

KIC 008639063

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})
008639063-01	OBS	No	1.770951	132.293477	106.1	3.682	13.9	14.8	2.38	8026	2.80	16419.69
008639063-02	OBS	No	1.770956	132.951454	94.4	3.565	11.2	12.5	2.38	8026	2.69	16419.63
008639063-03	OBS	No	1.770967	131.603498	71.0	3.192	8.9	8.7	2.38	8026	2.29	16419.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008639063-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008639063-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008639063-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_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.

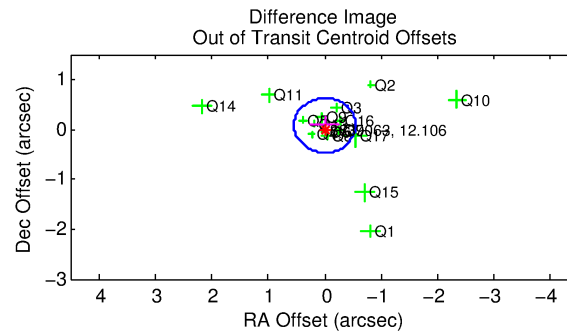
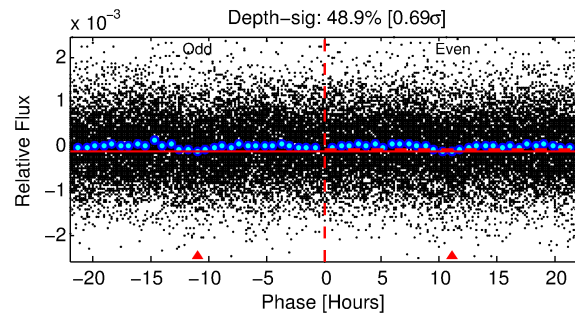
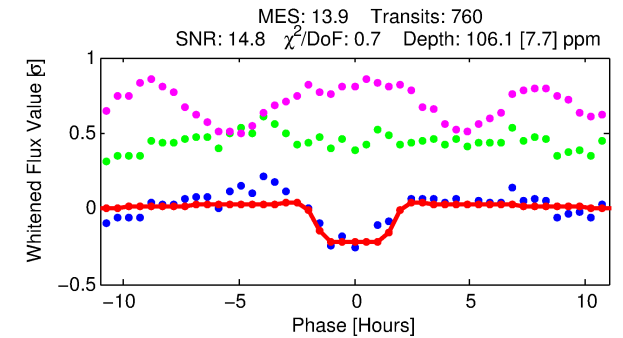
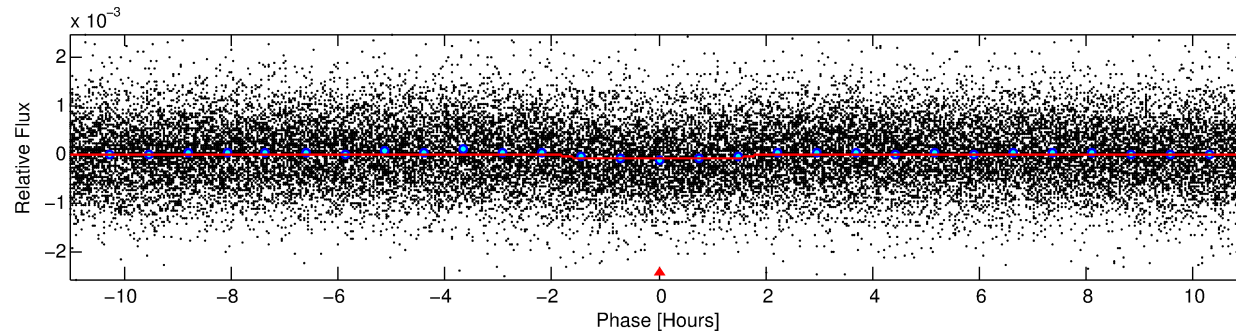
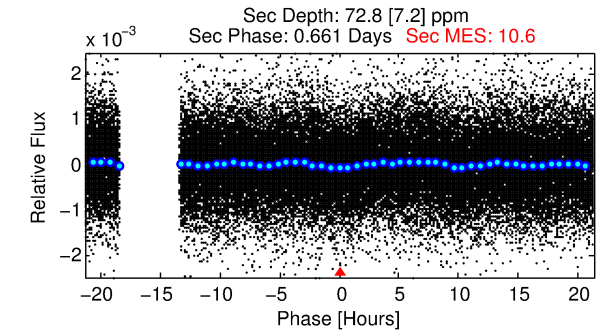
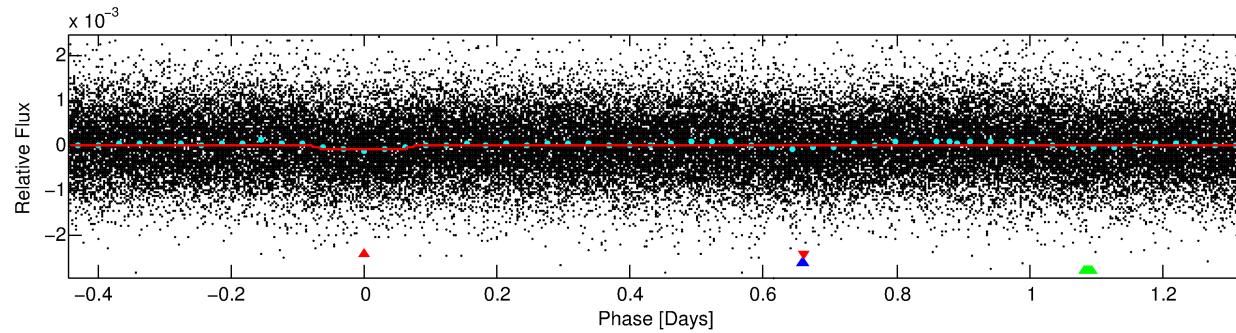
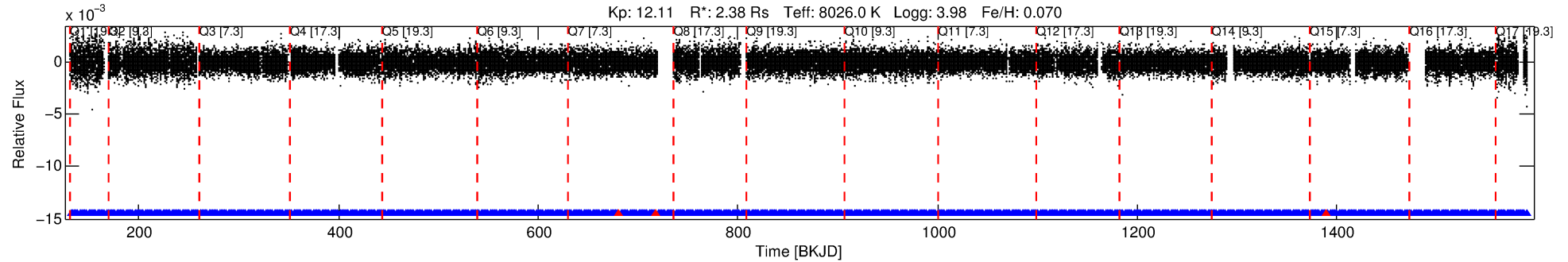
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008639063-01

No Significant Match Found

DV One-Page Summary

KIC: 8639063 Candidate: 1 of 3 Period: 1.771 d



DV Fit Results:

Period = 1.77095 [0.00001] d
Epoch = 132.2935 [0.0034] BKJD
Rp/R* = 0.0108 [0.0045]
a/R* = 2.10 [4.19]
b = 0.87 [0.73]
Seff = 16419.68 [6719.64]
Teq = 2886 [295] K
Rp = 2.80 [1.43] Re
a = 0.0359 [0.0089] AU
Ag = 6.58 [6.10] [0.92σ]
Teffp = 7148 [1553] K [2.70σ]

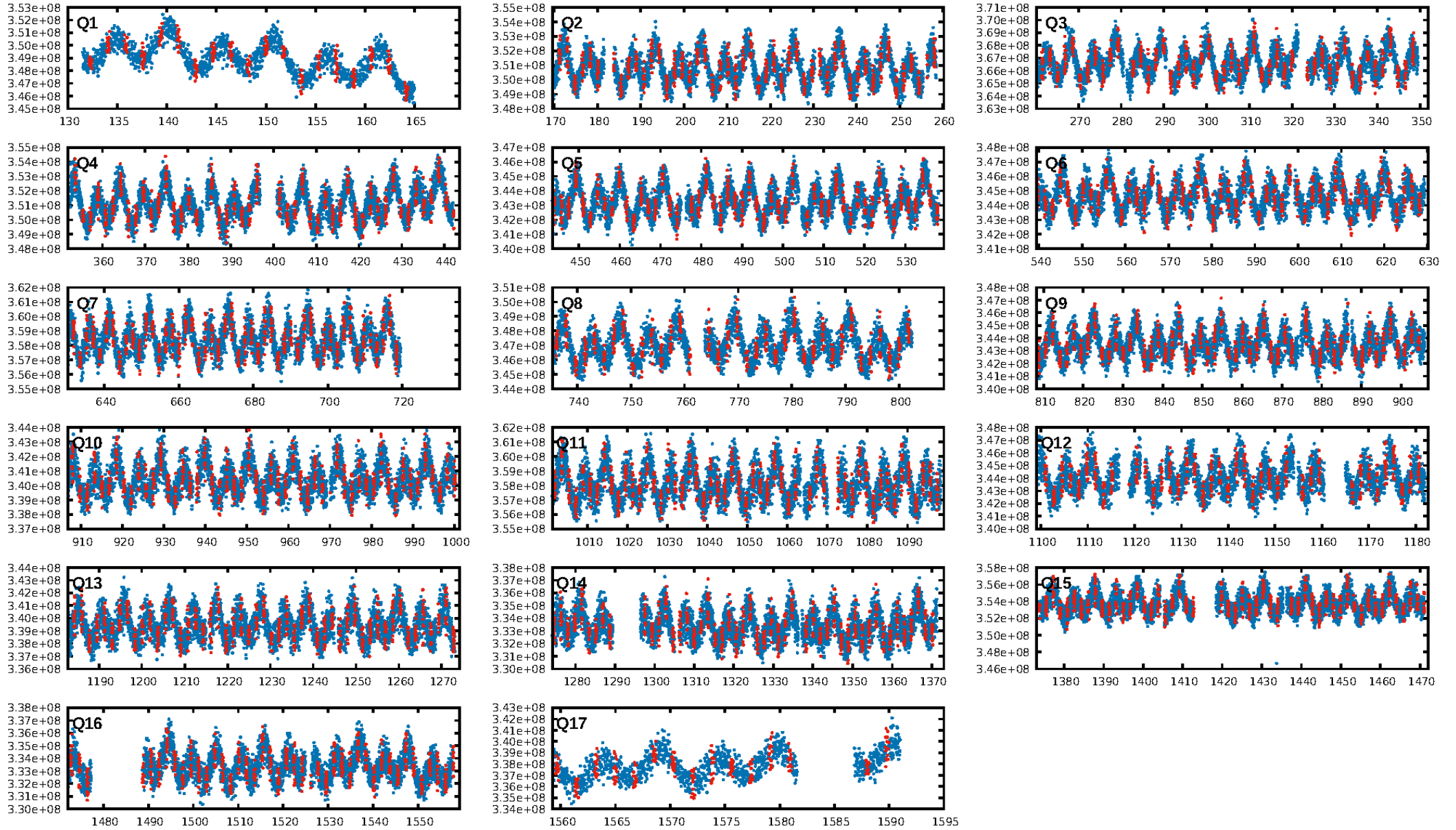
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.18e-45
RollingBand-fgt: 1.00 [723/726]
GhostDiagnostic-chr: 2.072
Centroid-sig: 22.4%
Centroid-so: 0.203 arcsec [1.50σ]
OotOffset-rm: 0.076 arcsec [0.42σ]
KicOffset-rm: 0.102 arcsec [0.44σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

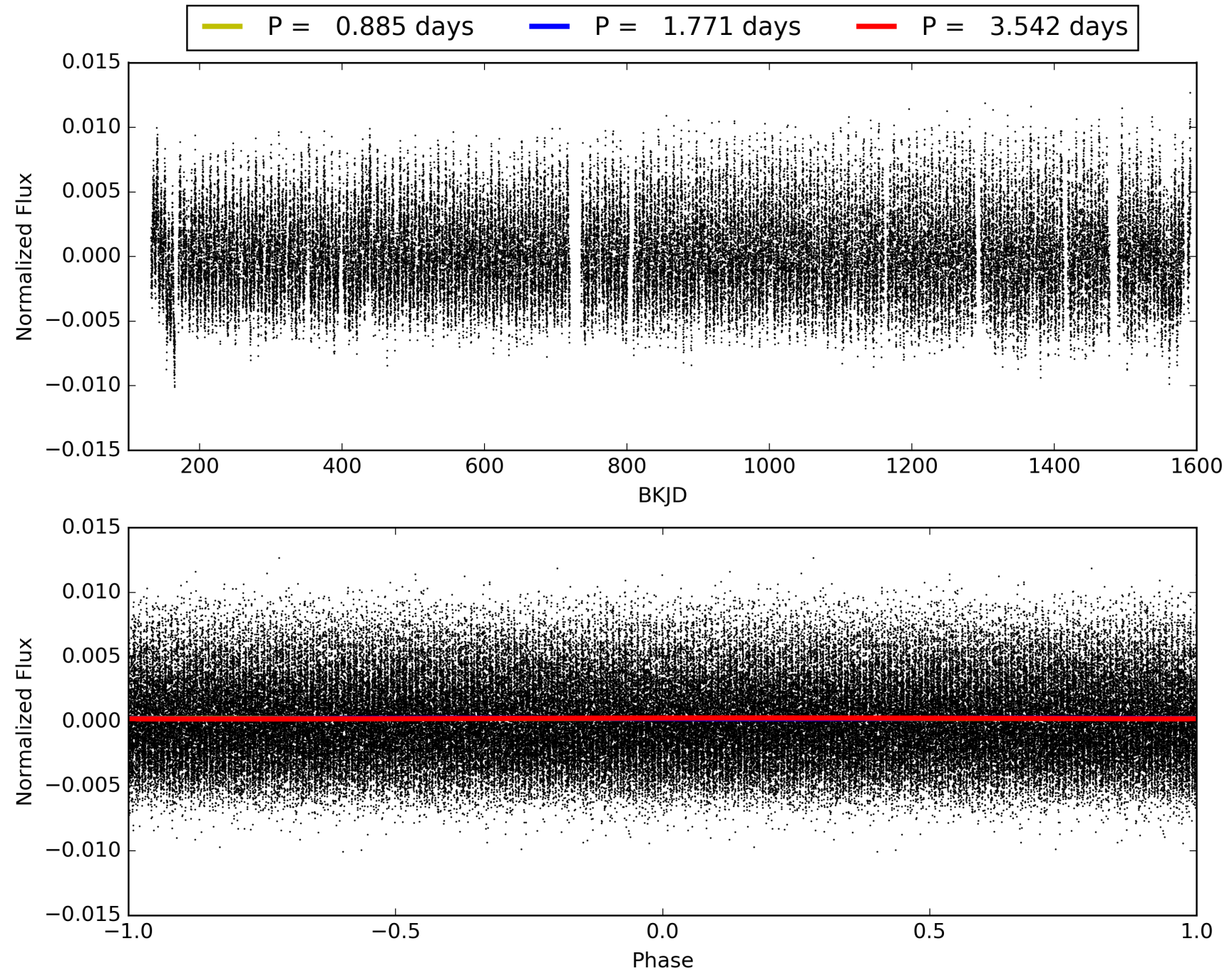
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:50:43 Z

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

TCE 008639063-01, PDC Light Curves

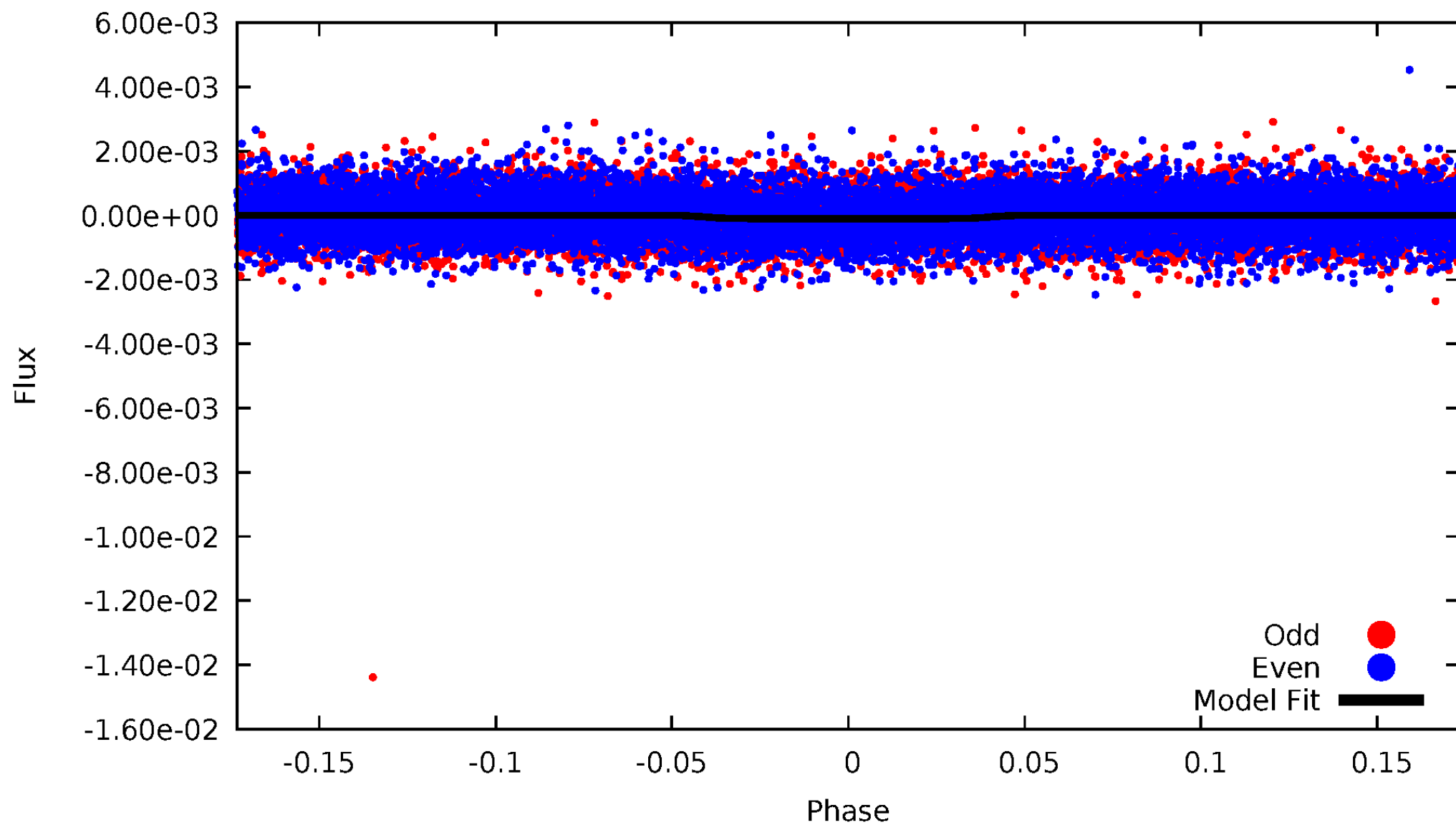


TCE 008639063-01



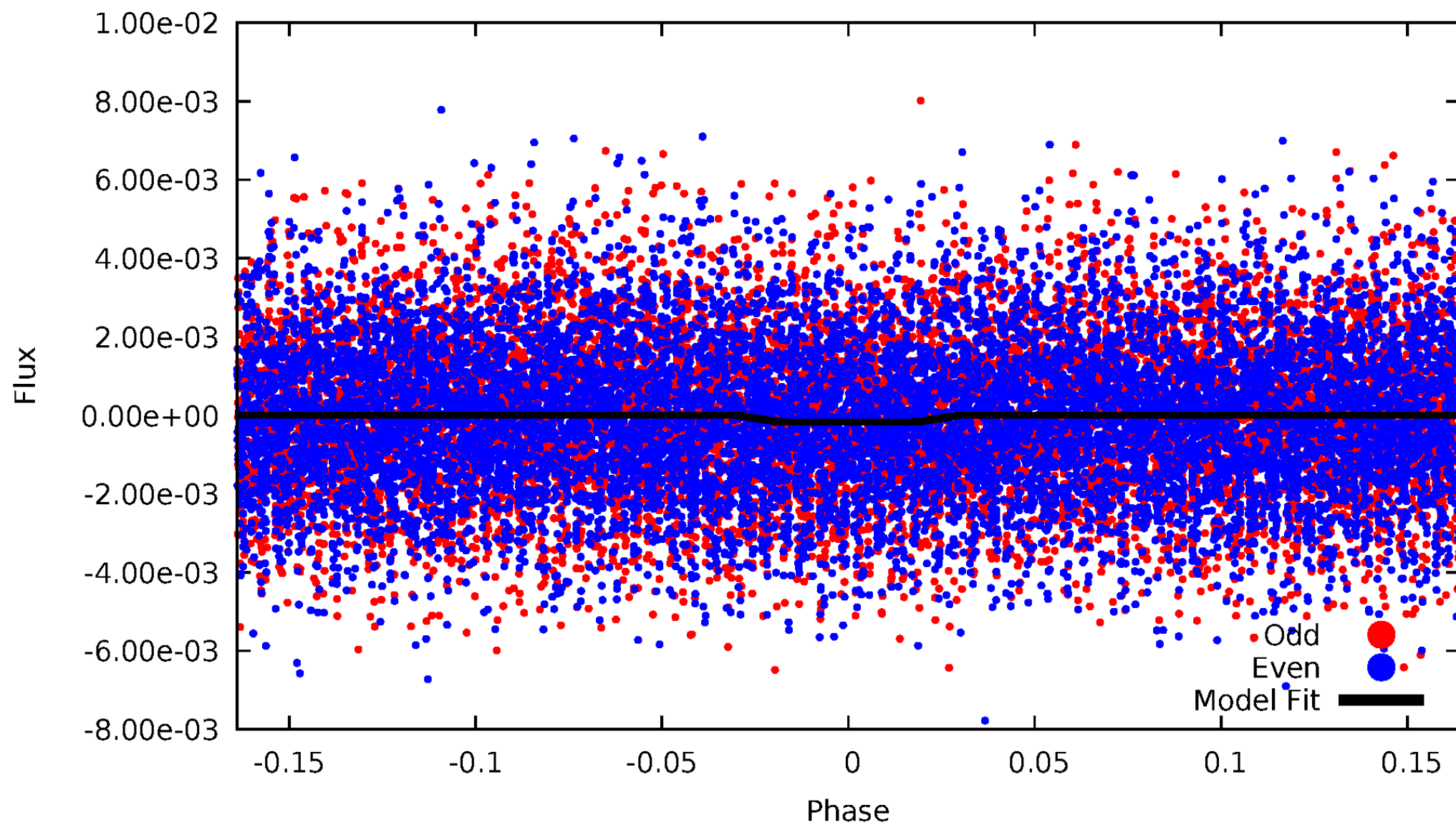
DV Odd/Even

TCE 008639063-01

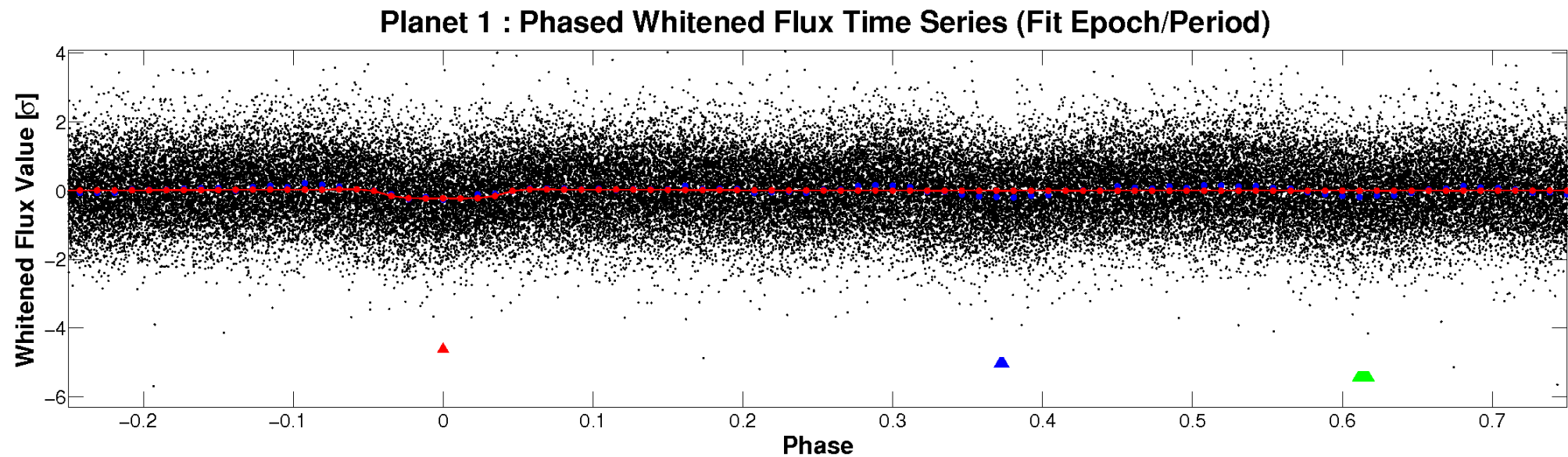
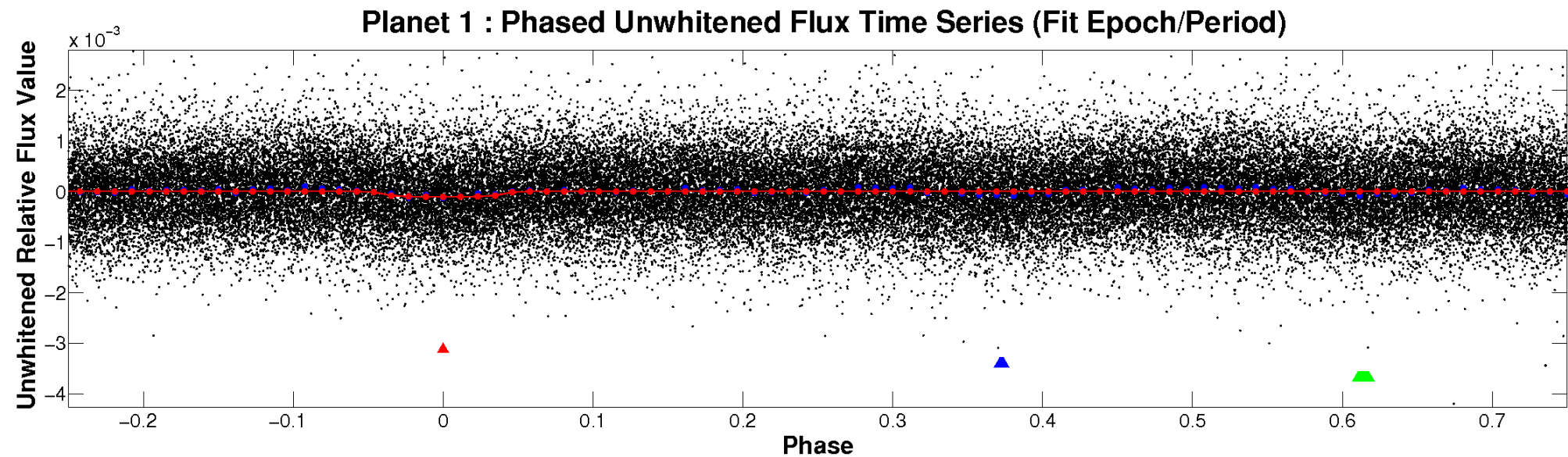


ALT Odd/Even

TCE 008639063-01

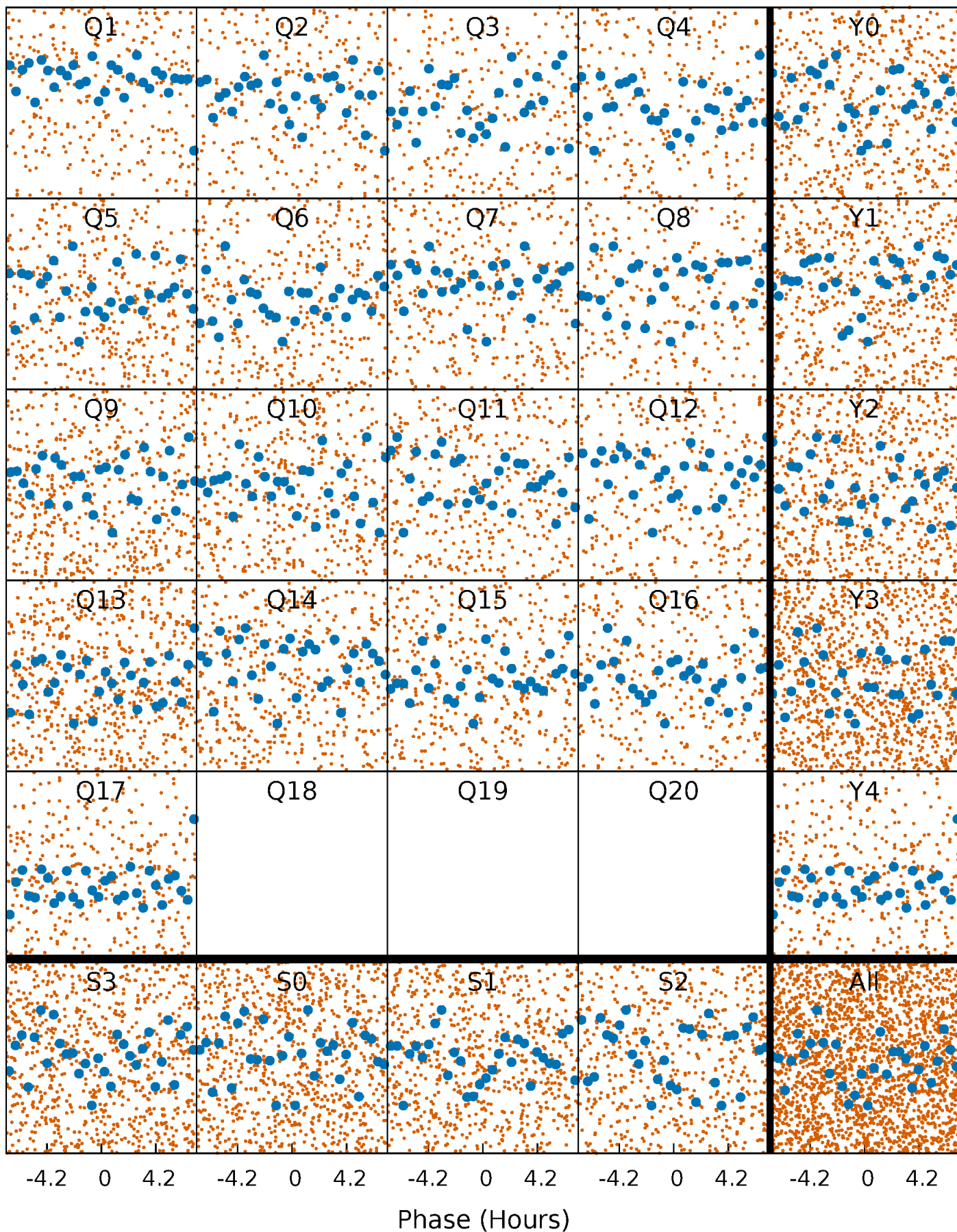


Non-Whitened Vs. Whitened Light Curve



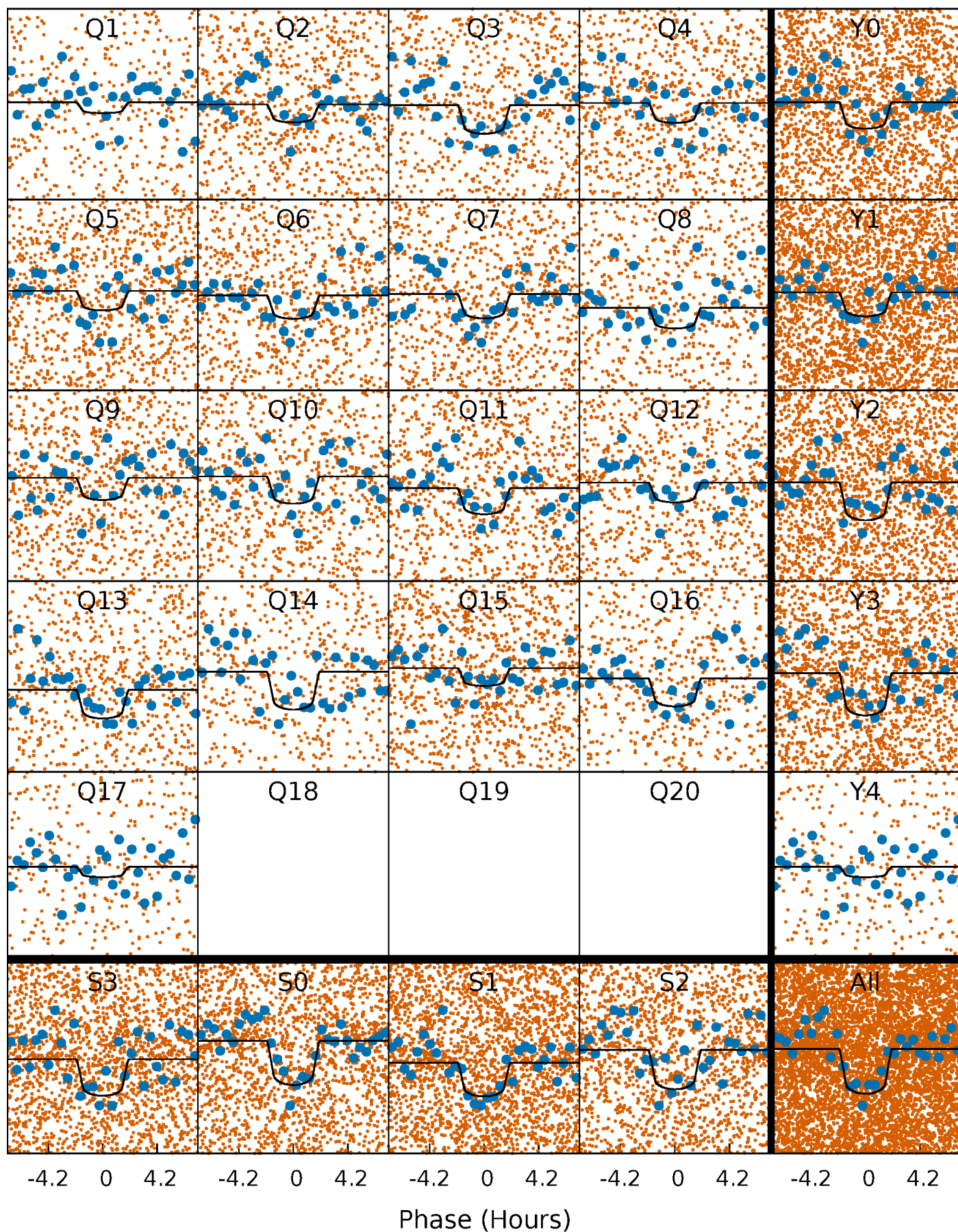
PDC Quarter-Phased Transit Curves

TCE 008639063-01 P= 1.770951 Days $T_0=132.293477$ (BKJD)



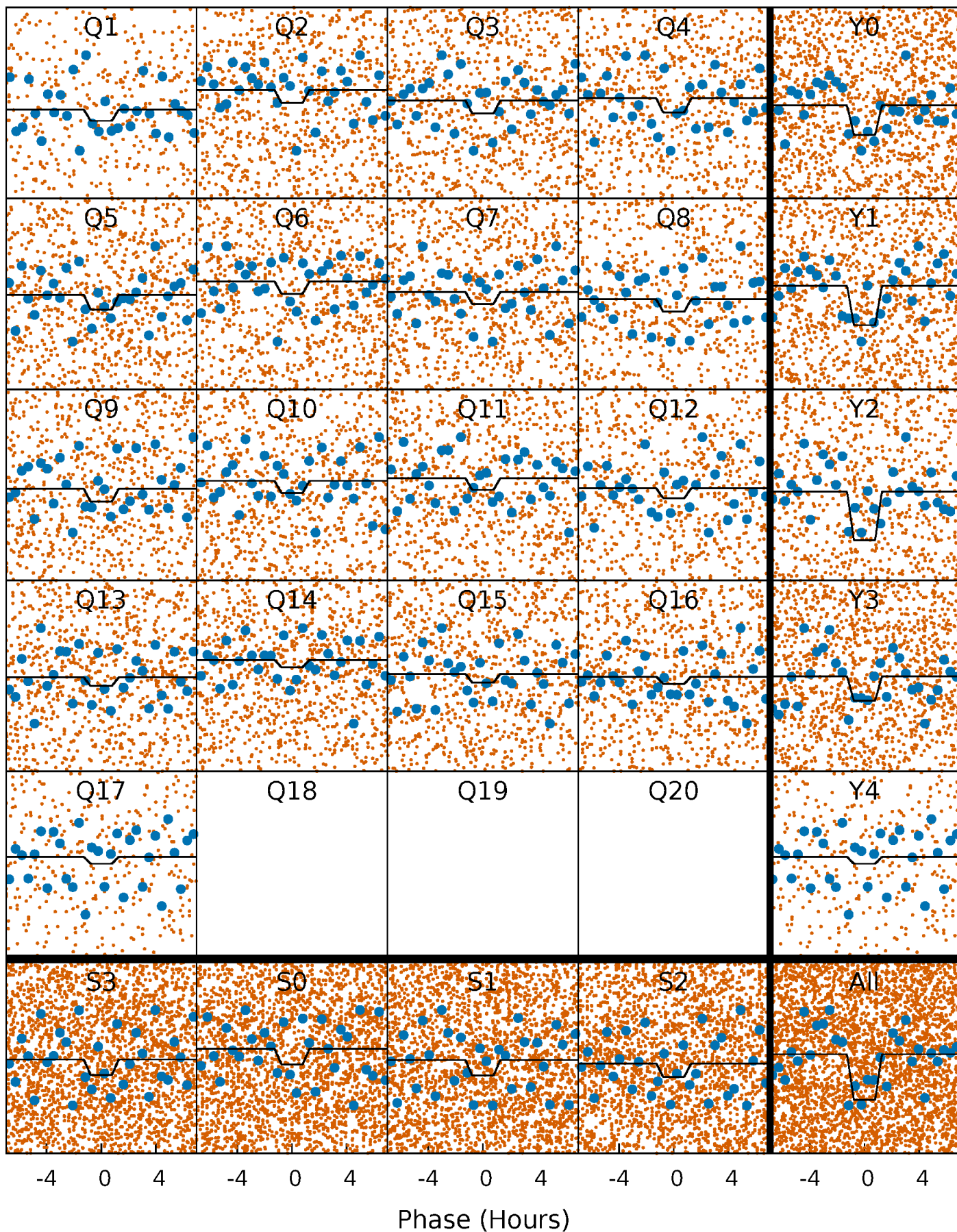
DV Quarter-Phased Transit Curves

TCE 008639063-01 P= 1.770951 Days $T_0=132.293477$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

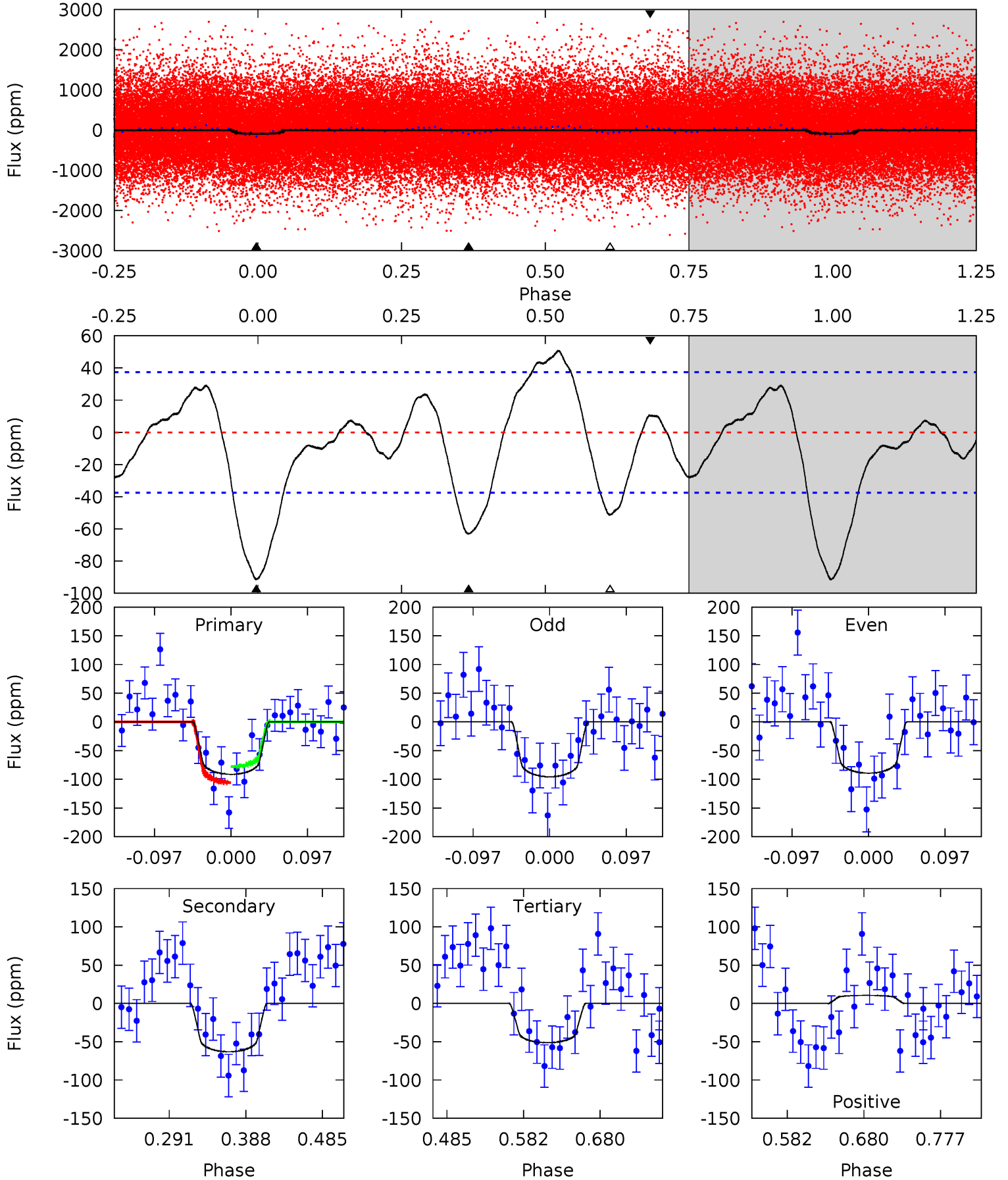
TCE 008639063-01 P= 1.770911 Days $T_0=132.283853$ (BKJD)



DV Model-Shift Uniqueness Test

008639063-01, P = 1.770951 Days, E = 130.522526 Days

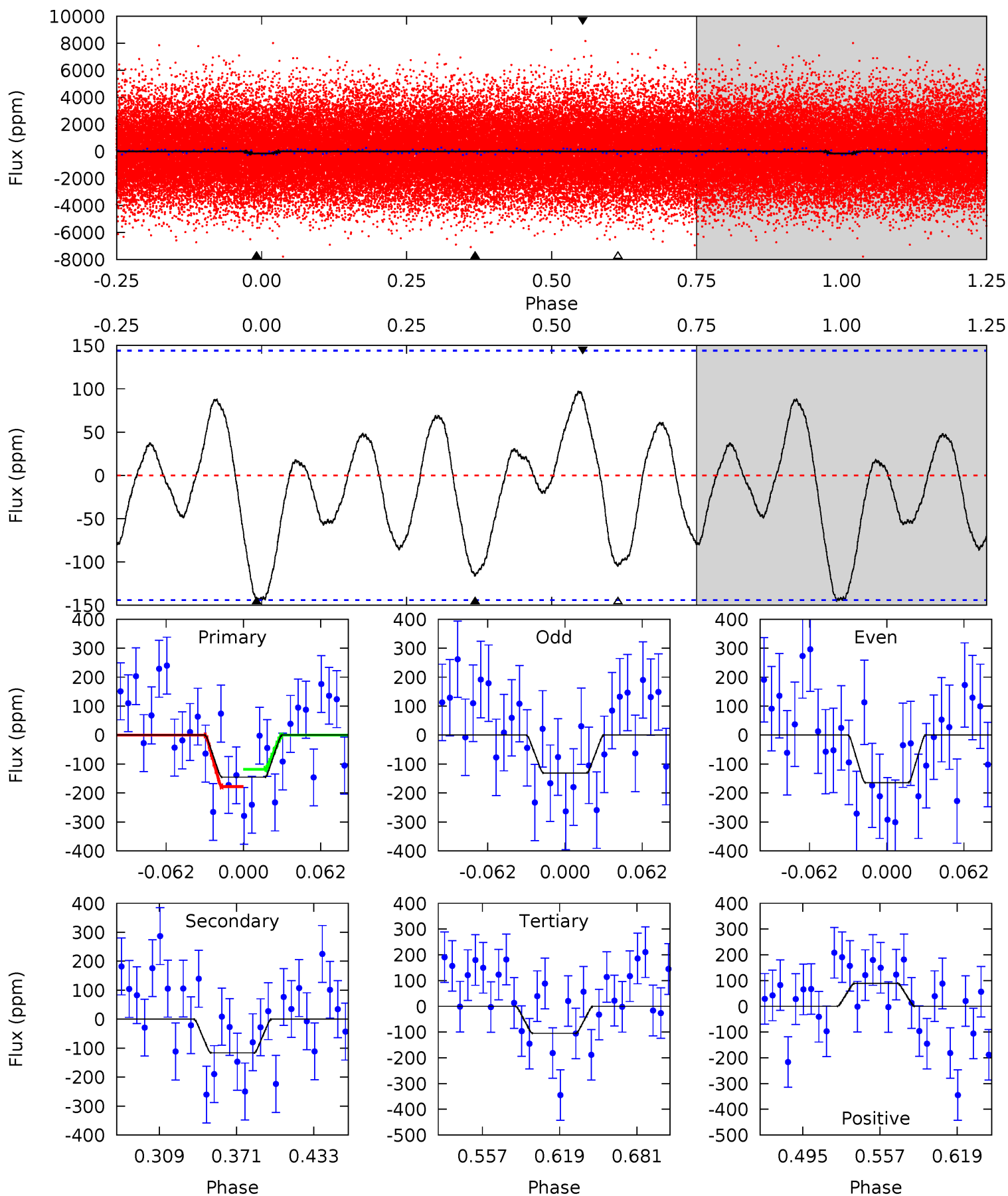
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	7.70	6.25	1.29	4.57	1.66	2.92	4.90	9.86	1.45	6.41	0.38	0.97	0.36	1.72



Alt Model-Shift Uniqueness Test

008639063-01, P = 1.770911 Days, E = 130.512942 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.70	3.77	3.40	2.89	4.66	1.87	1.59	1.30	1.81	0.37	0.88	0.53	0.82	0.40	0.97



Stellar Parameters For KIC 008639063

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8026^{+222}_{-361}	$3.976^{+0.204}_{-0.136}$	$0.070^{+0.200}_{-0.400}$	$2.383^{+0.516}_{-0.688}$	$1.961^{+0.277}_{-0.381}$	$0.204^{+0.262}_{-0.081}$
	+3%/-4%	+5%/-3%	+286%/-571%	+22%/-29%	+14%/-19%	+129%/-39%
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 008639063-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-63 ± 8	$2.75^{+1.27}_{-1.22}$	4003^{+250}_{-296}	6623^{+2541}_{-1232}	$5.785^{+12.991}_{-3.077}$
Alt.	-116 ± 31	$3.34^{+1.35}_{-1.13}$	4010^{+268}_{-304}	6964^{+2073}_{-1162}	$7.197^{+9.443}_{-3.703}$

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

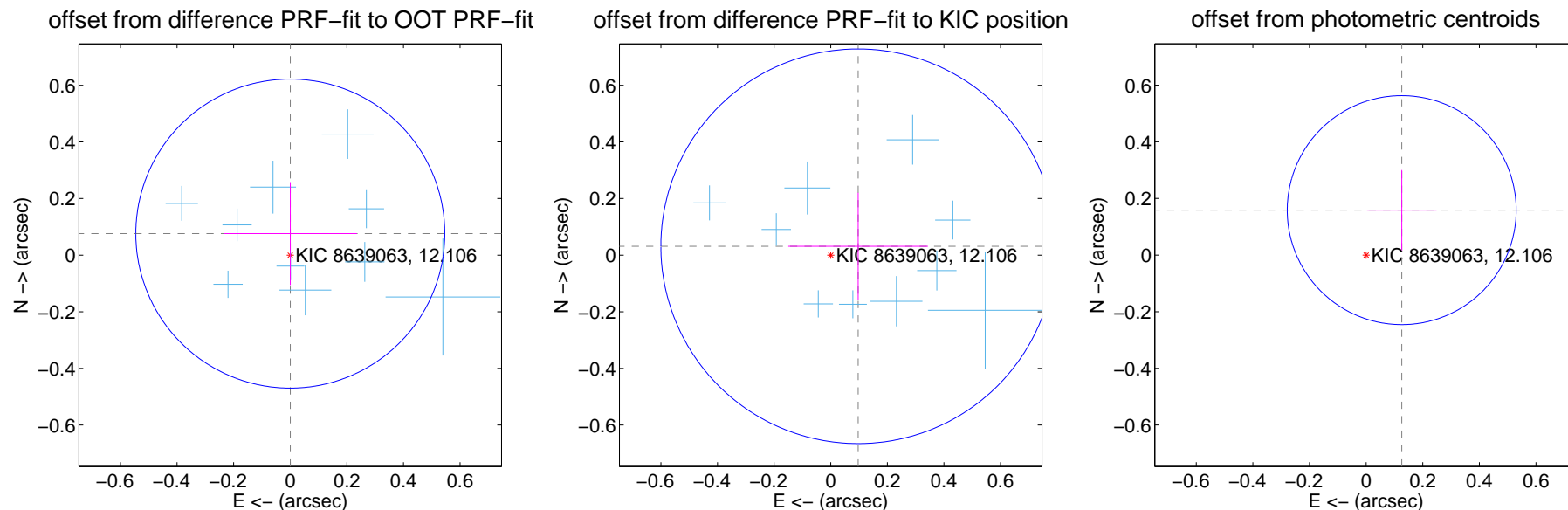
DV Centroid Data

Supplemental centroid analysis for 008639063-01. Kepler magnitude: 12.11. Transit SNR 14.76

There are 16 quarters with good PRF difference image offsets

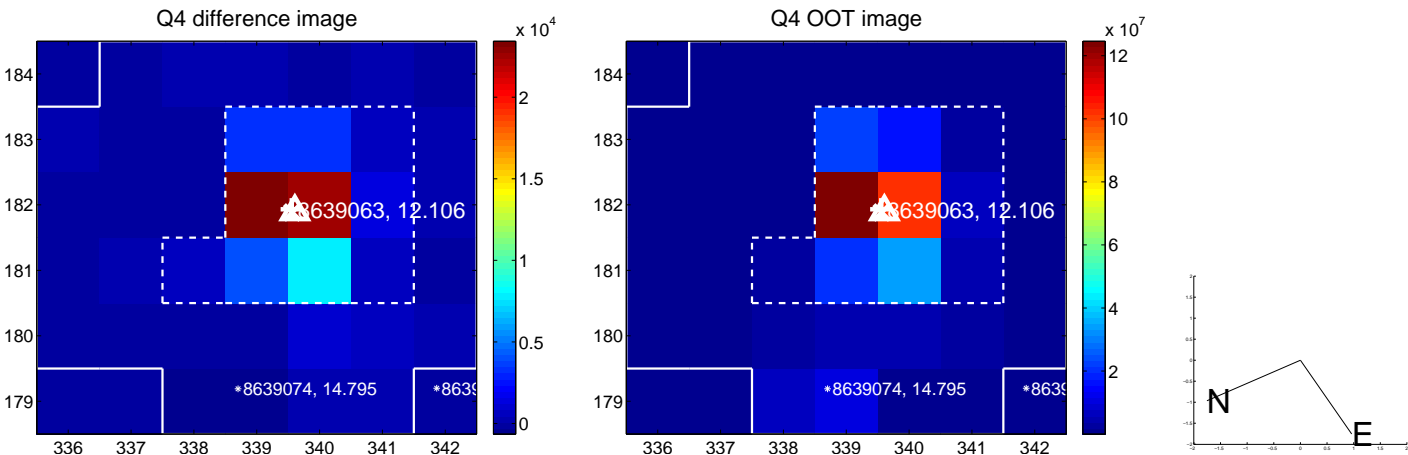
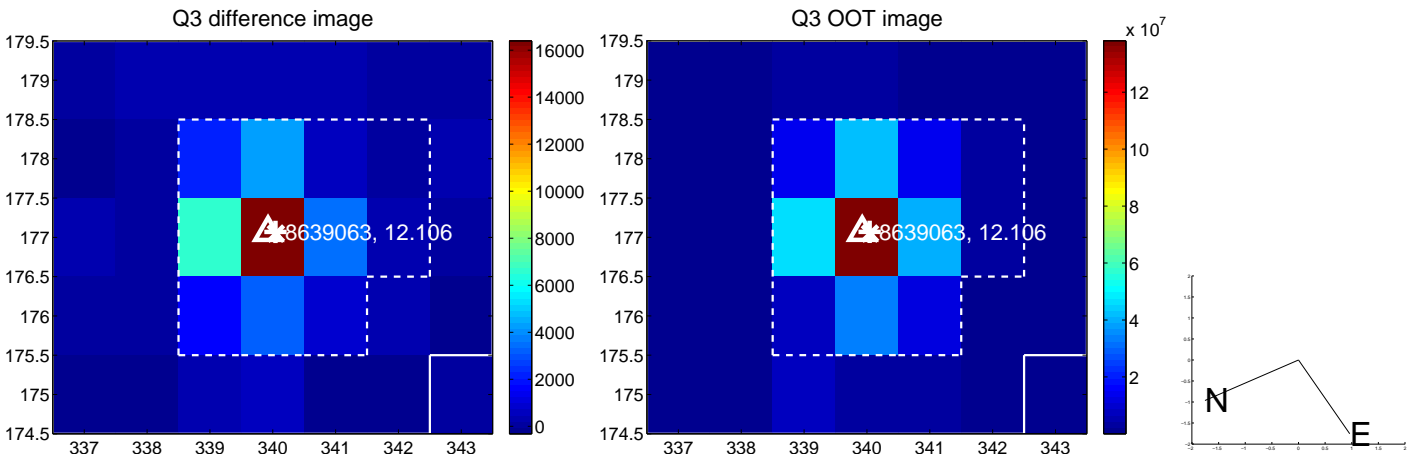
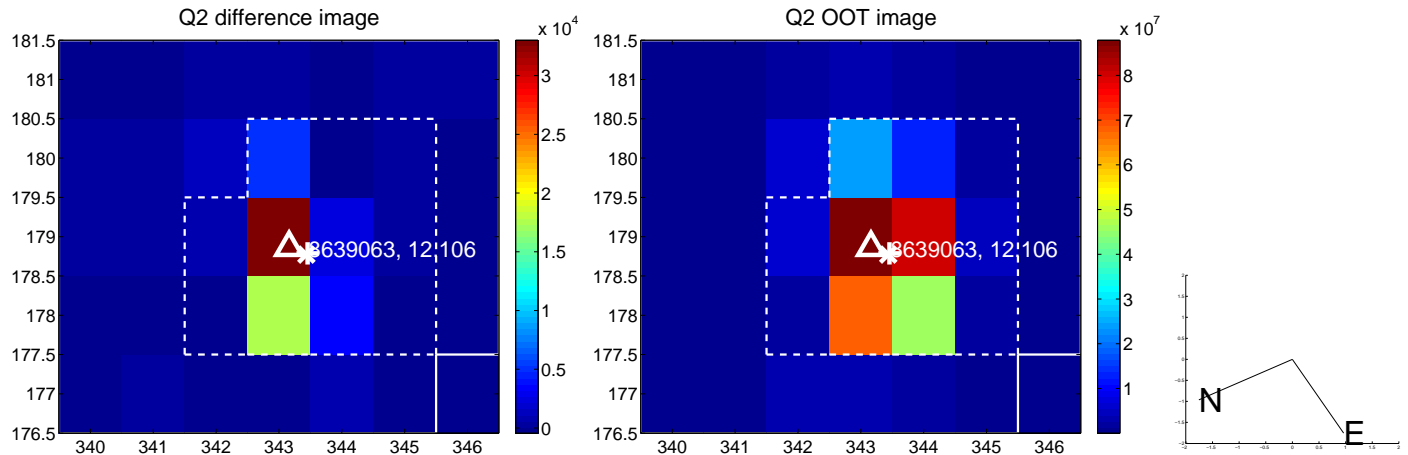
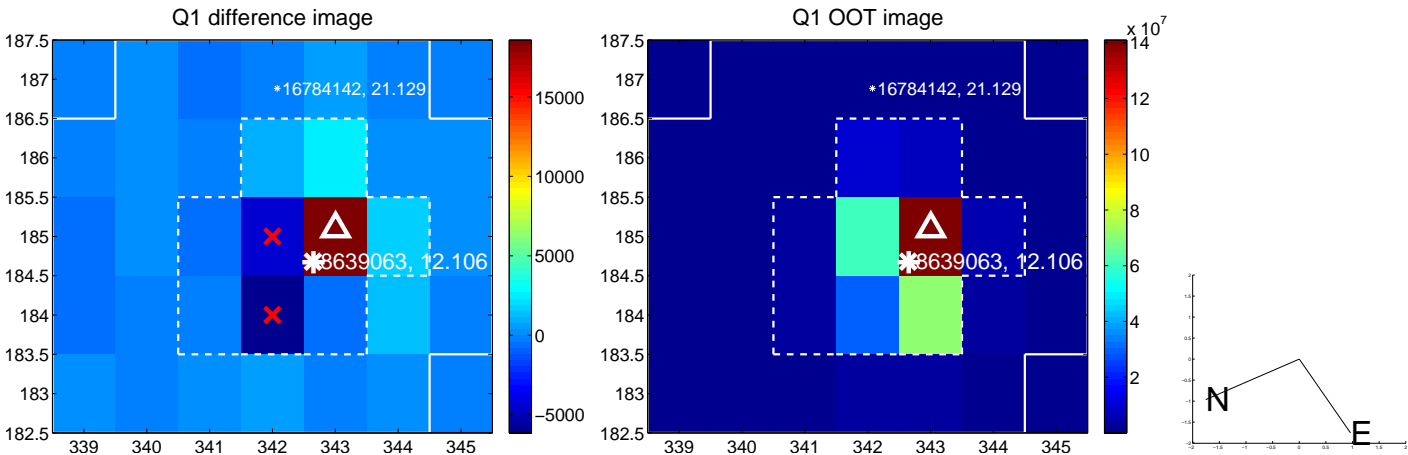
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.076 ± 0.182	0.42	-0.000 ± 0.235	0.076 ± 0.182
PRF-fit source offset from KIC position	0.102 ± 0.232	0.44	-0.097 ± 0.247	0.031 ± 0.189
photometric centroid source offset	0.20 ± 0.13	1.50	-0.13 ± 0.12	0.16 ± 0.14

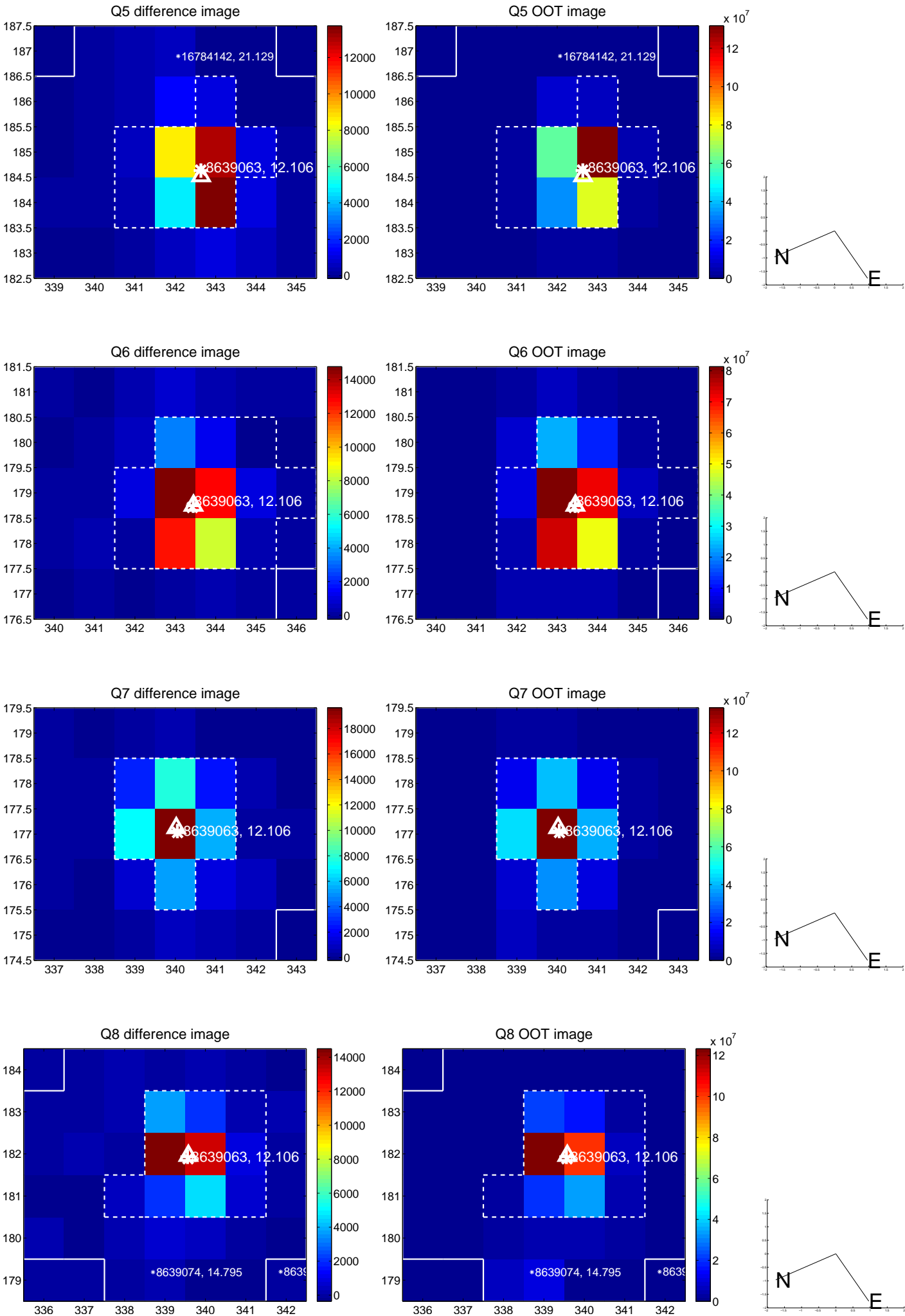


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

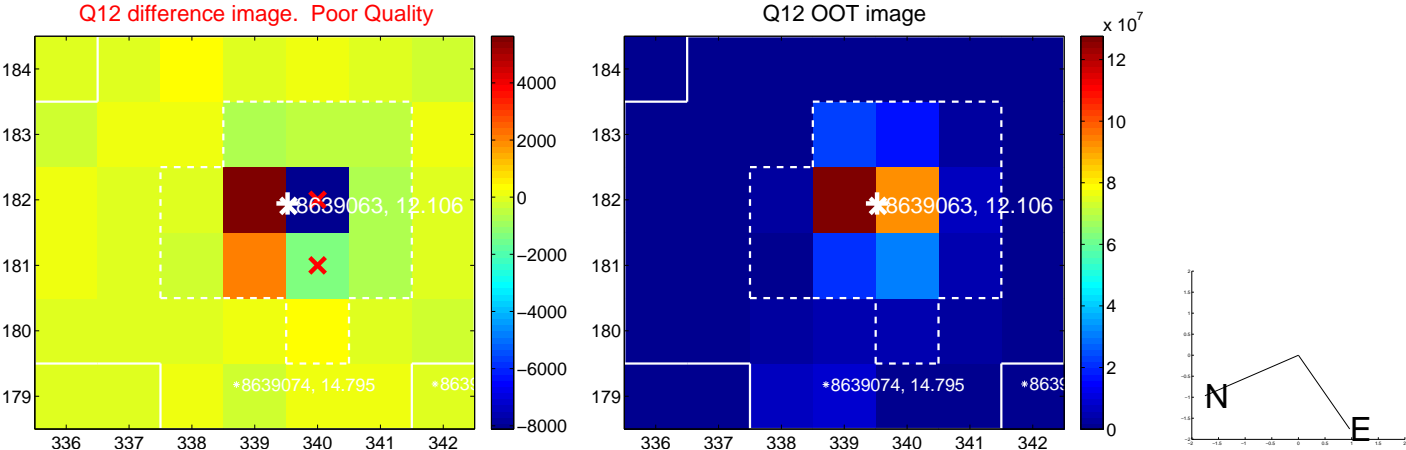
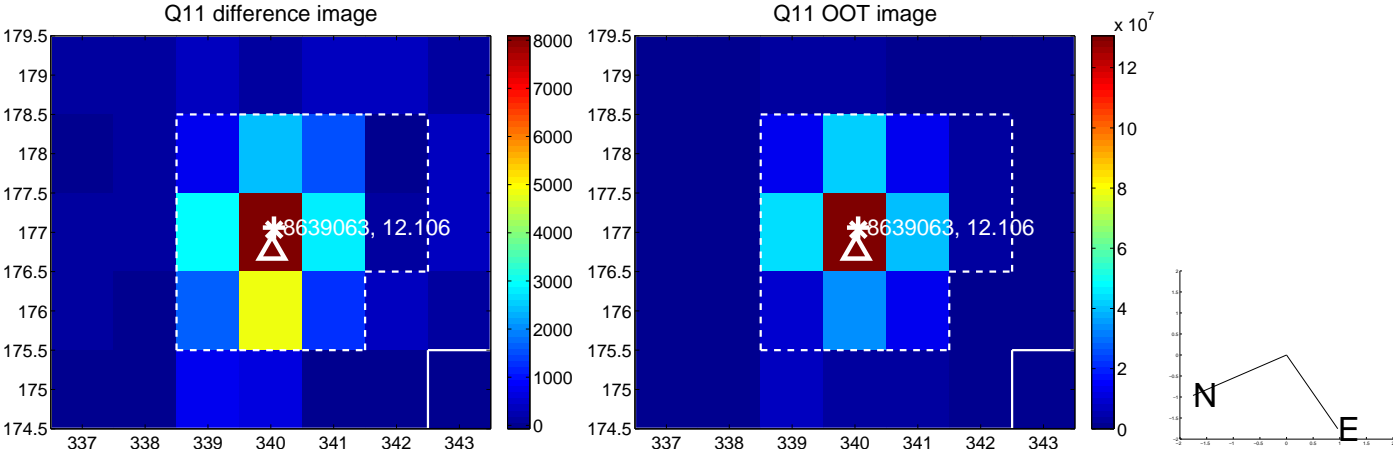
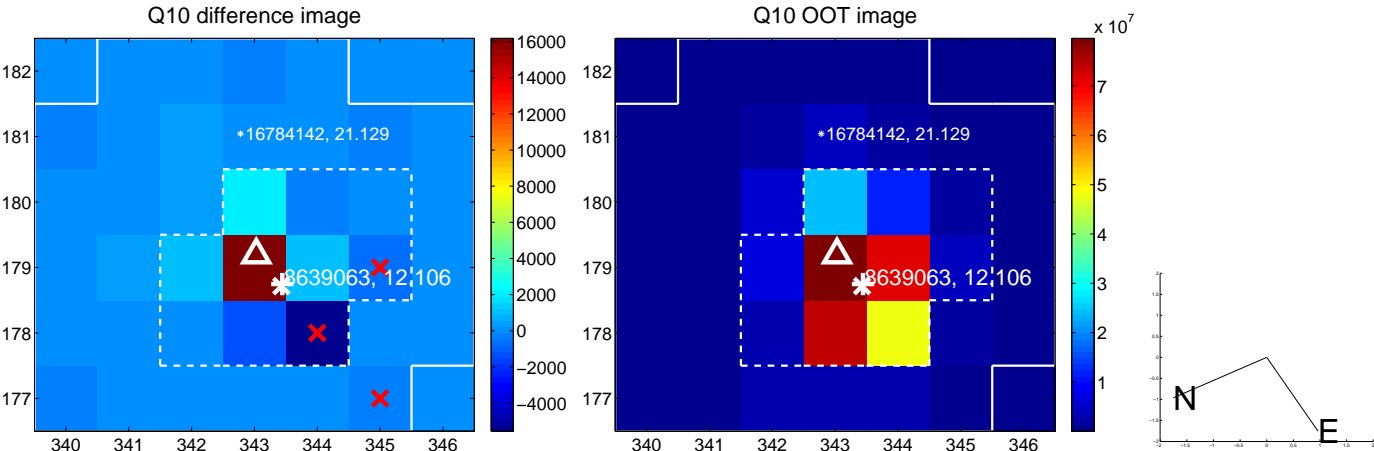
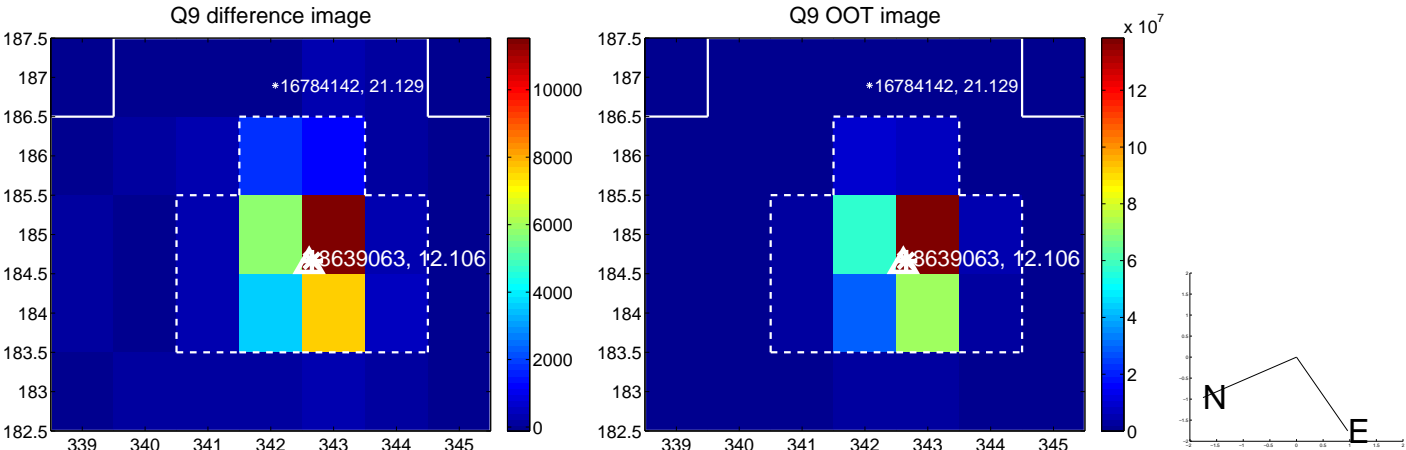
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



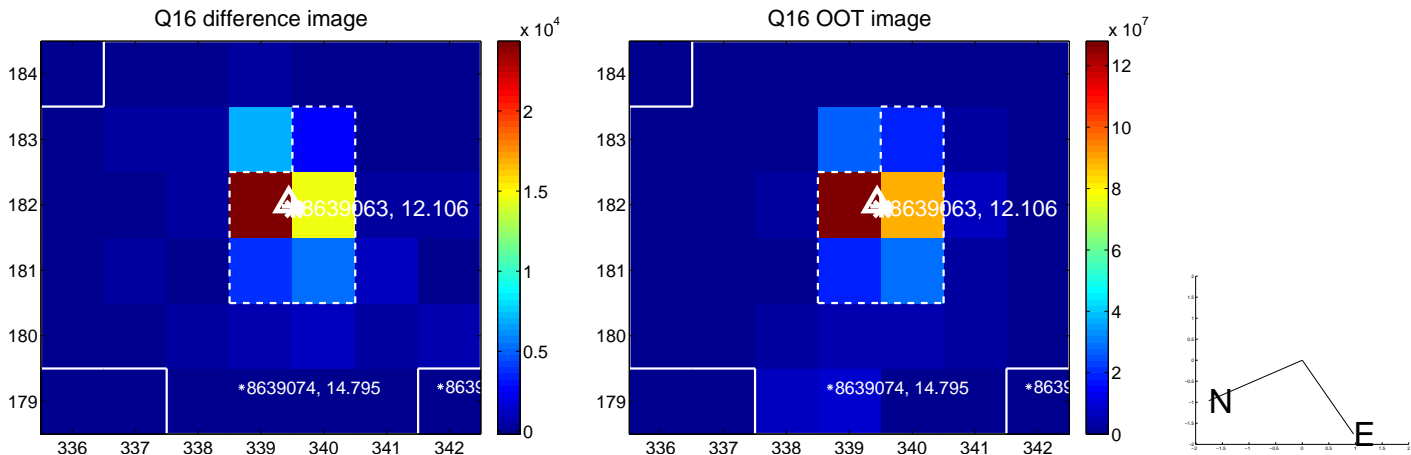
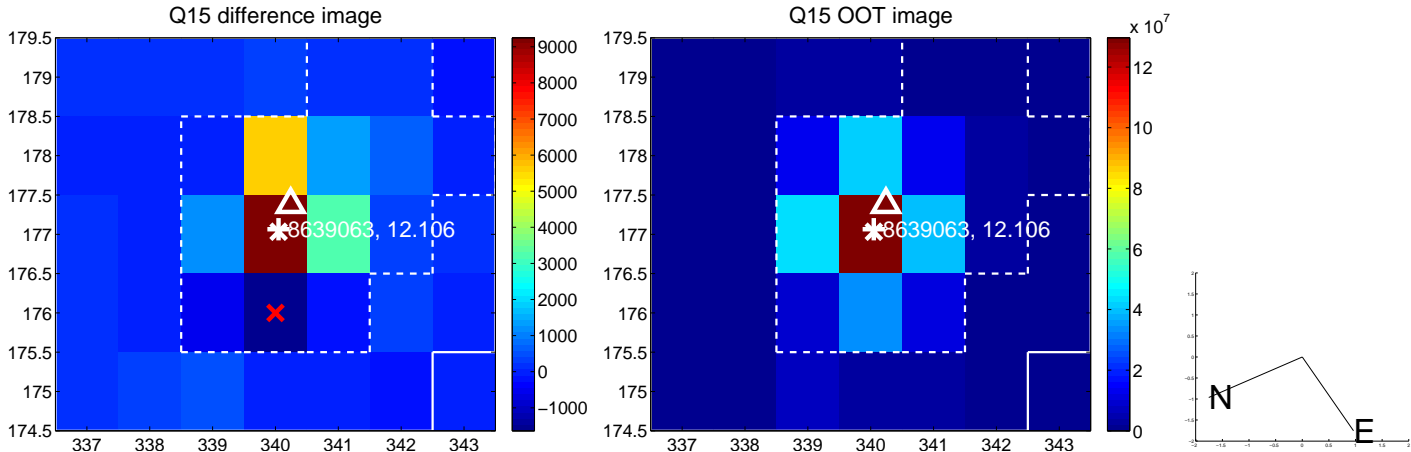
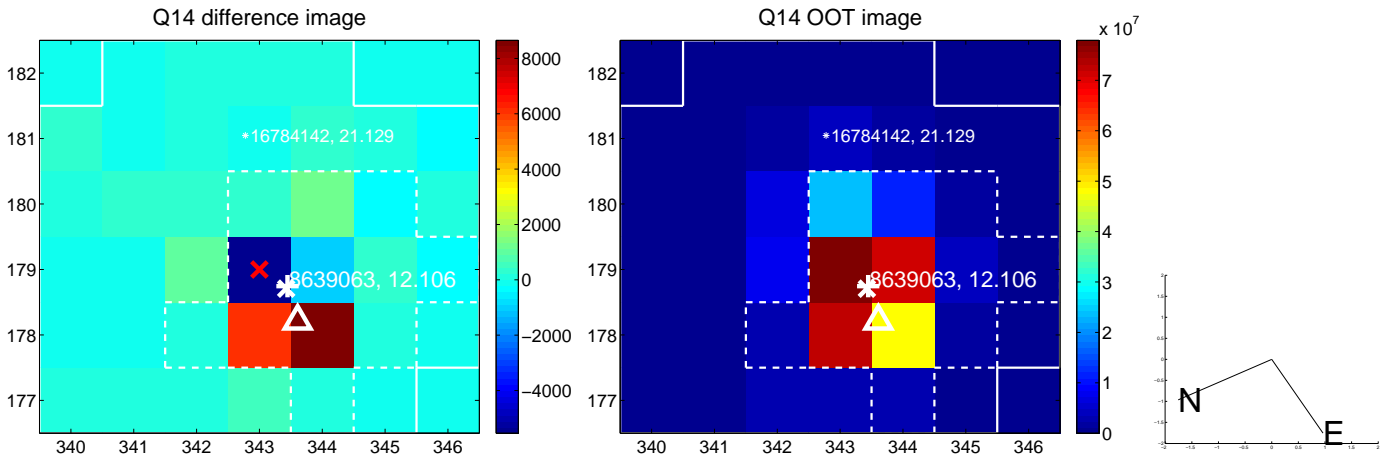
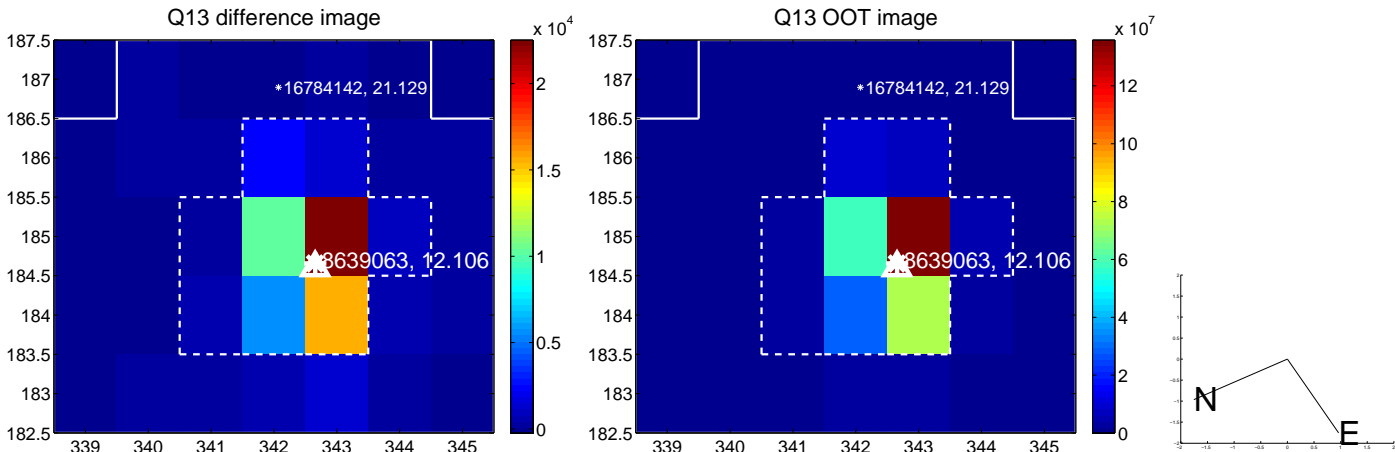
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



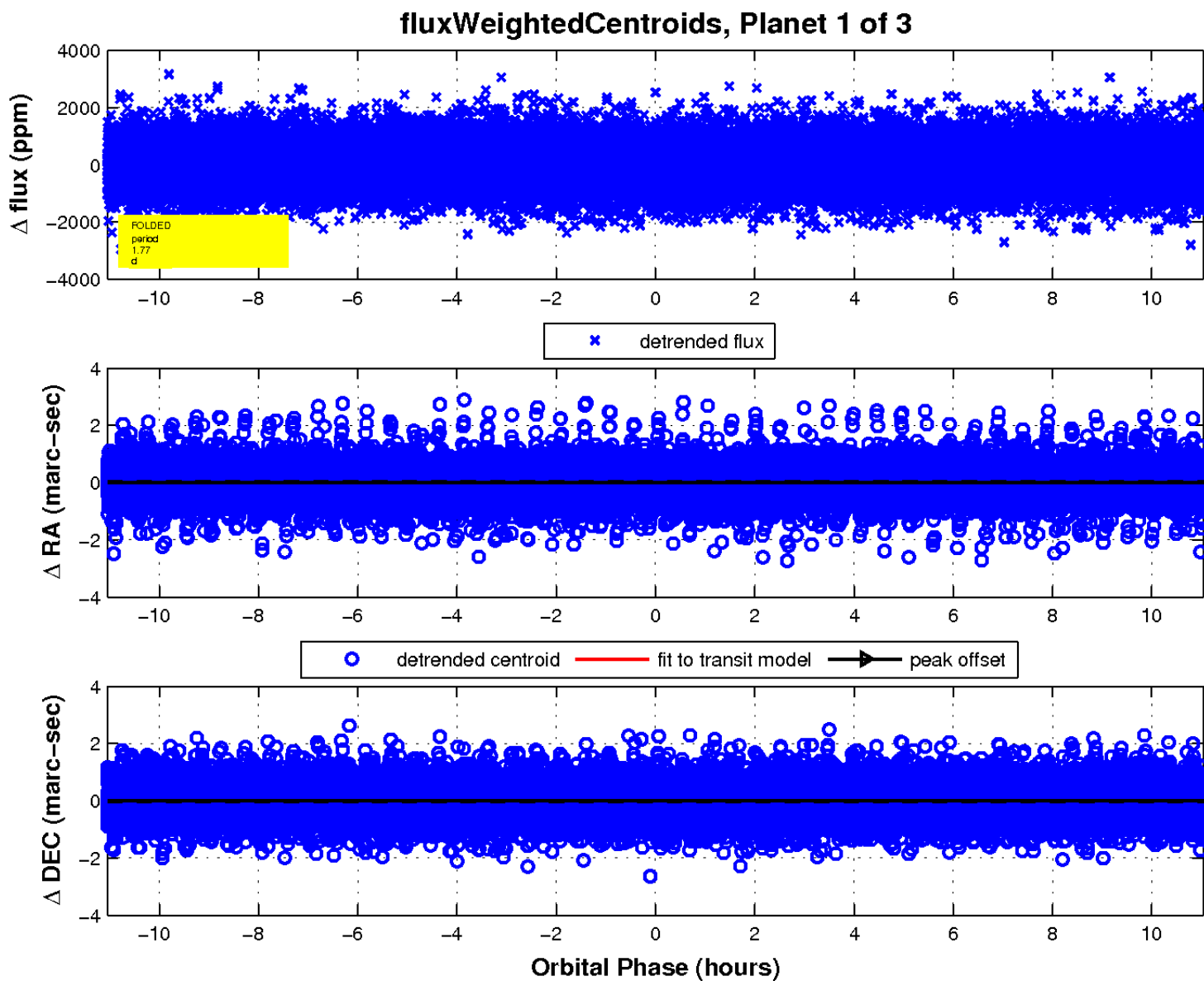
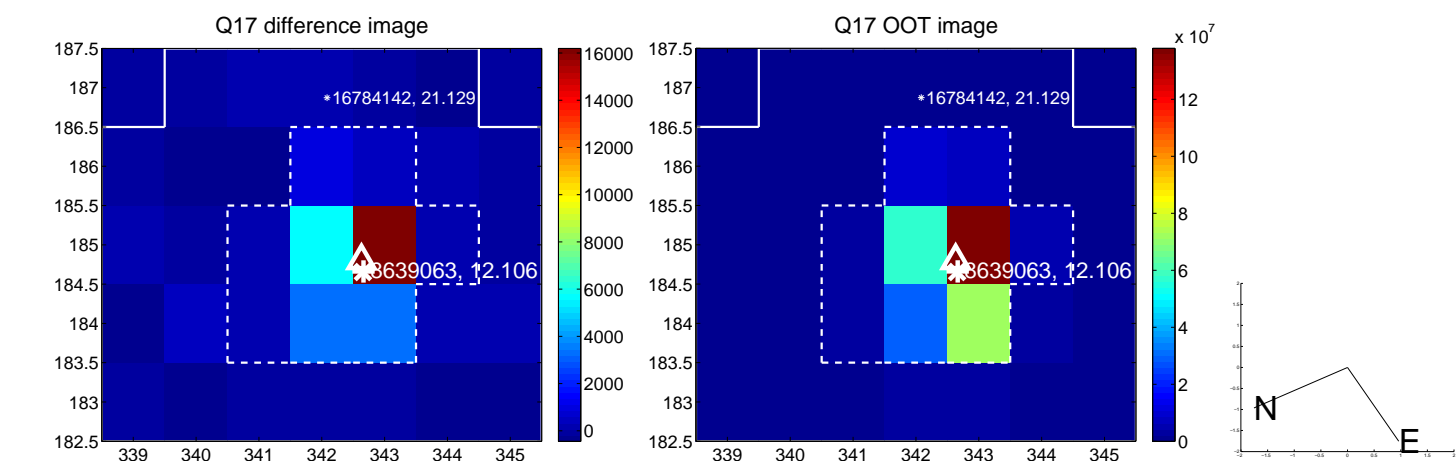
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

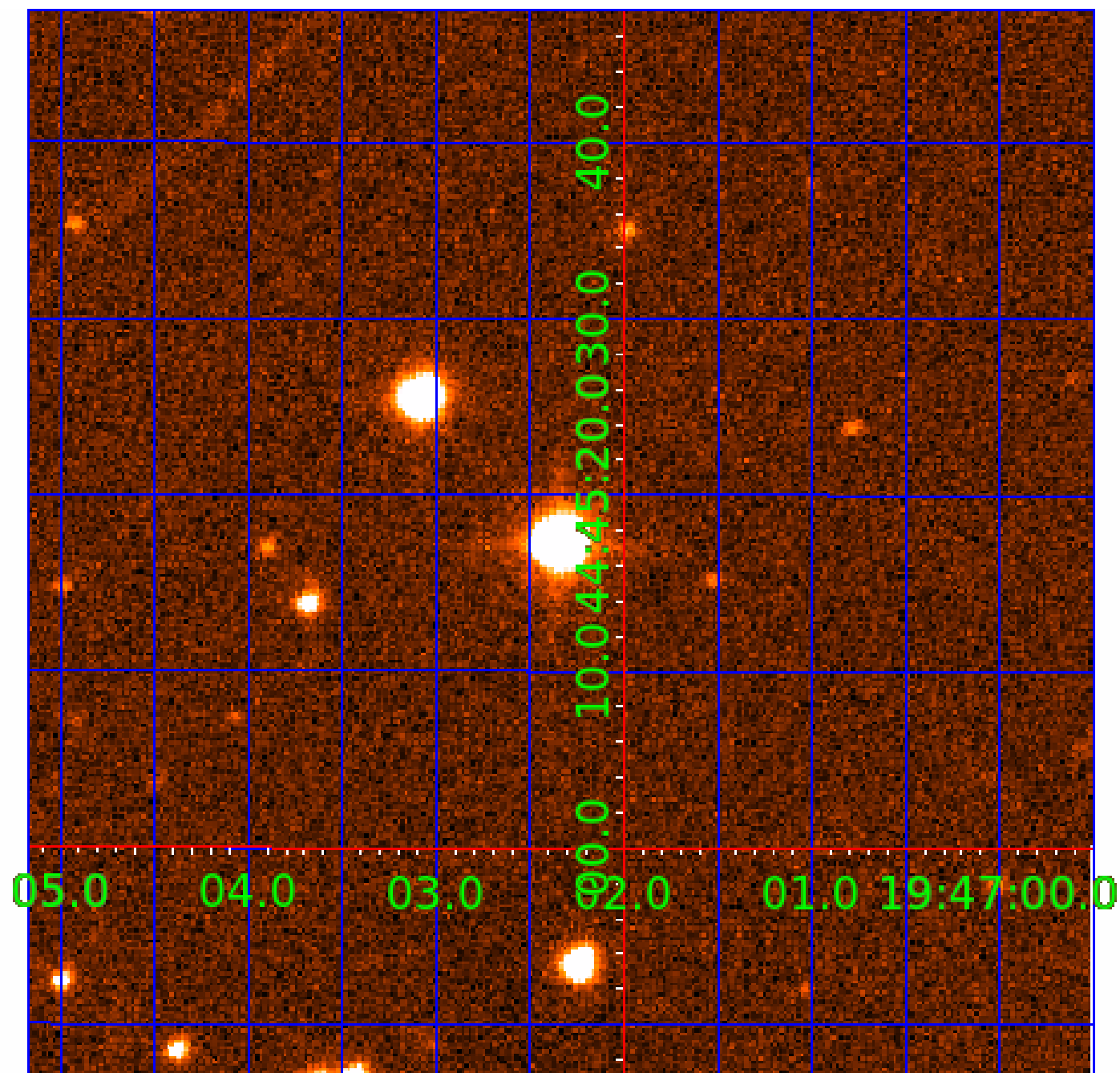


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008639063

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})
008639063-01	OBS	No	1.770951	132.293477	106.1	3.682	13.9	14.8	2.38	8026	2.80	16419.69
008639063-02	OBS	No	1.770956	132.951454	94.4	3.565	11.2	12.5	2.38	8026	2.69	16419.63
008639063-03	OBS	No	1.770967	131.603498	71.0	3.192	8.9	8.7	2.38	8026	2.29	16419.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008639063-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008639063-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008639063-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_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.

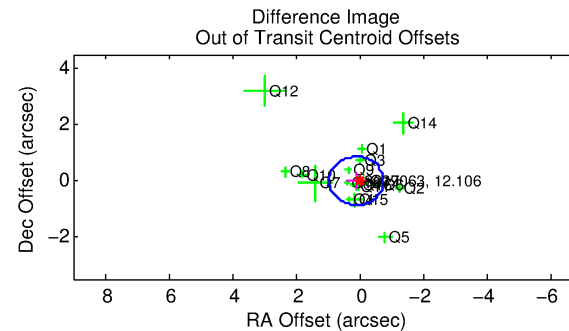
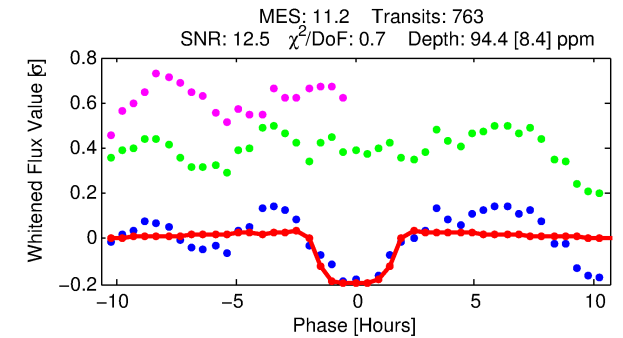
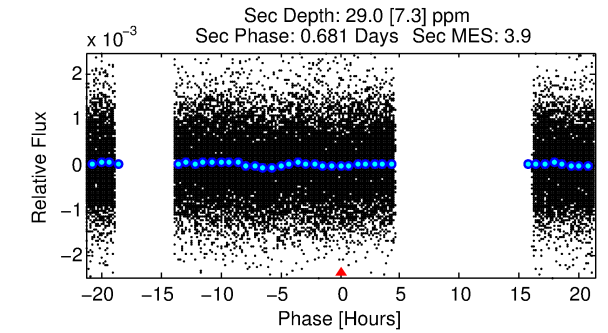
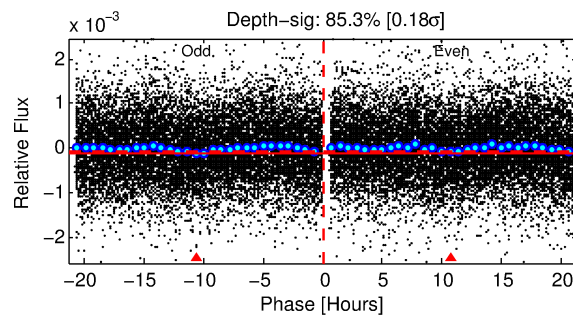
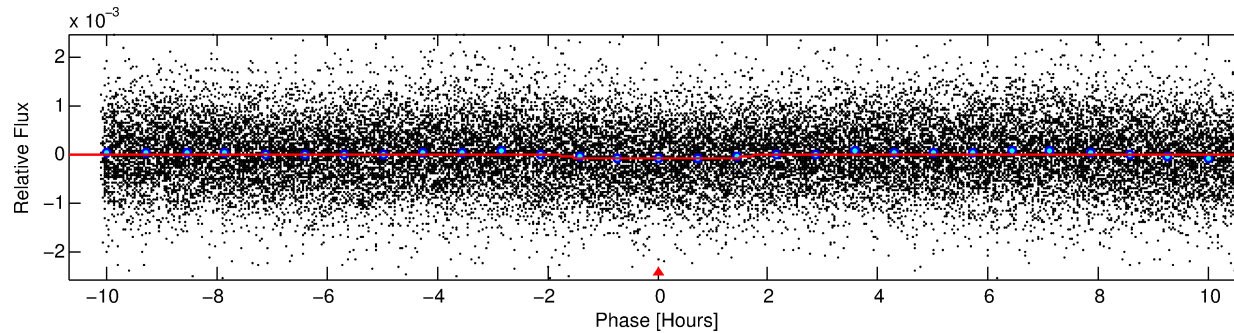
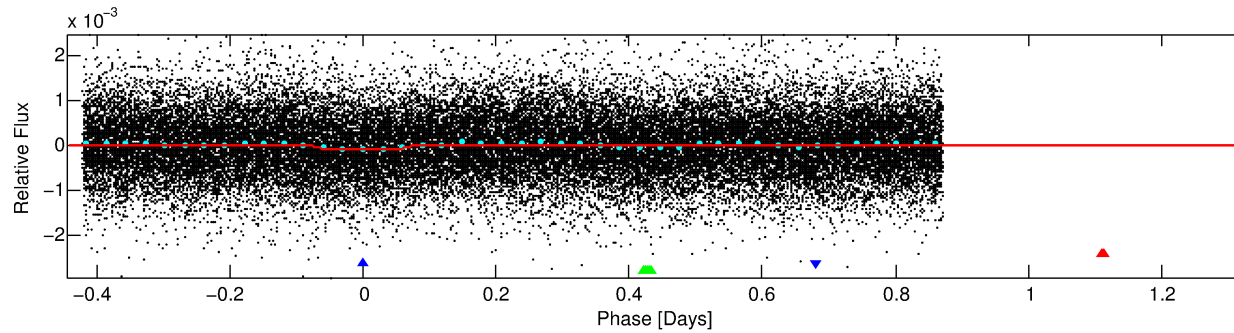
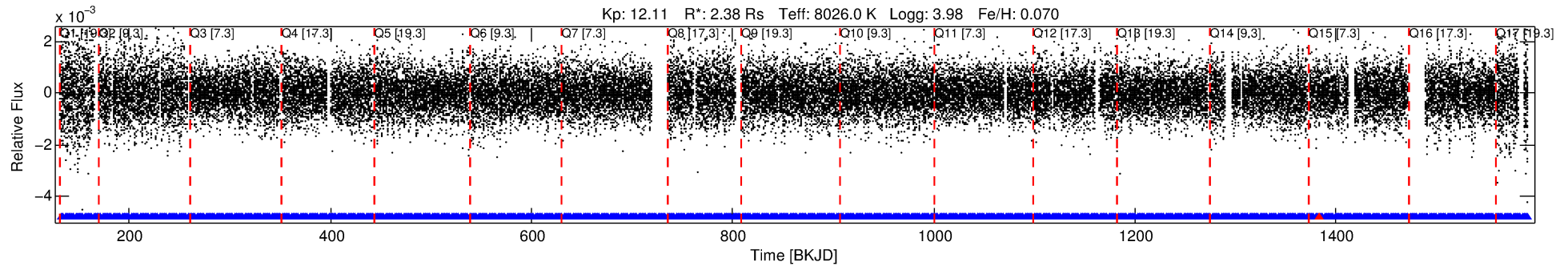
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008639063-02

No Significant Match Found

DV One-Page Summary

KIC: 8639063 Candidate: 2 of 3 Period: 1.771 d



DV Fit Results:

Period = 1.77096 [0.00001] d
Epoch = 132.9515 [0.0040] BKJD
Rp/R* = 0.0103 [0.0050]
a/R* = 1.98 [4.41]
b = 0.90 [0.64]
Seff = 16419.63 [6719.62]
Teq = 2886 [295] K
Rp = 2.69 [1.51] Re
a = 0.0359 [0.0089] AU
Ag = 2.83 [2.99] [0.61 σ]
Teffp = 5788 [1458] K [1.95 σ]

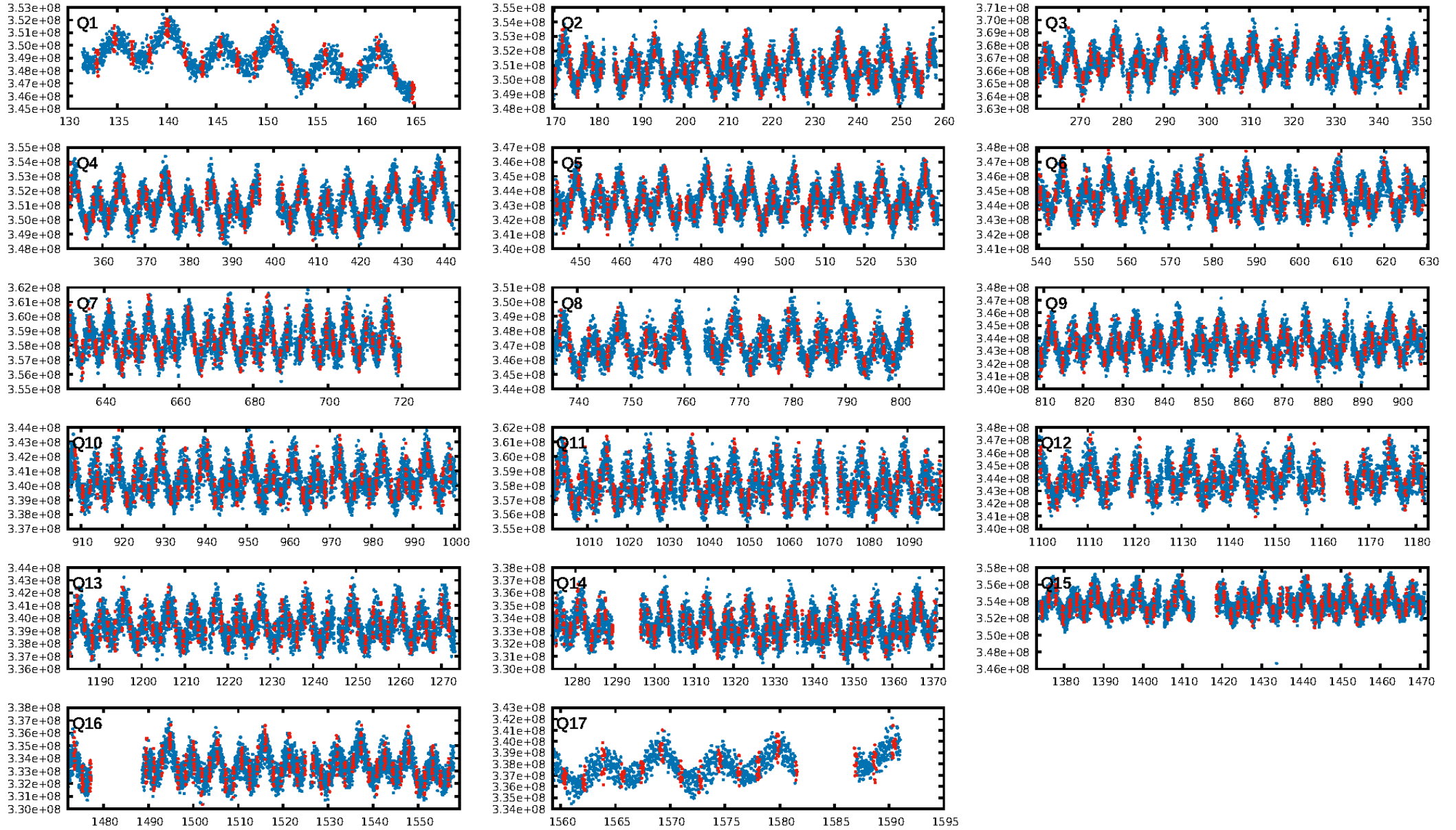
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.09e-30
RollingBand-fgt: 1.00 [727/728]
GhostDiagnostic-chr: 0.7992
Centroid-sig: 32.6%
Centroid-so: 0.201 arcsec [1.42 σ]
OotOffset-rm: 0.100 arcsec [0.35 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.098 arcsec [0.41 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 1.00 [17/17]

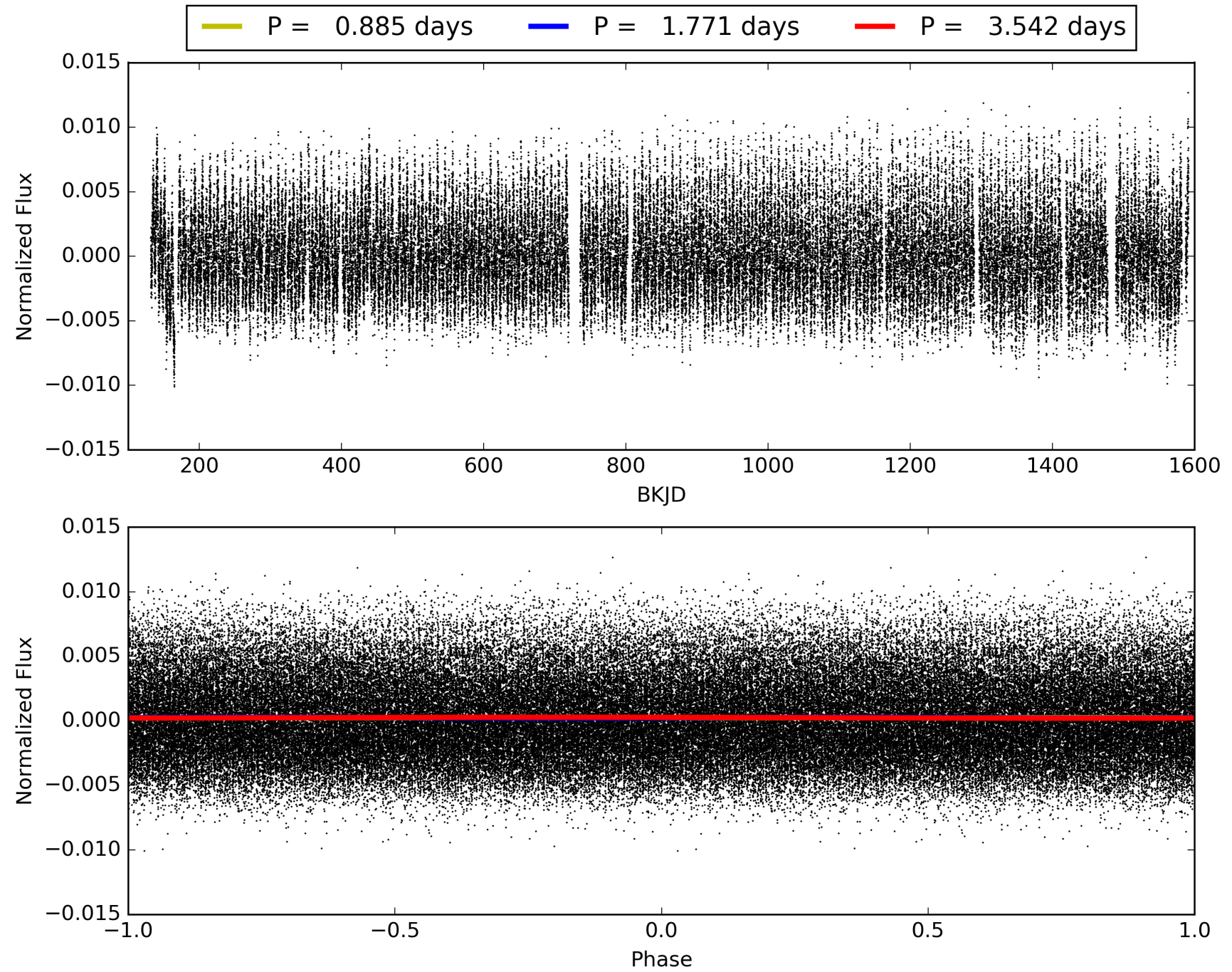
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:50:53 Z

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

TCE 008639063-02, PDC Light Curves

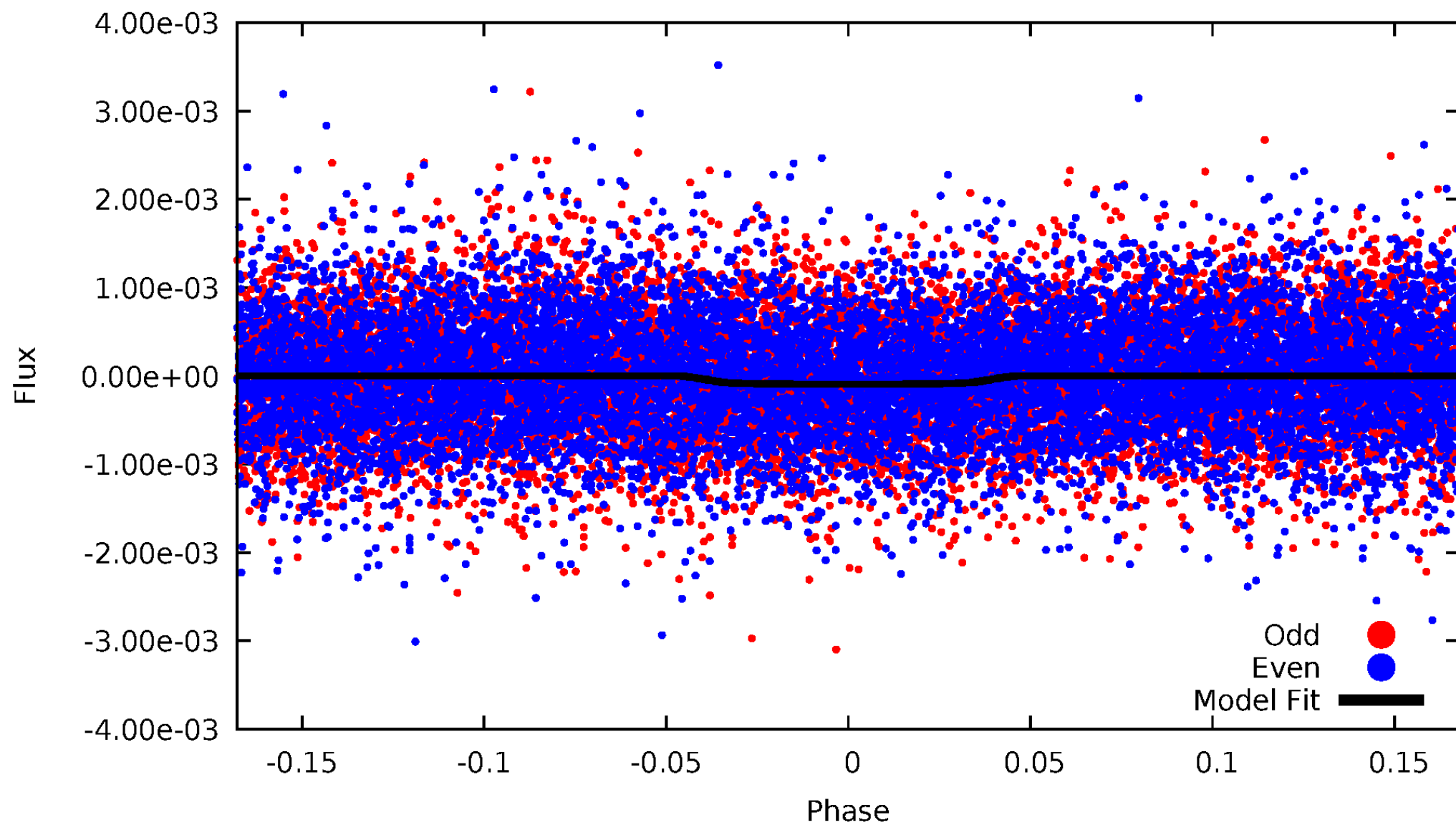


TCE 008639063-02



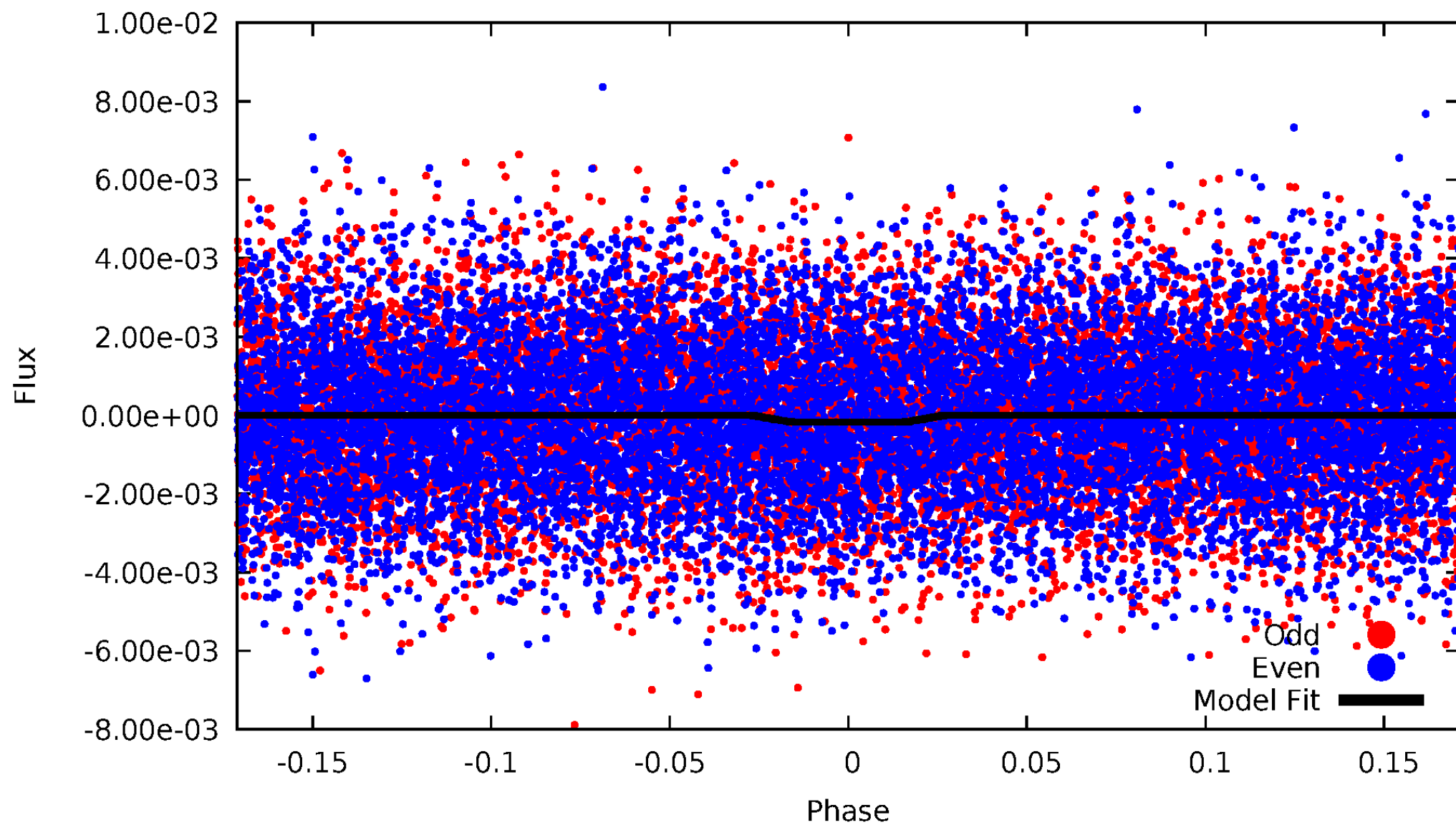
DV Odd/Even

TCE 008639063-02



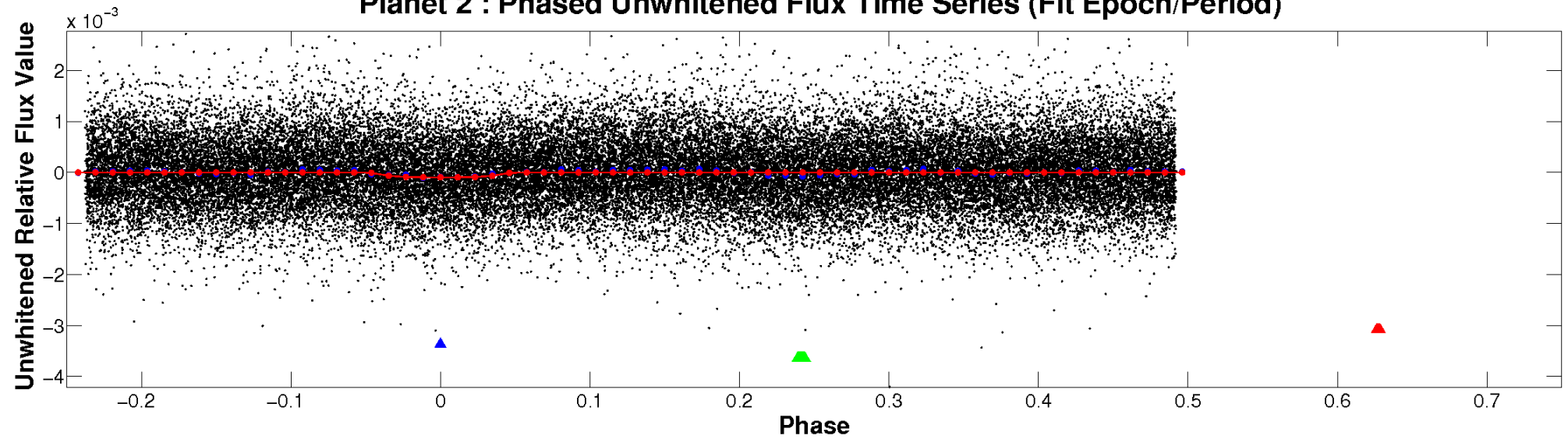
ALT Odd/Even

TCE 008639063-02

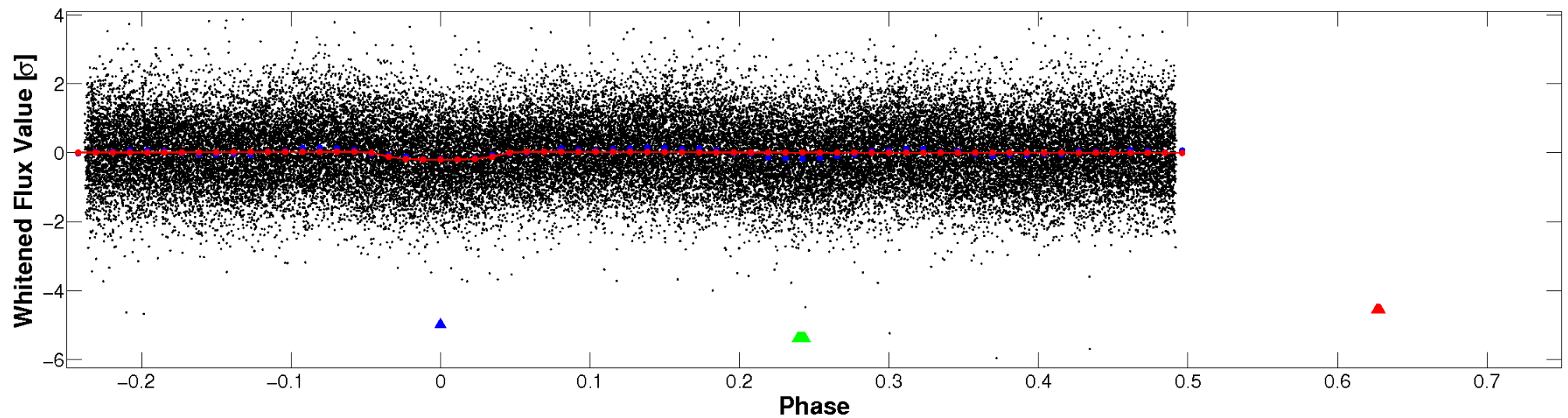


Non-Whitened Vs. Whitened Light Curve

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

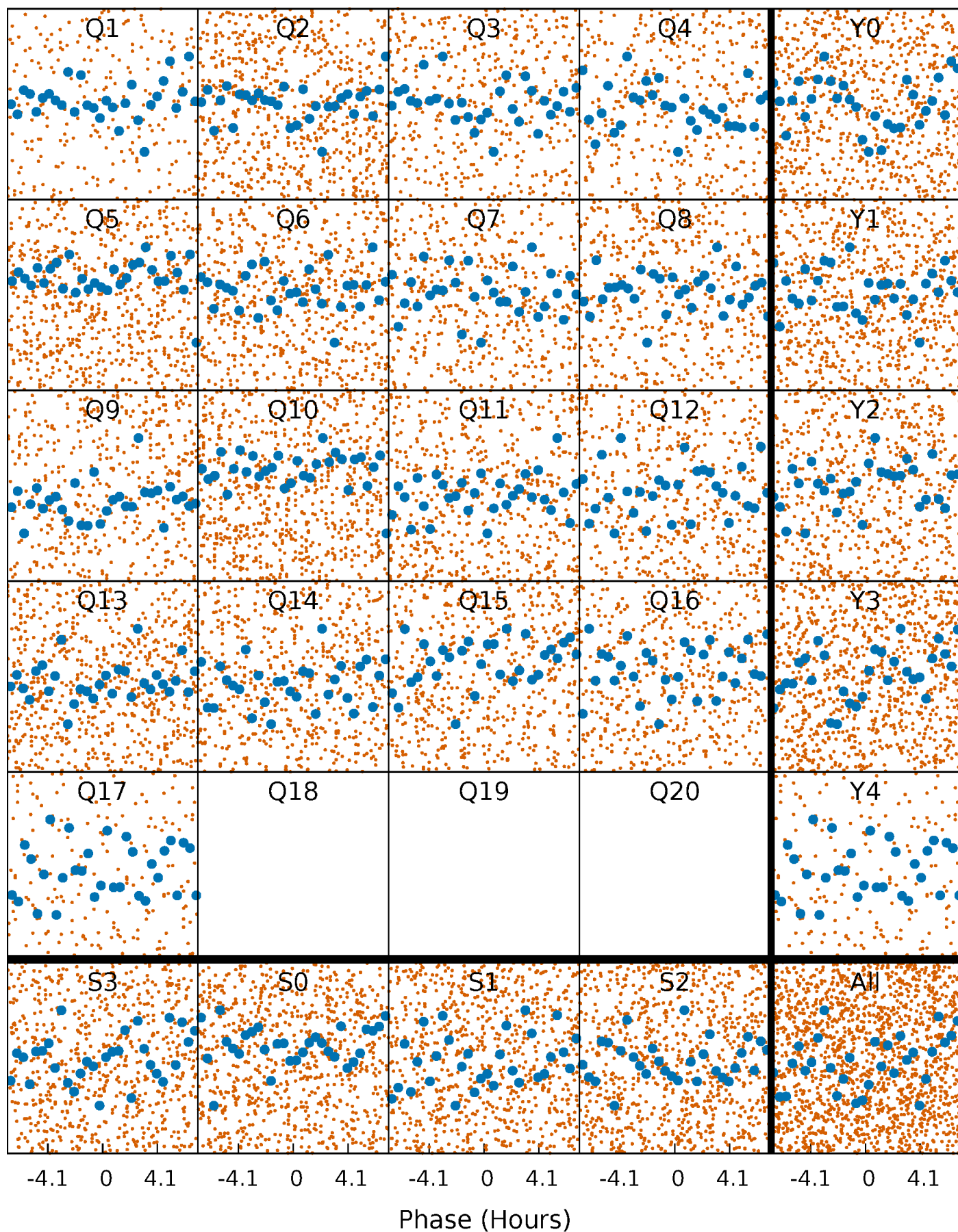


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



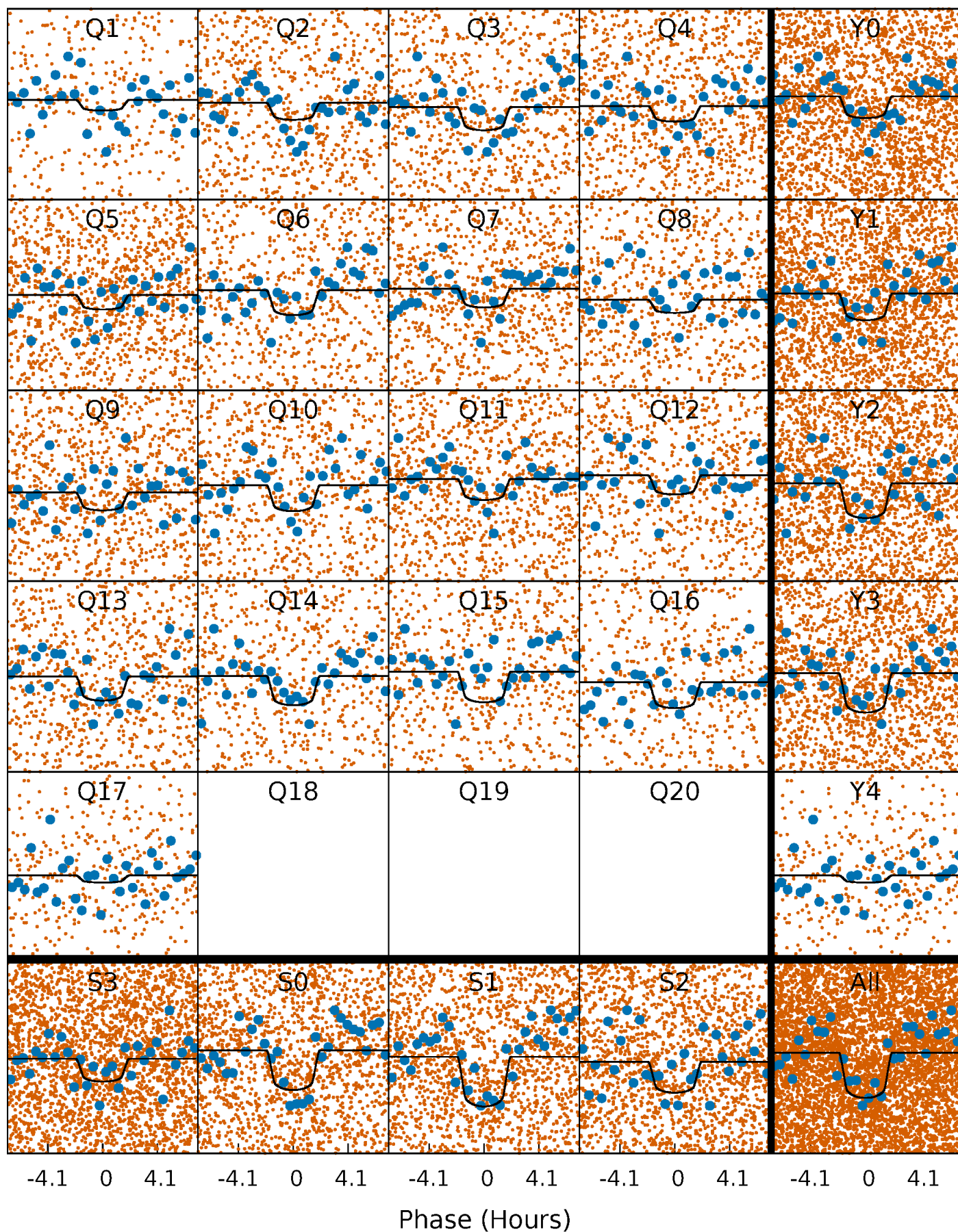
PDC Quarter-Phased Transit Curves

TCE 008639063-02 P= 1.770956 Days $T_0=132.951454$ (BKJD)



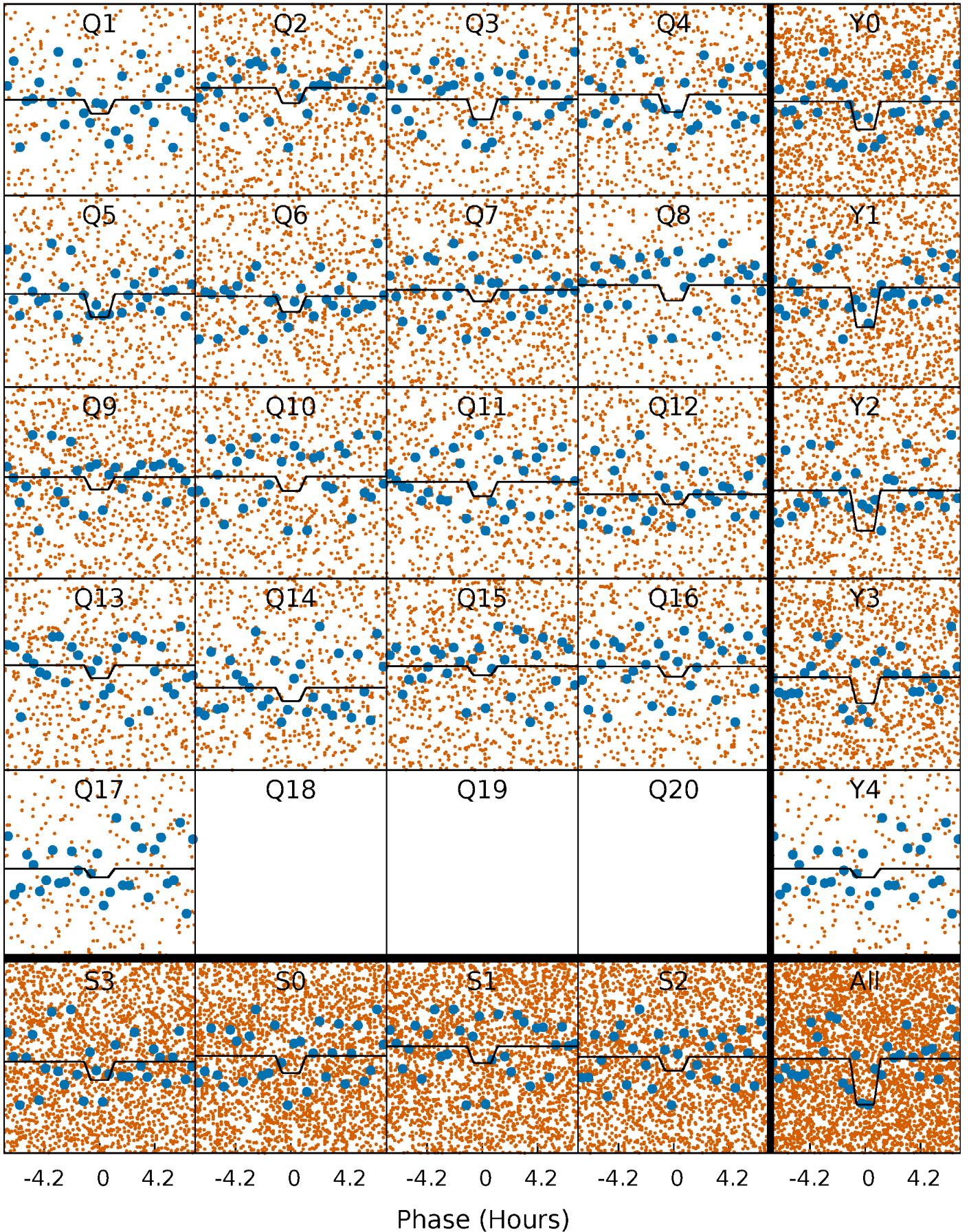
DV Quarter-Phased Transit Curves

TCE 008639063-02 P= 1.770956 Days $T_0=132.951454$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

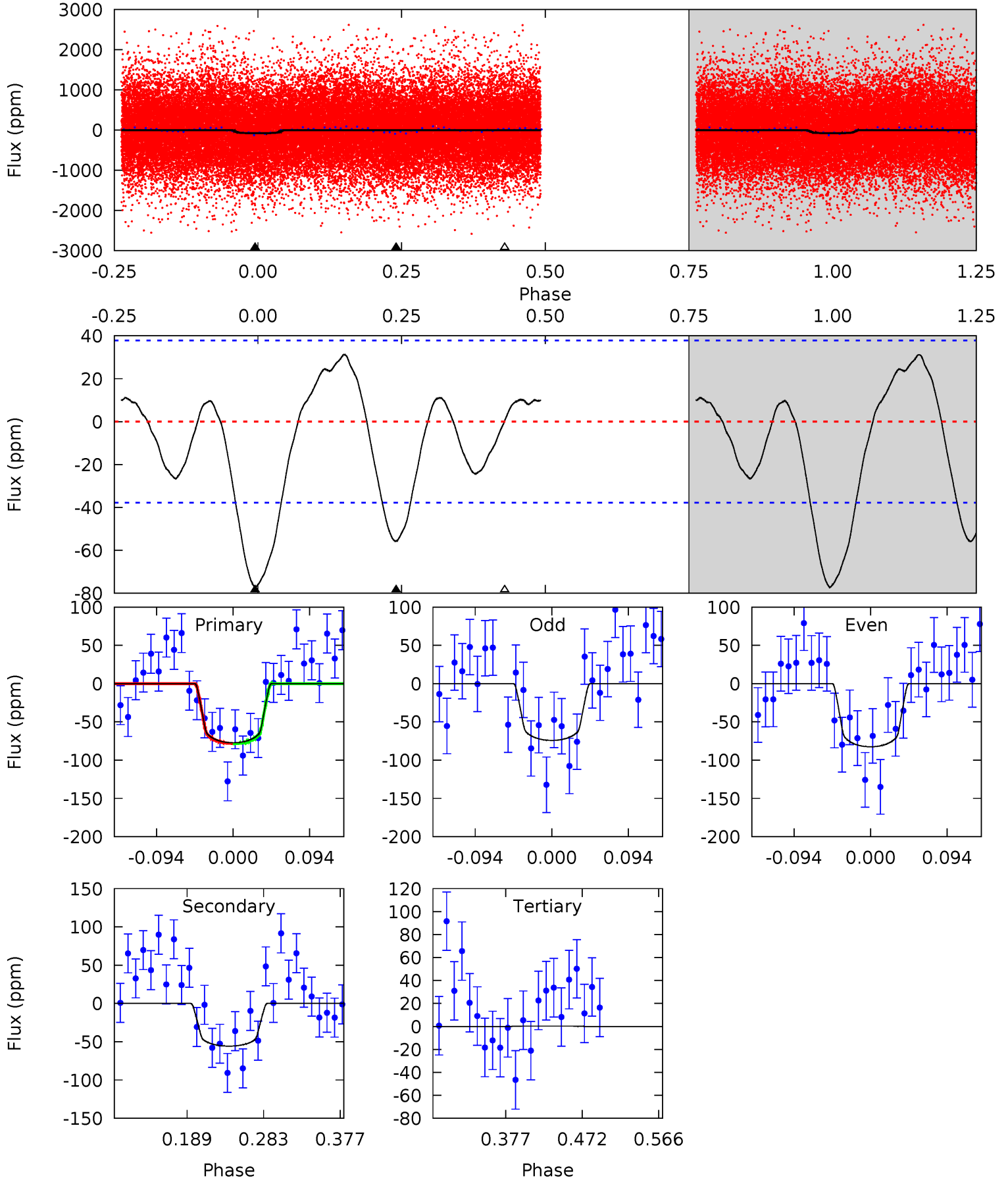
TCE 008639063-02 P= 1.770915 Days $T_0=132.944807$ (BKJD)



DV Model-Shift Uniqueness Test

008639063-02, P = 1.770956 Days, E = 131.180498 Days

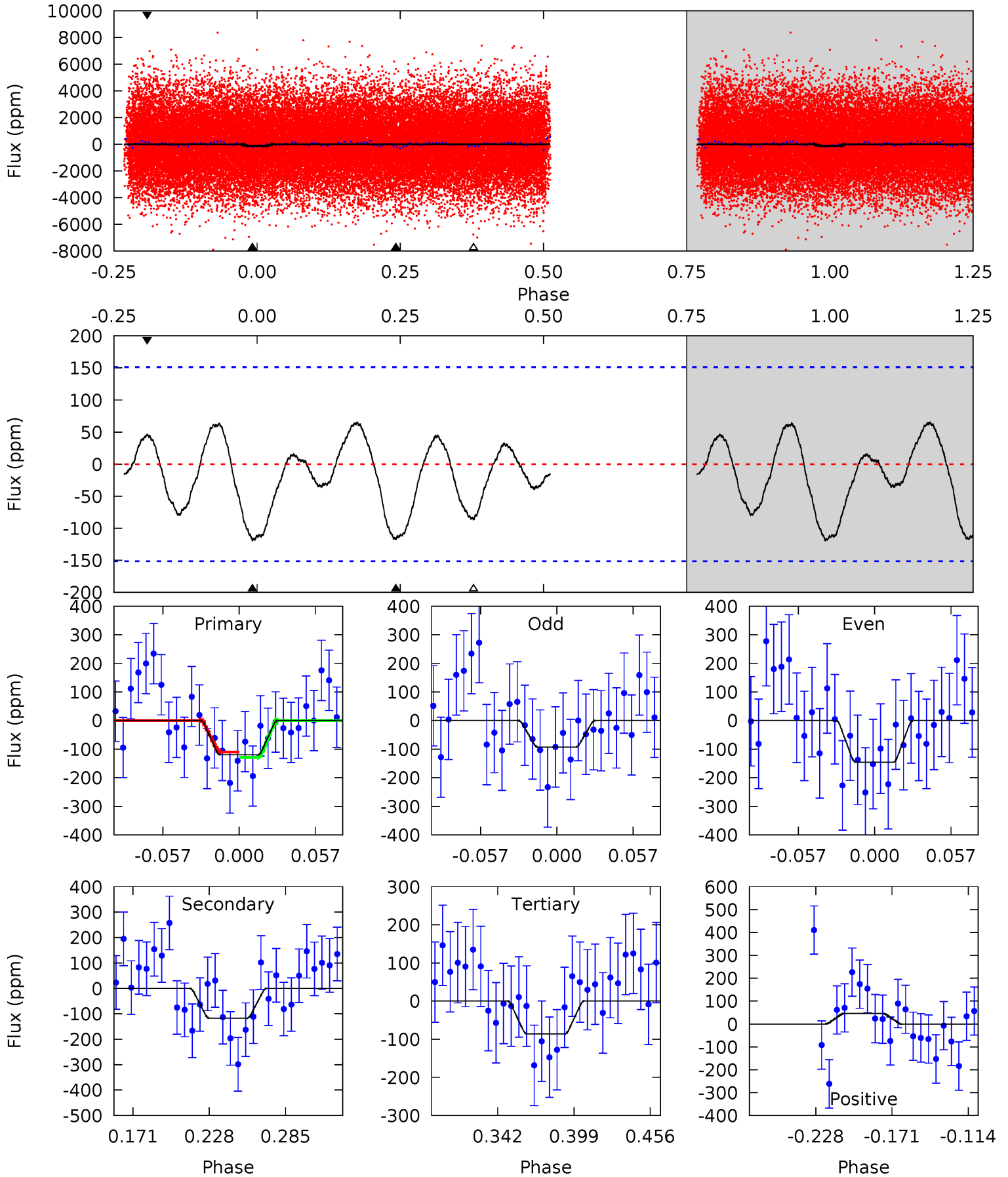
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.35	6.75	-0.03	0	4.58	1.67	1.91	9.39	9.35	6.78	6.75	0.51	1.07	0.29	0.02



Alt Model-Shift Uniqueness Test

008639063-02, P = 1.770915 Days, E = 131.173892 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.69	3.62	2.67	1.43	4.68	1.90	1.24	1.02	2.27	0.95	2.19	0.81	0.97	0.35	0.28



Stellar Parameters For KIC 008639063

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8026^{+222}_{-361}	$3.976^{+0.204}_{-0.136}$	$0.070^{+0.200}_{-0.400}$	$2.383^{+0.516}_{-0.688}$	$1.961^{+0.277}_{-0.381}$	$0.204^{+0.262}_{-0.081}$
	+3%/-4%	+5%/-3%	+286%/-571%	+22%/-29%	+14%/-19%	+129%/-39%
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 008639063-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-56 ± 8	$2.65^{+1.36}_{-1.27}$	4009^{+257}_{-317}	6517^{+3145}_{-1255}	$5.607^{+13.453}_{-3.194}$
Alt.	-117 ± 32	$3.50^{+1.37}_{-1.30}$	3999^{+276}_{-312}	6879^{+2236}_{-1270}	$6.871^{+10.205}_{-3.654}$

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

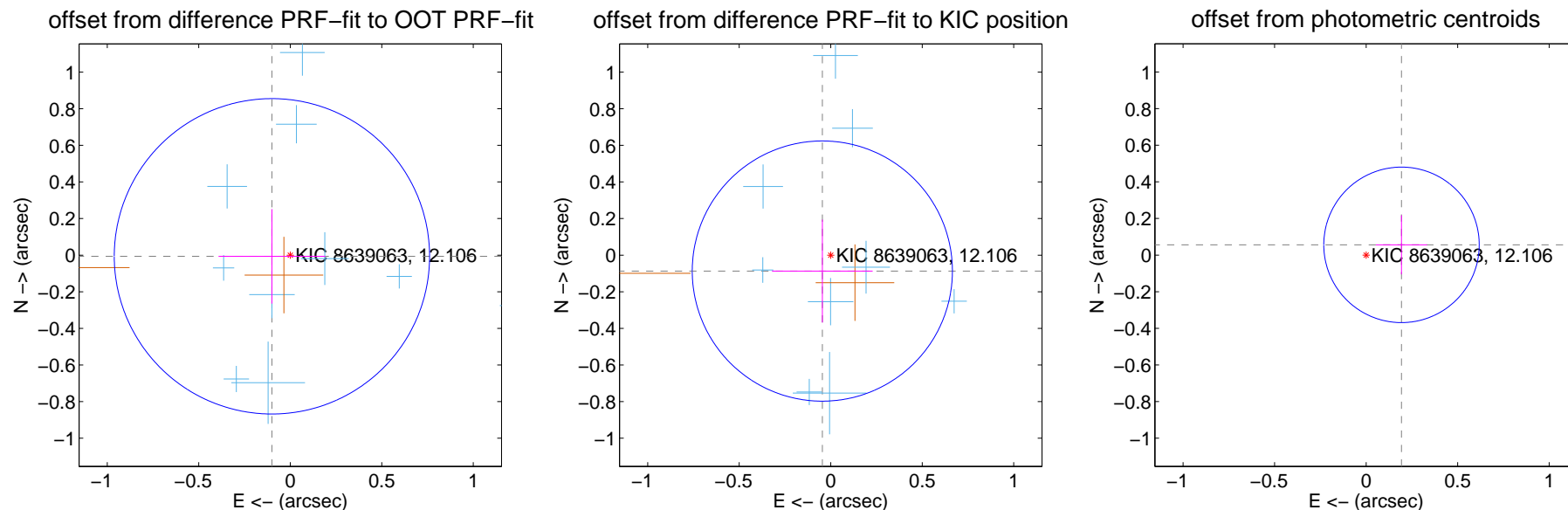
DV Centroid Data

Supplemental centroid analysis for 008639063-02. Kepler magnitude: 12.11. Transit SNR 12.51

There are 13 quarters with good PRF difference image offsets

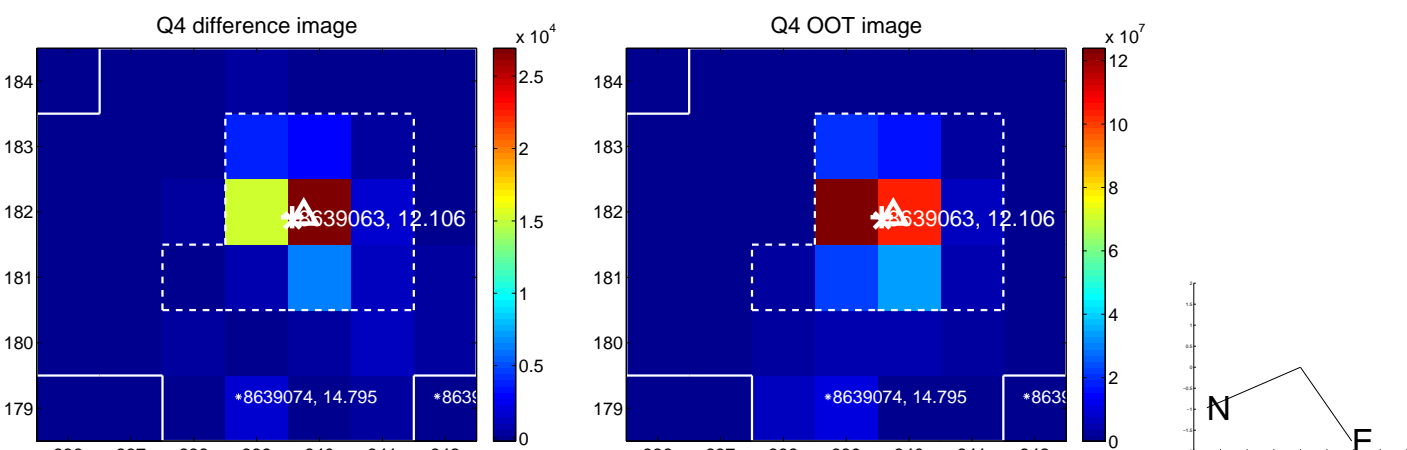
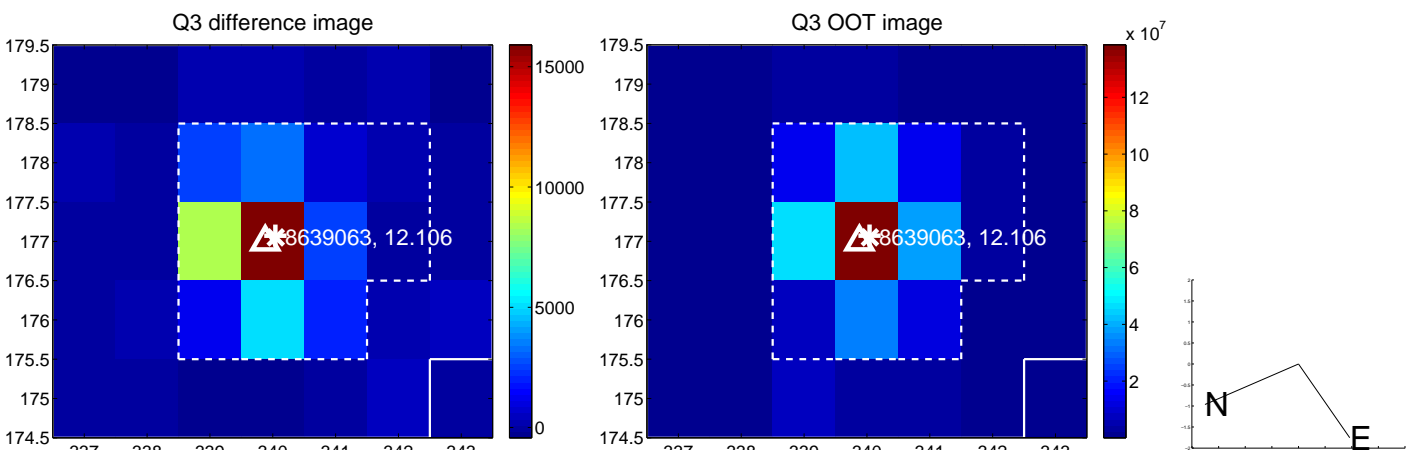
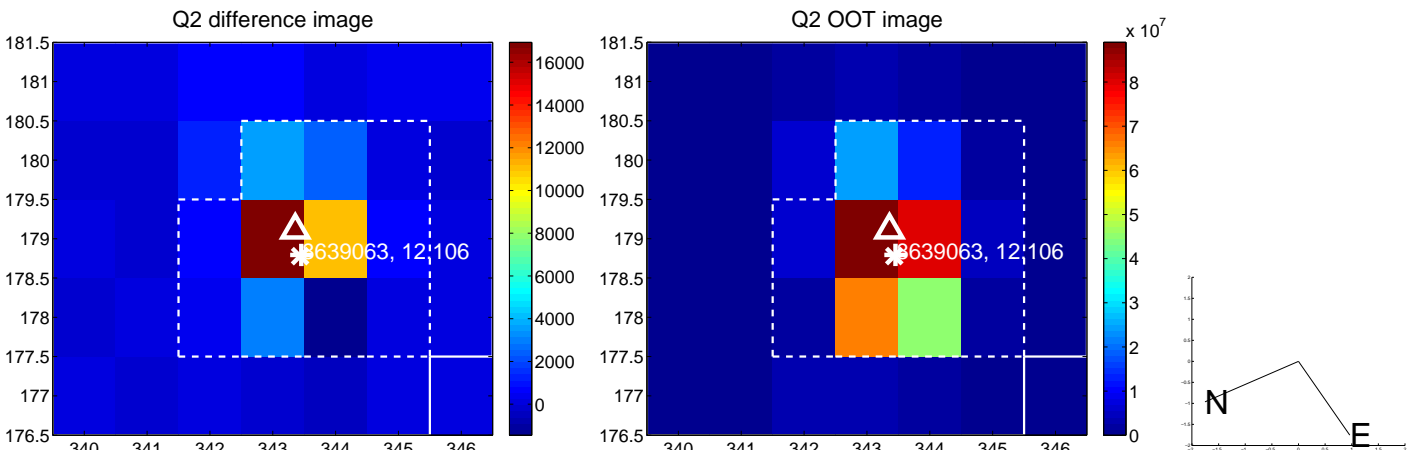
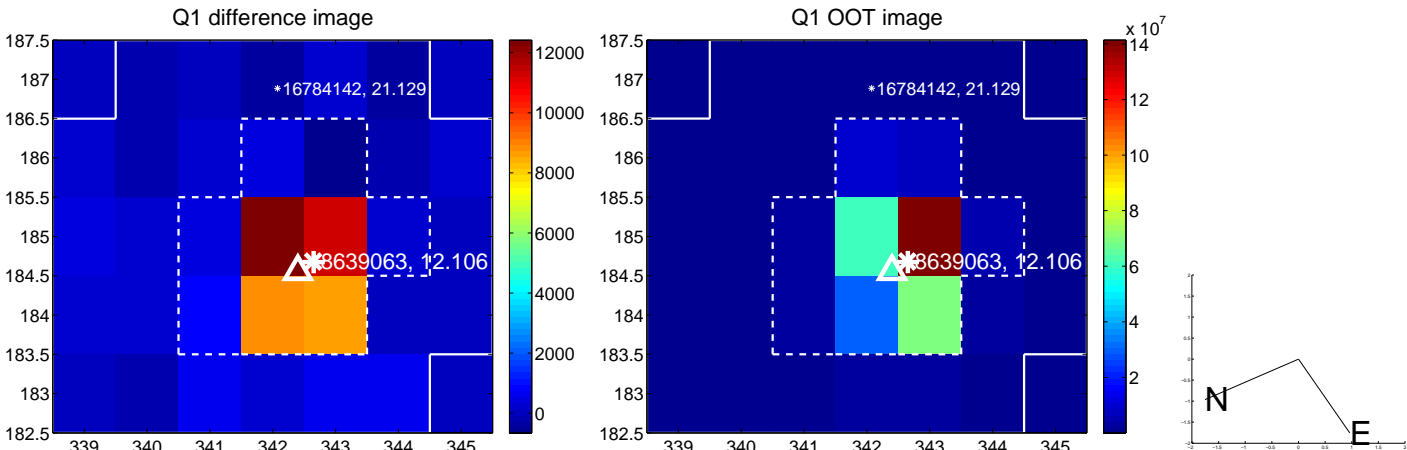
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.100 ± 0.287	0.35	0.100 ± 0.292	-0.006 ± 0.258
PRF-fit source offset from KIC position	0.098 ± 0.237	0.41	0.046 ± 0.275	-0.087 ± 0.281
photometric centroid source offset	0.20 ± 0.14	1.42	-0.19 ± 0.14	0.06 ± 0.16

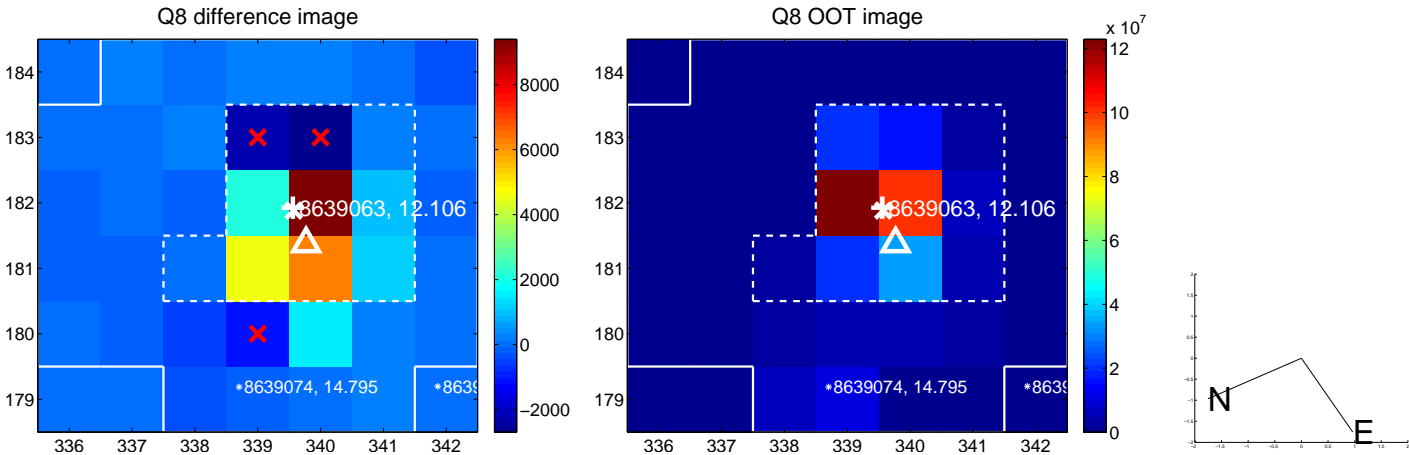
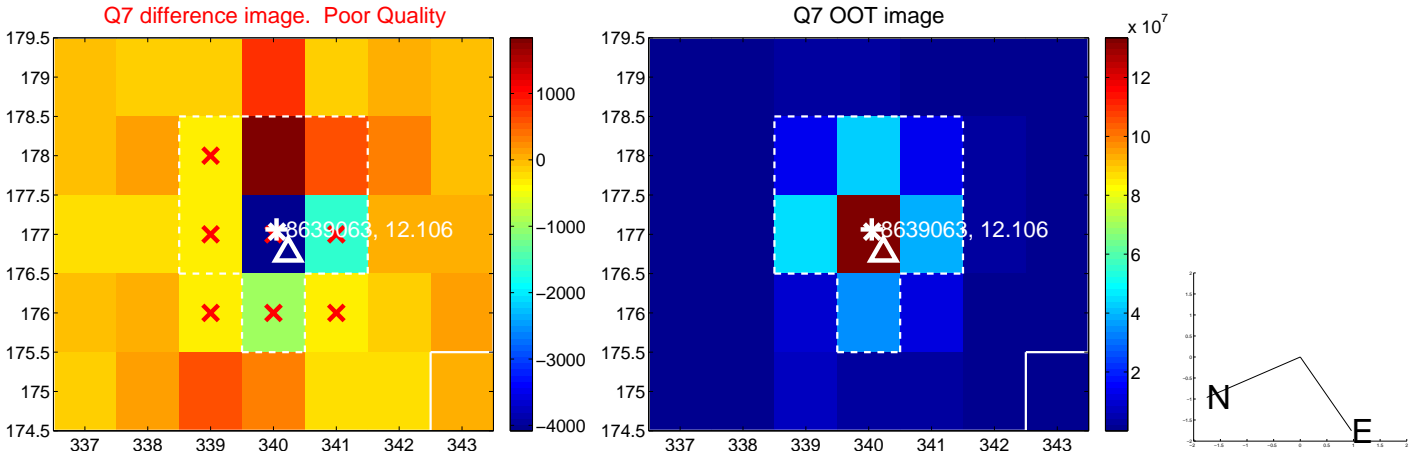
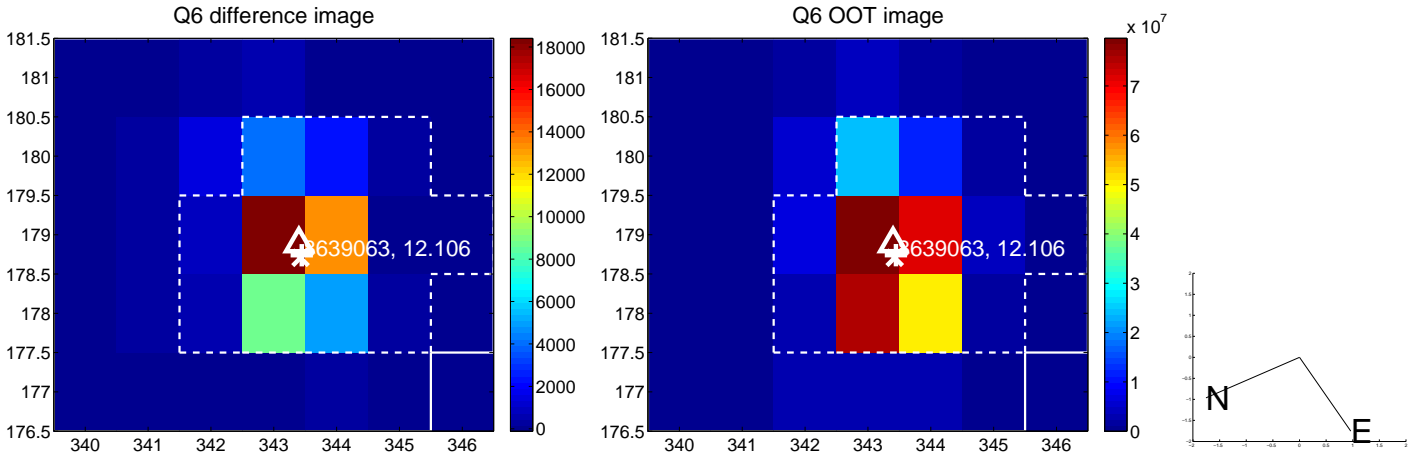
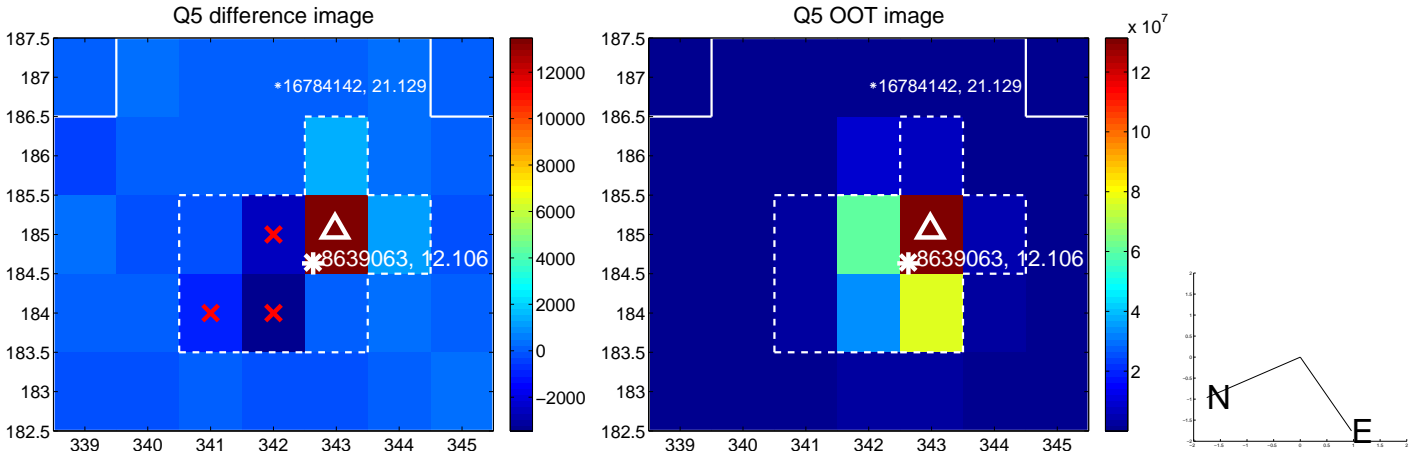


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

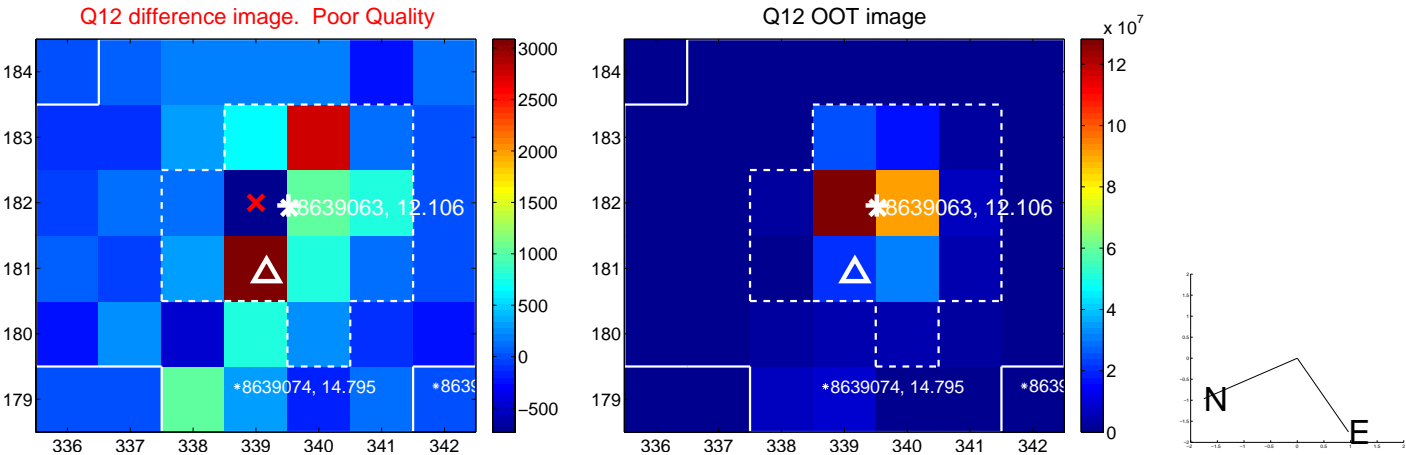
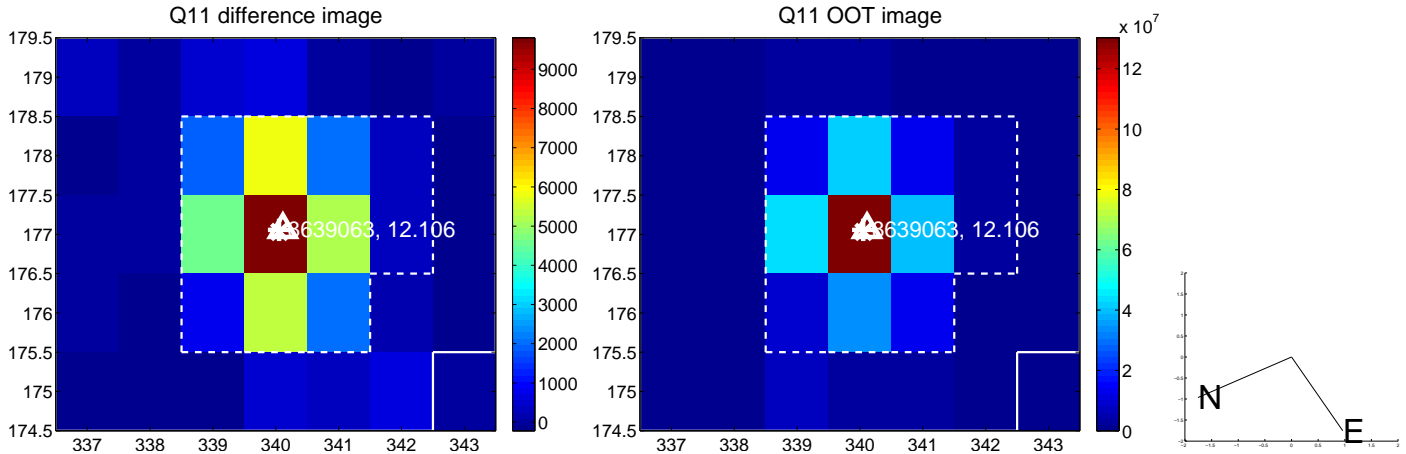
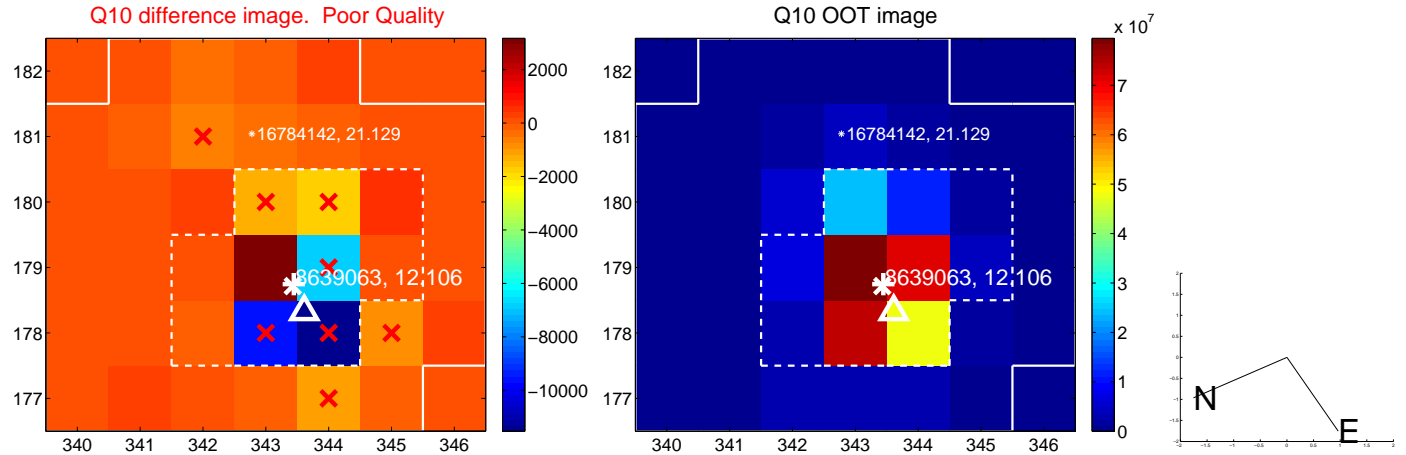
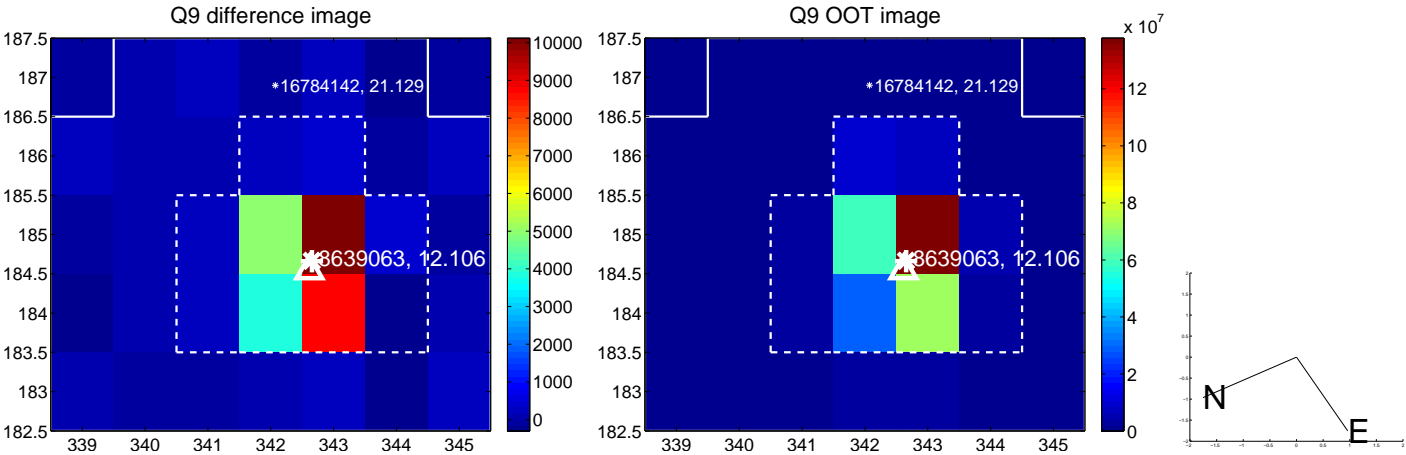
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



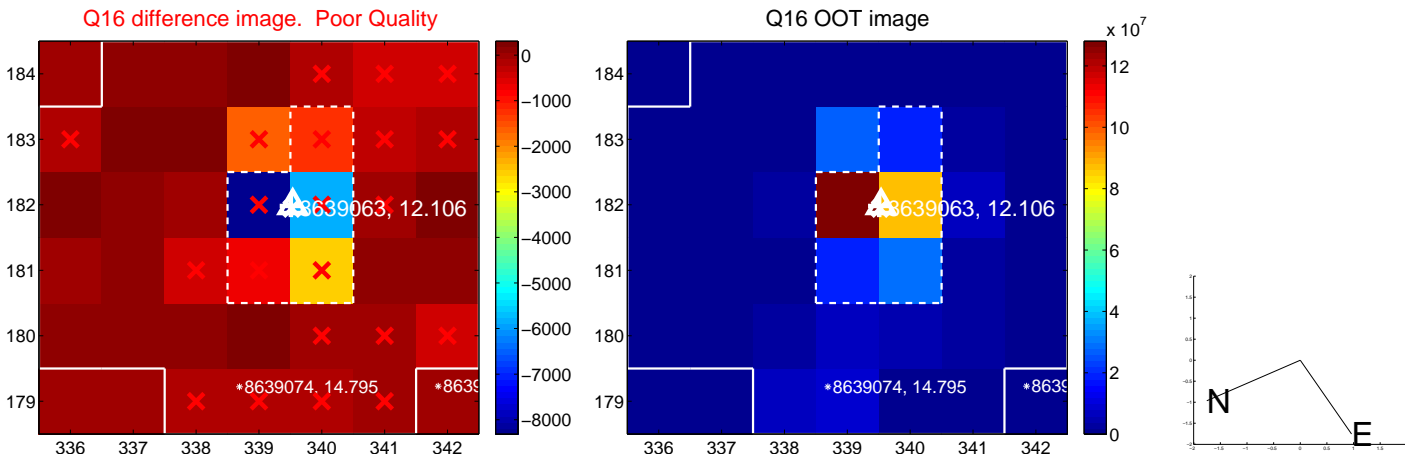
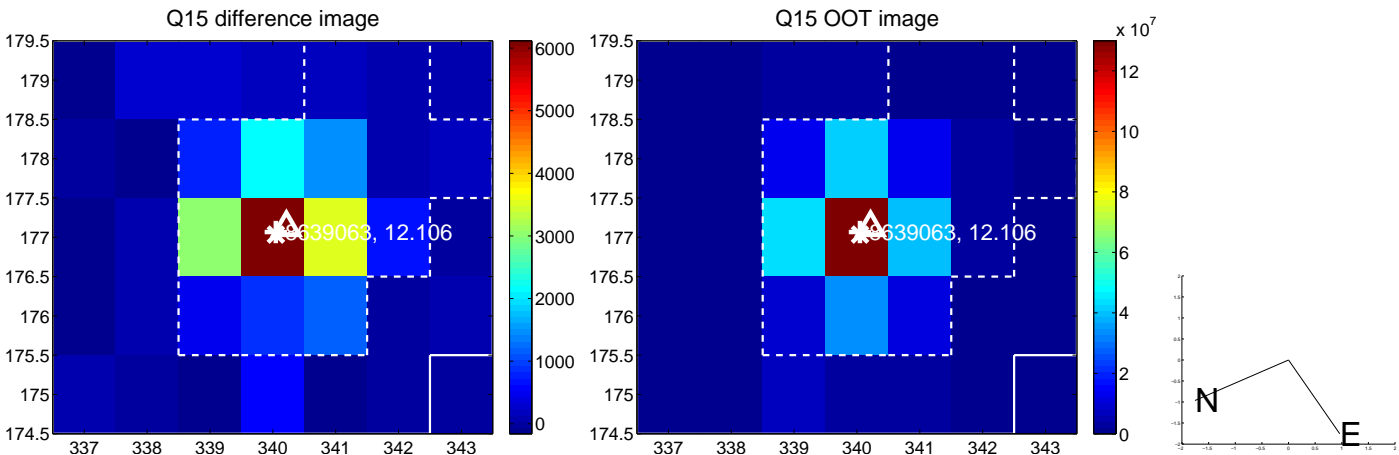
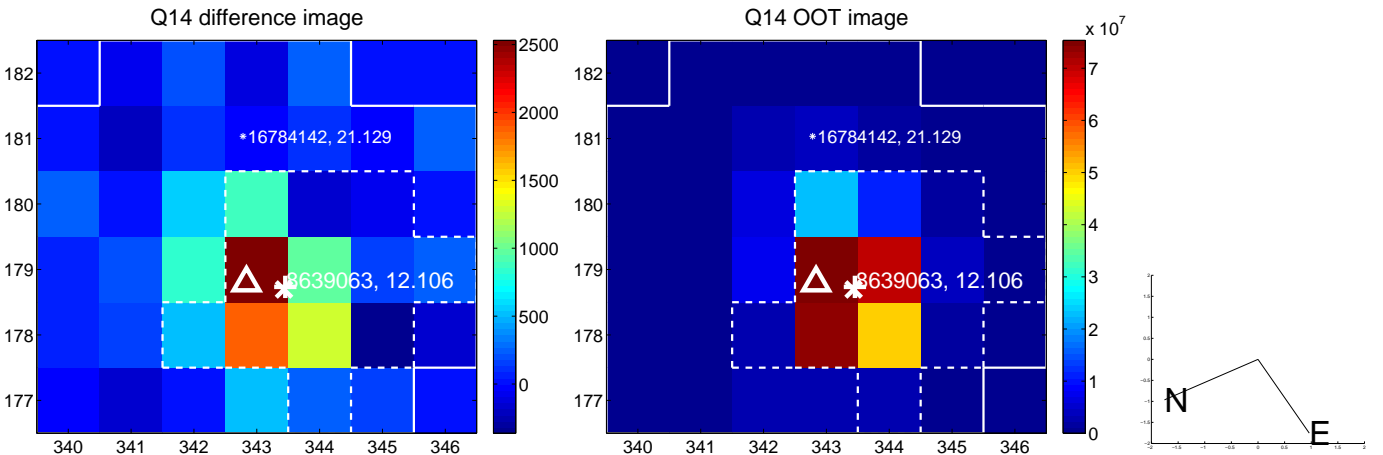
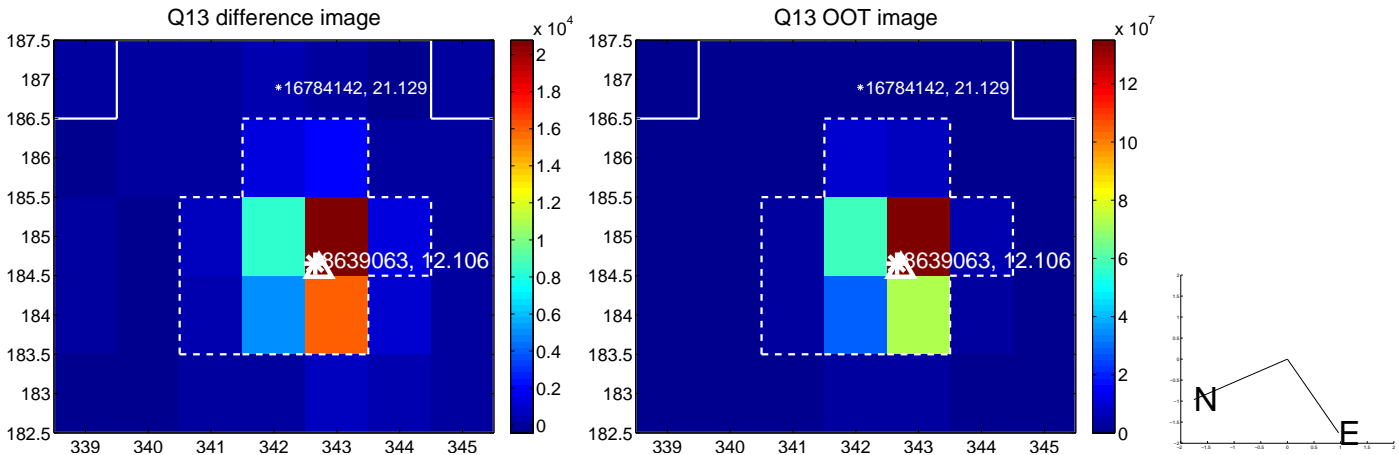
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



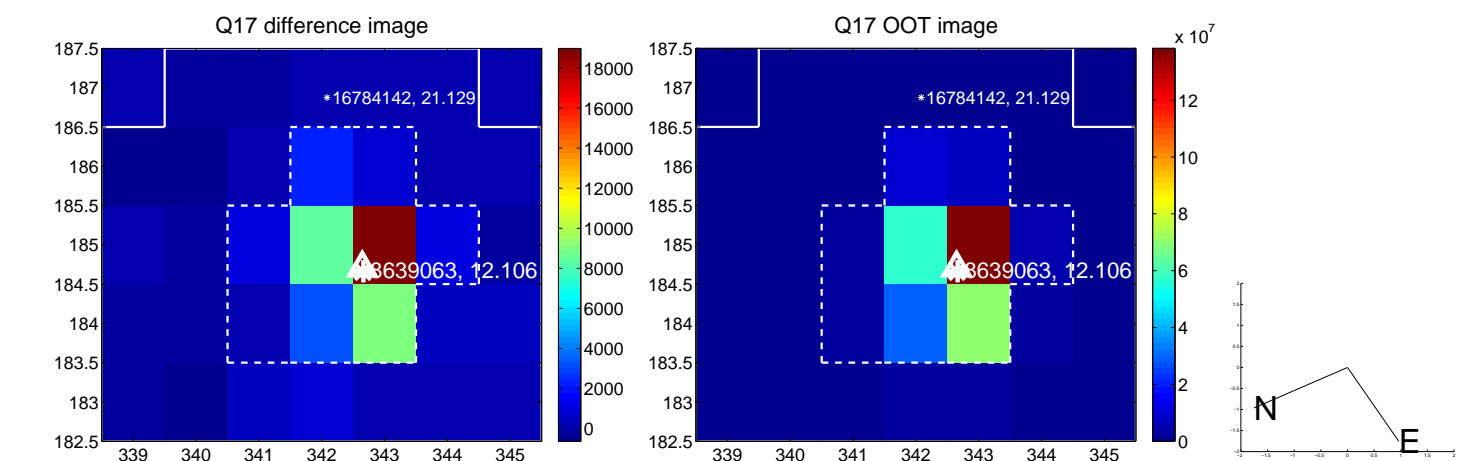
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



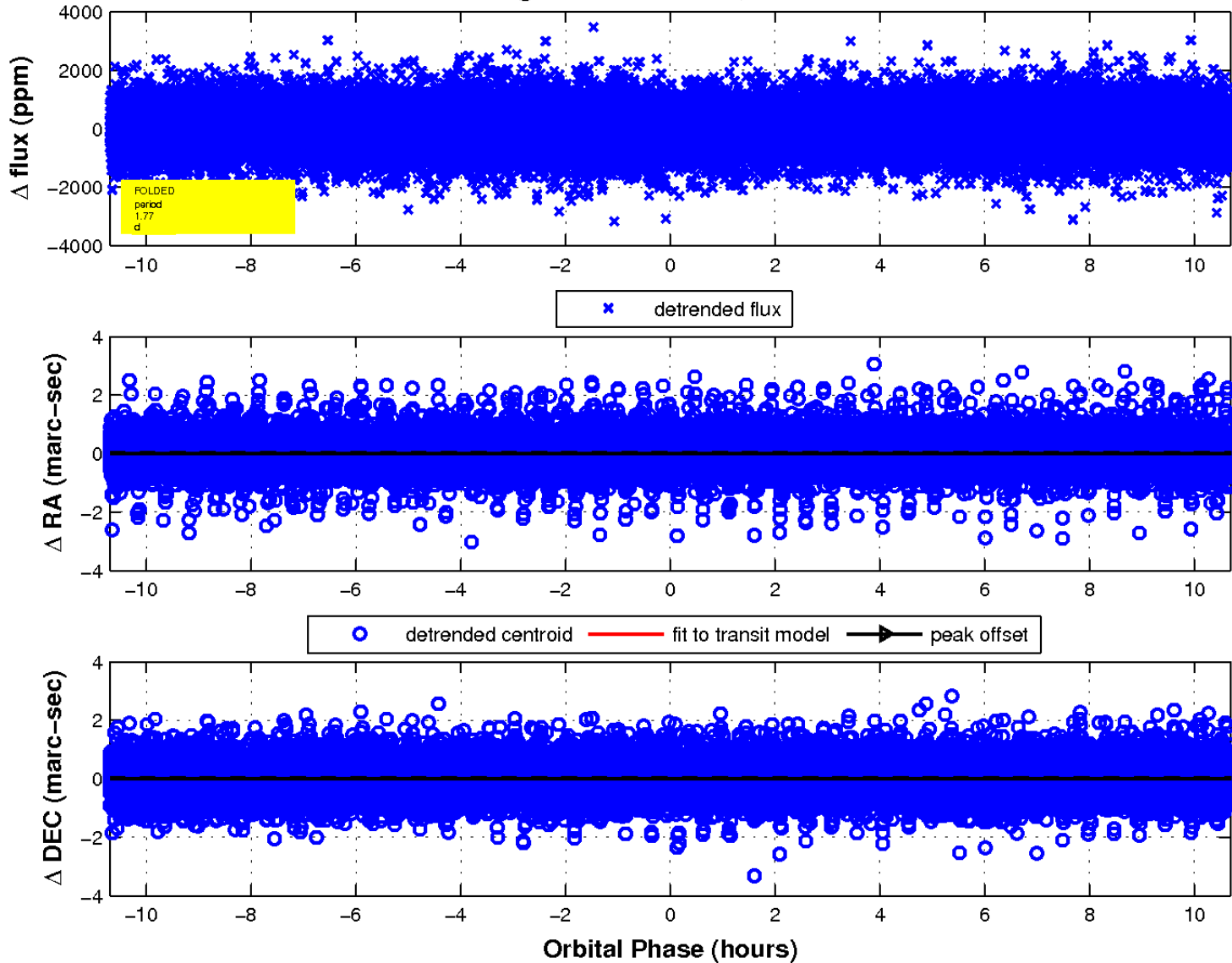
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

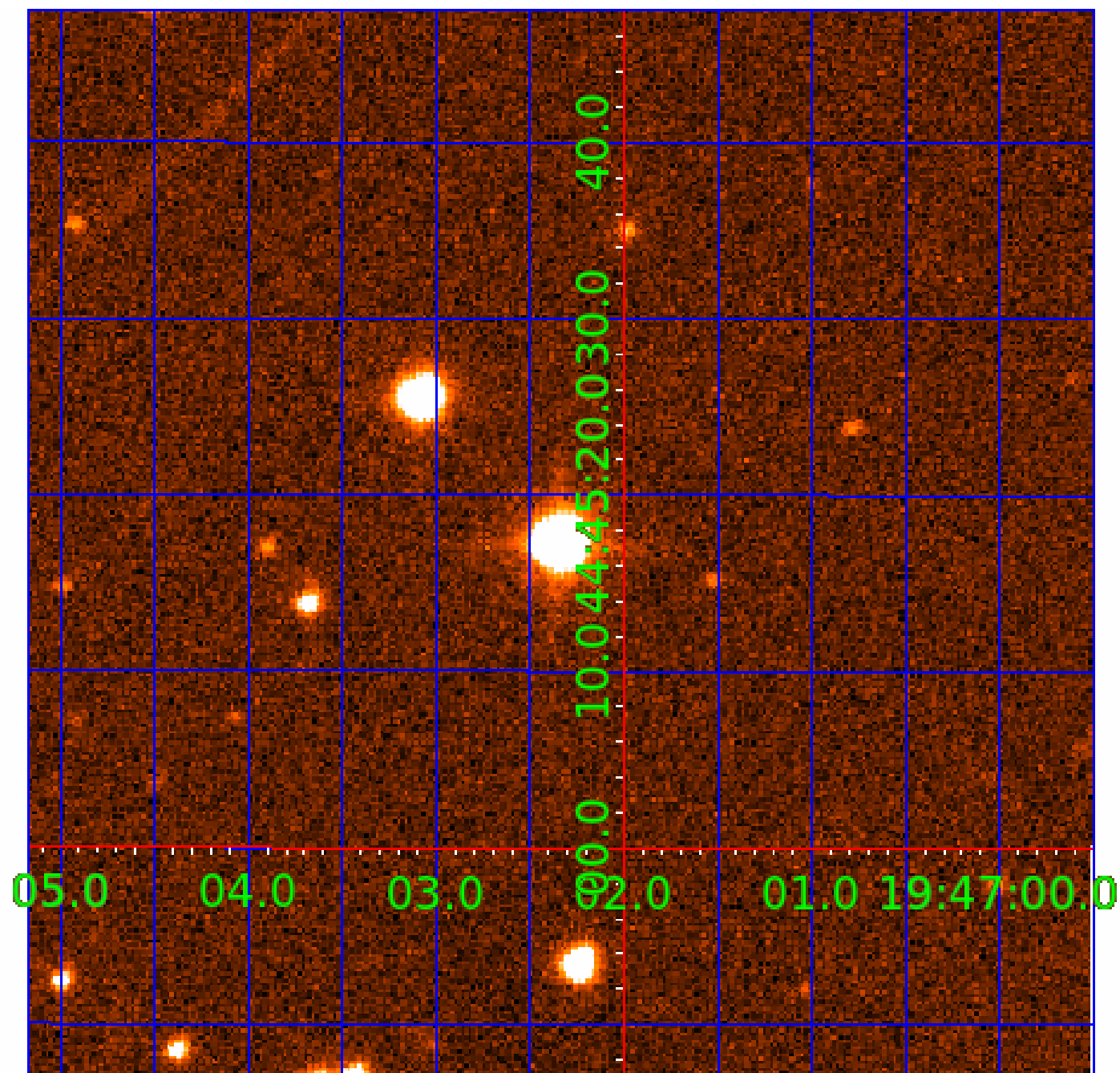


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 008639063

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})
008639063-01	OBS	No	1.770951	132.293477	106.1	3.682	13.9	14.8	2.38	8026	2.80	16419.69
008639063-02	OBS	No	1.770956	132.951454	94.4	3.565	11.2	12.5	2.38	8026	2.69	16419.63
008639063-03	OBS	No	1.770967	131.603498	71.0	3.192	8.9	8.7	2.38	8026	2.29	16419.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008639063-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008639063-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008639063-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_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.

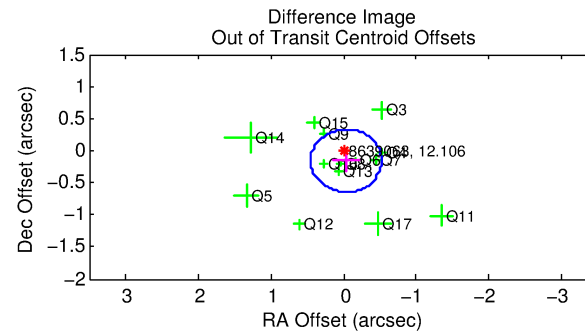
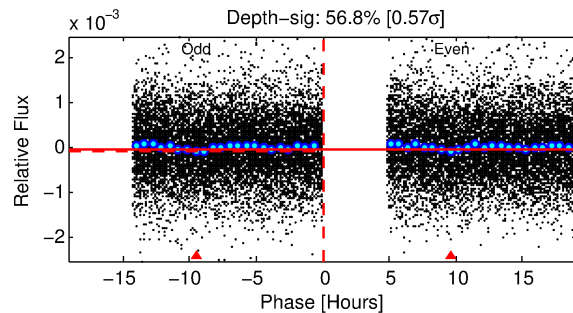
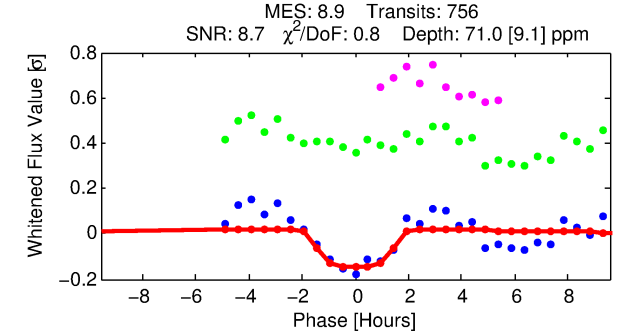
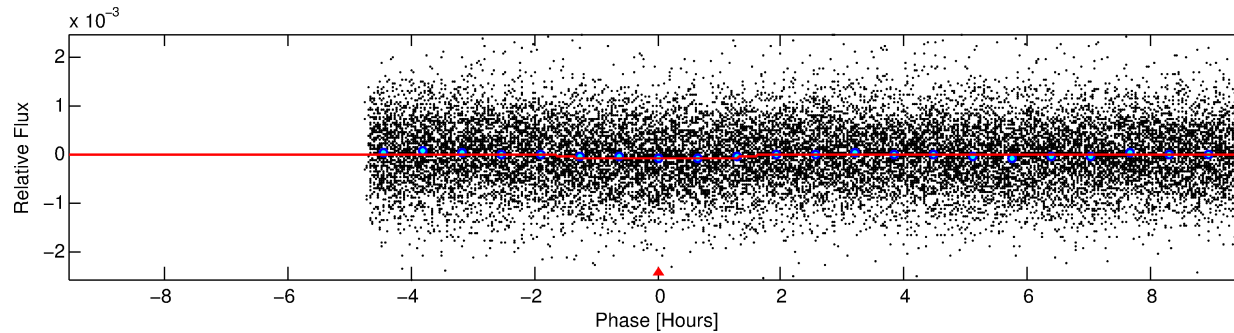
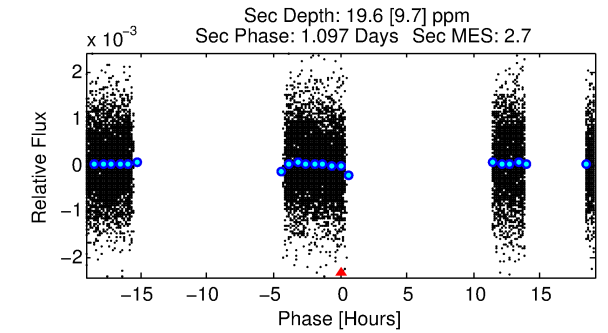
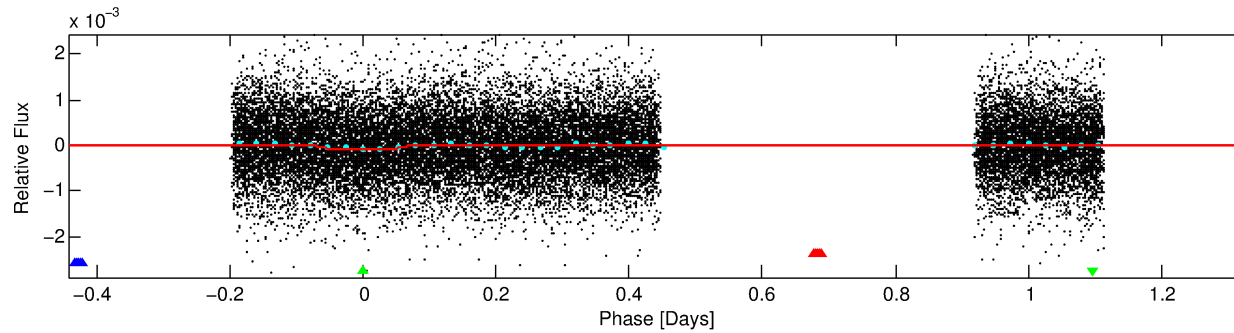
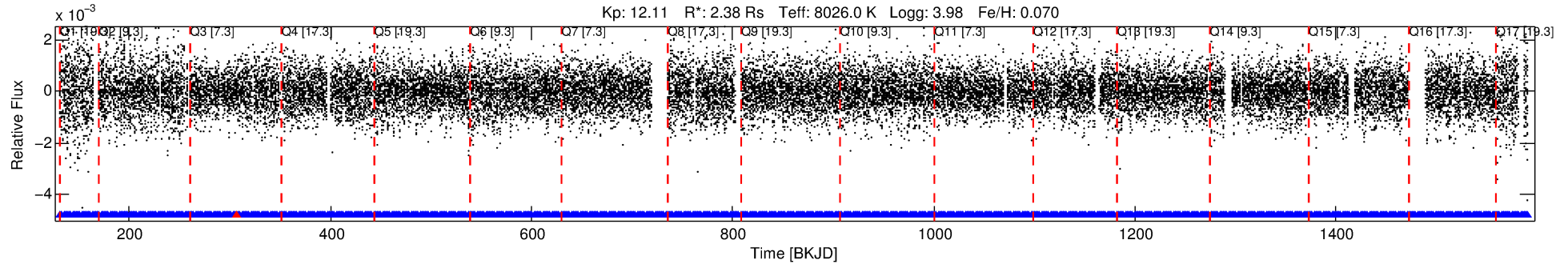
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008639063-03

No Significant Match Found

DV One-Page Summary

KIC: 8639063 Candidate: 3 of 3 Period: 1.771 d



DV Fit Results:

Period = 1.77097 [0.00002] d
Epoch = 131.6035 [0.0055] BKJD
Rp/R* = 0.0088 [0.0063]
a/R* = 2.36 [8.46]
b = 0.87 [1.25]
Seff = 16419.49 [6719.56]
Teff = 2886 [295] K
Rp = 2.29 [1.76] Re
a = 0.0359 [0.0089] AU
Ag = 2.65 [4.12] [0.40σ]
Teffp = 5692 [2166] K [1.28σ]

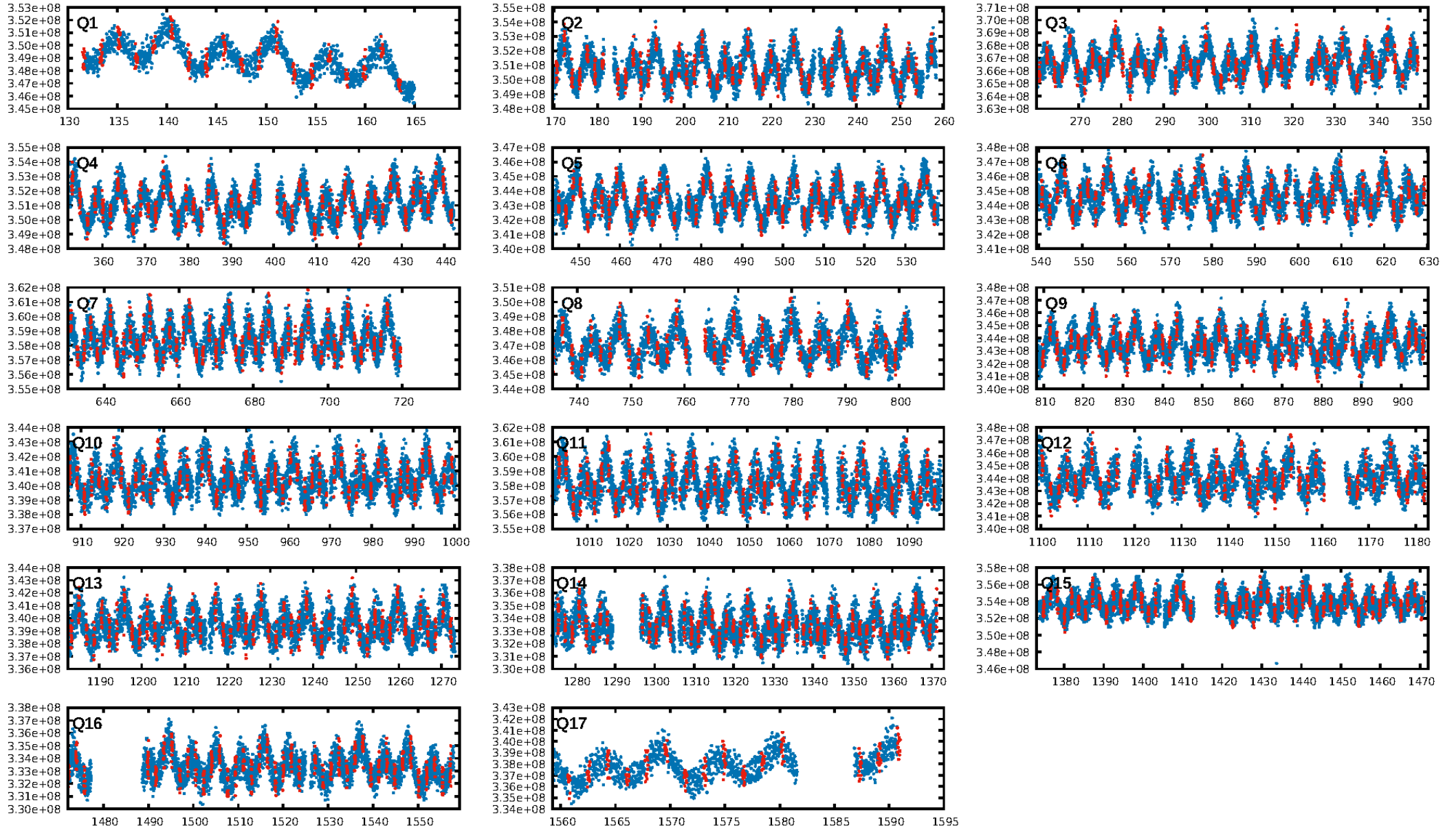
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.70e-20
RollingBand-fgt: 1.00 [721/722]
GhostDiagnostic-chr: 1.018
Centroid-sig: 0.0%
Centroid-so: 0.694 arcsec [3.34σ]
OotOffset-rm: 0.162 arcsec [0.99σ]
KicOffset-rm: 0.256 arcsec [1.40σ]
OotOffset-st: 2/4/4/4 [14]
KicOffset-st: 2/4/4/4 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 1.00 [17/17]

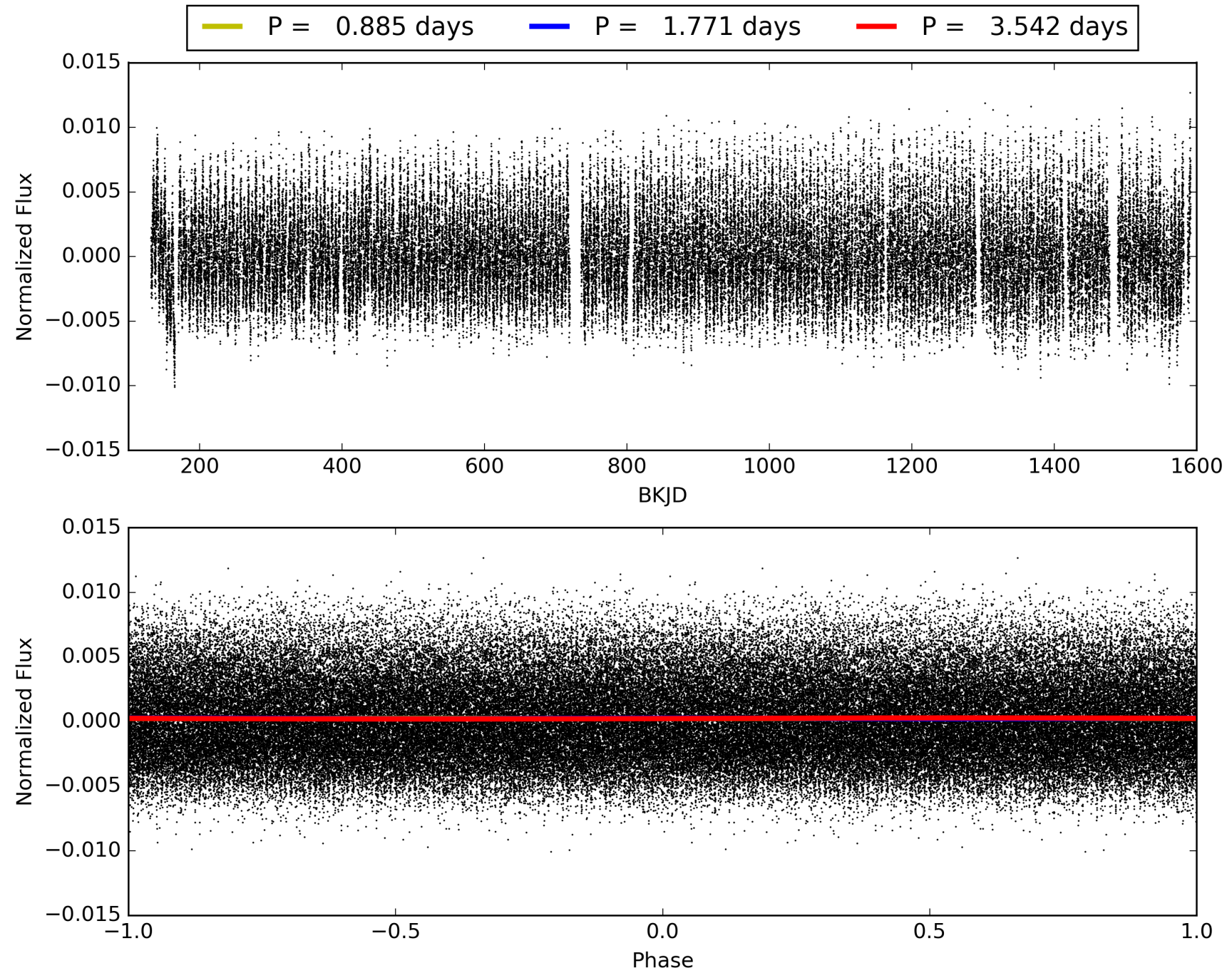
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:51:07 Z

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

TCE 008639063-03, PDC Light Curves

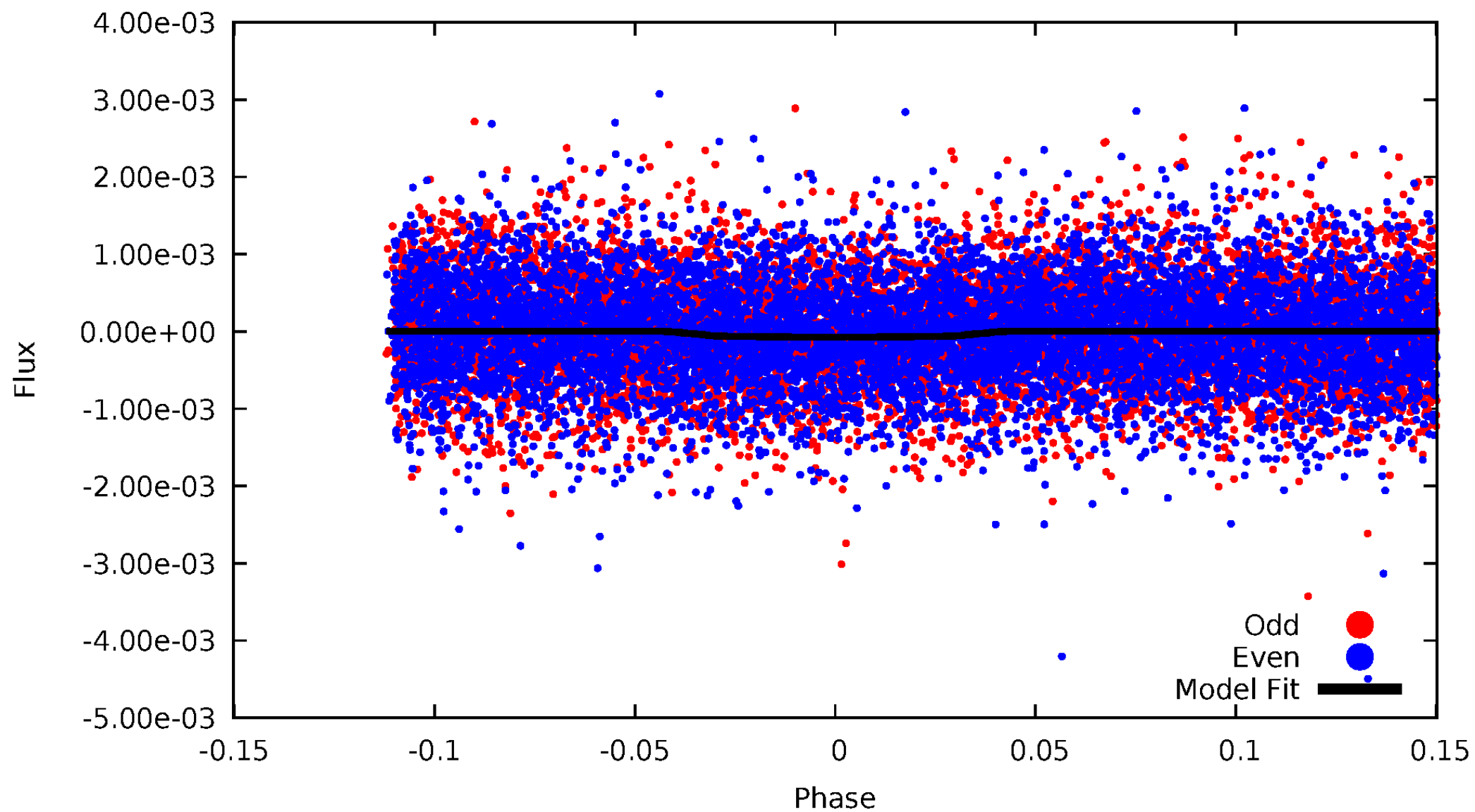


TCE 008639063-03



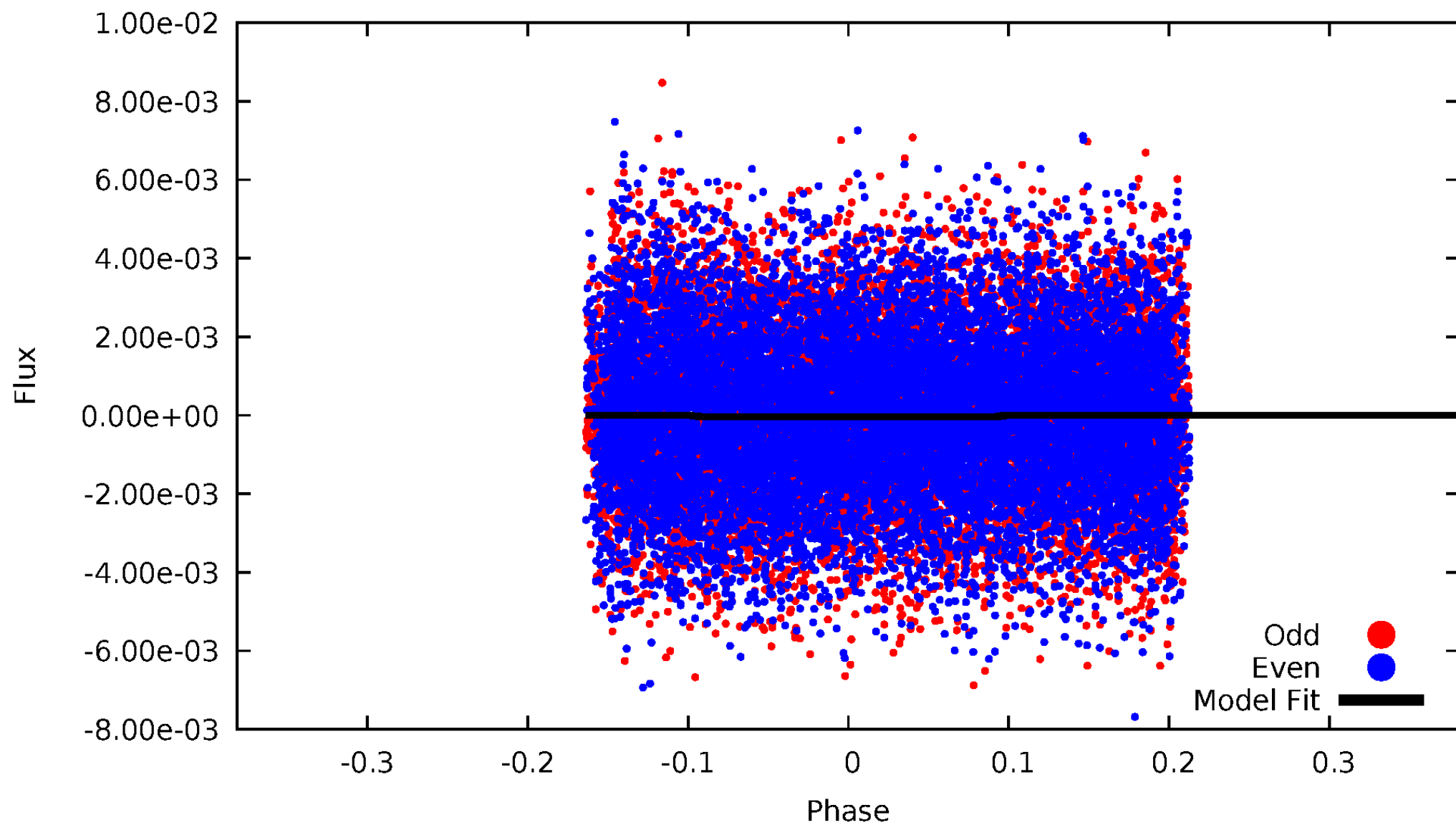
DV Odd/Even

TCE 008639063-03

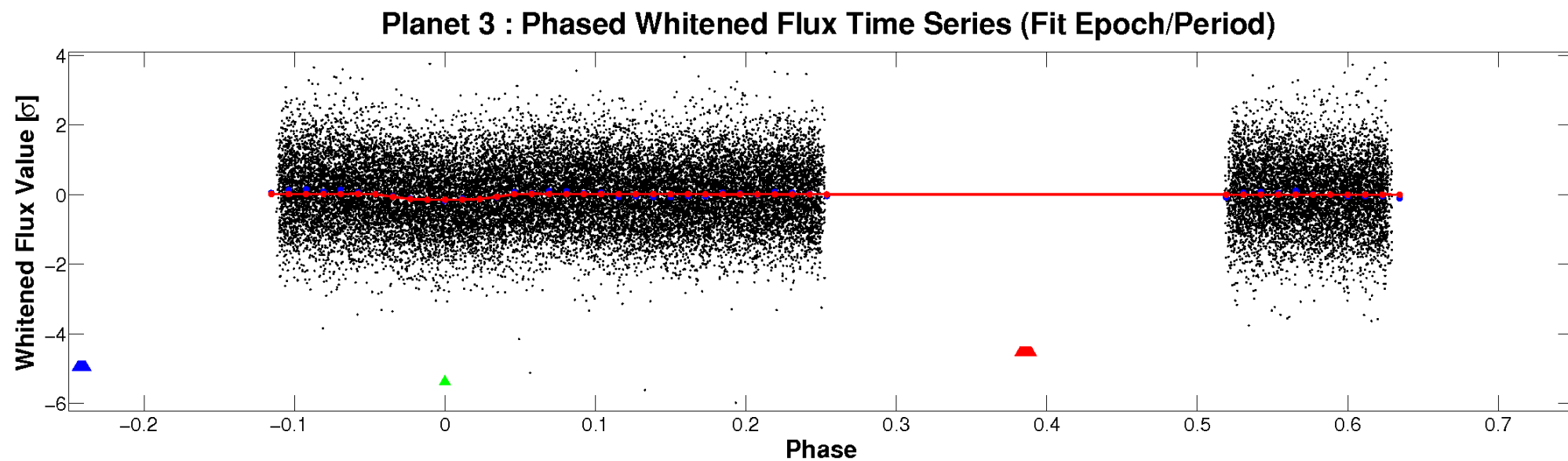
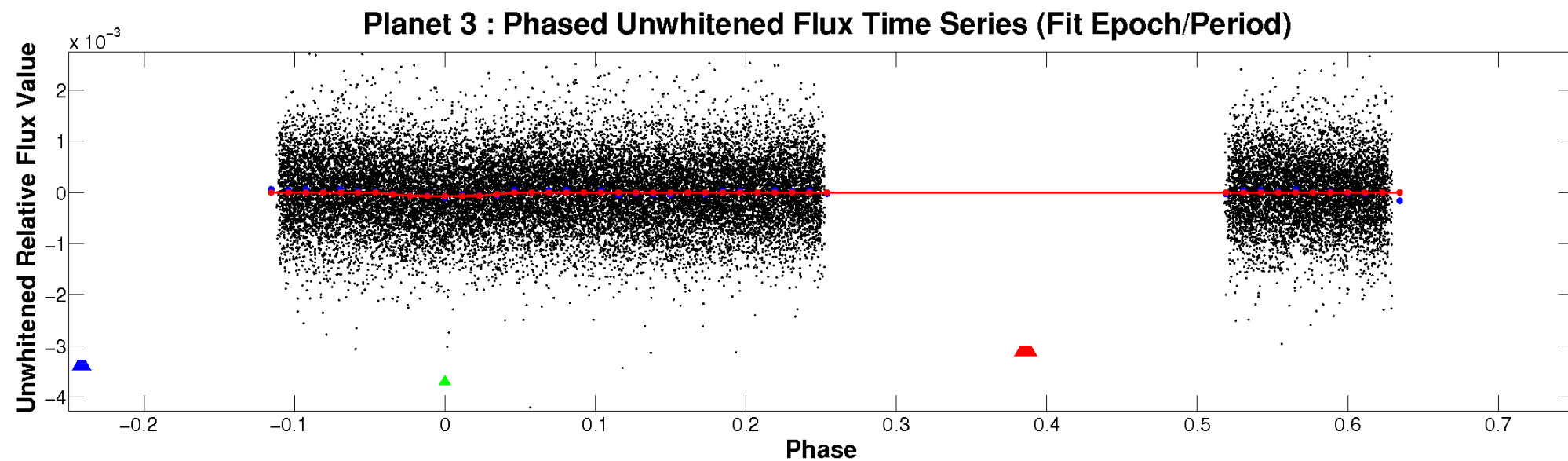


ALT Odd/Even

TCE 008639063-03

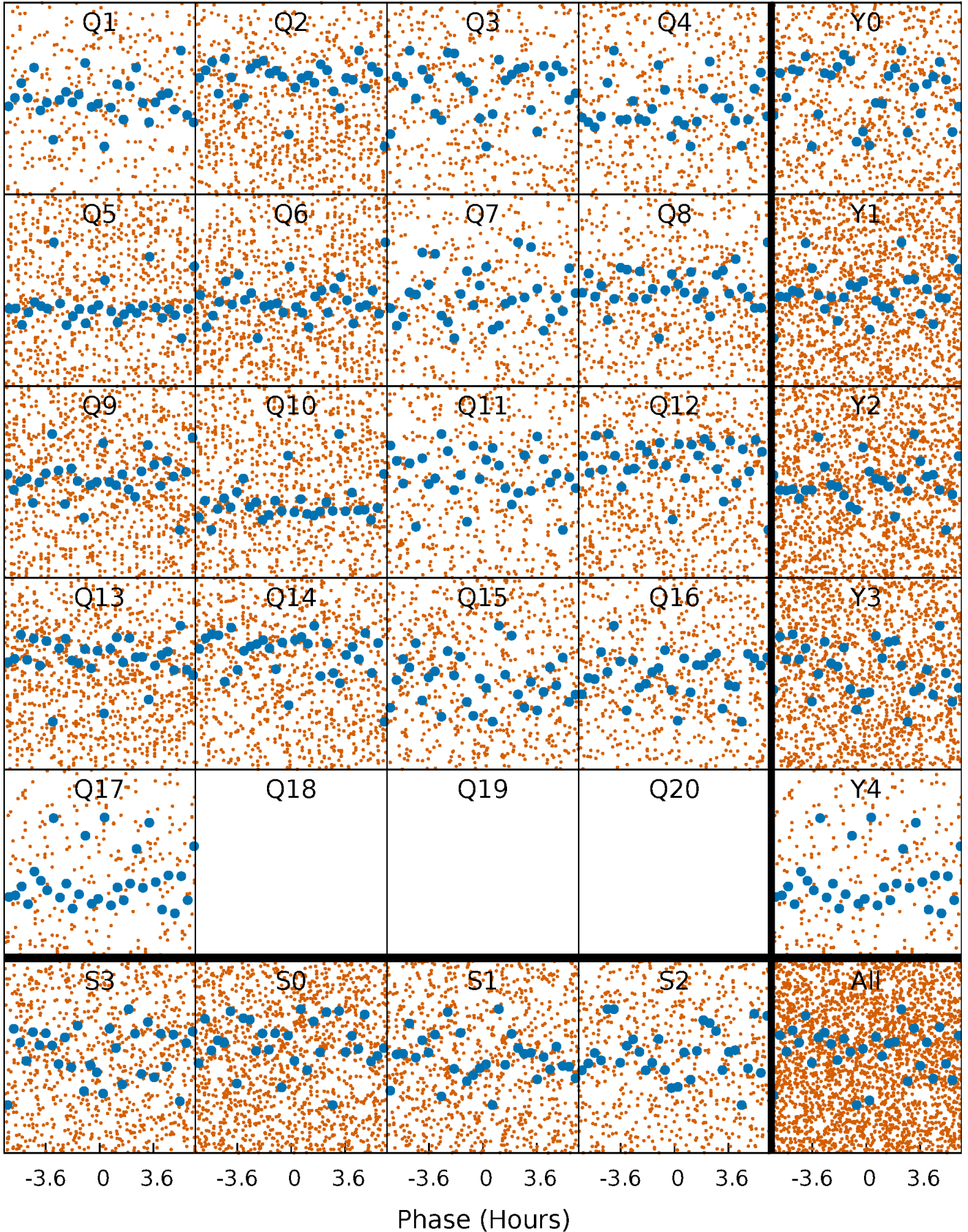


Non-Whitened Vs. Whitened Light Curve



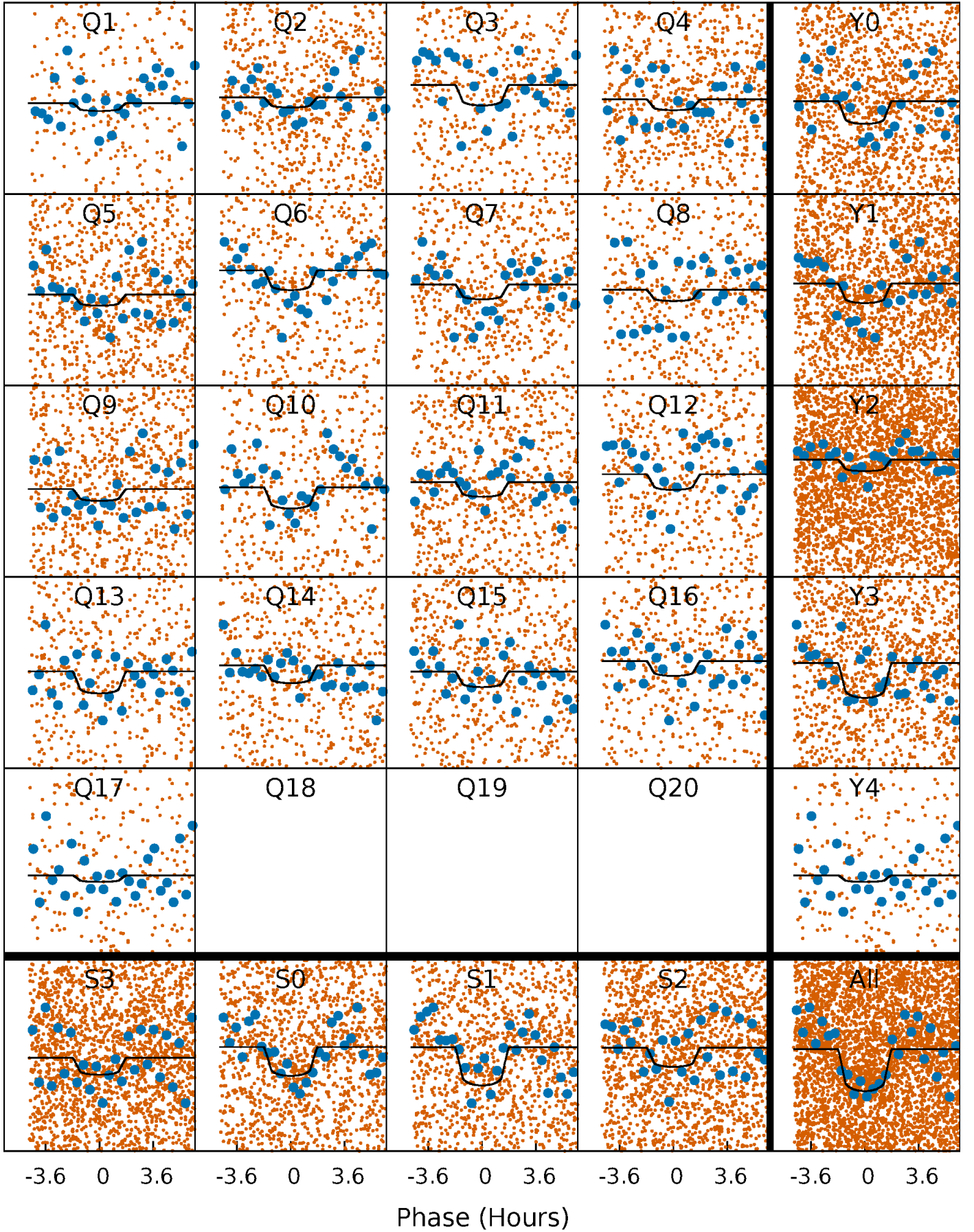
PDC Quarter-Phased Transit Curves

TCE 008639063-03 P= 1.770967 Days $T_0=131.603498$ (BKJD)



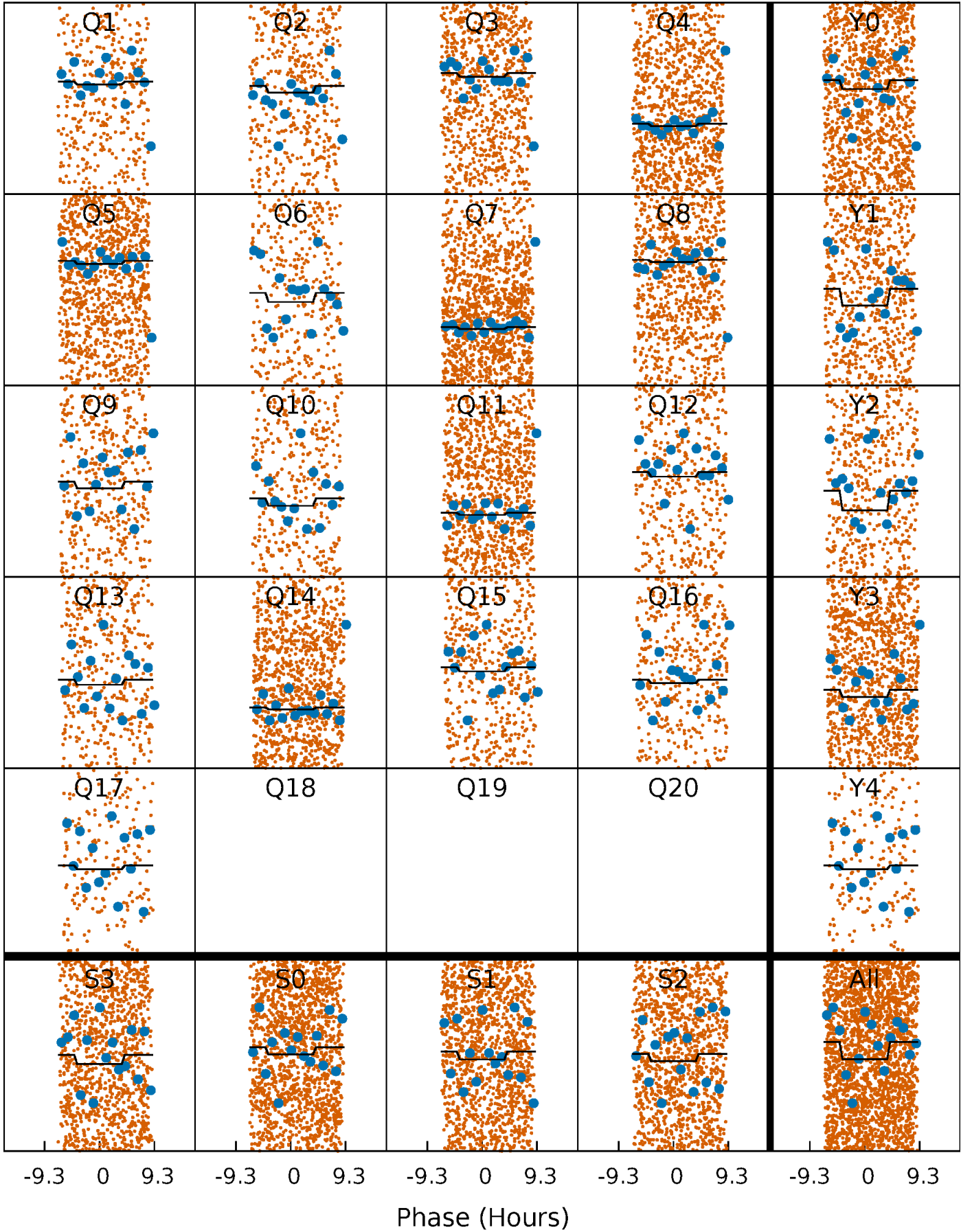
DV Quarter-Phased Transit Curves

TCE 008639063-03 $P = 1.770967$ Days $T_0 = 131.603498$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

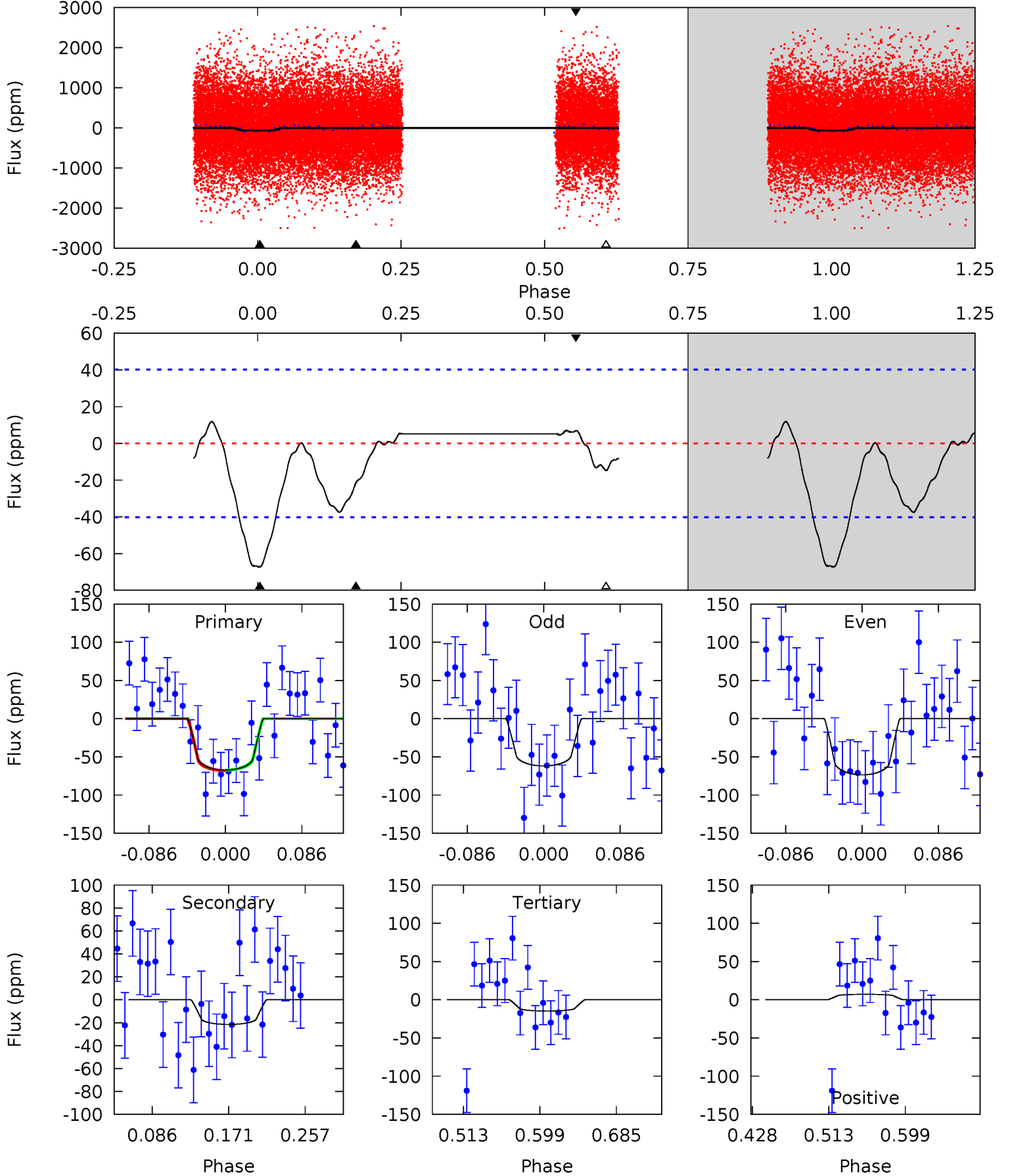
TCE 008639063-03 P= 1.770911 Days $T_0=131.706546$ (BKJD)



DV Model-Shift Uniqueness Test

008639063-03, P = 1.770967 Days, E = 129.832531 Days

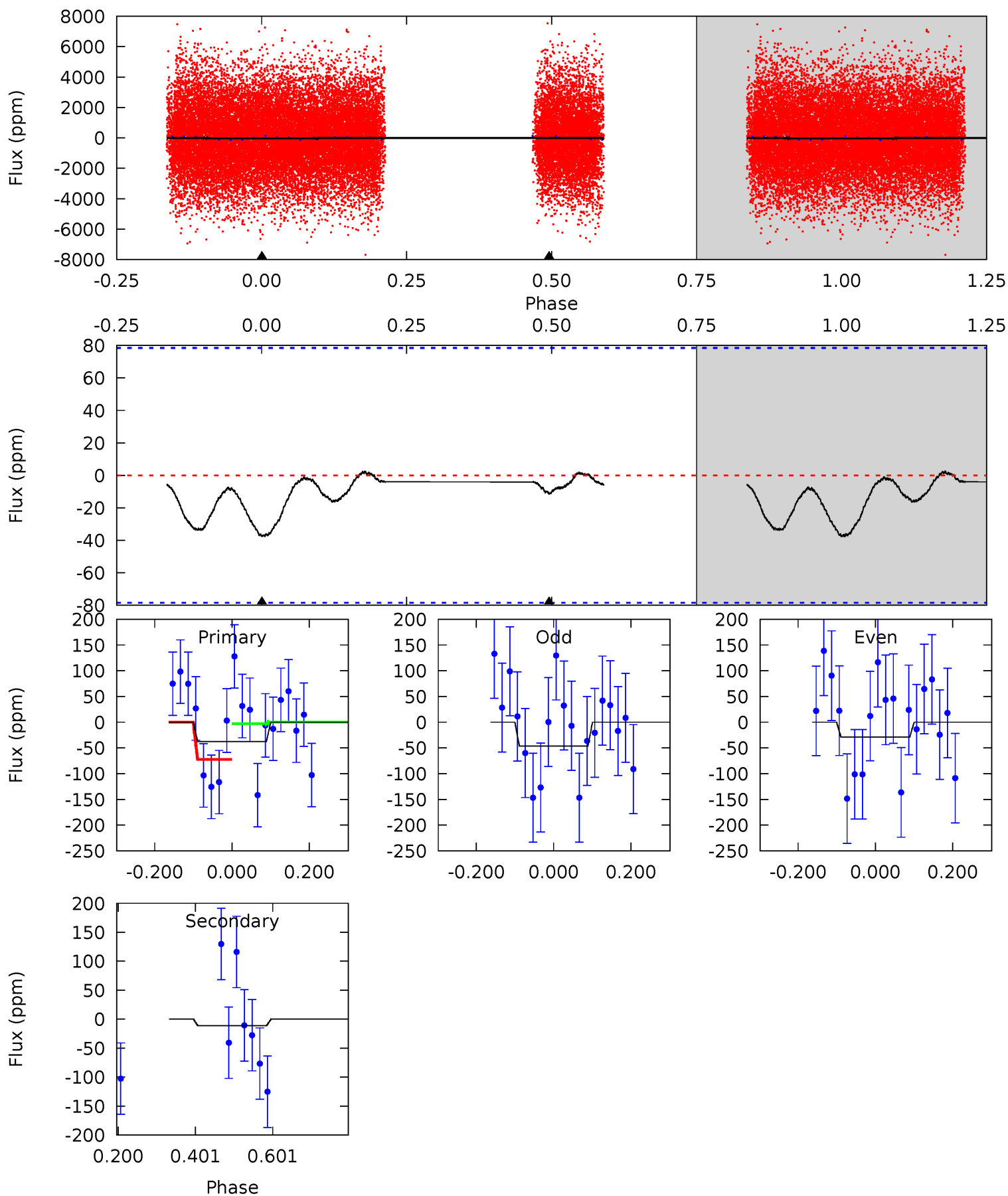
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.69	2.46	1.69	0.81	4.60	1.72	0.92	6.00	6.88	0.78	1.66	0.67	1.09	0.15	0.04



Alt Model-Shift Uniqueness Test

008639063-03, P = 1.770911 Days, E = 129.935635 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.11	0.64	0	0	4.42	1.28	0.12	2.11	2.11	0.64	0.64	0.49	2.76	0.06	1.89



Stellar Parameters For KIC 008639063

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8026^{+222}_{-361}	$3.976^{+0.204}_{-0.136}$	$0.070^{+0.200}_{-0.400}$	$2.383^{+0.516}_{-0.688}$	$1.961^{+0.277}_{-0.381}$	$0.204^{+0.262}_{-0.081}$
	+3%/-4%	+5%/-3%	+286%/-571%	+22%/-29%	+14%/-19%	+129%/-39%
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 008639063-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-22 ± 9	$2.36^{+1.62}_{-1.36}$	3995^{+273}_{-319}	5241^{+3195}_{-1287}	$2.476^{+11.503}_{-1.665}$
Alt.	-11 ± 18	$1.92^{+1.65}_{-1.22}$	3990^{+282}_{-280}	4811^{+3592}_{-9271}	$1.790^{+11.473}_{-2.428}$

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

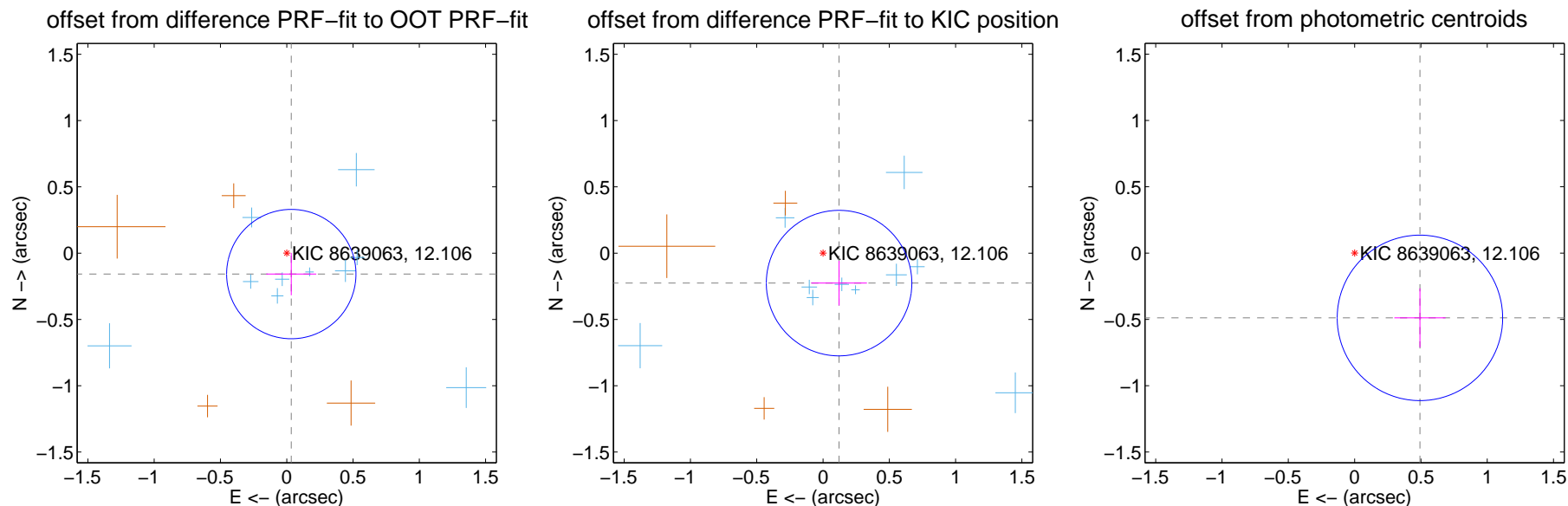
DV Centroid Data

Supplemental centroid analysis for 008639063-03. Kepler magnitude: 12.11. Transit SNR 8.73

There are 10 quarters with good PRF difference image offsets

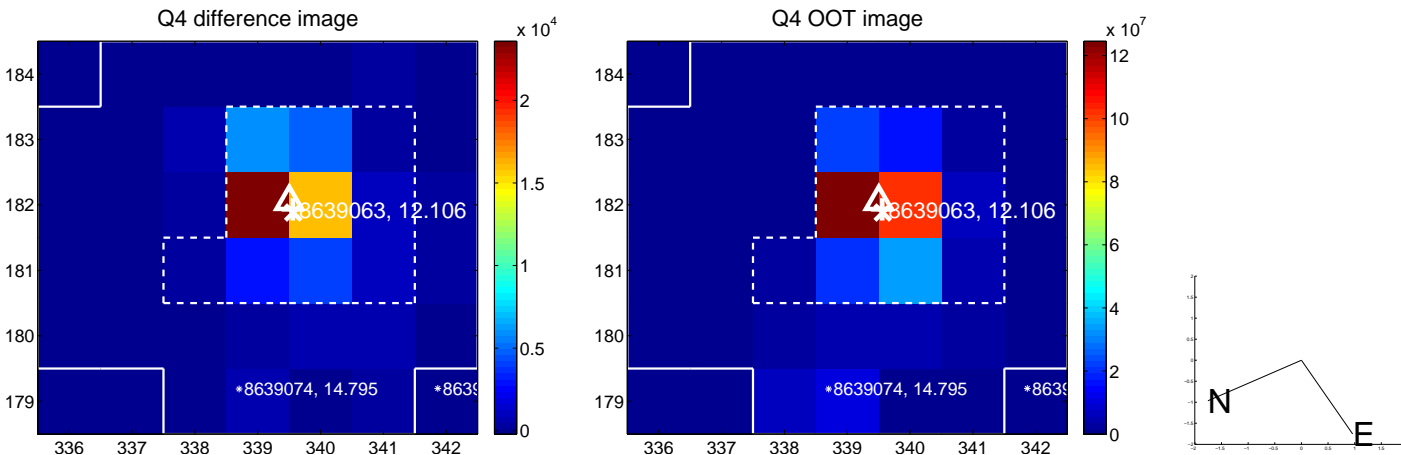
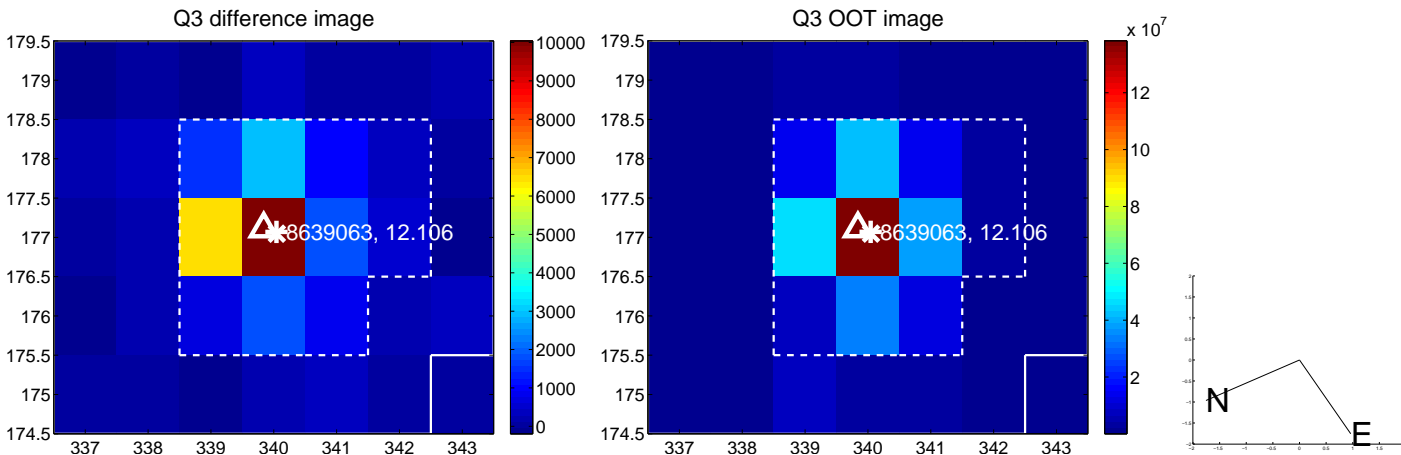
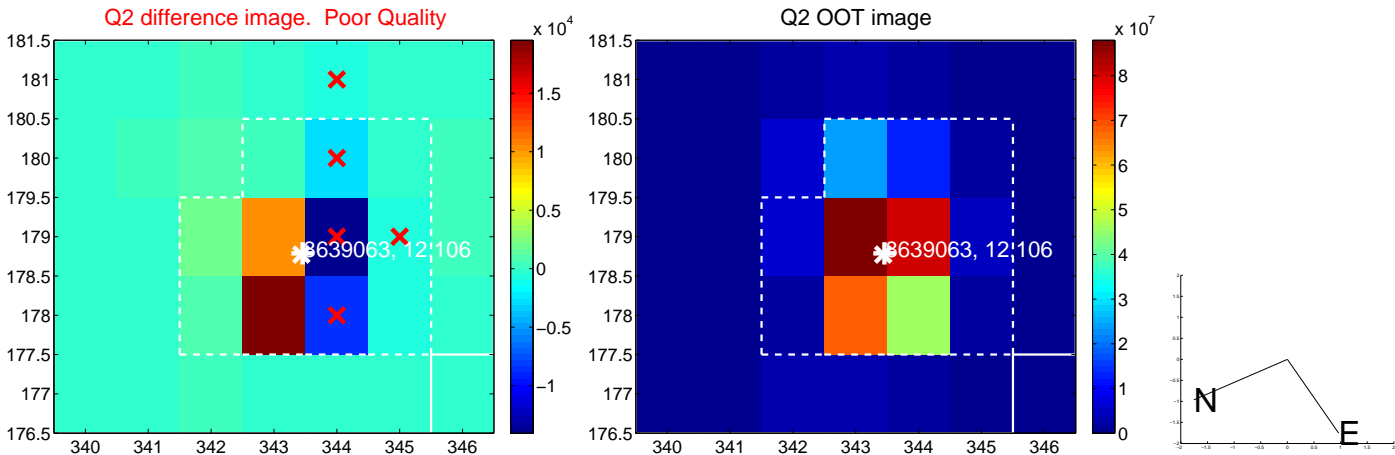
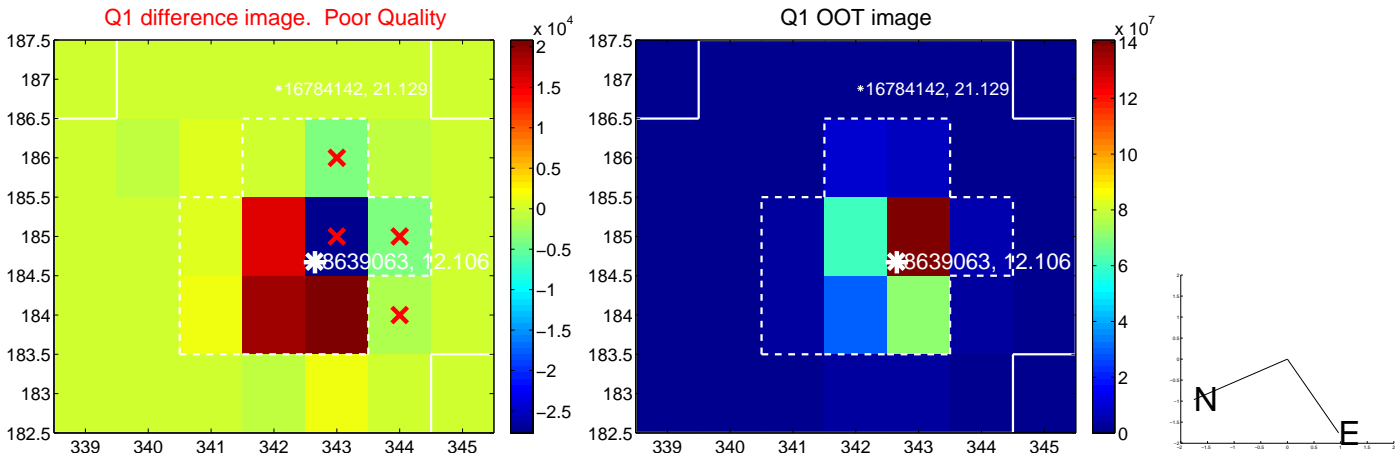
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.162 ± 0.163	0.99	-0.034 ± 0.189	-0.158 ± 0.160
PRF-fit source offset from KIC position	0.256 ± 0.183	1.40	-0.121 ± 0.210	-0.226 ± 0.168
photometric centroid source offset	0.69 ± 0.21	3.34	-0.49 ± 0.19	-0.49 ± 0.22

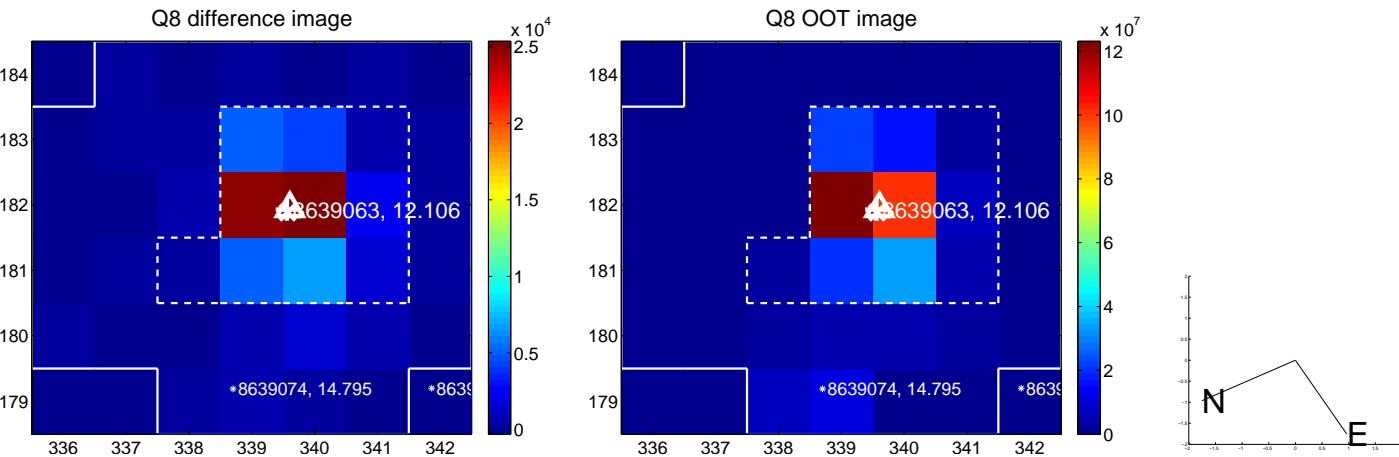
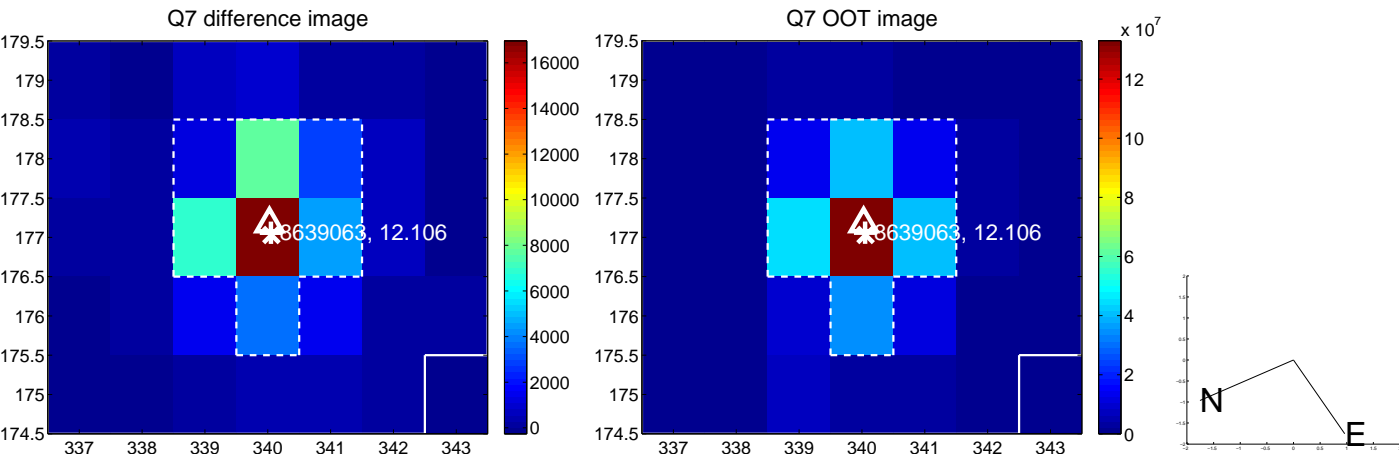
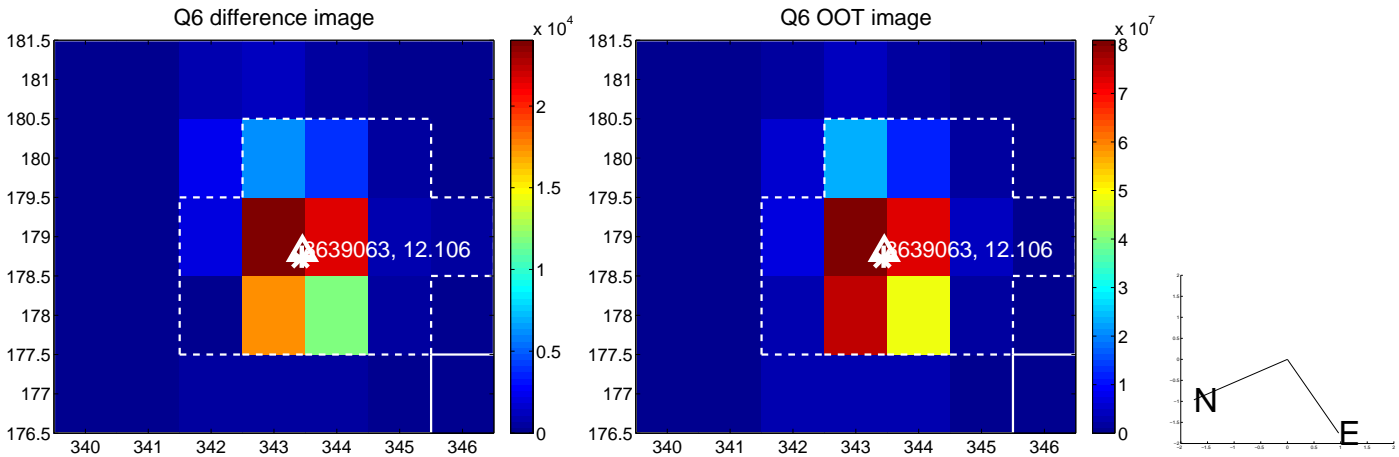
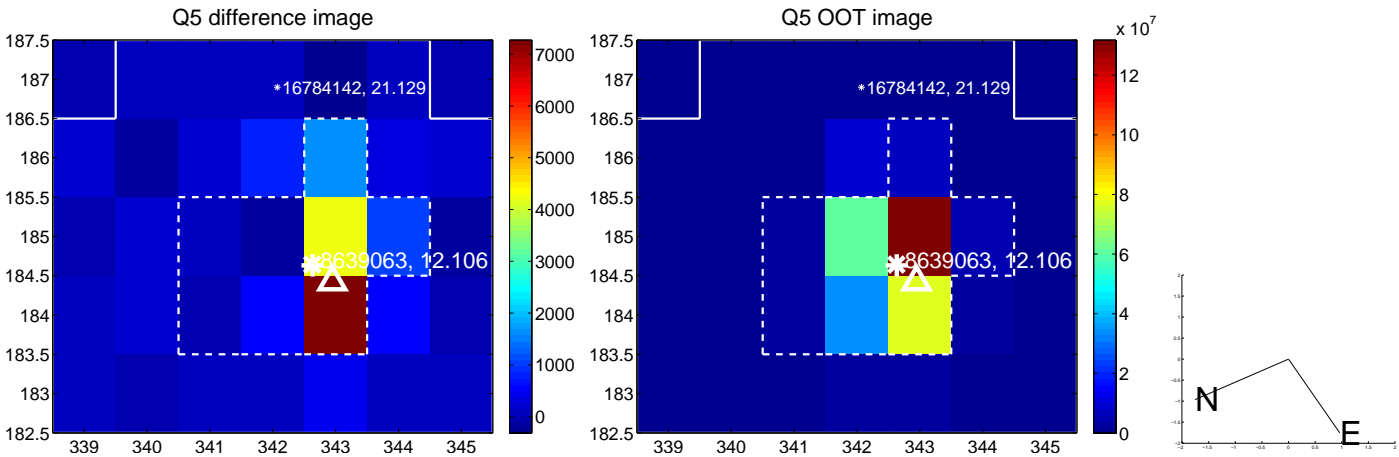


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

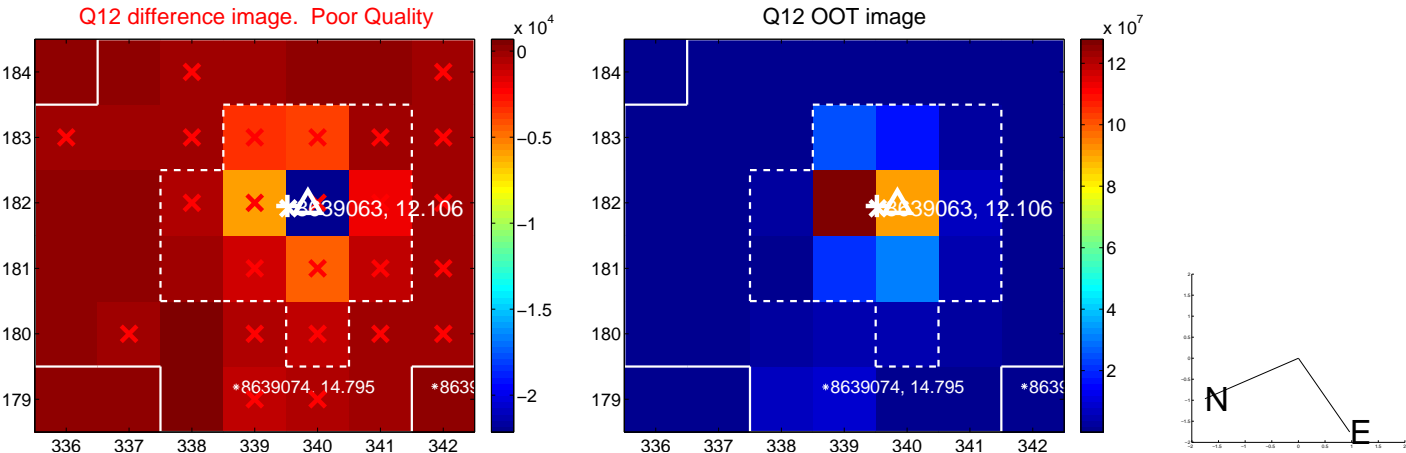
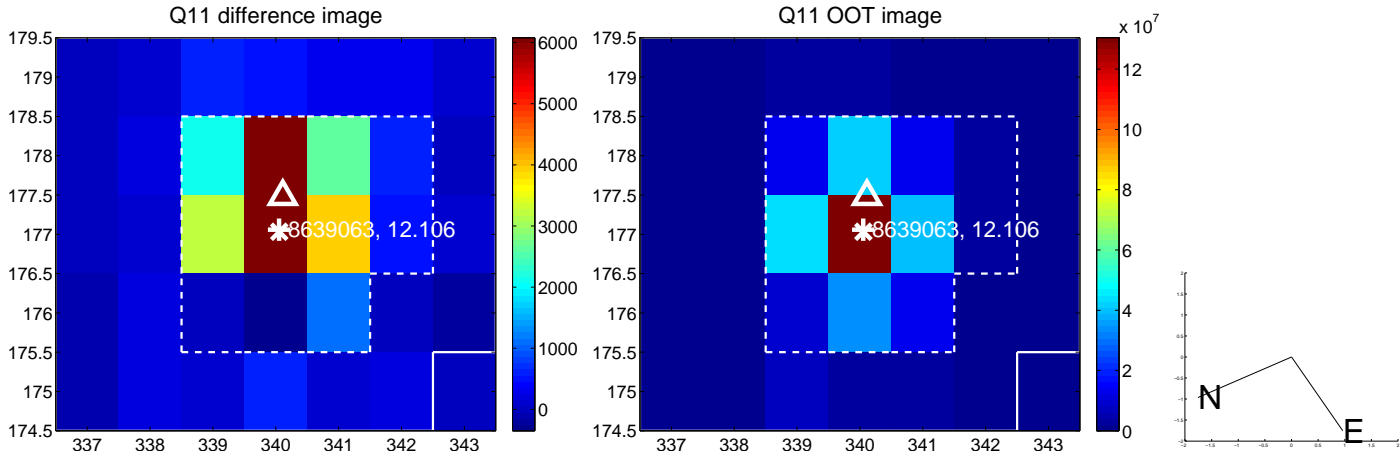
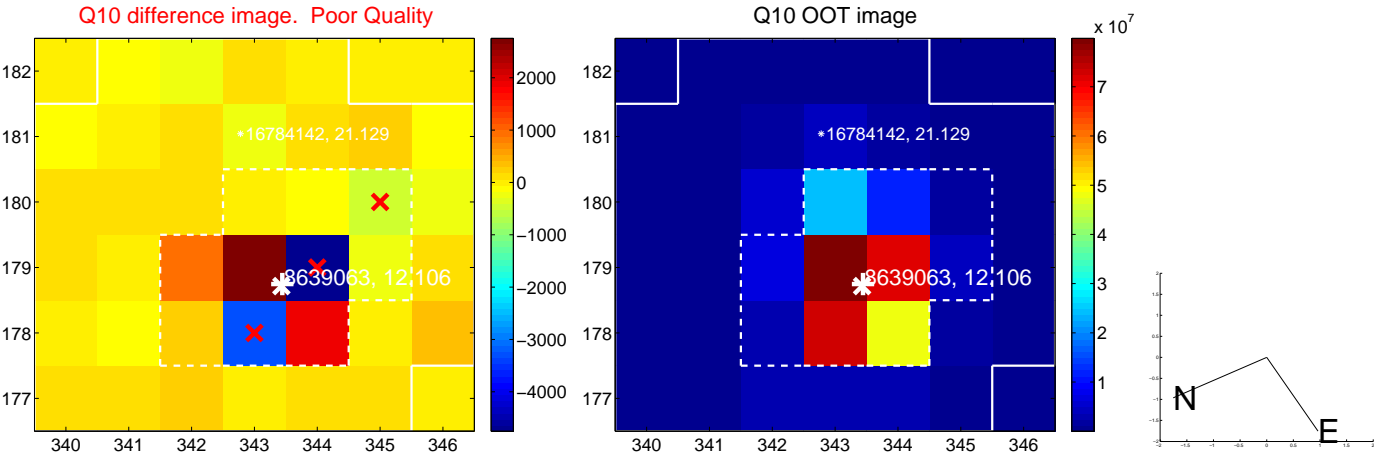
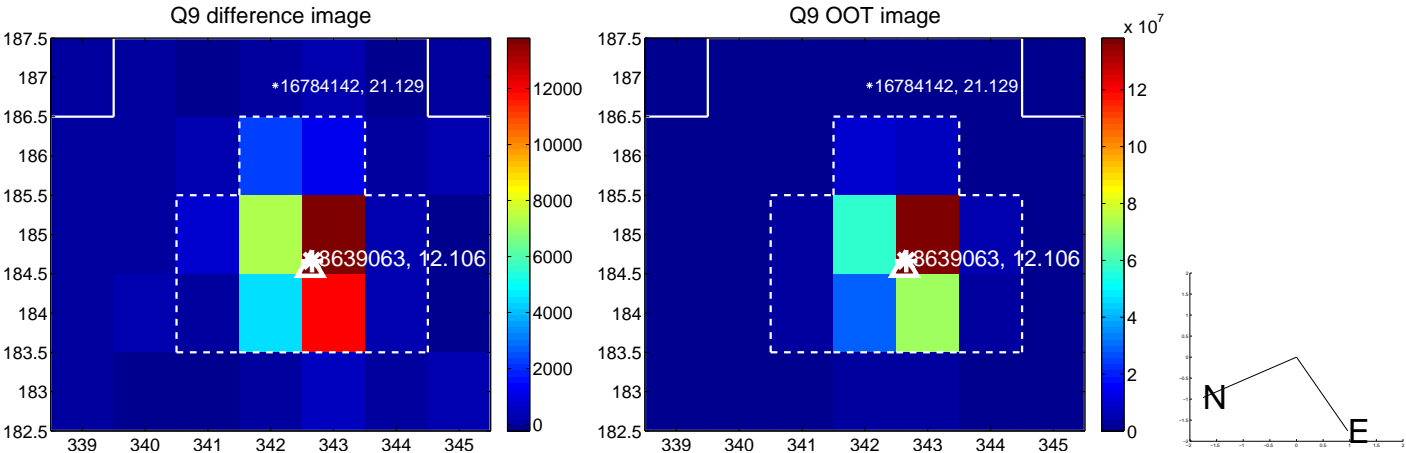
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



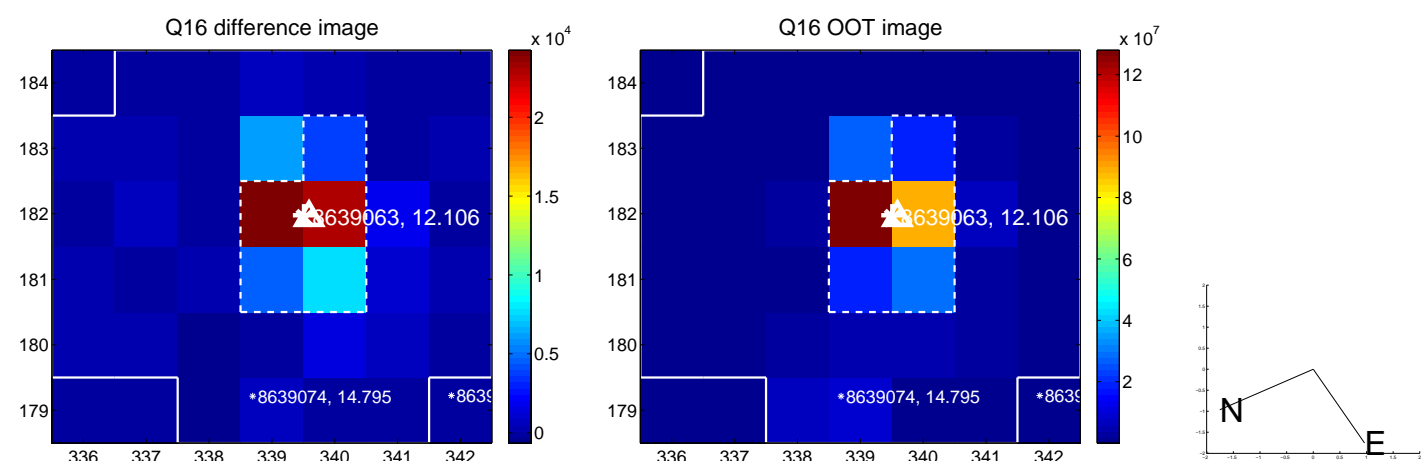
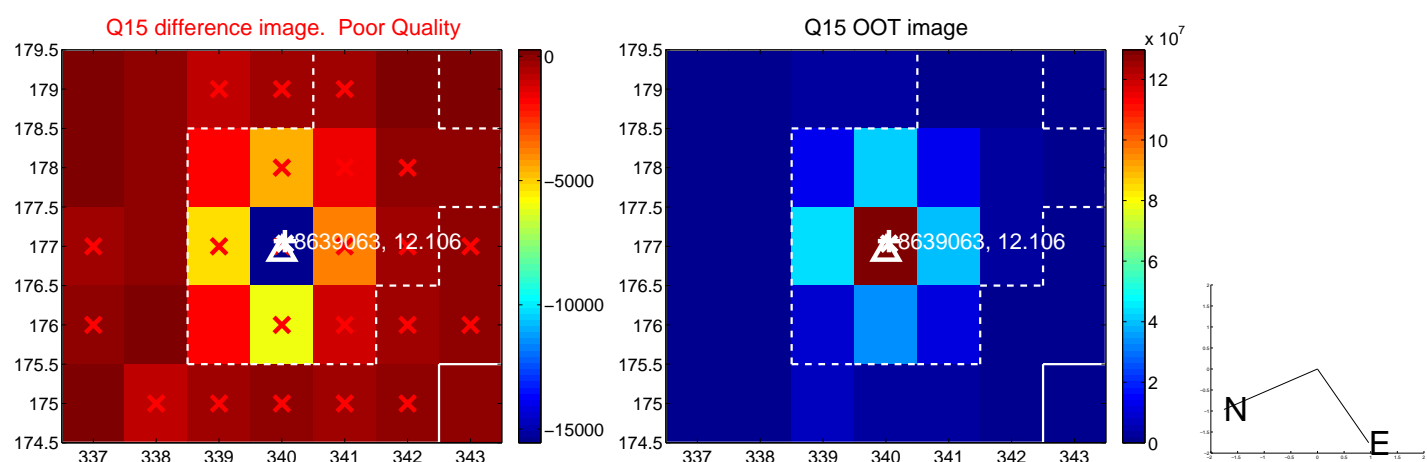
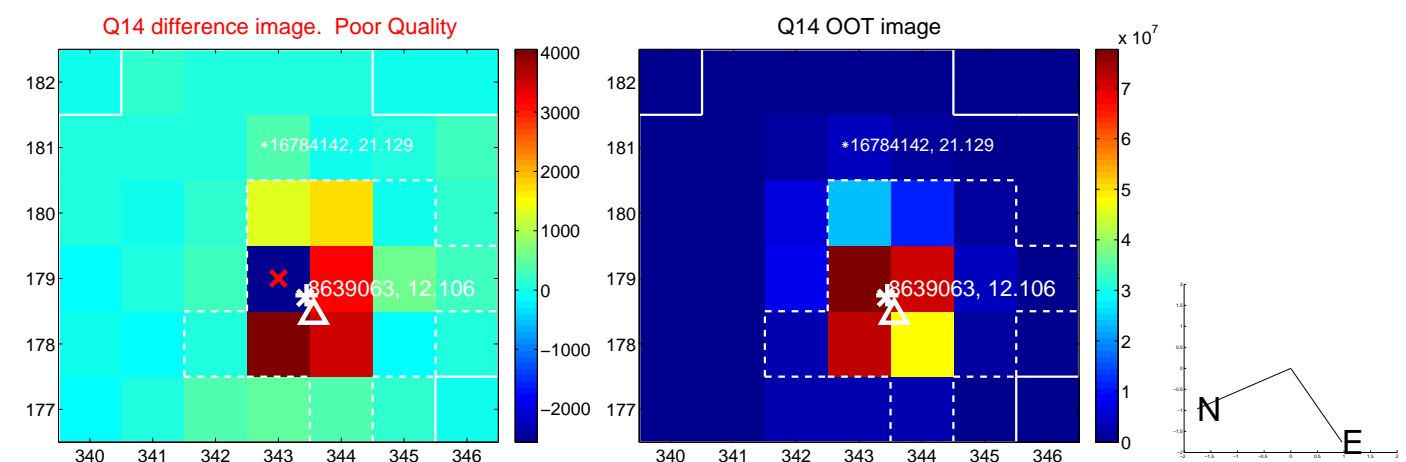
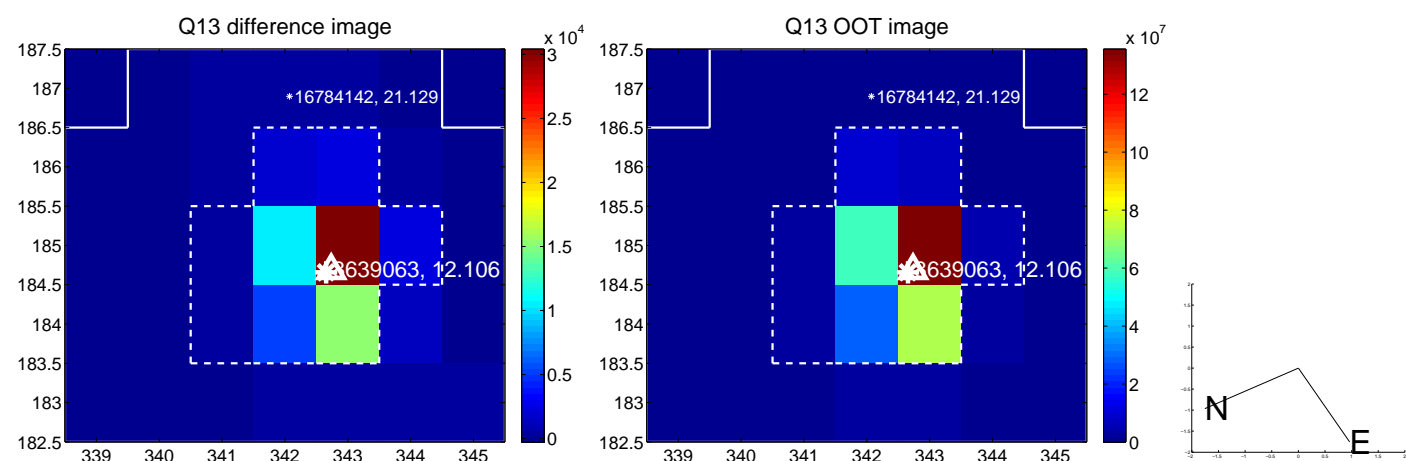
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



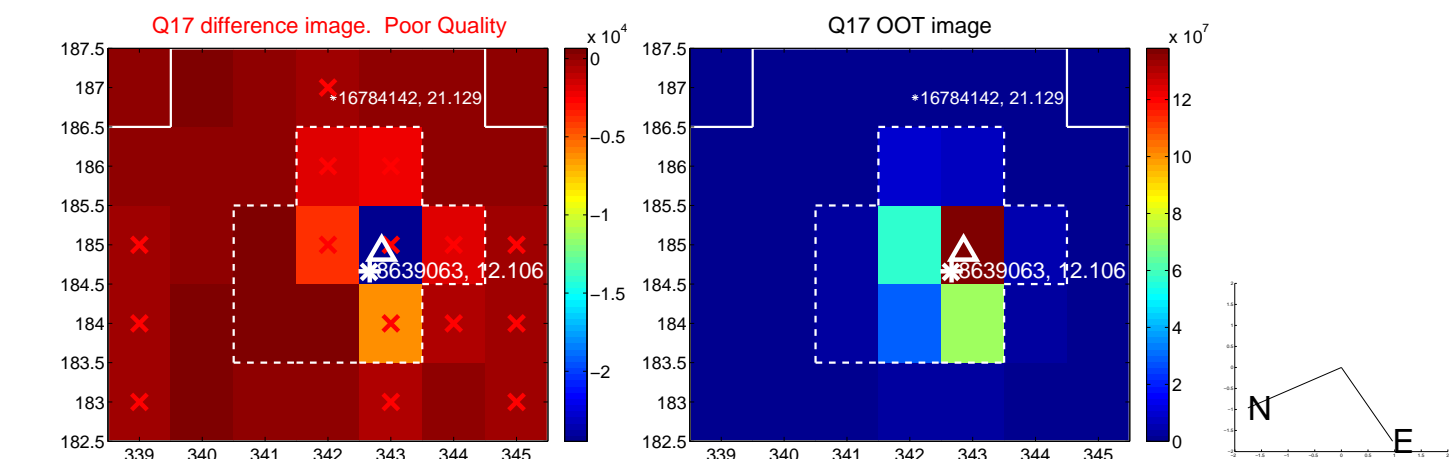
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



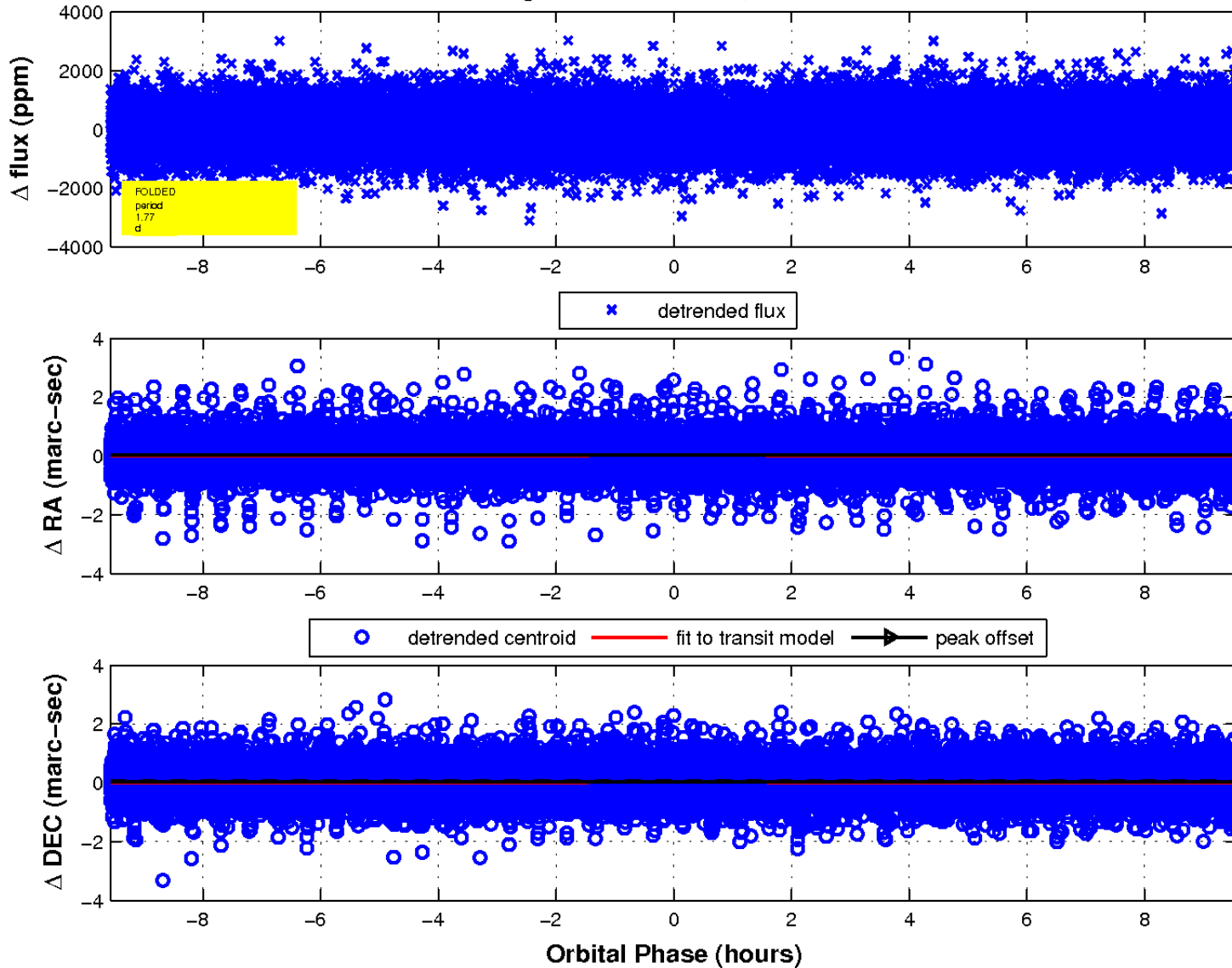
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

