

KIC 004932657

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})
004932657-01	OBS	No	1.781700	132.838217	252.2	1.549	9.4	9.3	2.16	8104	4.02	14725.98
004932657-02	OBS	No	0.653305	131.653774	144.2	1.540	8.1	8.2	2.16	8104	3.03	56110.25
004932657-03	OBS	No	0.653305	131.821363	127.3	1.640	7.5	6.8	2.16	8104	2.85	56110.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004932657-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
004932657-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_KIC_POS
004932657-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_KIC_POS

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

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

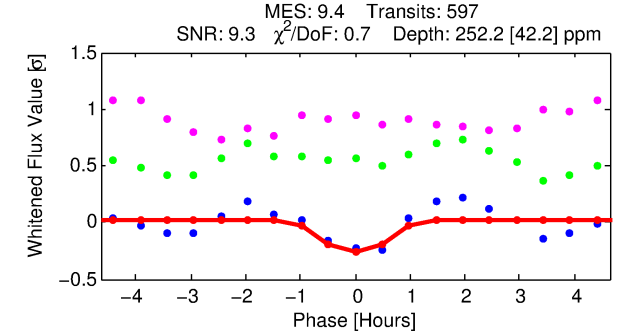
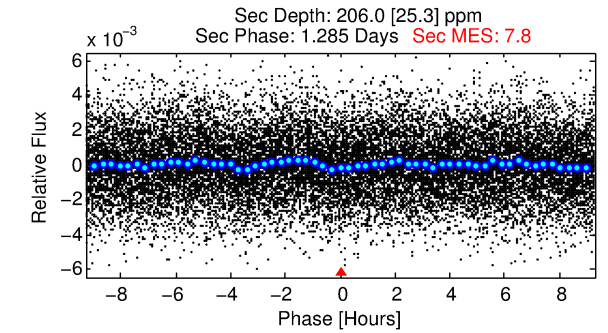
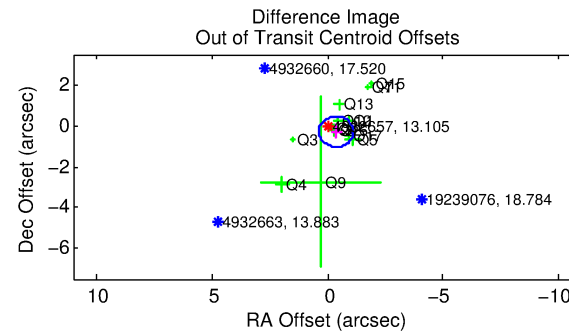
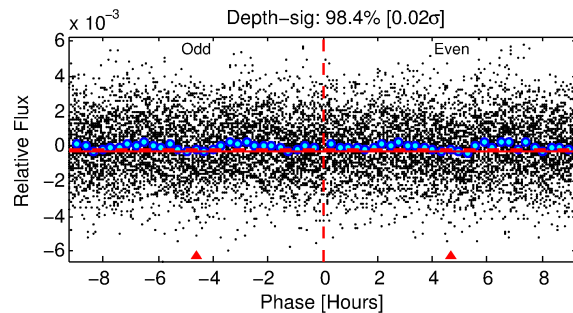
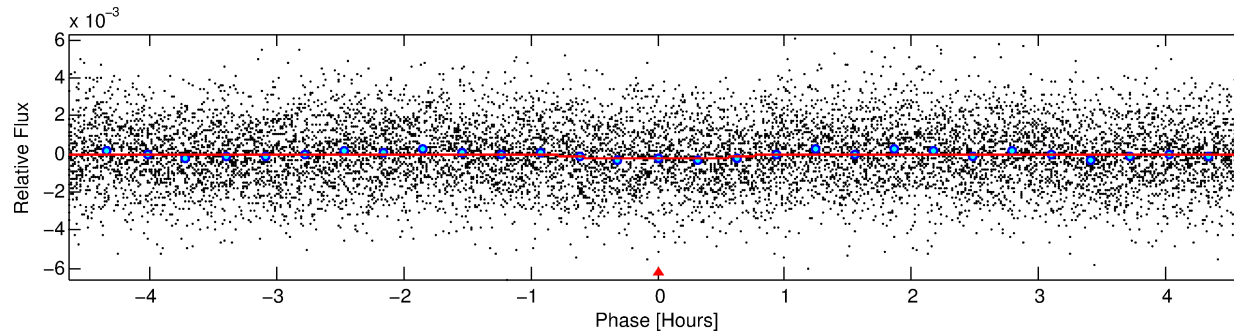
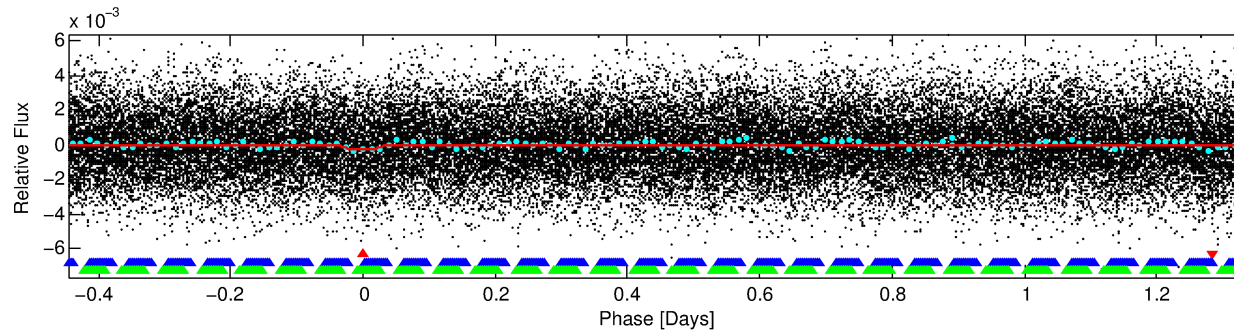
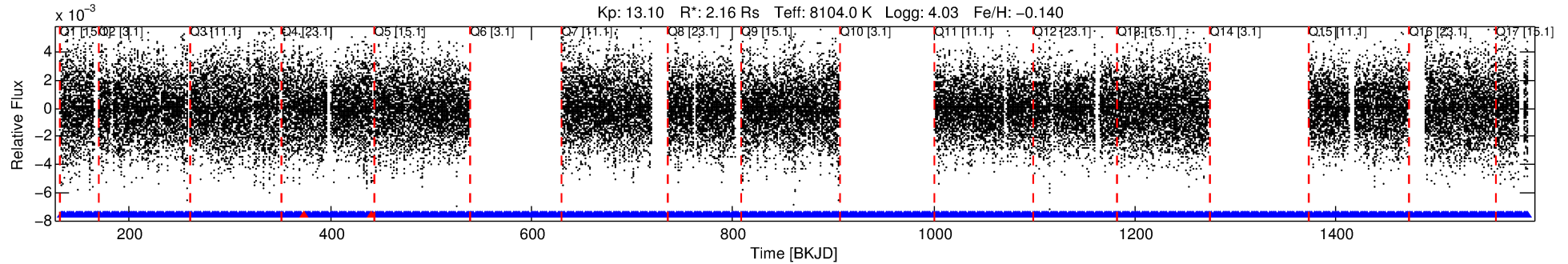
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004932657-01

No Significant Match Found

DV One-Page Summary

KIC: 4932657 Candidate: 1 of 3 Period: 1.782 d



DV Fit Results:

Period = 1.78170 [0.00001] d
Epoch = 132.8382 [0.0030] BKJD
Rp/R* = 0.0170 [0.0132]
a/R* = 4.24 [18.76]
b = 0.90 [0.99]
Seff = 14725.98 [5419.56]
Teq = 2809 [258] K
Rp = 4.02 [3.29] Re
a = 0.0351 [0.0078] AU
Ag = 8.62 [13.72] [0.56 σ]
Teffp = 7442 [2914] K [1.58 σ]

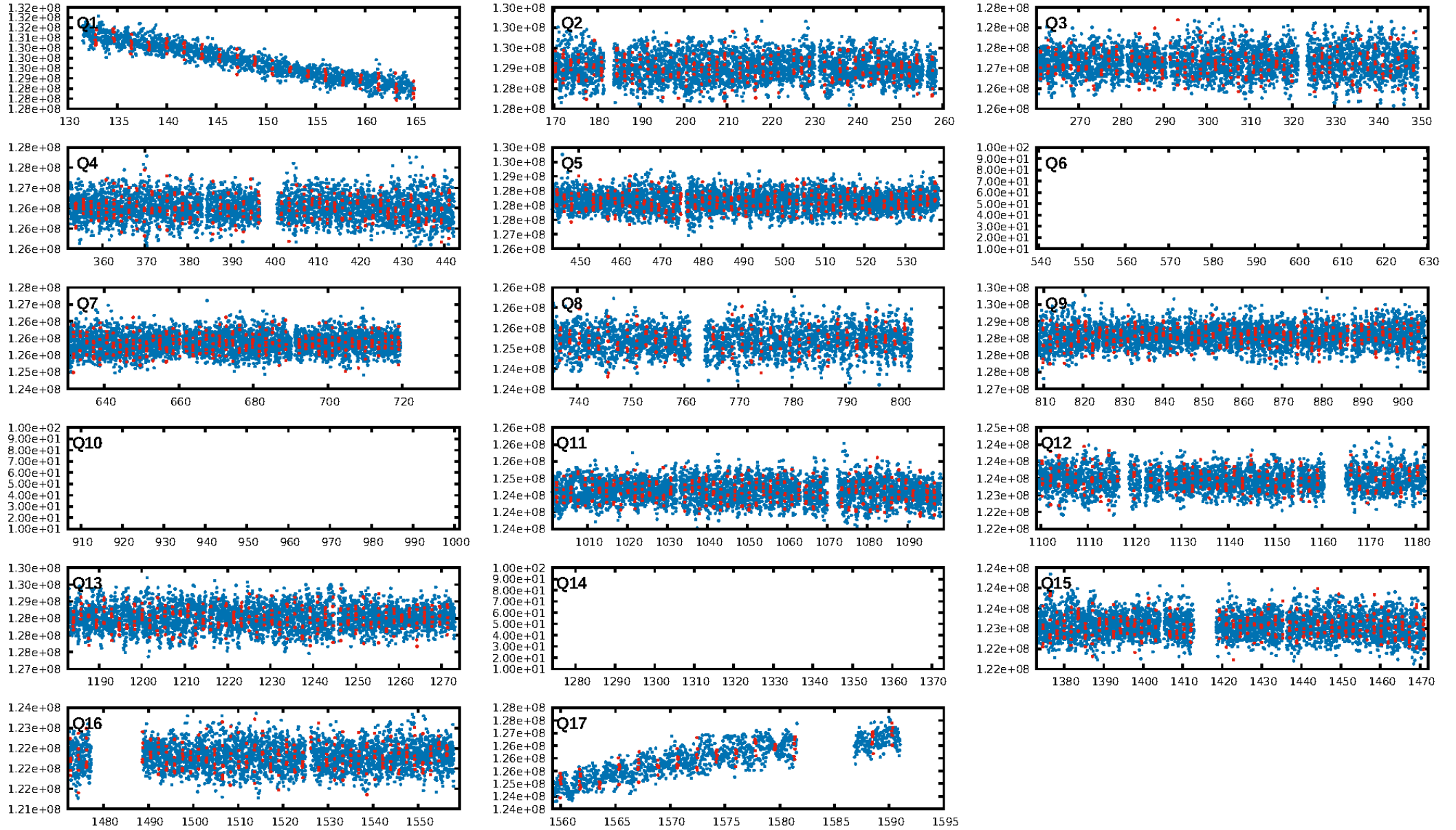
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [12.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.79e-25
RollingBand-fgt: 1.00 [561/563]
GhostDiagnostic-chr: 3.103
Centroid-sig: N/A
Centroid-so: 0.760 arcsec [1.29 σ]
OotOffset-rm: 0.469 arcsec [1.89 σ]
KicOffset-rm: 0.423 arcsec [1.84 σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 0.00 [0/14]

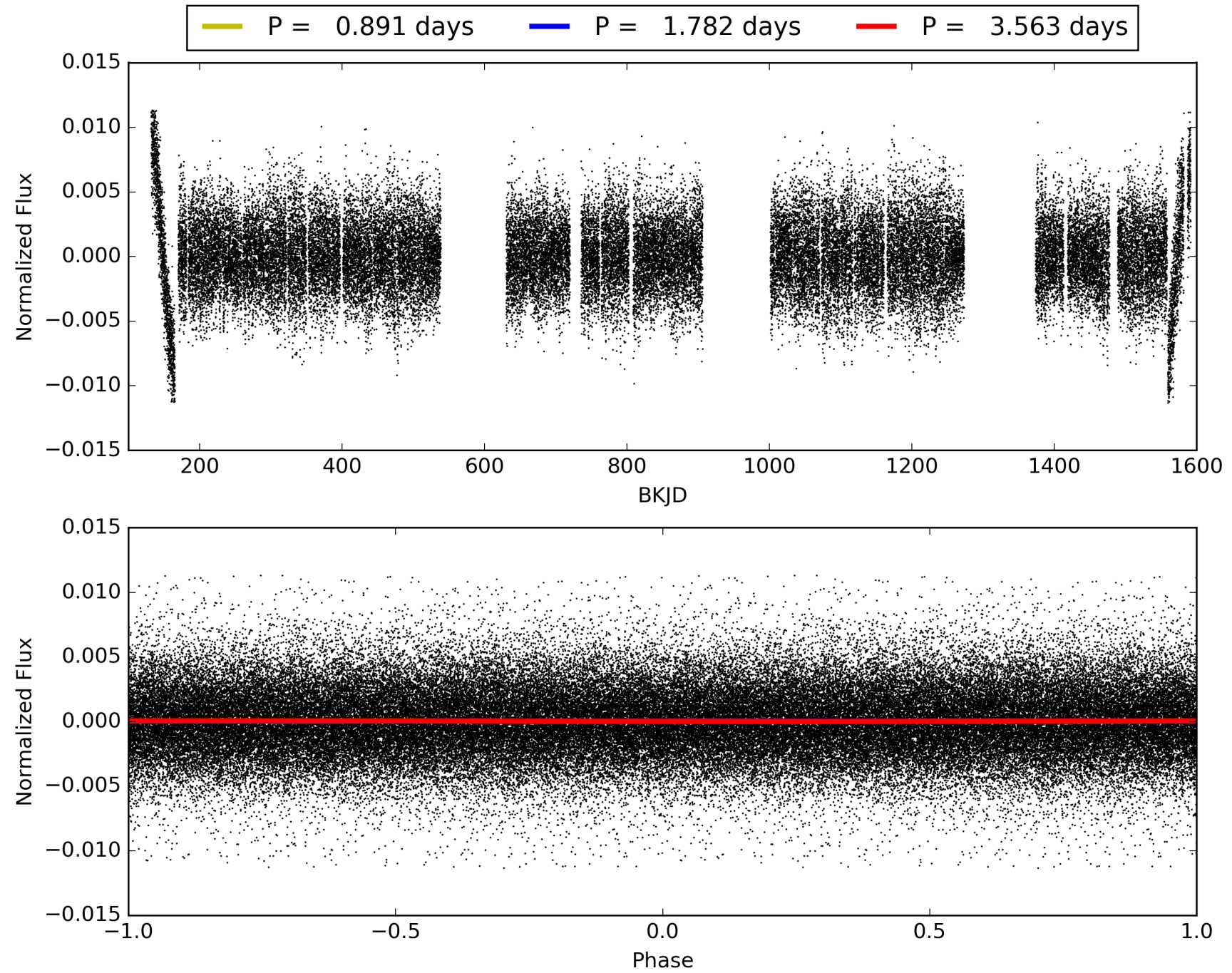
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004932657-01, PDC Light Curves

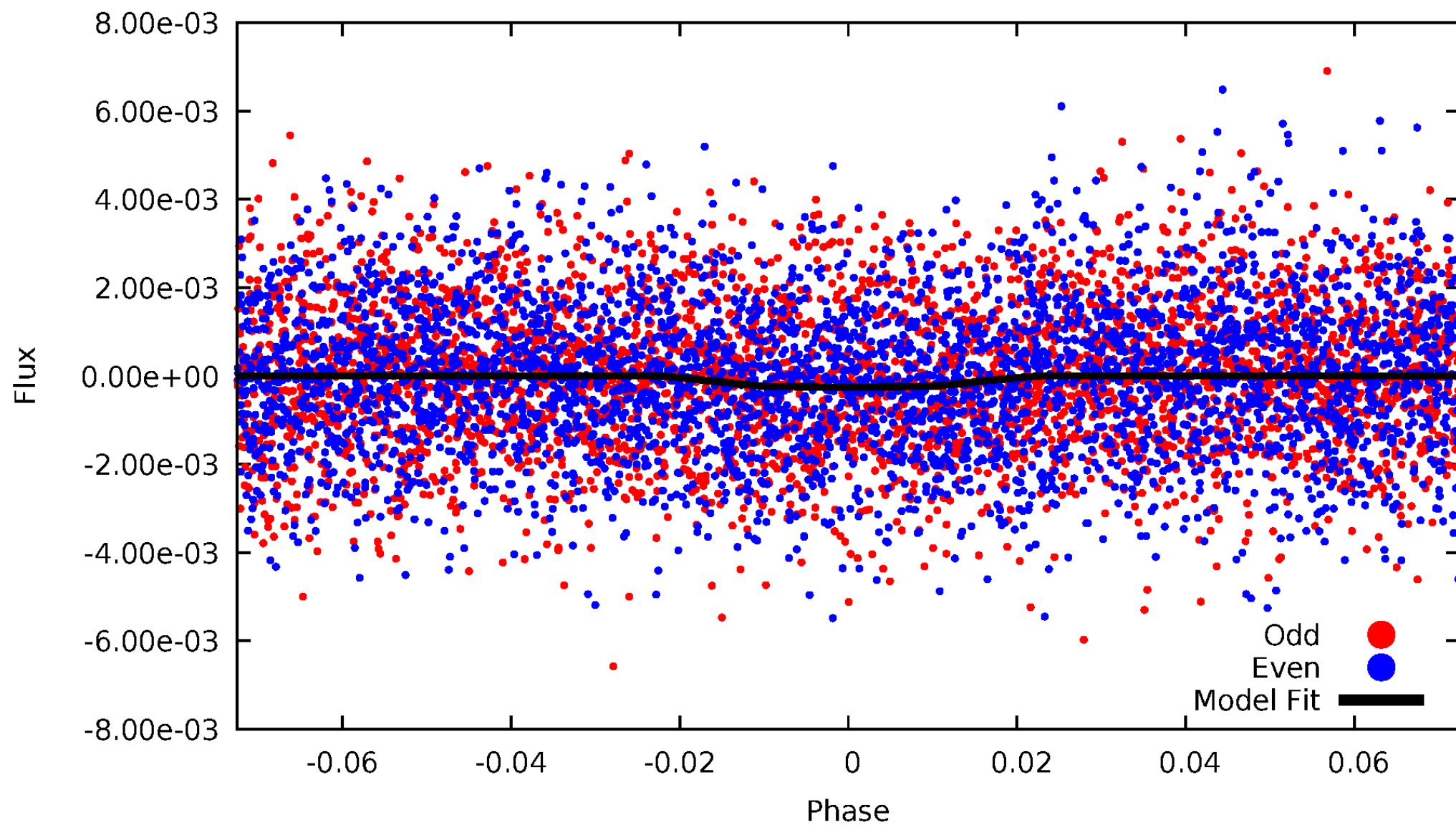


TCE 004932657-01



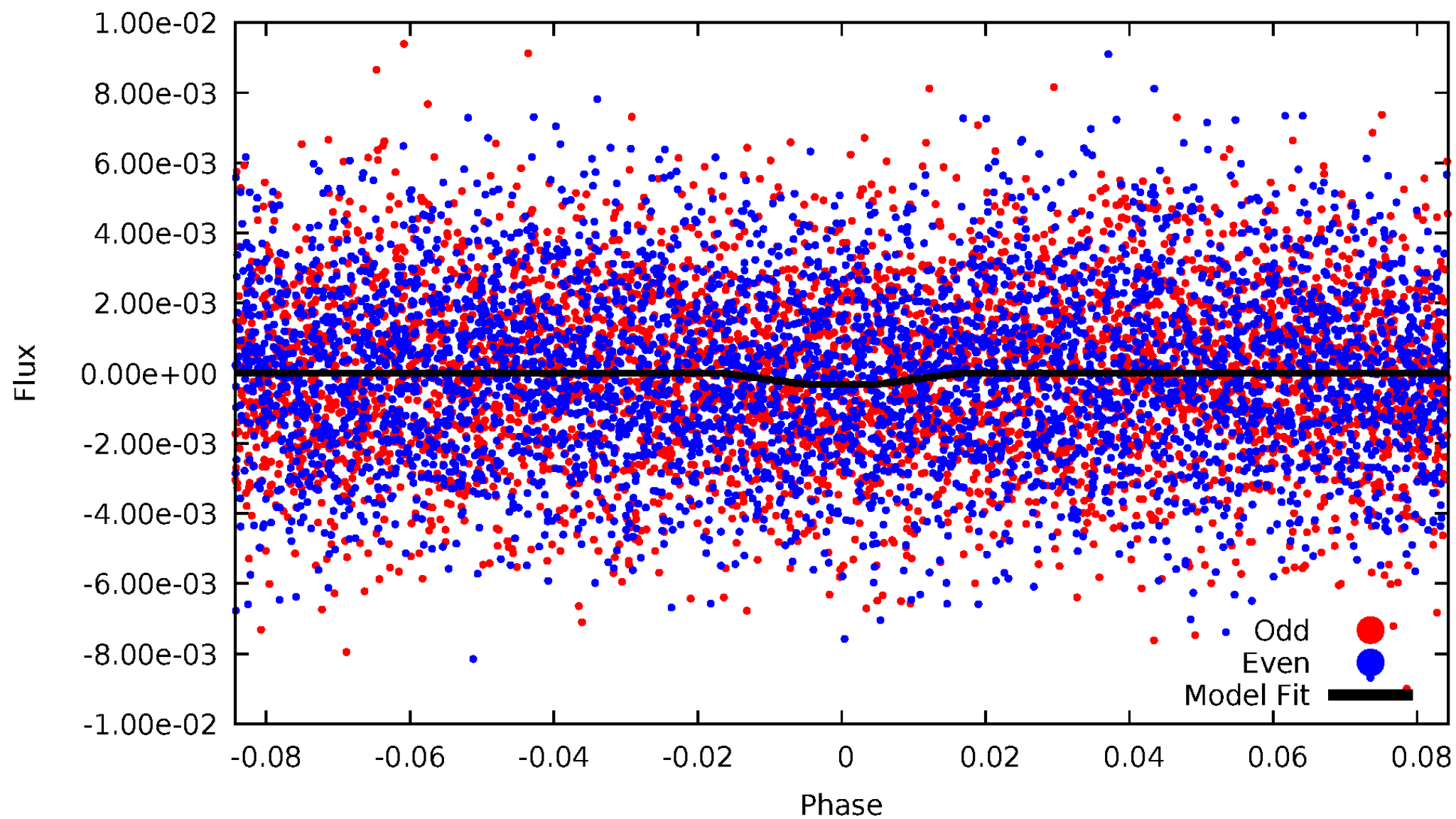
DV Odd/Even

TCE 004932657-01



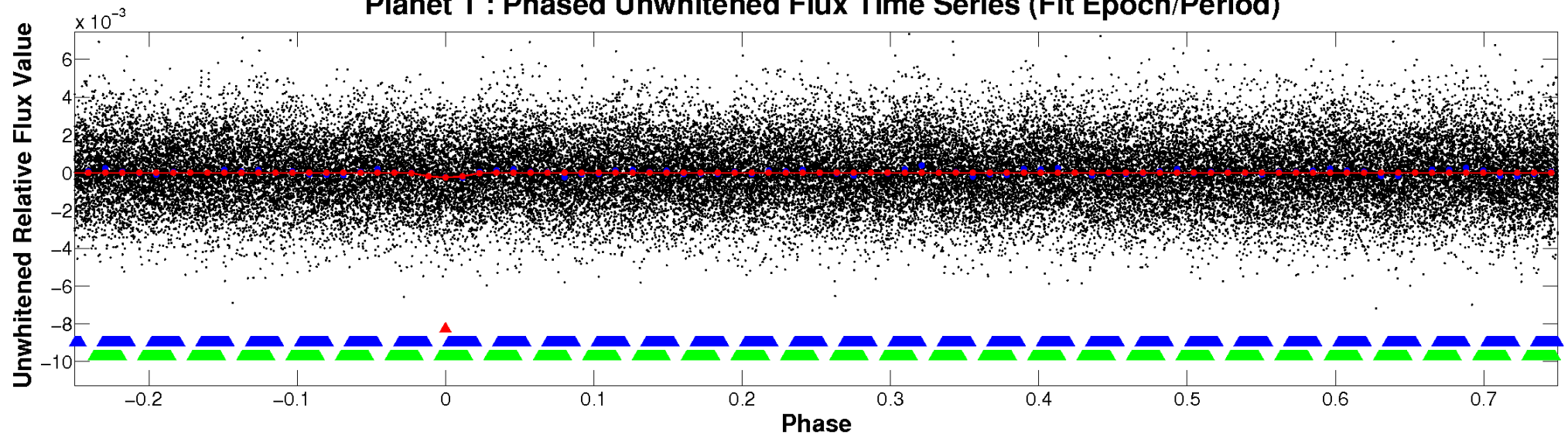
ALT Odd/Even

TCE 004932657-01

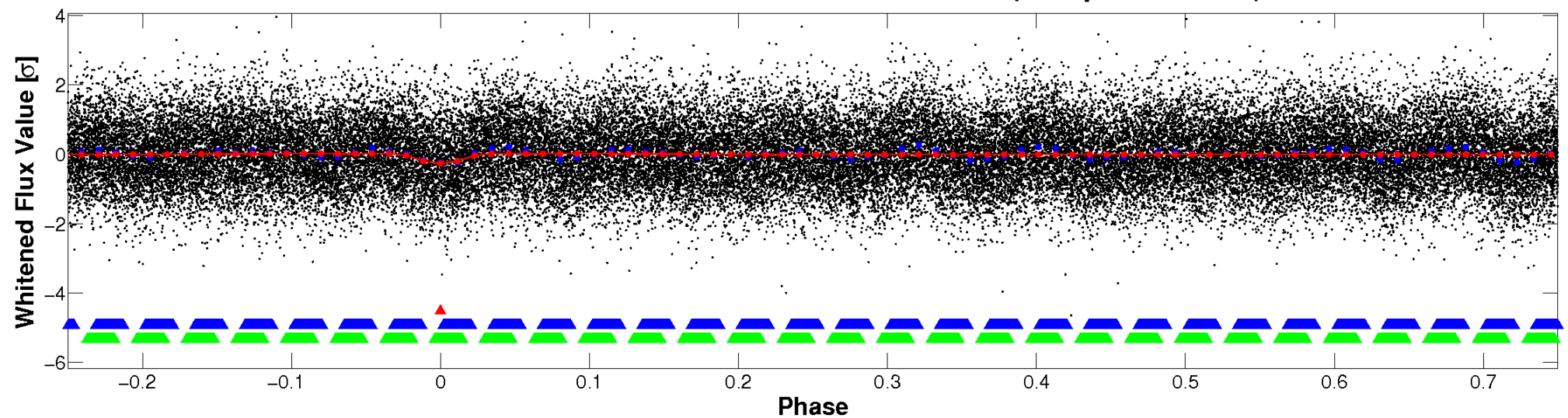


Non-Whitened Vs. Whitened Light Curve

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

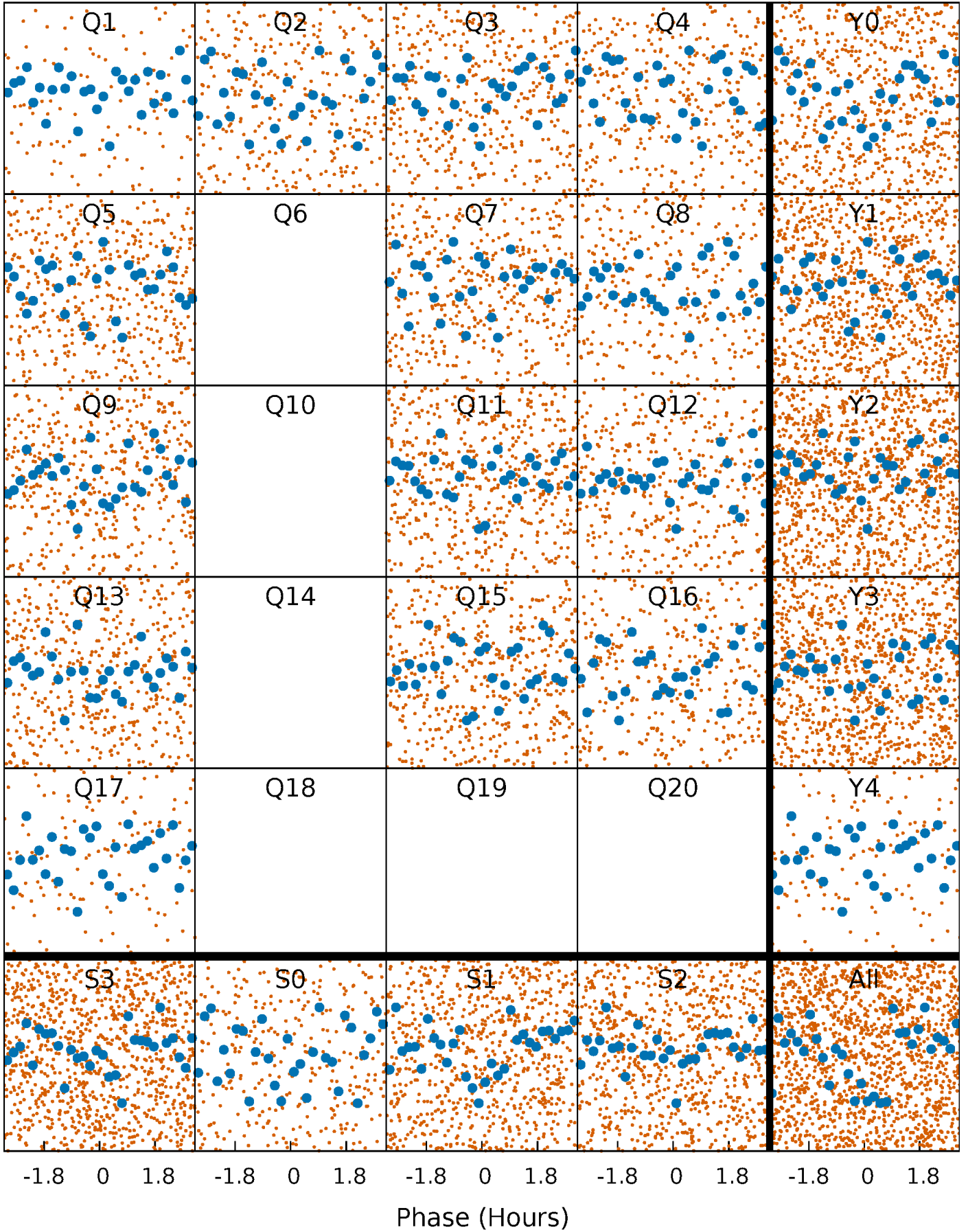


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



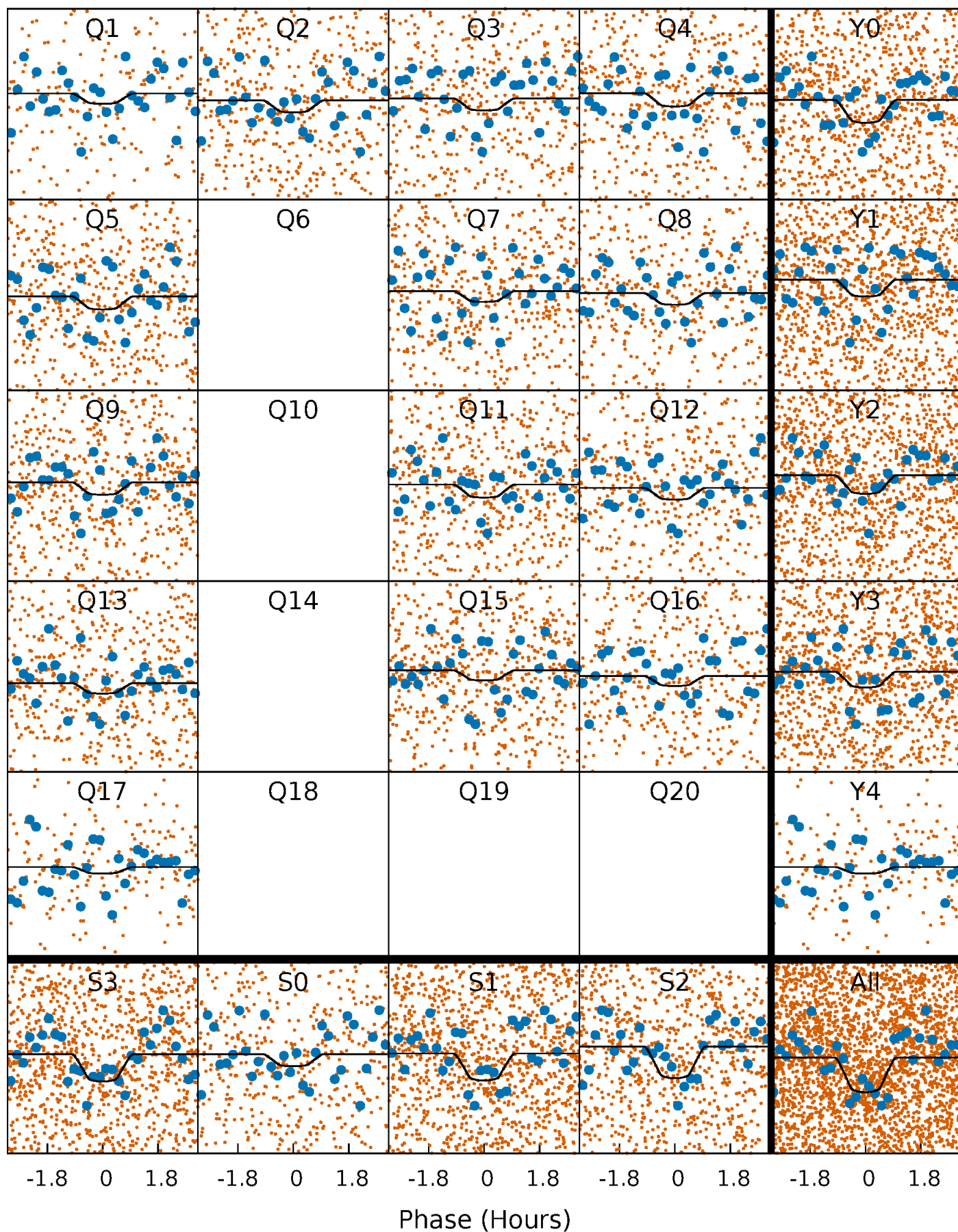
PDC Quarter-Phased Transit Curves

TCE 004932657-01 P= 1.781700 Days $T_0=132.838217$ (BKJD)



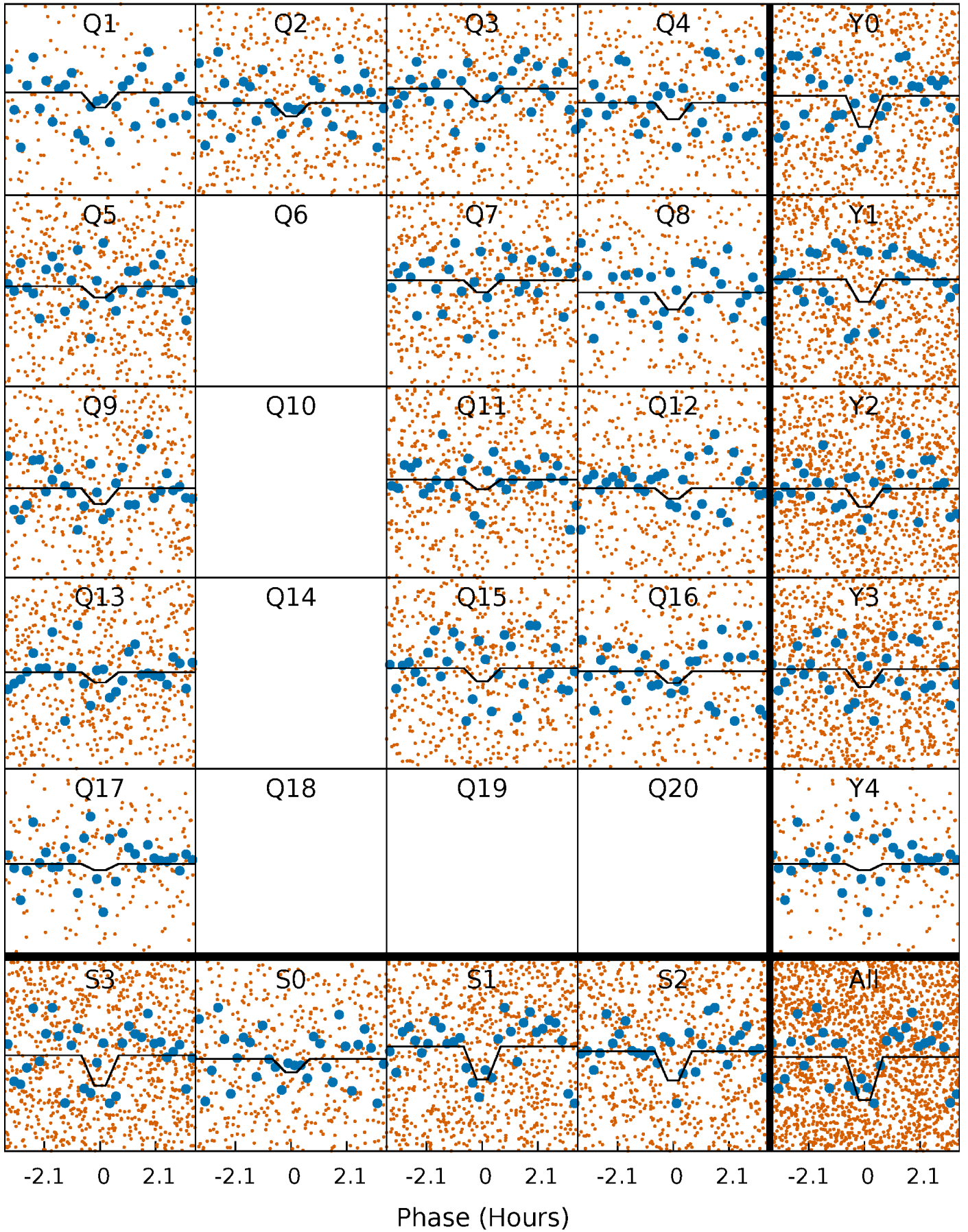
DV Quarter-Phased Transit Curves

TCE 004932657-01 P= 1.781700 Days $T_0=132.838217$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

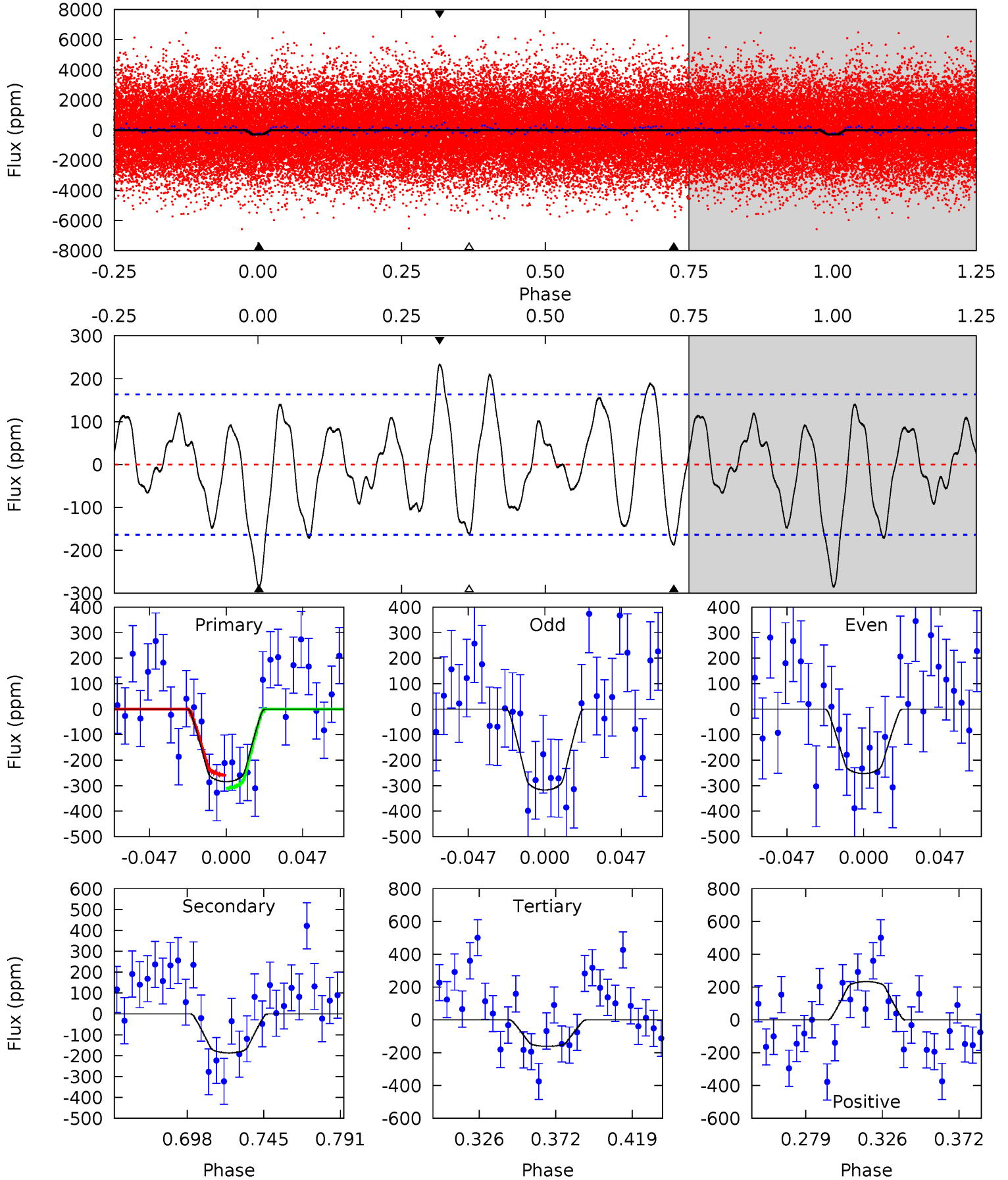
TCE 004932657-01 P= 1.781710 Days $T_0=132.838073$ (BKJD)



DV Model-Shift Uniqueness Test

004932657-01, P = 1.781700 Days, E = 131.056517 Days

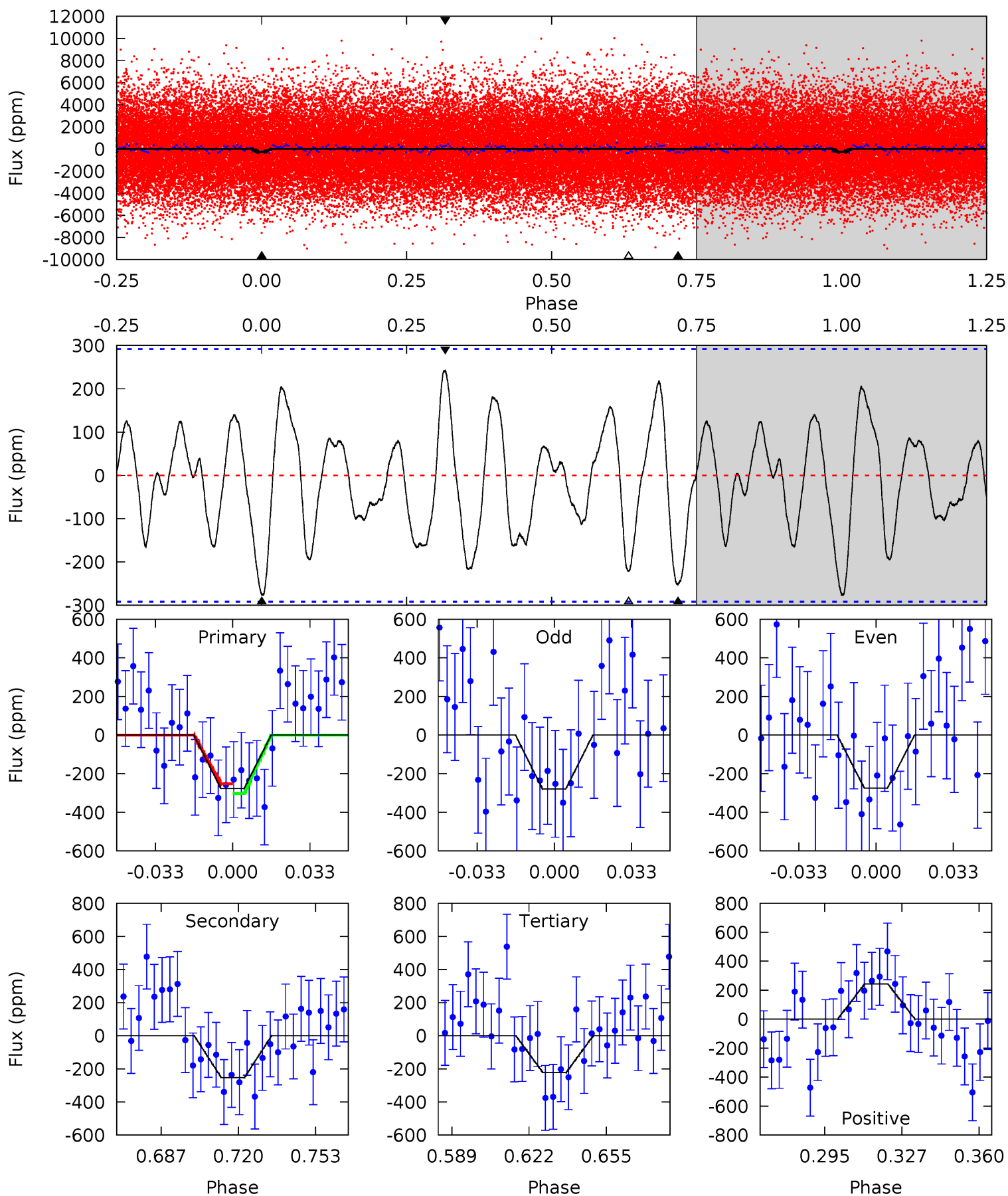
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.21	5.40	4.66	6.73	4.72	1.99	2.59	3.56	1.48	0.74	-1.33	0.93	0.99	0.45	0.74



Alt Model-Shift Uniqueness Test

004932657-01, P = 1.781710 Days, E = 131.056363 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.55	4.15	3.66	3.99	4.79	2.14	1.79	0.90	0.56	0.50	0.16	0.04	0.93	0.47	0.41



Stellar Parameters For KIC 004932657

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8104^{+226}_{-340}	$4.025^{+0.181}_{-0.132}$	$-0.140^{+0.250}_{-0.300}$	$2.164^{+0.461}_{-0.563}$	$1.809^{+0.134}_{-0.314}$	$0.251^{+0.279}_{-0.098}$
	+3%/-4%	+4%/-3%	+179%/-214%	+21%/-26%	+7%/-17%	+111%/-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 004932657-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-187 ± 35	$4.28^{+2.98}_{-2.47}$	3885^{+256}_{-301}	6552^{+5314}_{-1504}	$6.533^{+32.007}_{-4.268}$
Alt.	-253 ± 61	$4.54^{+2.92}_{-2.70}$	3886^{+285}_{-264}	6937^{+6789}_{-1605}	$7.896^{+41.221}_{-5.081}$

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 $A_{obs} \gg 1.0$

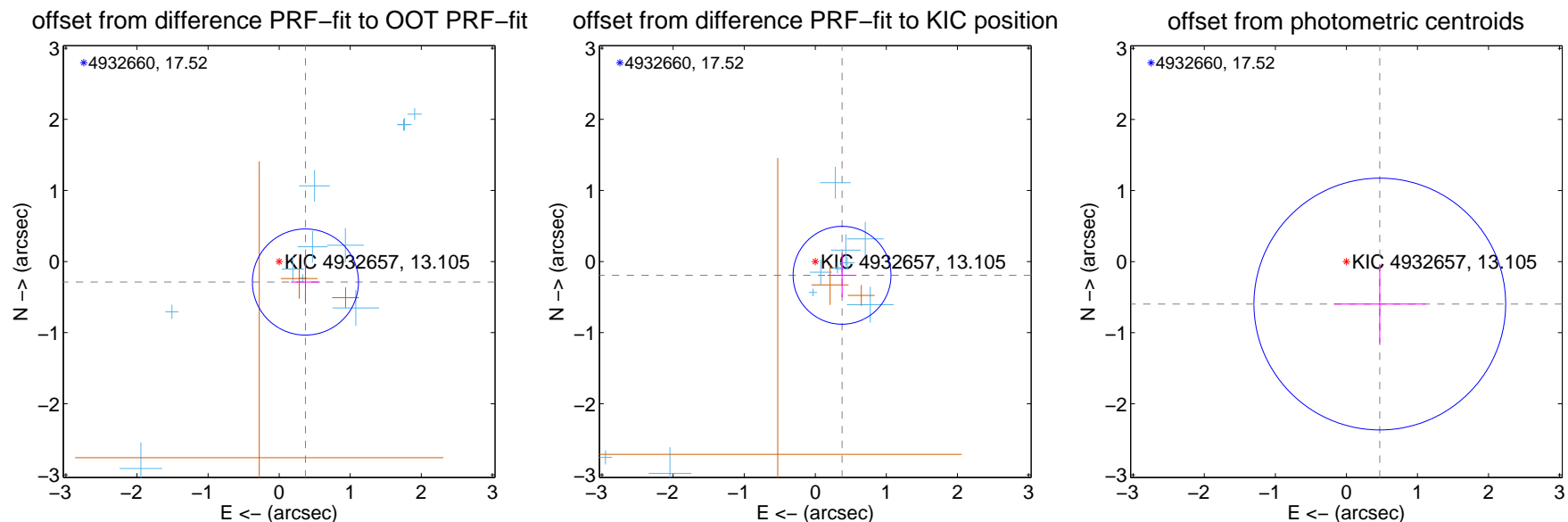
DV Centroid Data

Supplemental centroid analysis for 004932657-01. Kepler magnitude: 13.11. Transit SNR 9.34

There are 11 quarters with good PRF difference image offsets

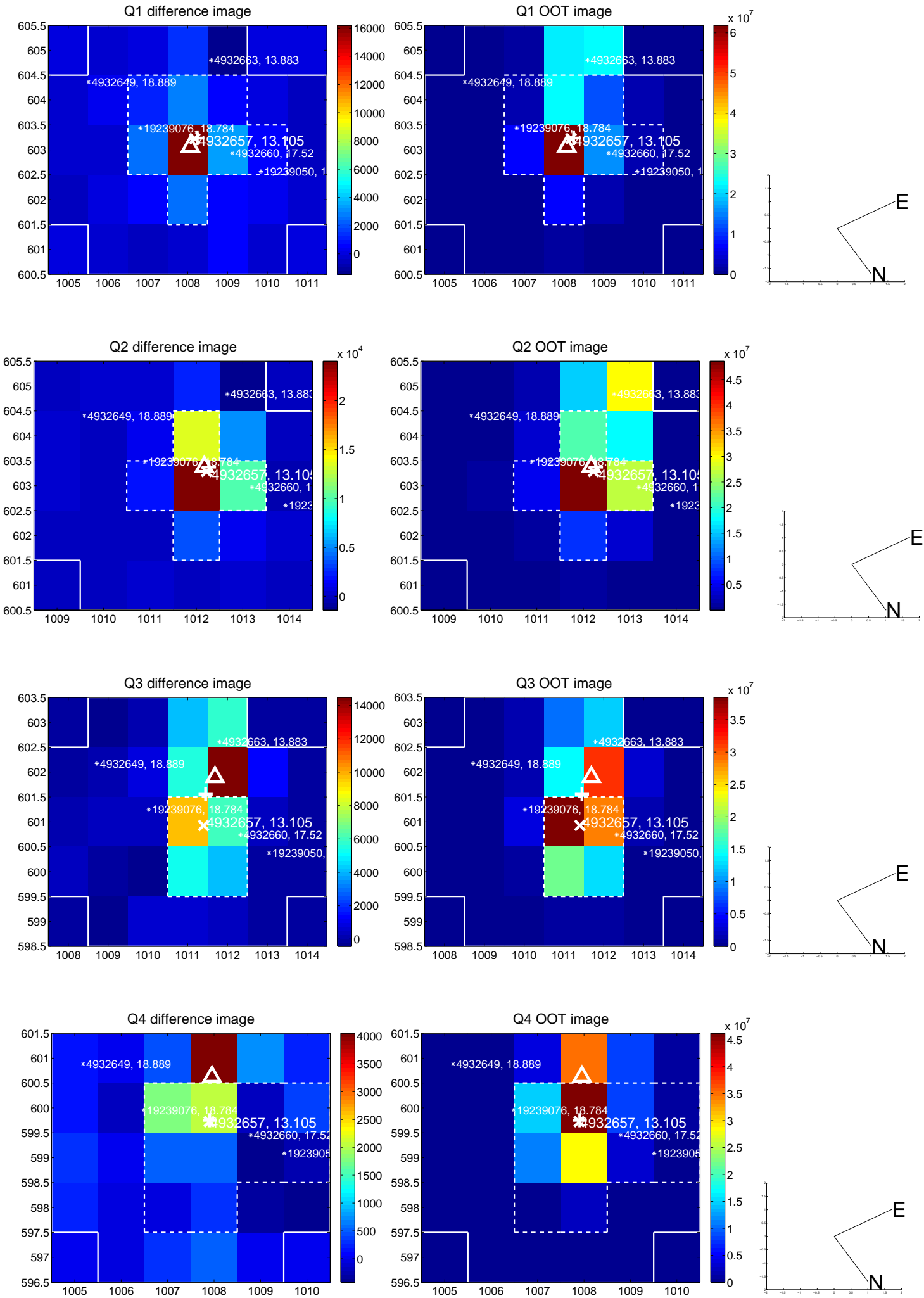
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.469 ± 0.249	1.89	-0.370 ± 0.203	-0.288 ± 0.310
PRF-fit source offset from KIC position	0.423 ± 0.230	1.84	-0.377 ± 0.203	-0.193 ± 0.310
photometric centroid source offset	0.76 ± 0.59	1.29	-0.47 ± 0.65	-0.60 ± 0.55

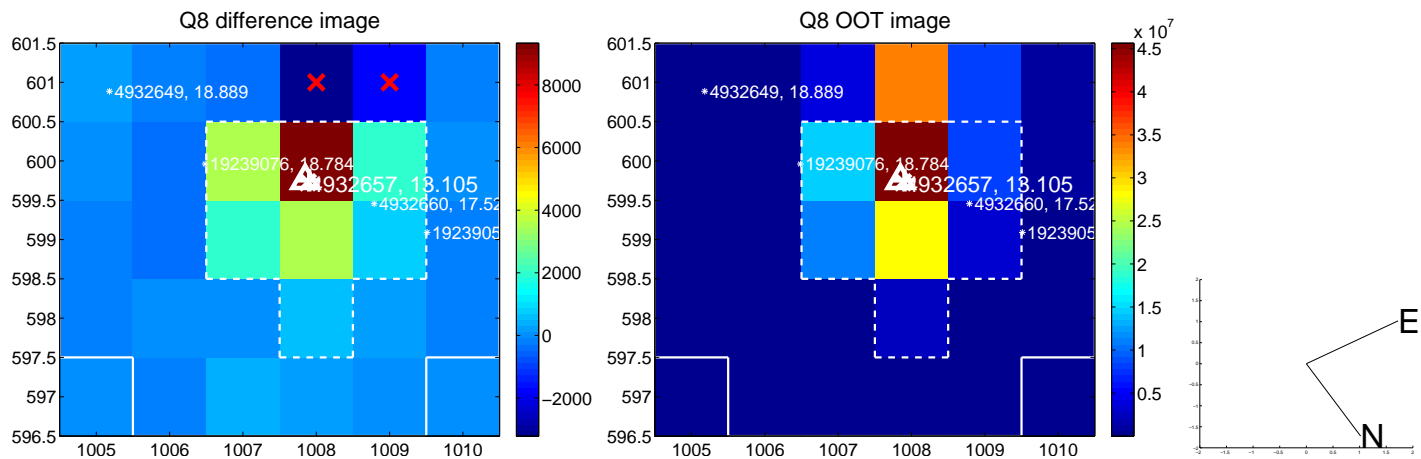
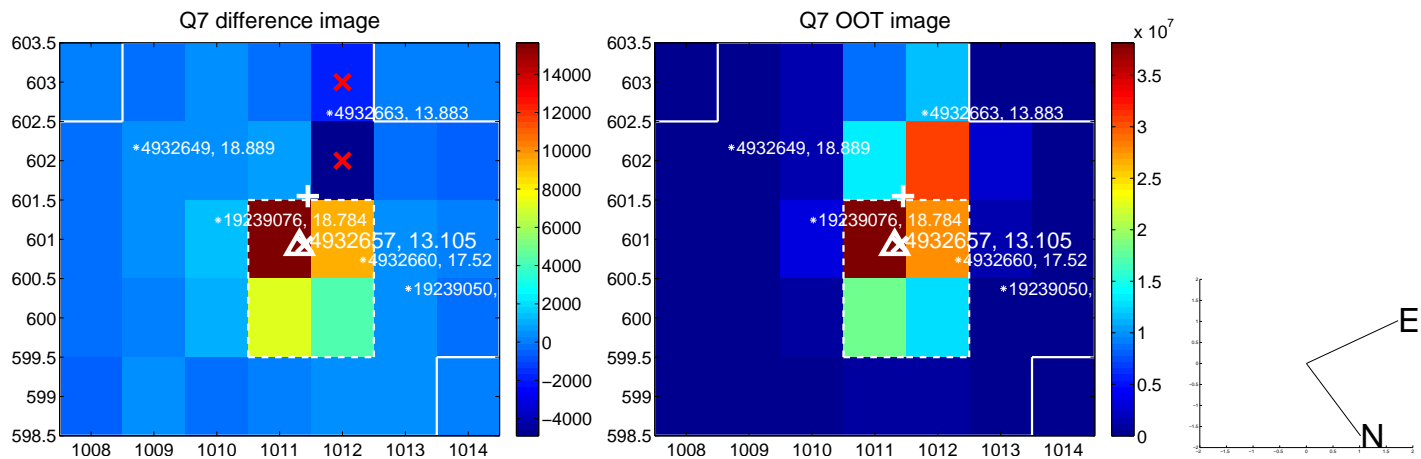
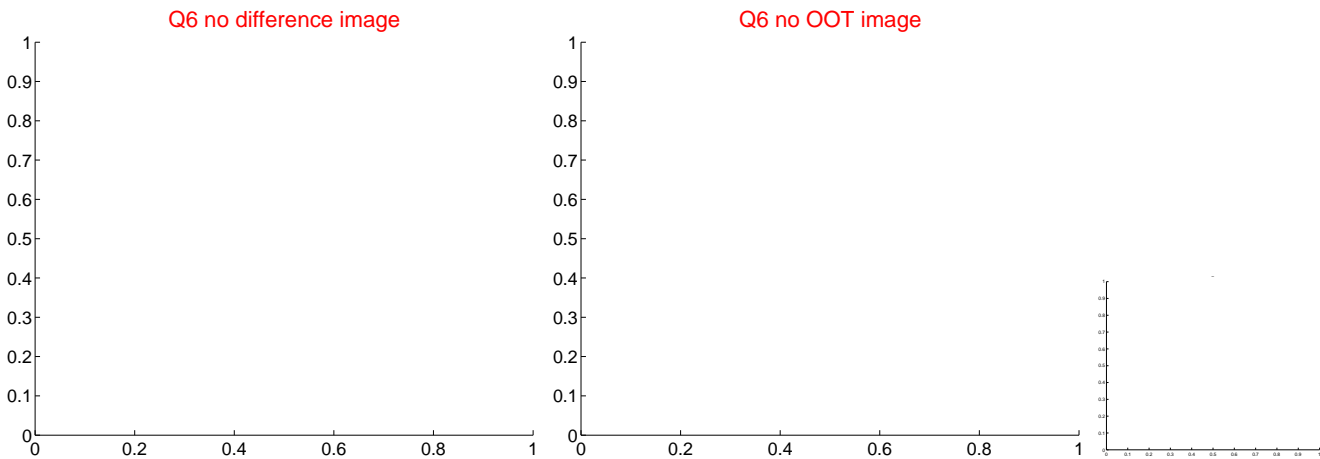
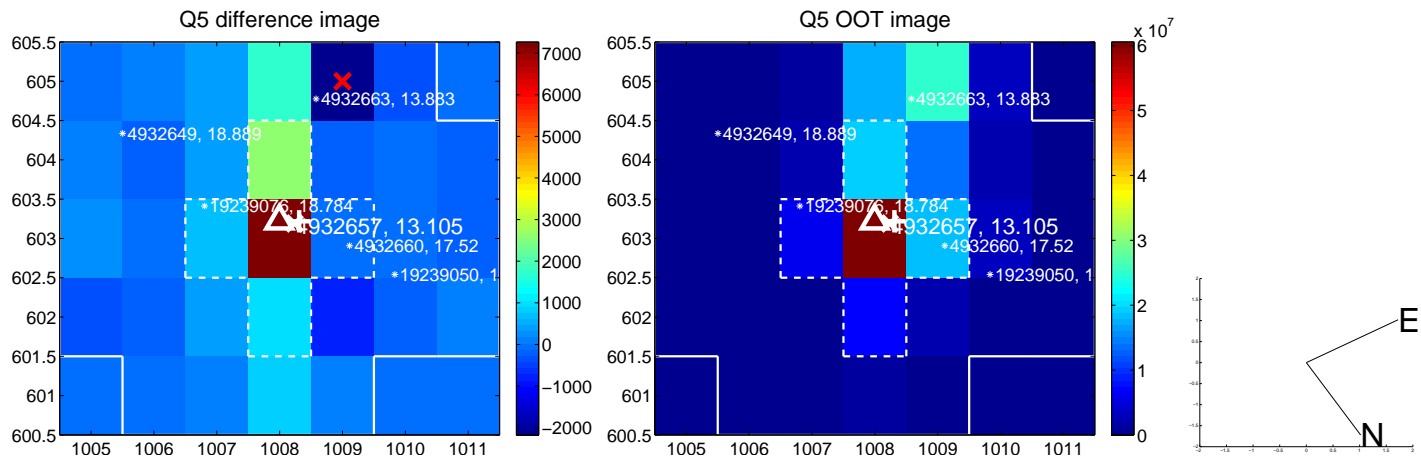


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

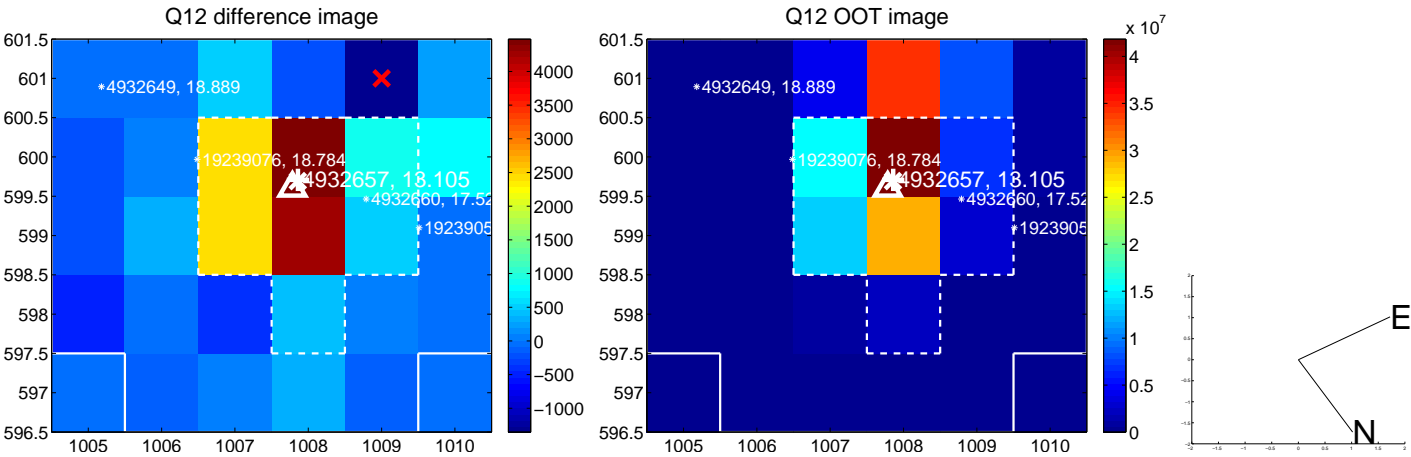
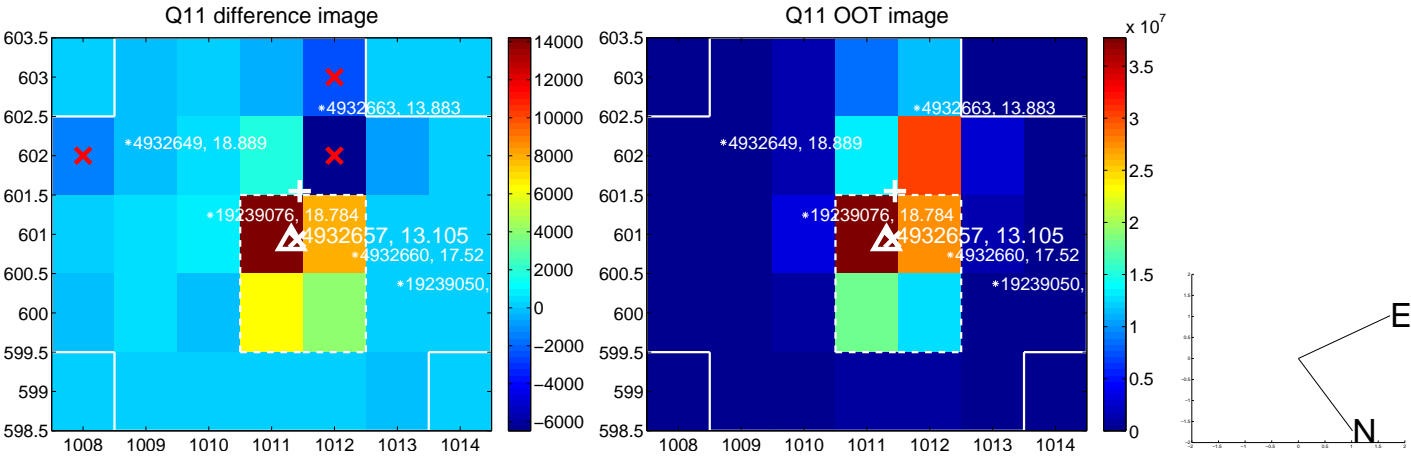
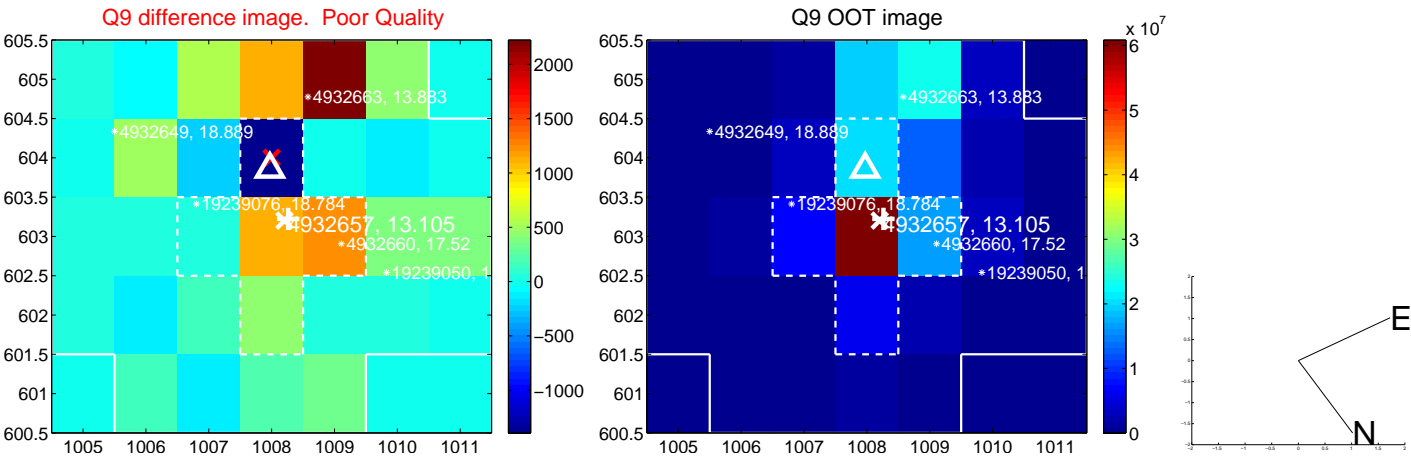
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



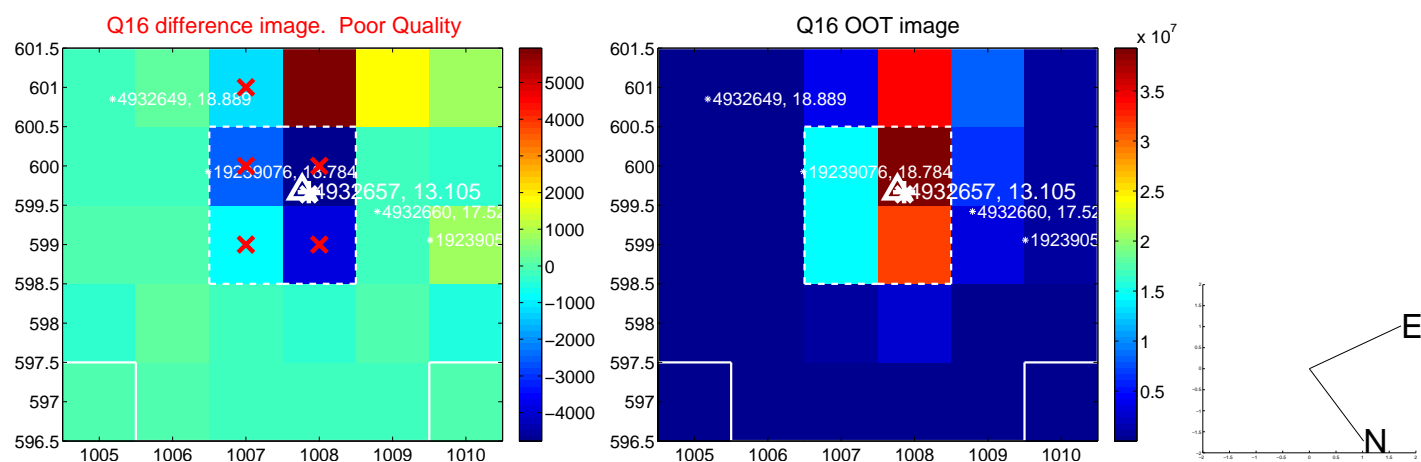
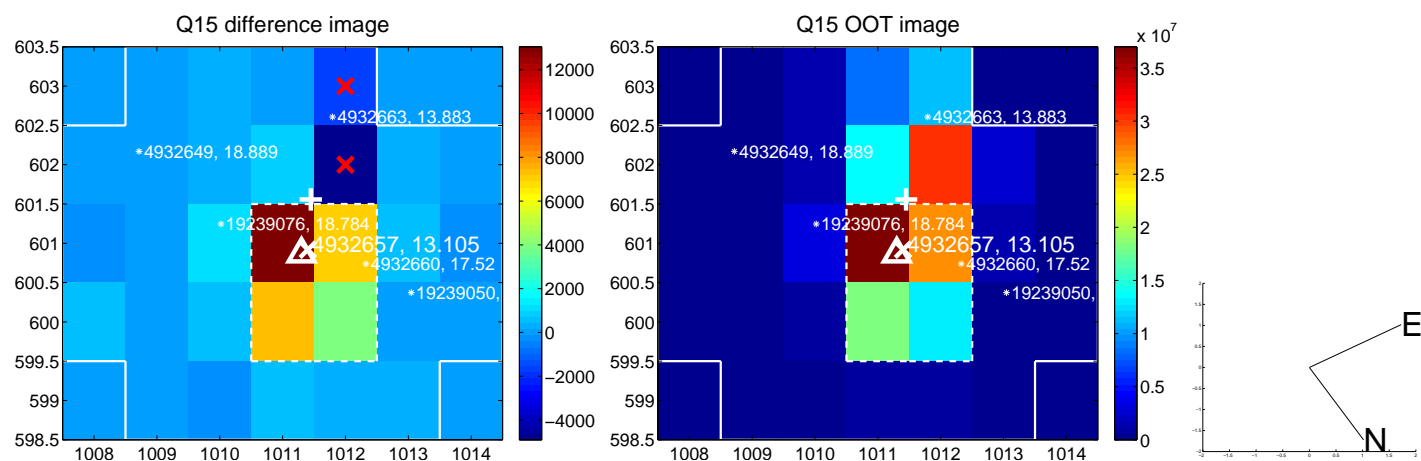
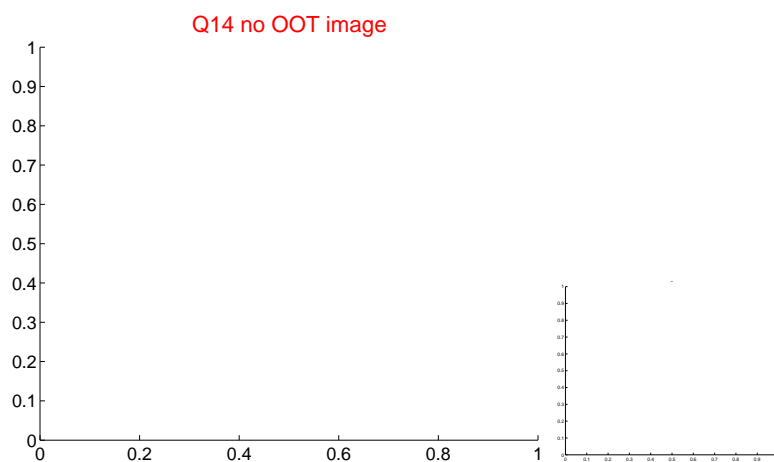
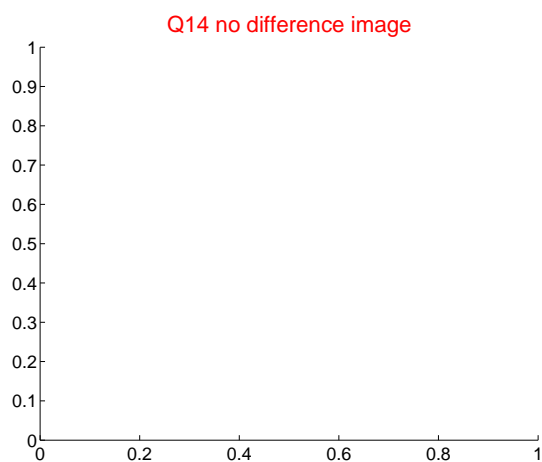
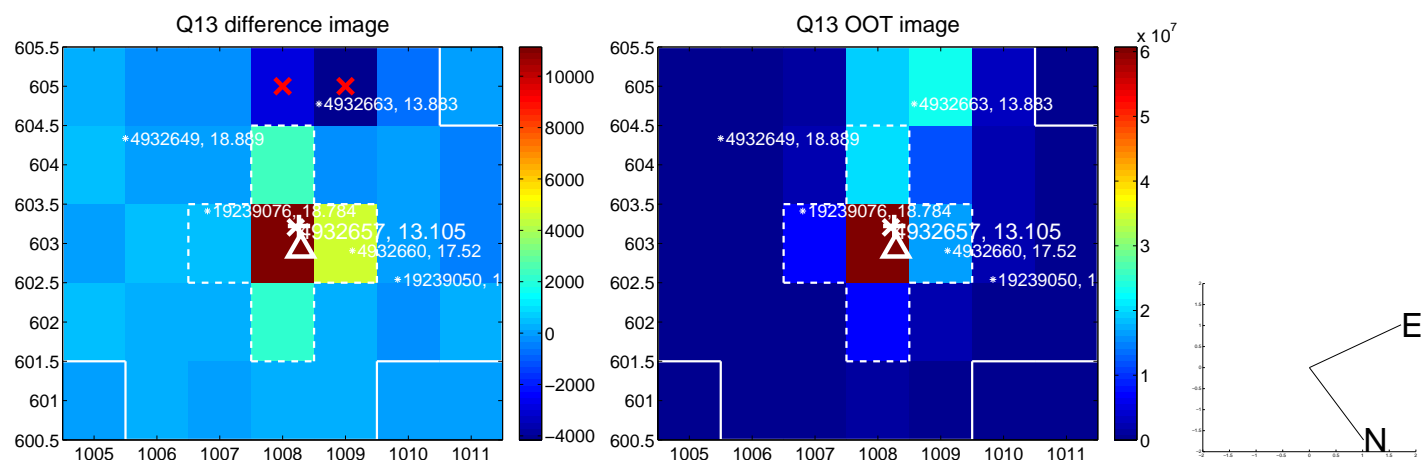
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



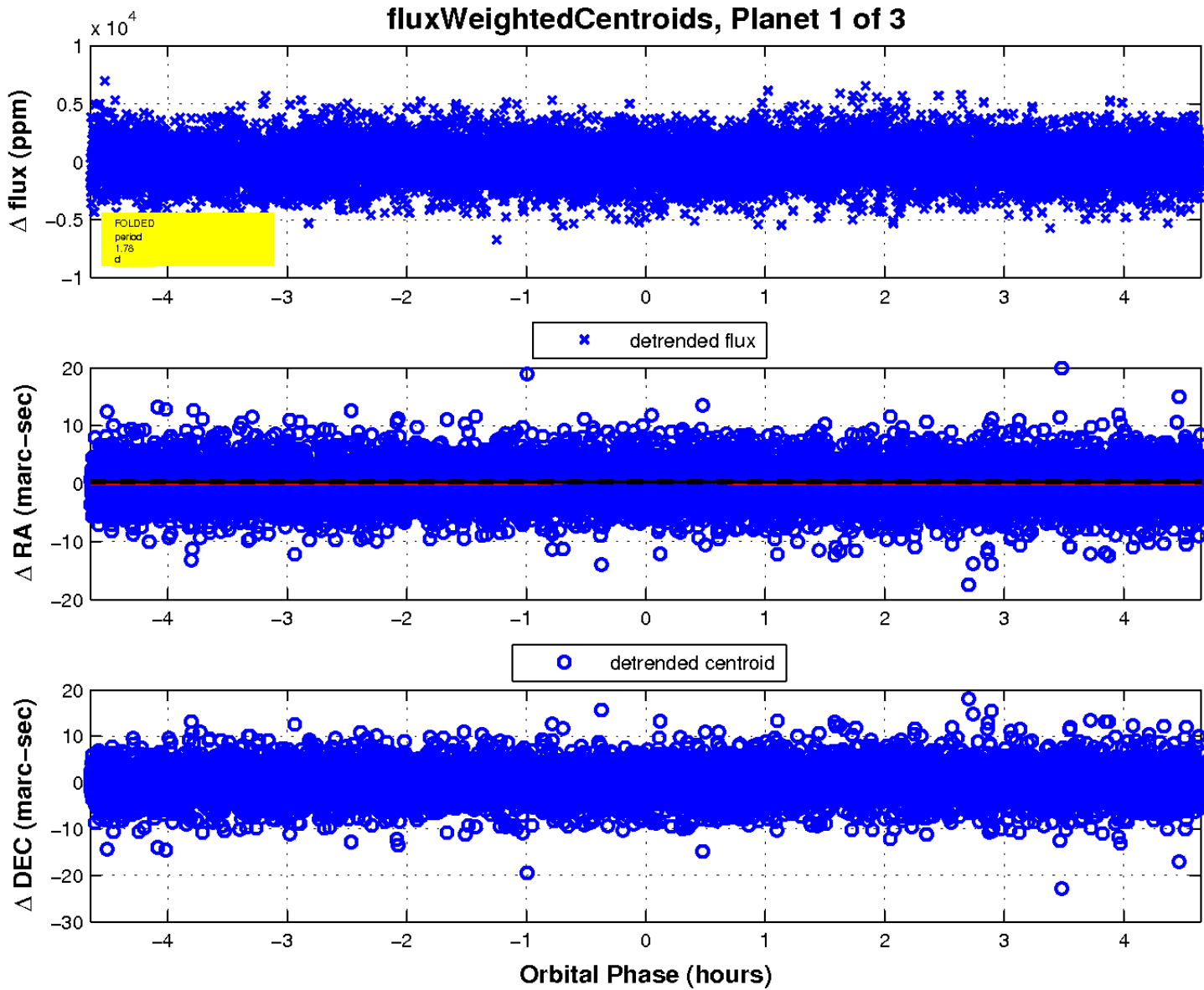
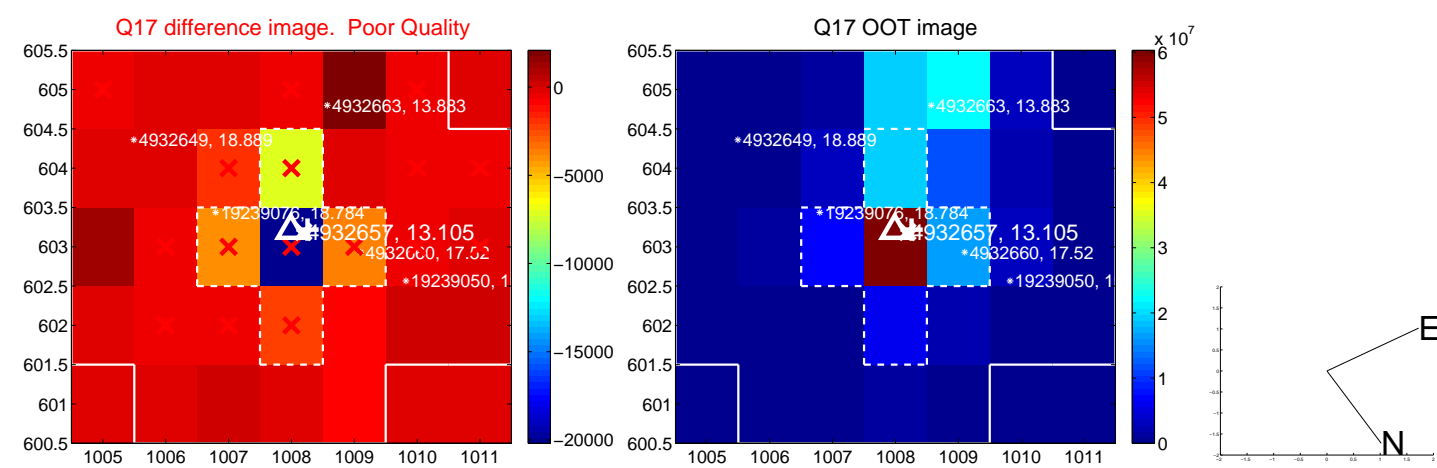
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

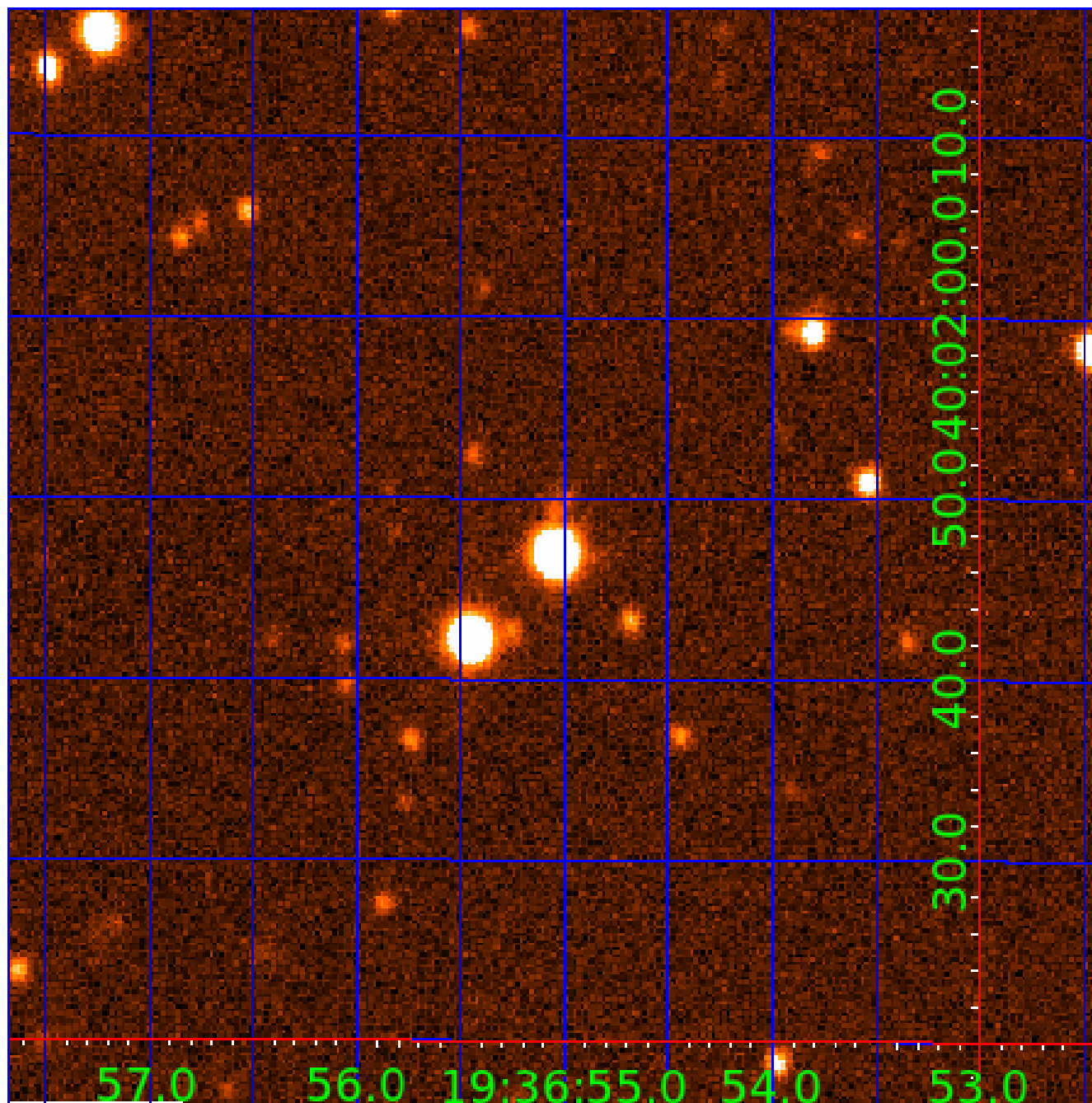


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004932657

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})
004932657-01	OBS	No	1.781700	132.838217	252.2	1.549	9.4	9.3	2.16	8104	4.02	14725.98
004932657-02	OBS	No	0.653305	131.653774	144.2	1.540	8.1	8.2	2.16	8104	3.03	56110.25
004932657-03	OBS	No	0.653305	131.821363	127.3	1.640	7.5	6.8	2.16	8104	2.85	56110.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004932657-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
004932657-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_KIC_POS
004932657-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_KIC_POS

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

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

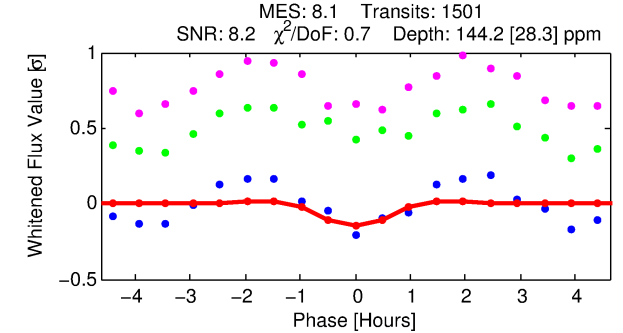
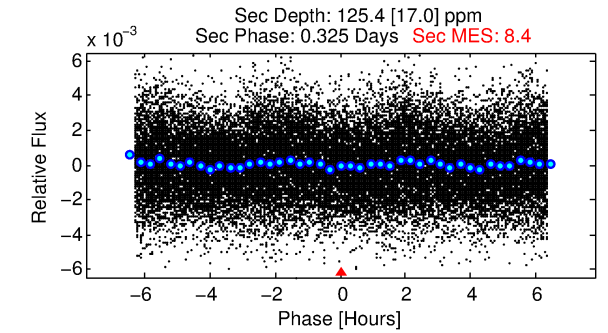
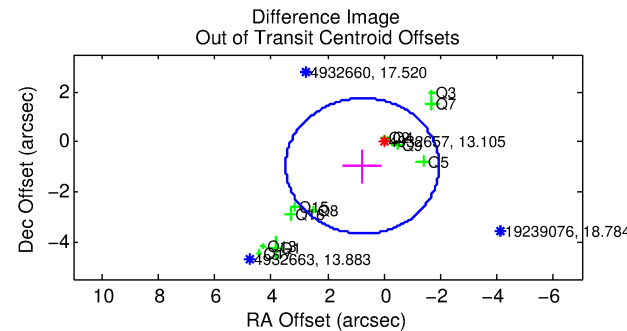
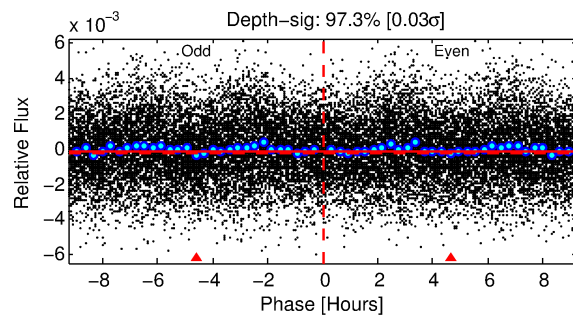
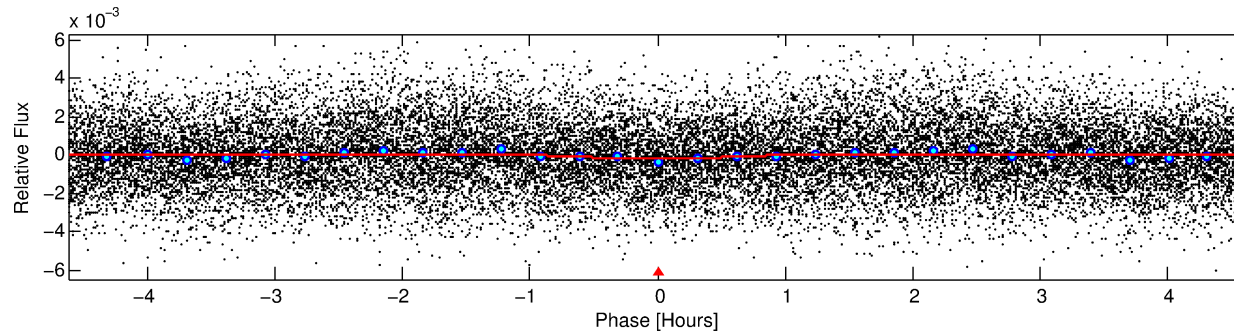
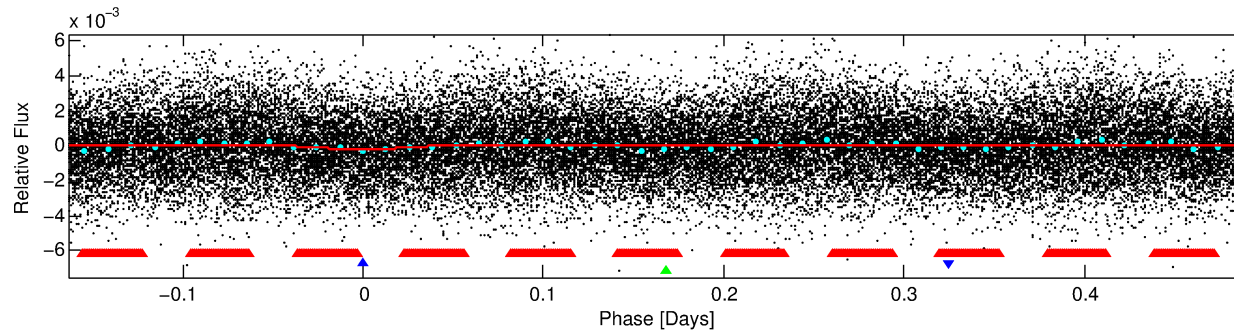
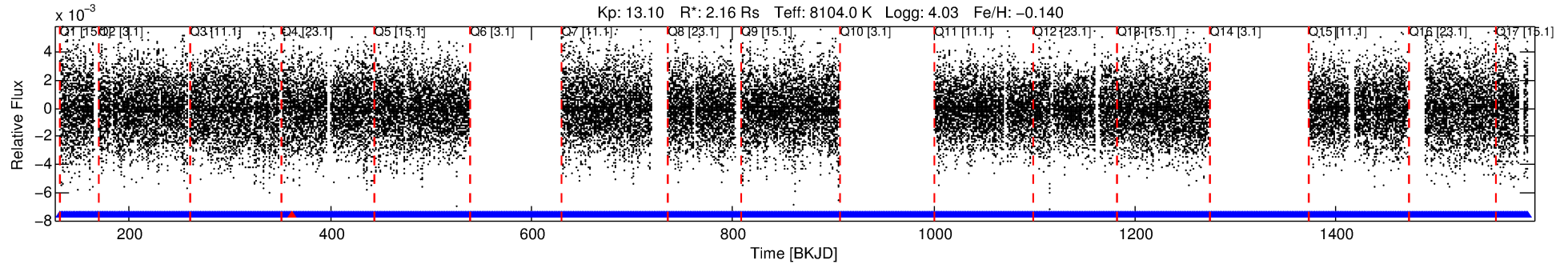
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004932657-02

No Significant Match Found

DV One-Page Summary

KIC: 4932657 Candidate: 2 of 3 Period: 0.653 d



DV Fit Results:

Period = 0.65331 [0.00001] d
Epoch = 131.6538 [0.0032] BKJD
Rp/R* = 0.0128 [0.0131]
a/R* = 1.77 [7.56]
b = 0.90 [1.34]
Seff = 56110.25 [20650.09]
Teq = 3925 [361] K
Rp = 3.03 [3.20] Re
a = 0.0180 [0.0040] AU
Ag = 2.42 [5.02] [0.28σ]
Teffp = 7566 [3890] K [0.93σ]

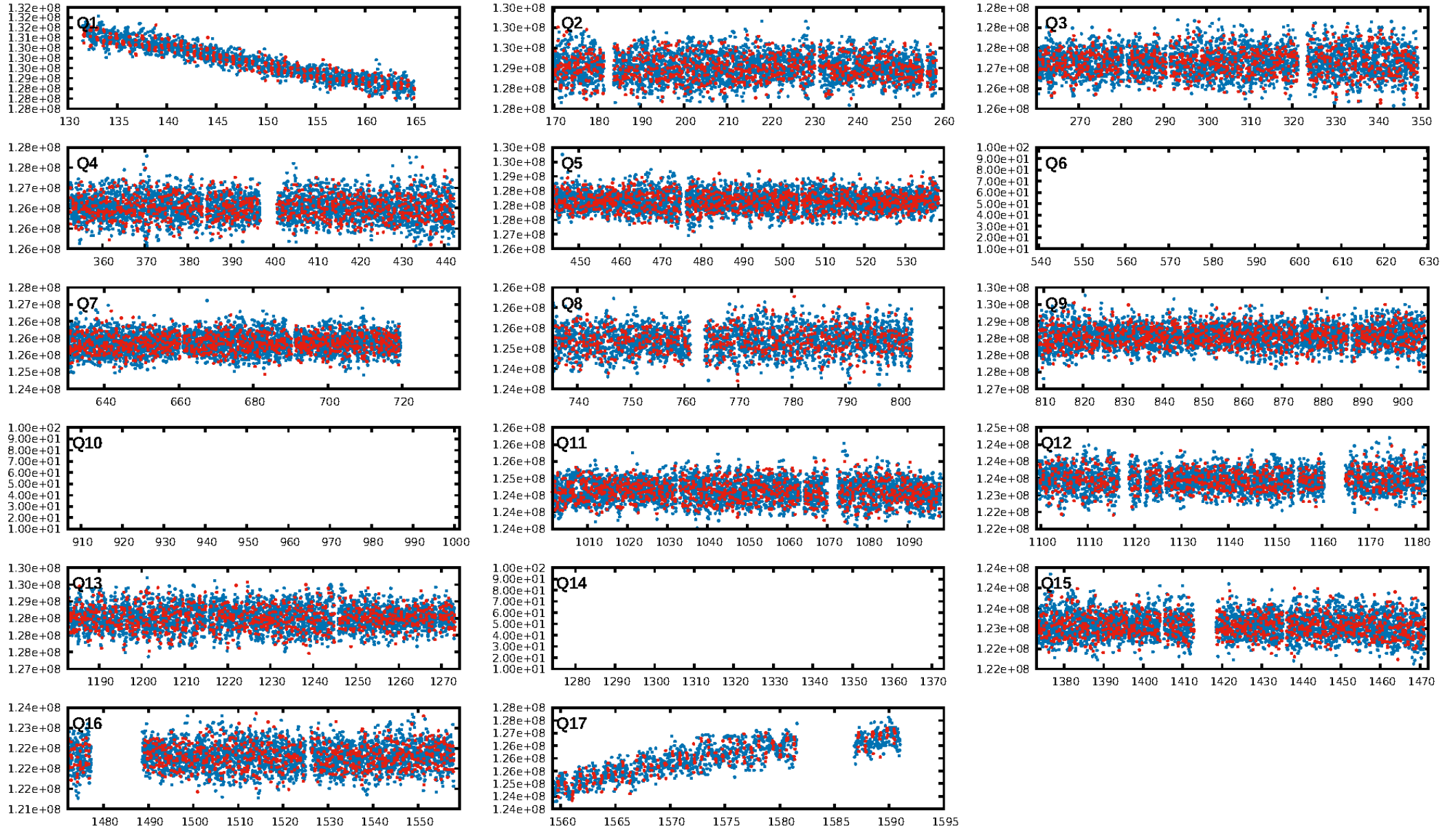
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.29e-17
RollingBand-fgt: 1.00 [1417/1418]
GhostDiagnostic-chr: 1.172
Centroid-sig: N/A
Centroid-so: 1.351 arcsec [2.06σ]
OotOffset-rm: 1.238 arcsec [1.37σ]
OotOffset-st: 1/3/3/5 [12]
KicOffset-rm: 2.578 arcsec [3.29σ]
KicOffset-st: 1/3/3/5 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 0.00 [0/14]

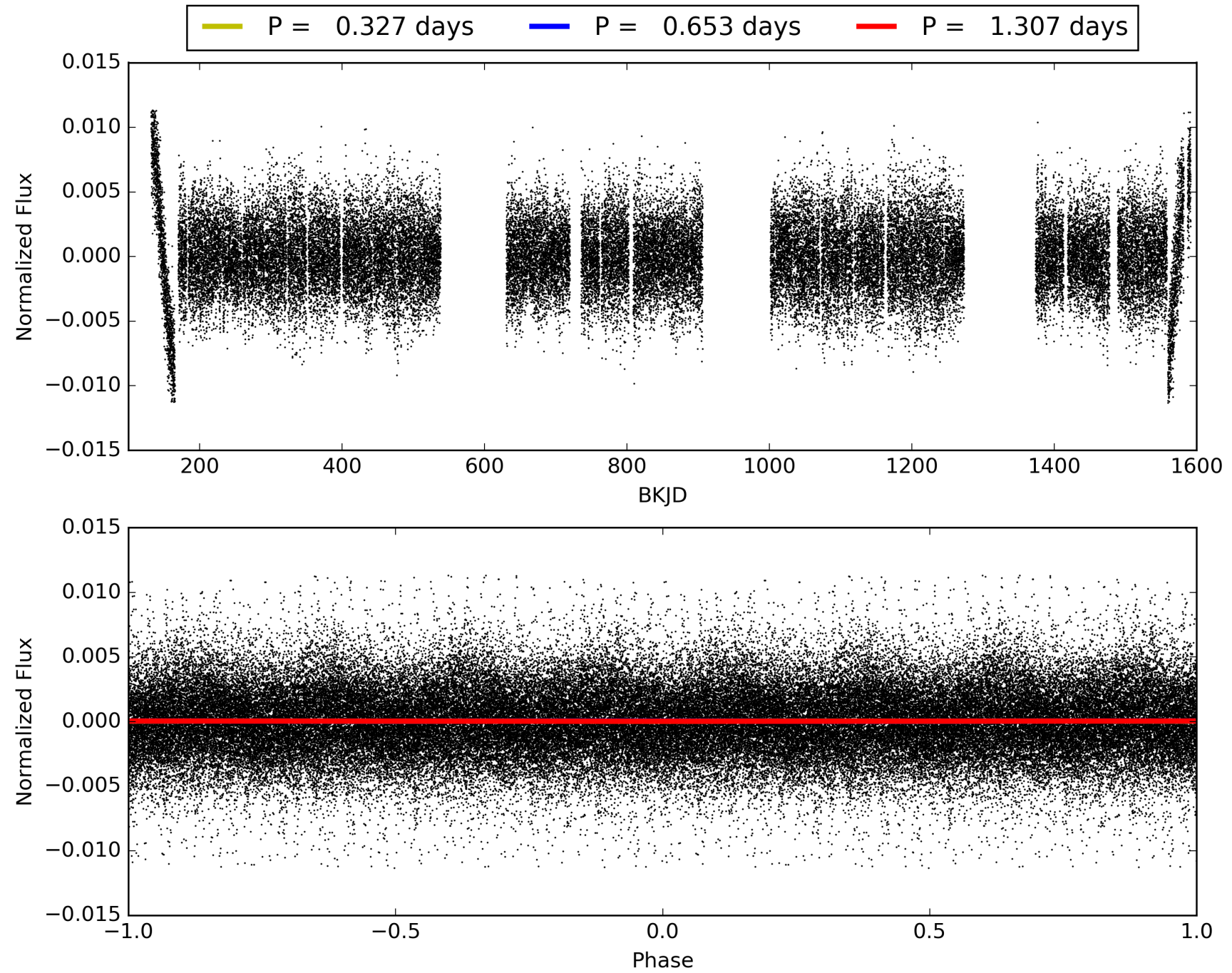
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:22:59 Z

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

TCE 004932657-02, PDC Light Curves

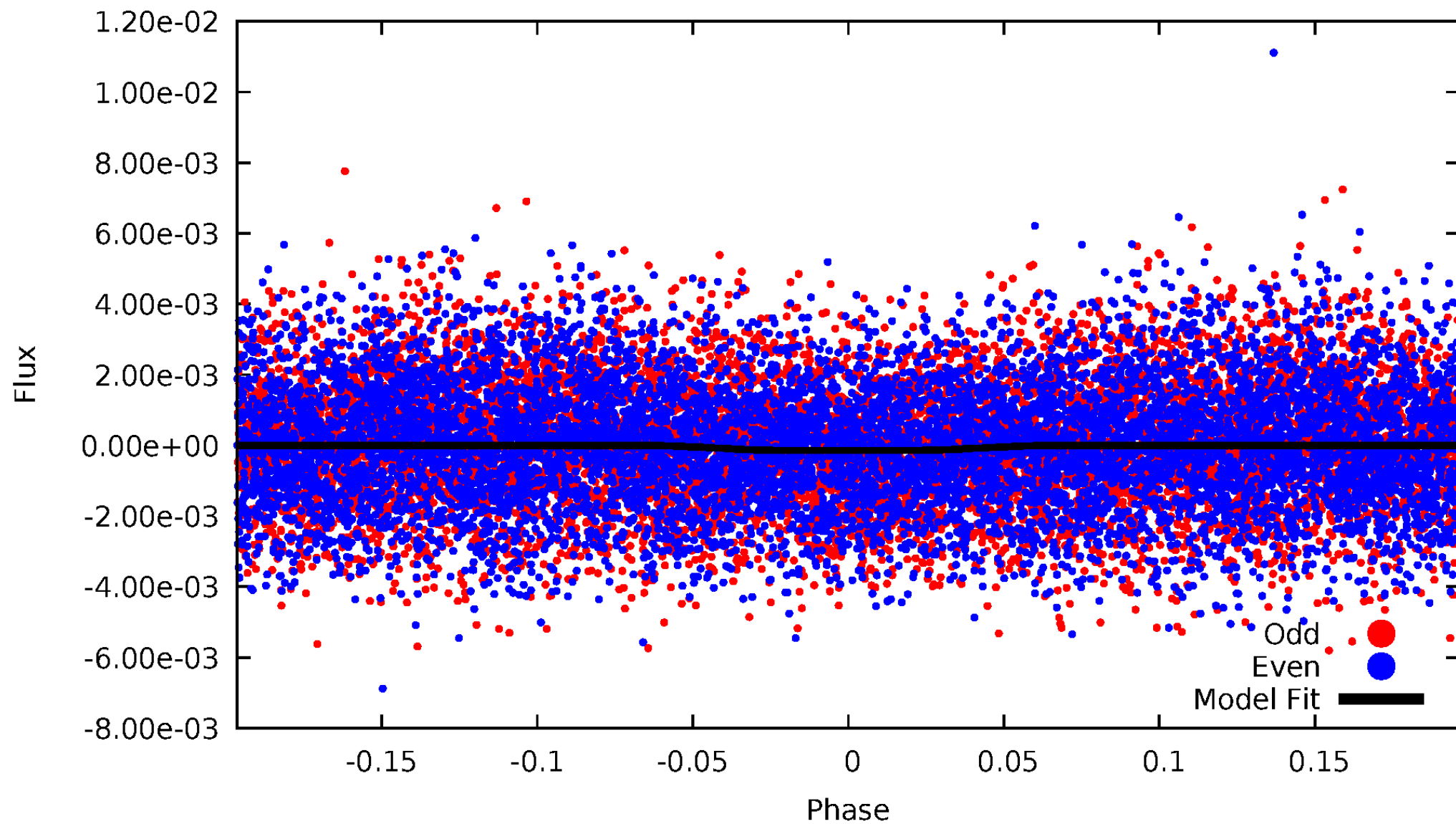


TCE 004932657-02



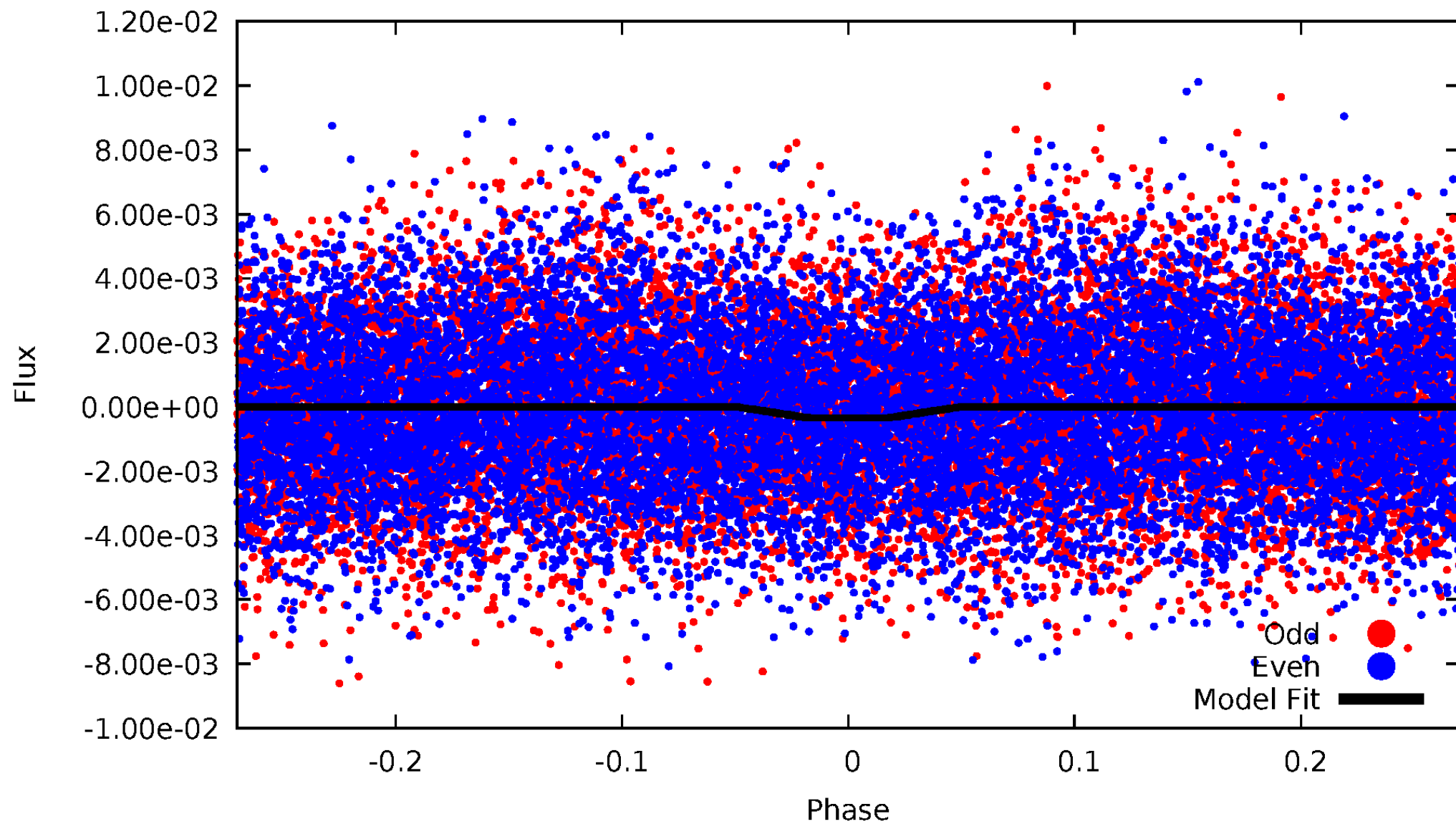
DV Odd/Even

TCE 004932657-02



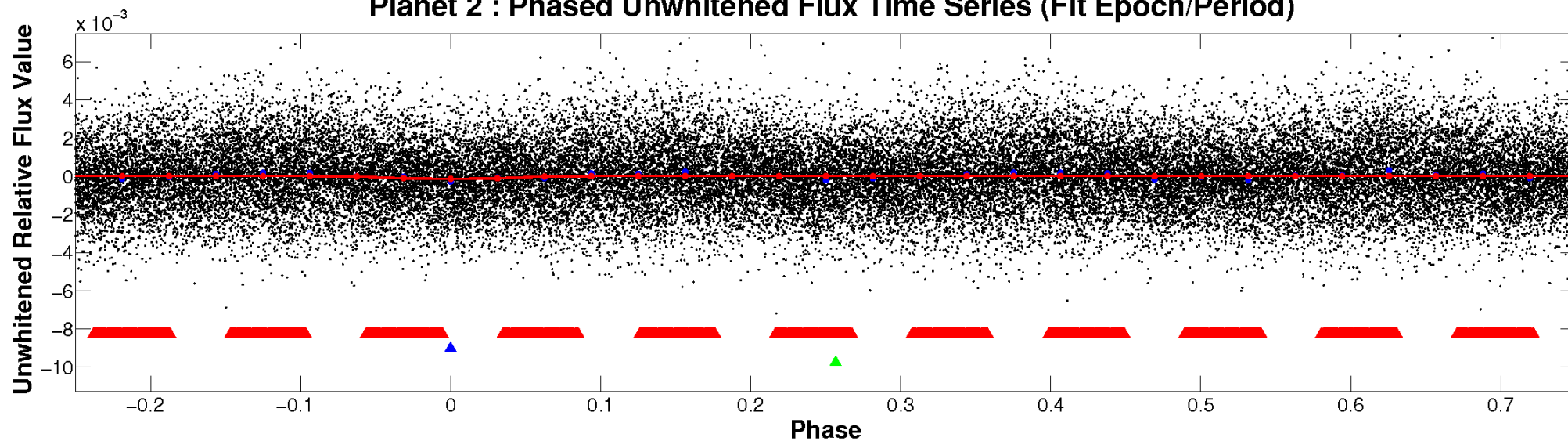
ALT Odd/Even

TCE 004932657-02

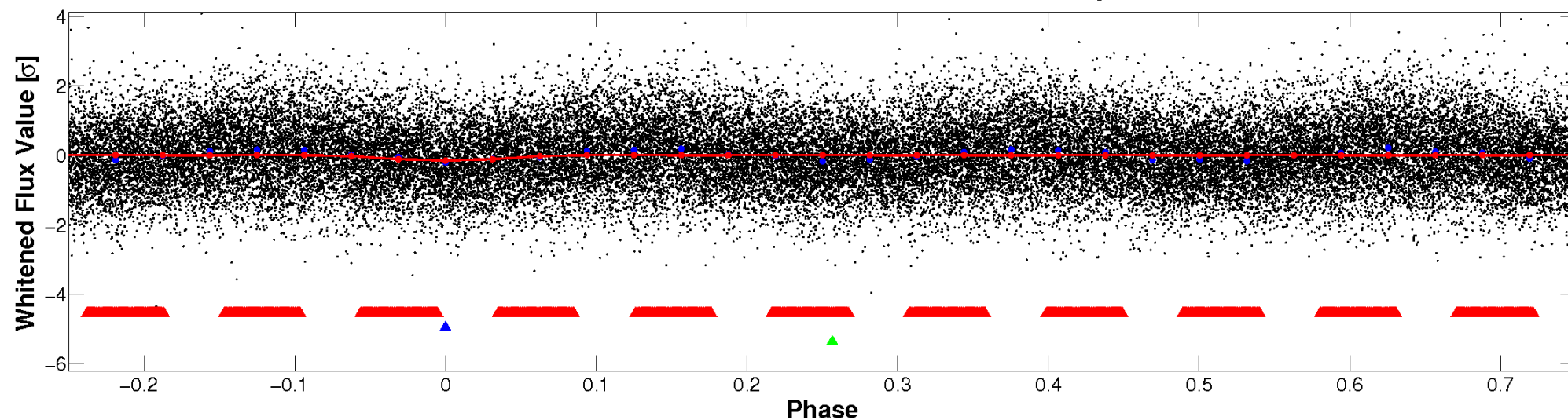


Non-Whitened Vs. Whitened Light Curve

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

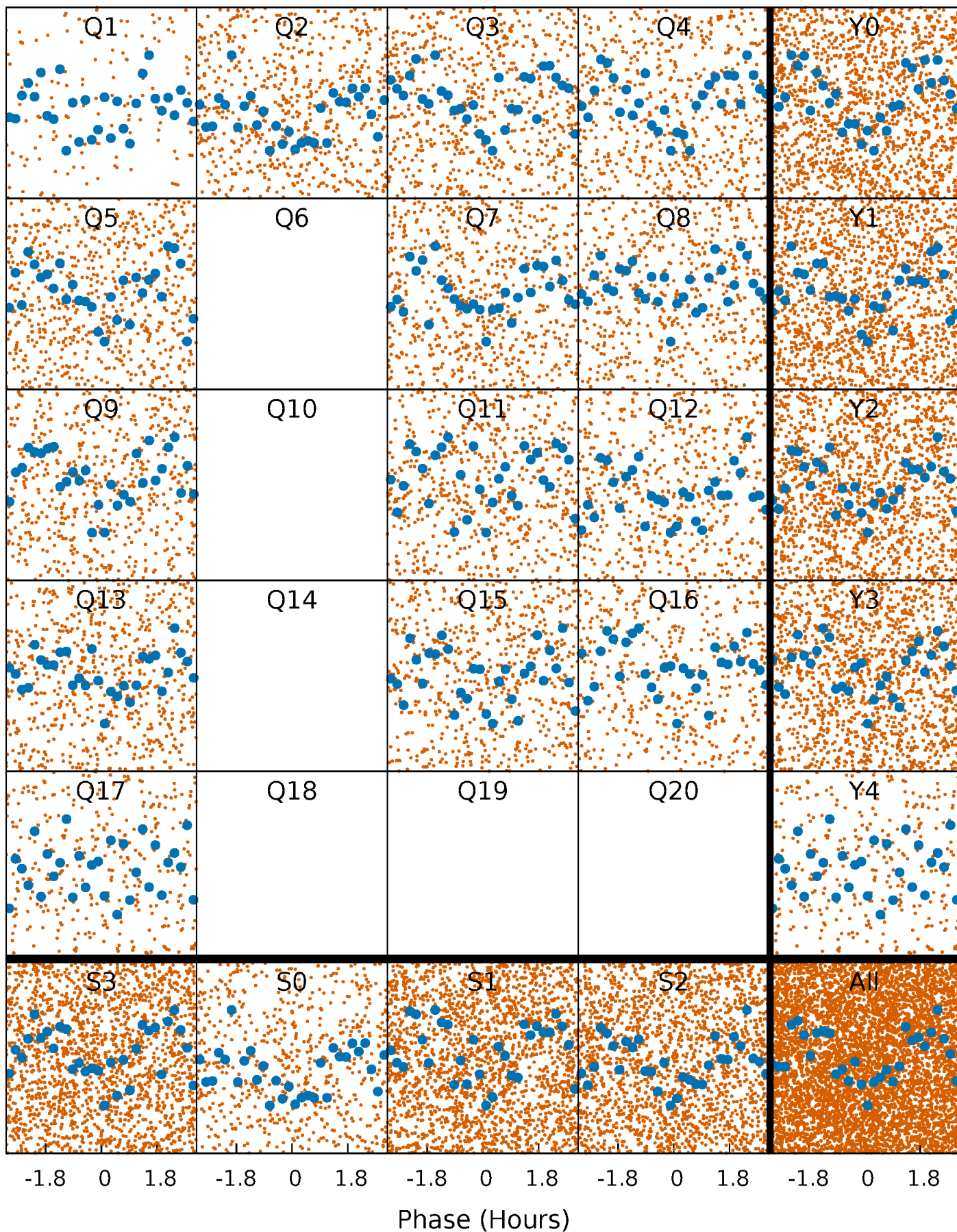


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



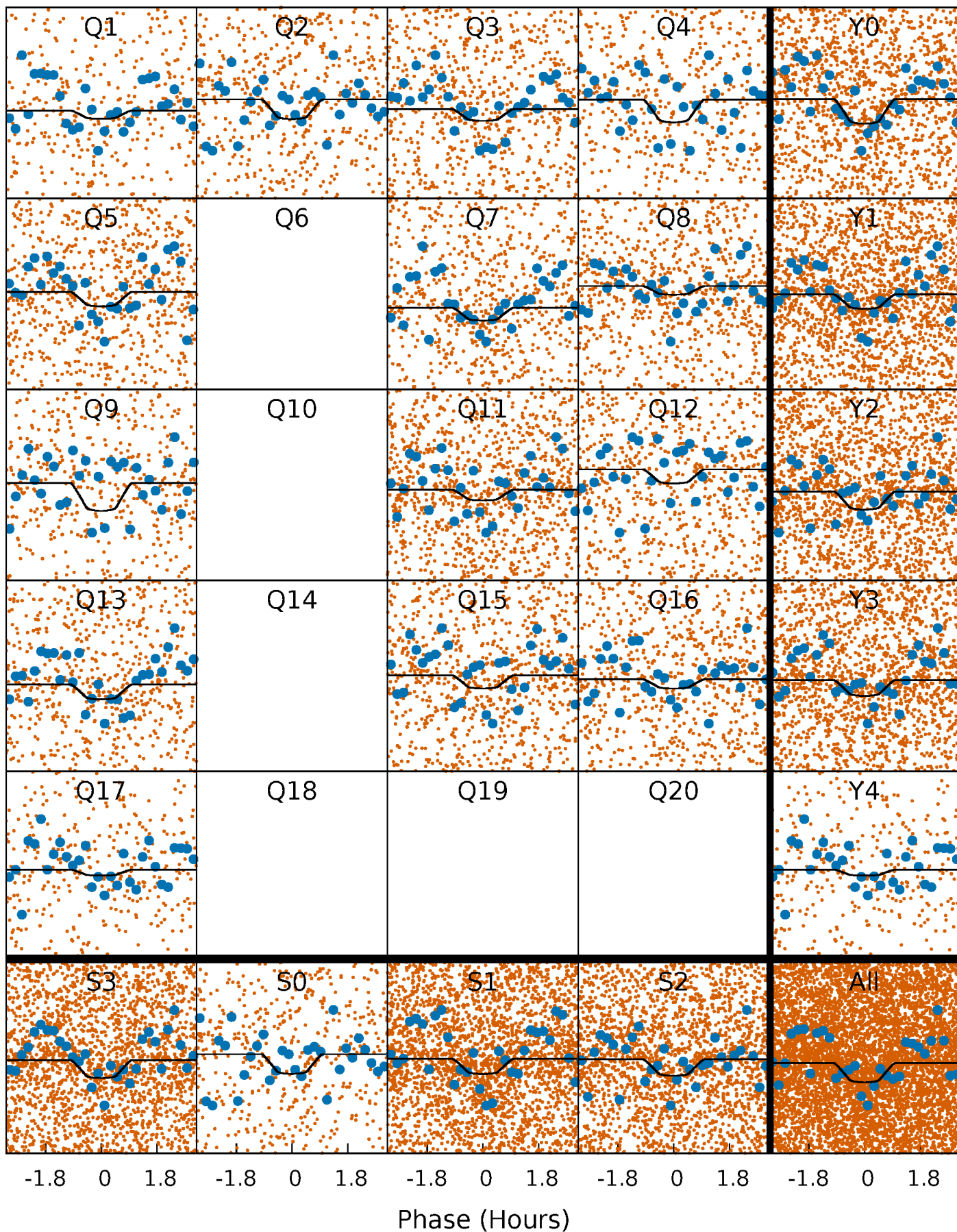
PDC Quarter-Phased Transit Curves

TCE 004932657-02 P= 0.653305 Days $T_0=131.653774$ (BKJD)



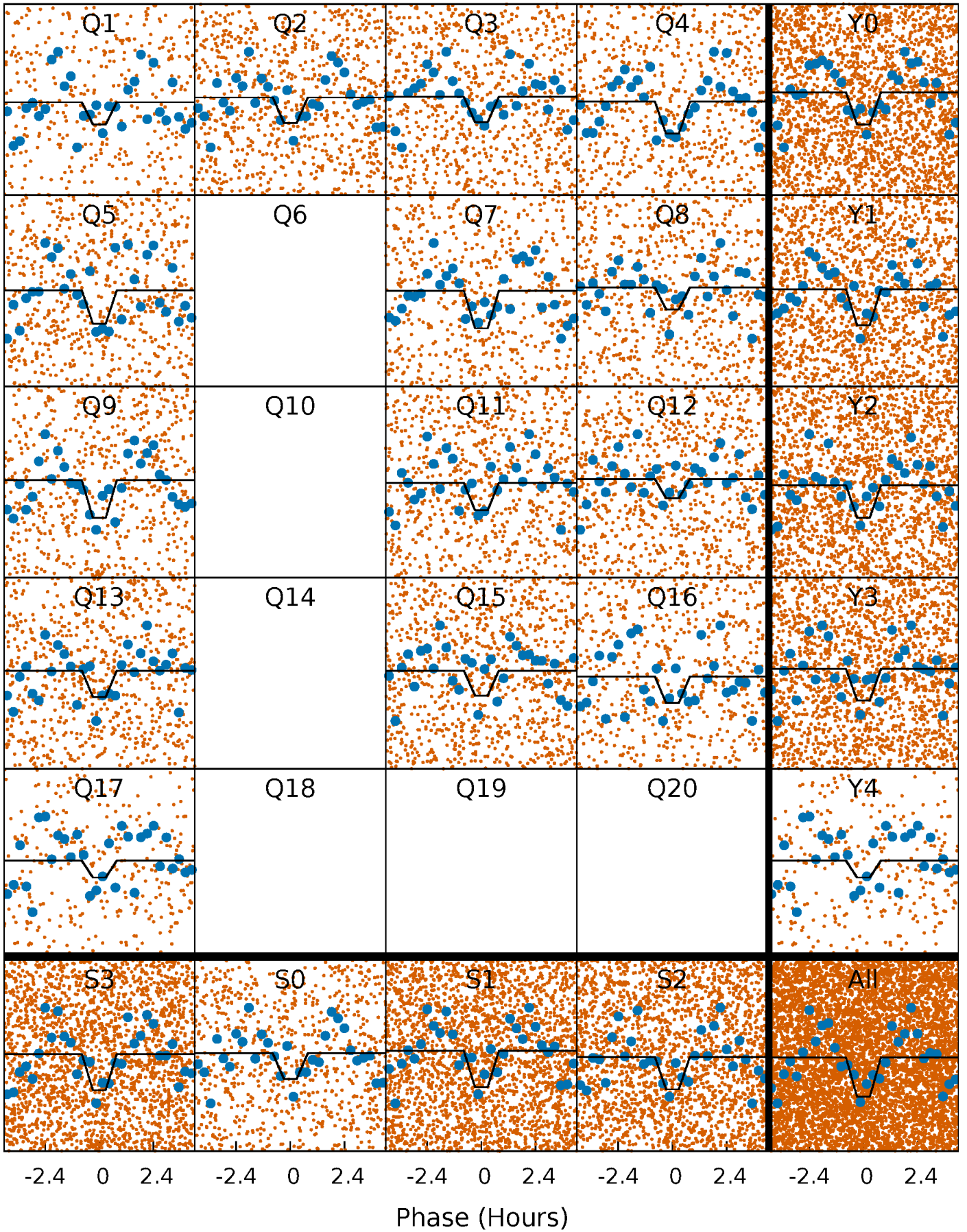
DV Quarter-Phased Transit Curves

TCE 004932657-02 P= 0.653305 Days $T_0=131.653774$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

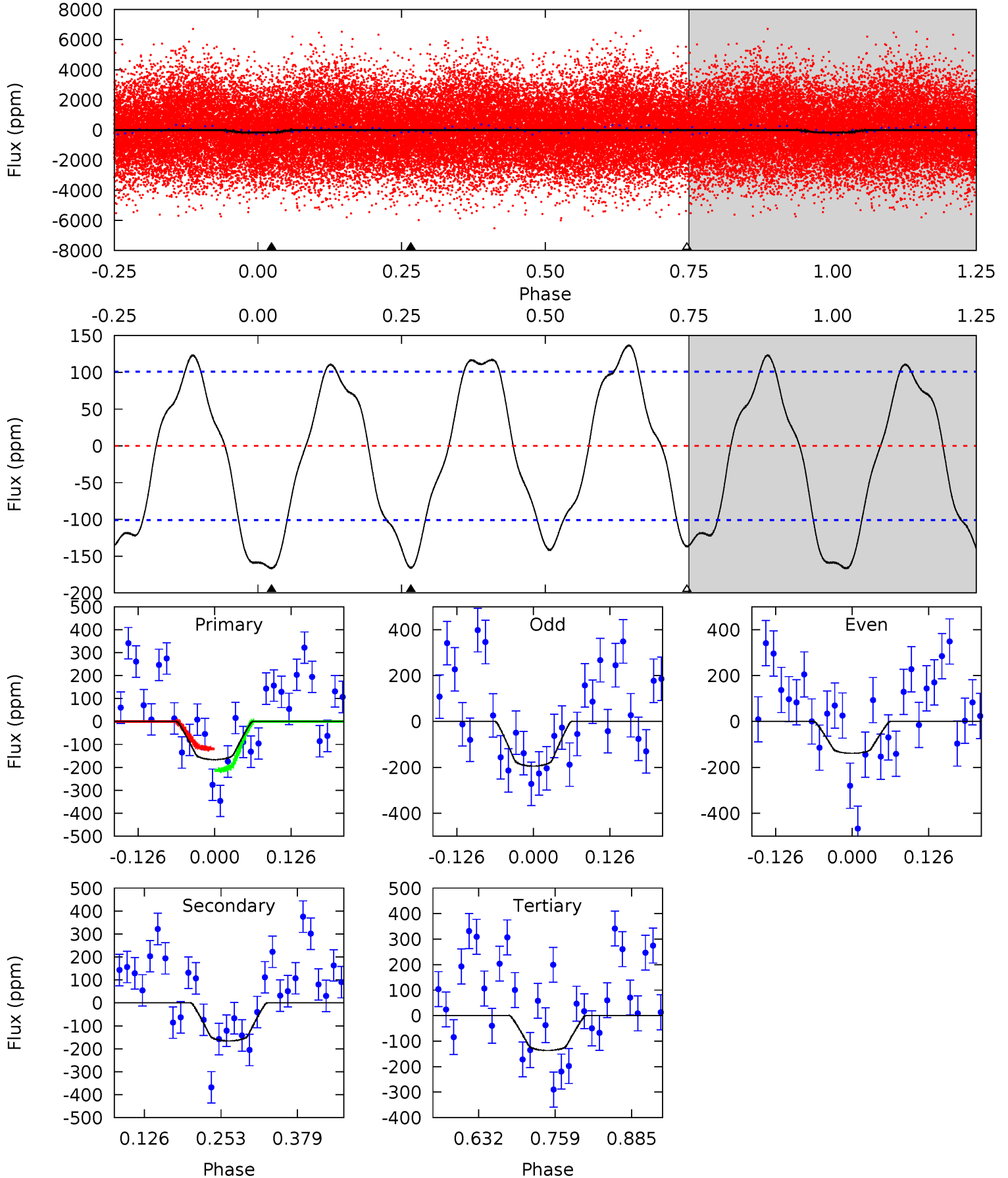
TCE 004932657-02 P= 0.653314 Days $T_0=131.649913$ (BKJD)



DV Model-Shift Uniqueness Test

004932657-02, P = 0.653305 Days, E = 131.000469 Days

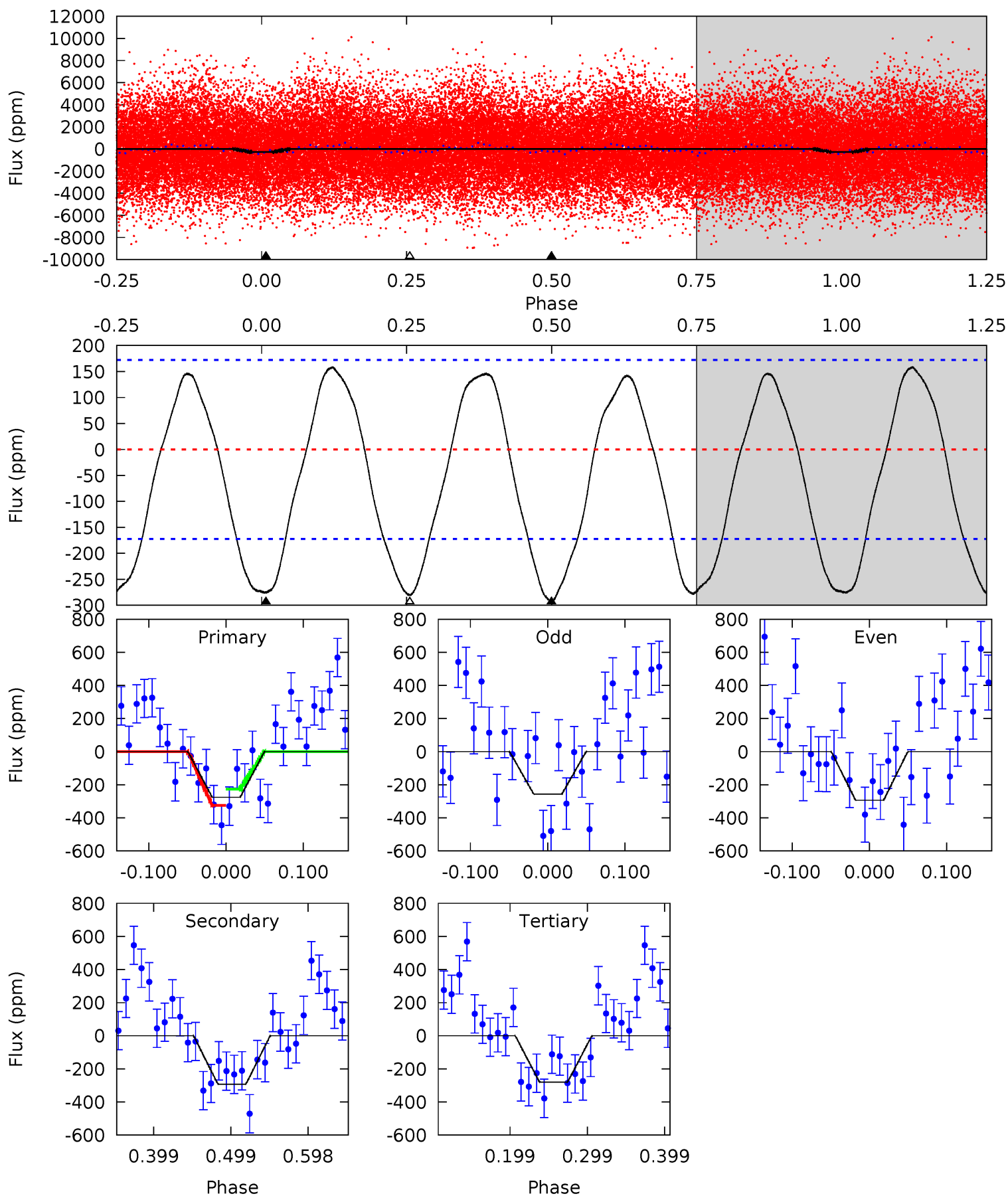
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.44	7.42	6.11	0	4.52	1.53	4.11	1.33	7.44	1.30	7.42	1.26	1.14	0.45	2.17



Alt Model-Shift Uniqueness Test

004932657-02, P = 0.653314 Days, E = 130.996599 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.31	7.76	7.44	0	4.57	1.65	4.07	-0.13	7.31	0.33	7.76	0.49	0.97	0.35	1.31



Stellar Parameters For KIC 004932657

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8104^{+226}_{-340}	$4.025^{+0.181}_{-0.132}$	$-0.140^{+0.250}_{-0.300}$	$2.164^{+0.461}_{-0.563}$	$1.809^{+0.134}_{-0.314}$	$0.251^{+0.279}_{-0.098}$
	+3%/-4%	+4%/-3%	+179%/-214%	+21%/-26%	+7%/-17%	+111%/-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 004932657-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-166 ± 22	$3.59^{+2.69}_{-2.18}$	5430^{+361}_{-407}	6830^{+7302}_{-2002}	$2.226^{+11.521}_{-1.498}$
Alt.	-293 ± 38	$4.49^{+3.10}_{-2.54}$	5420^{+346}_{-378}	7054^{+6396}_{-1925}	$2.394^{+10.602}_{-1.532}$

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

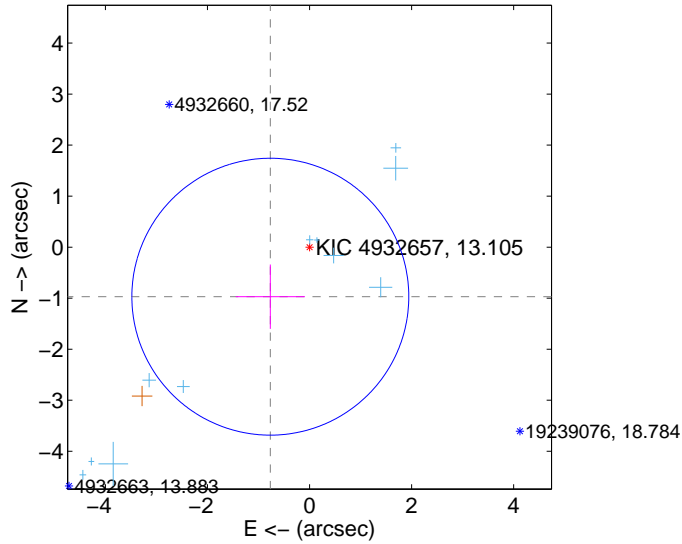
Supplemental centroid analysis for 004932657-02. Kepler magnitude: 13.11. Transit SNR 8.22

There are 11 quarters with good PRF difference image offsets

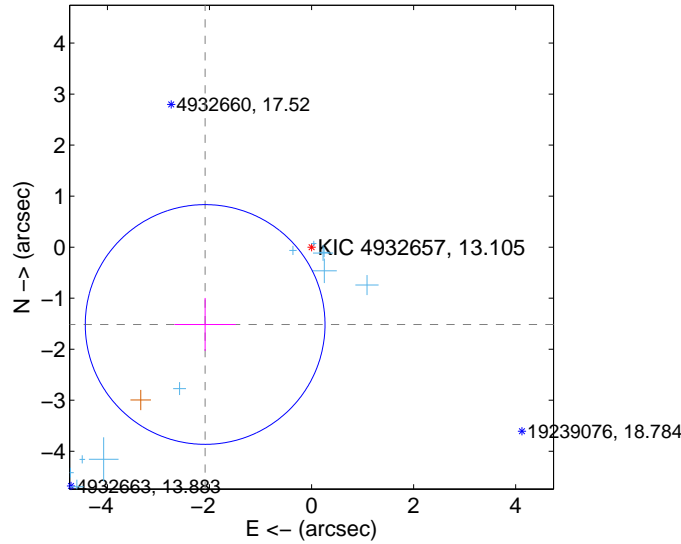
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.238 ± 0.904	1.37	0.769 ± 0.678	-0.971 ± 0.631
PRF-fit source offset from KIC position	2.578 ± 0.783	3.29	2.085 ± 0.602	-1.515 ± 0.519
photometric centroid source offset	1.35 ± 0.65	2.06	-1.15 ± 0.68	0.71 ± 0.58

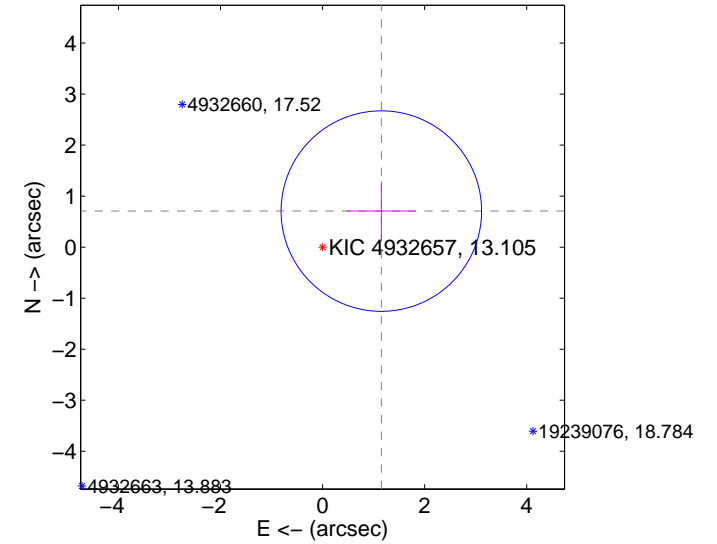
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

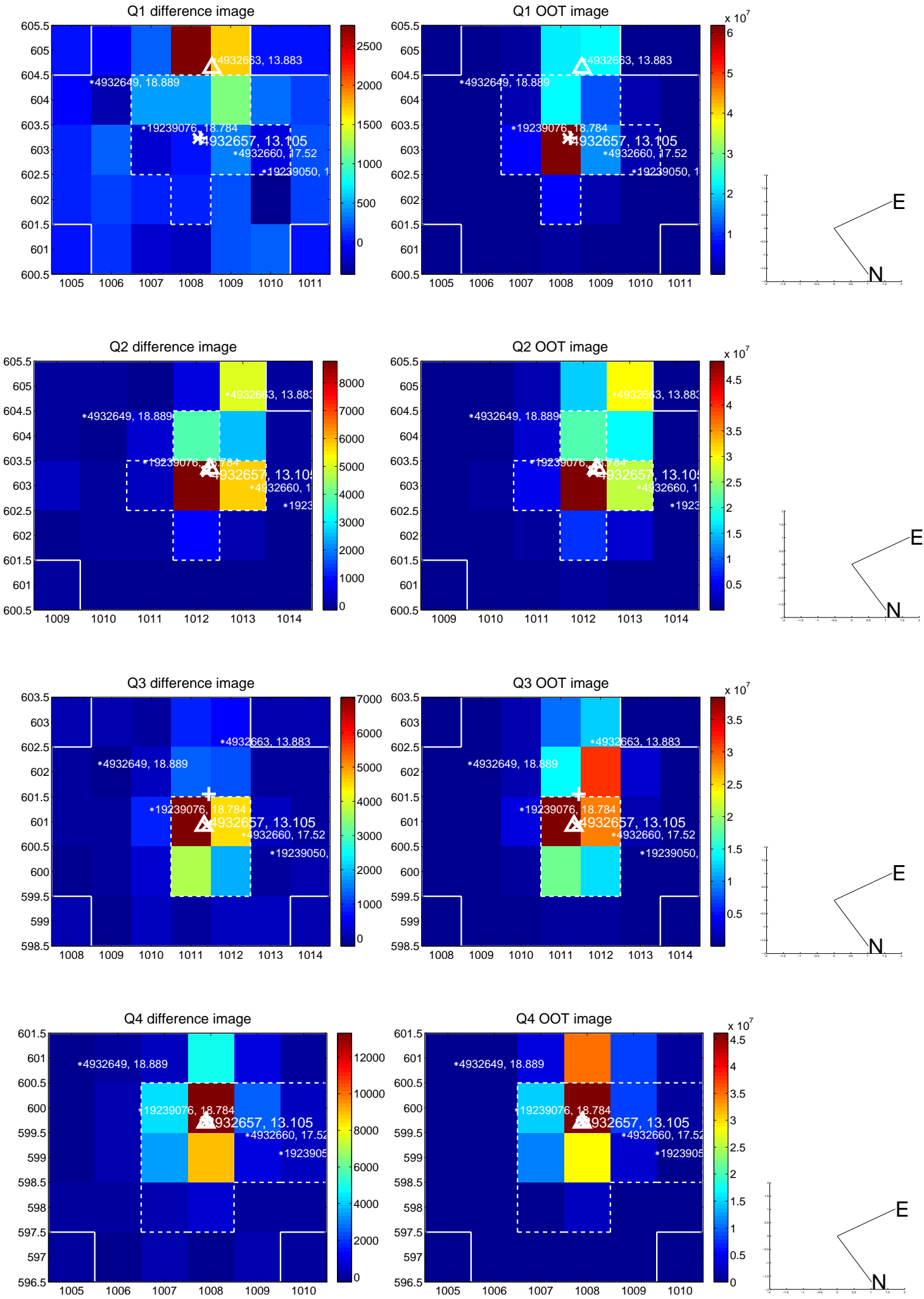


offset from photometric centroids

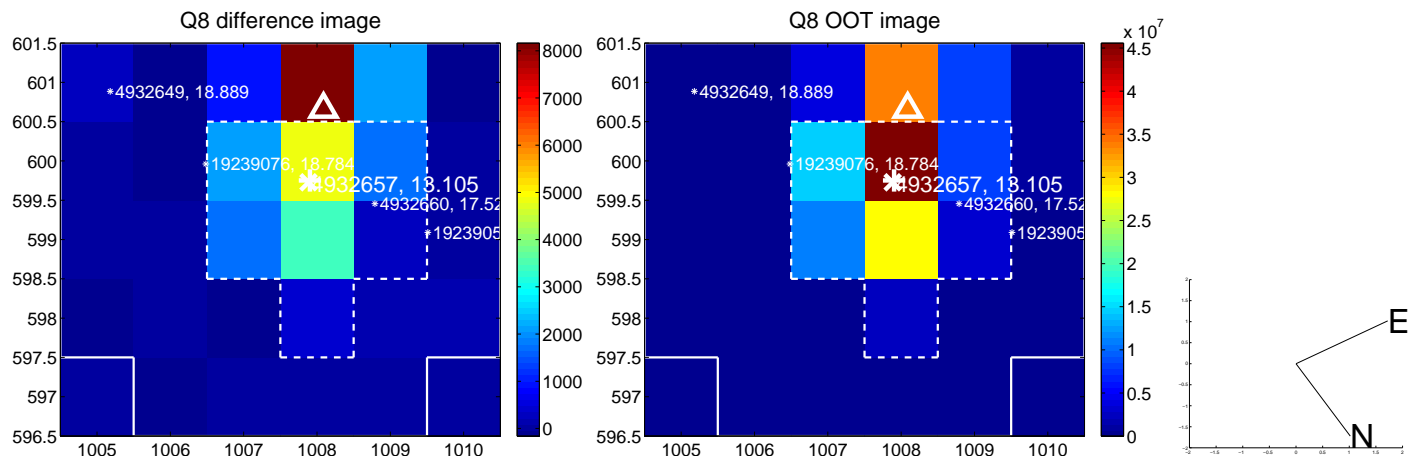
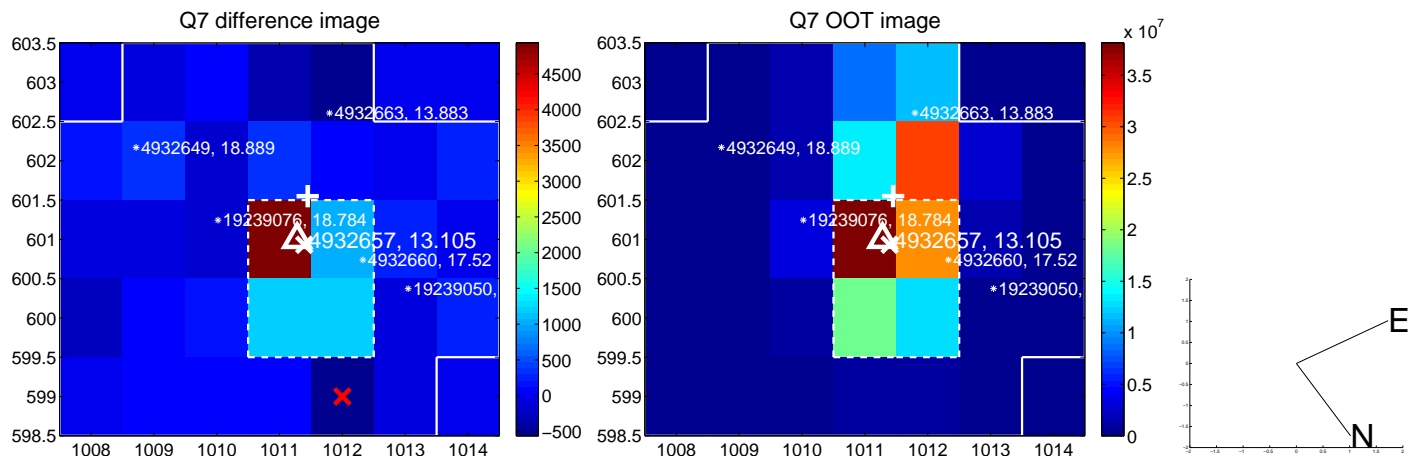
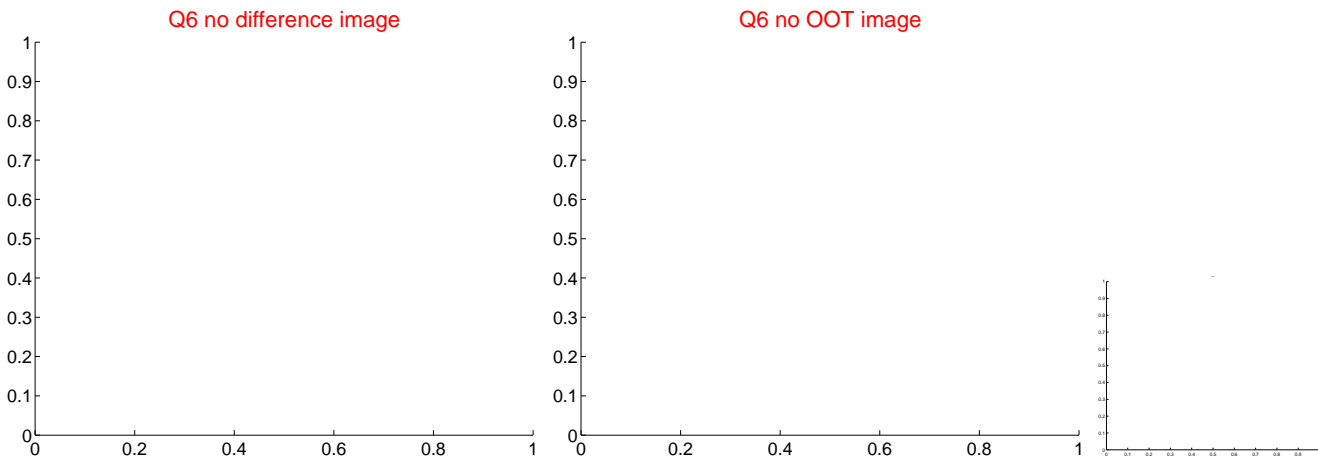
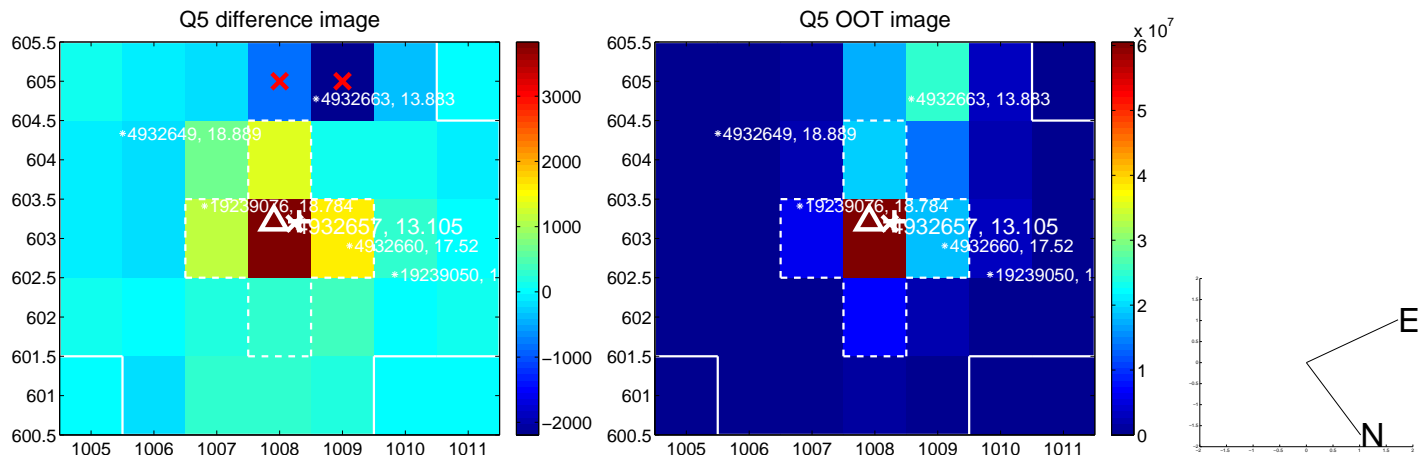


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

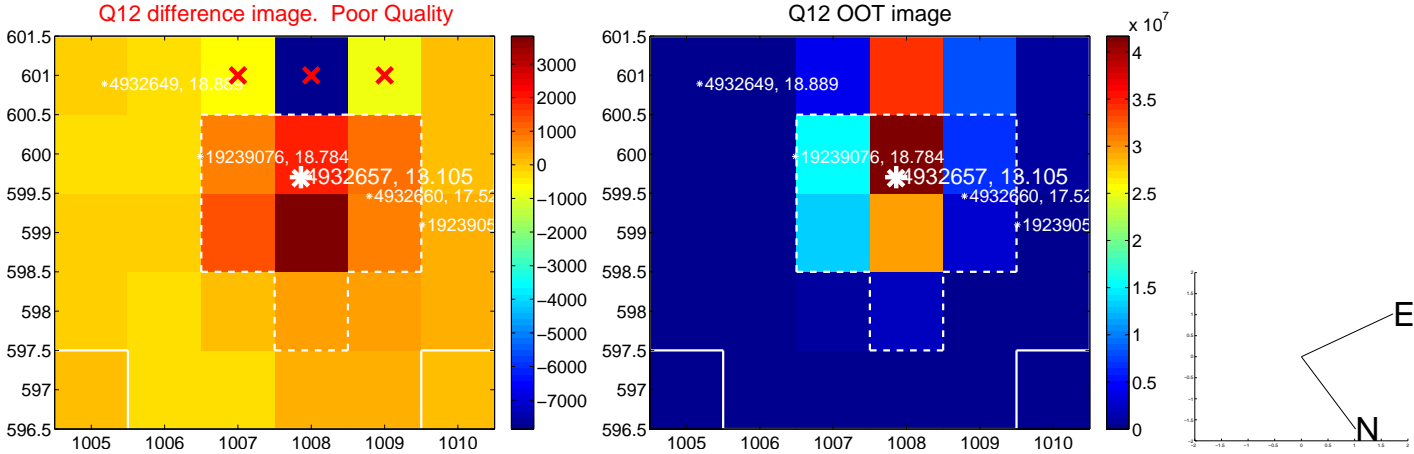
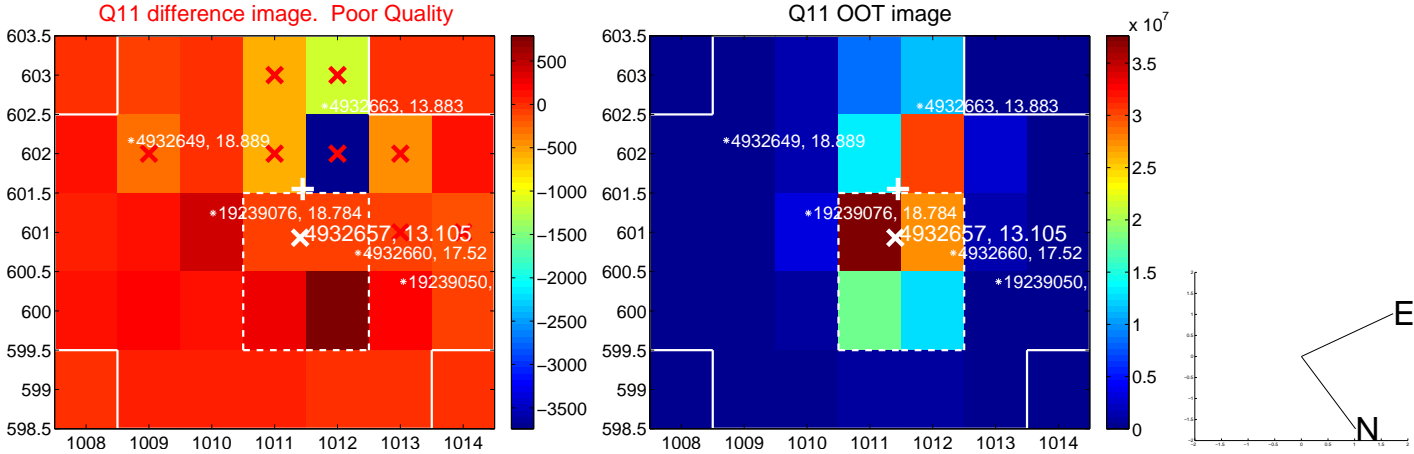
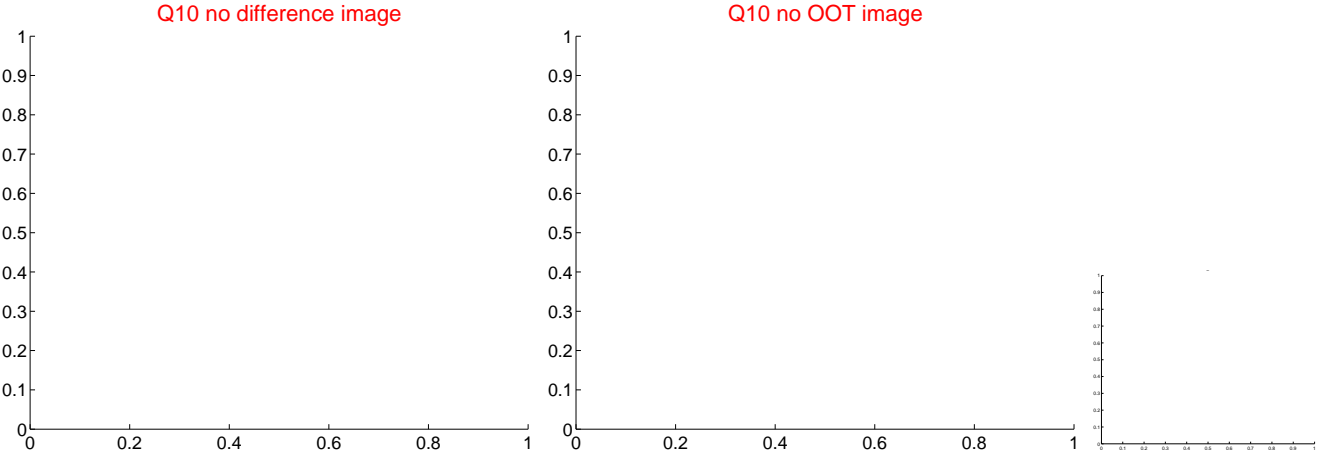
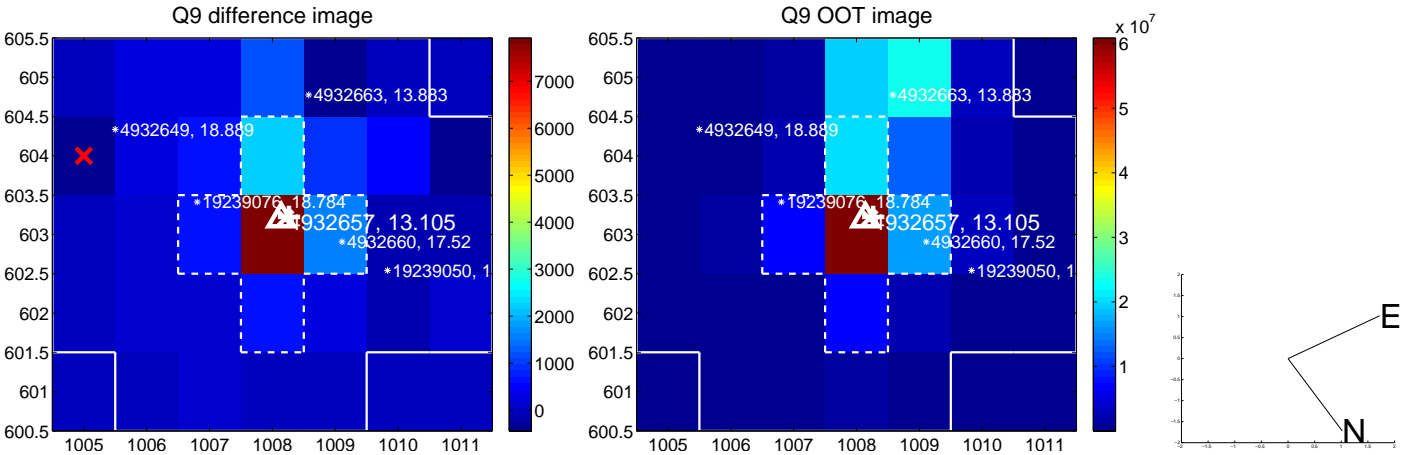
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



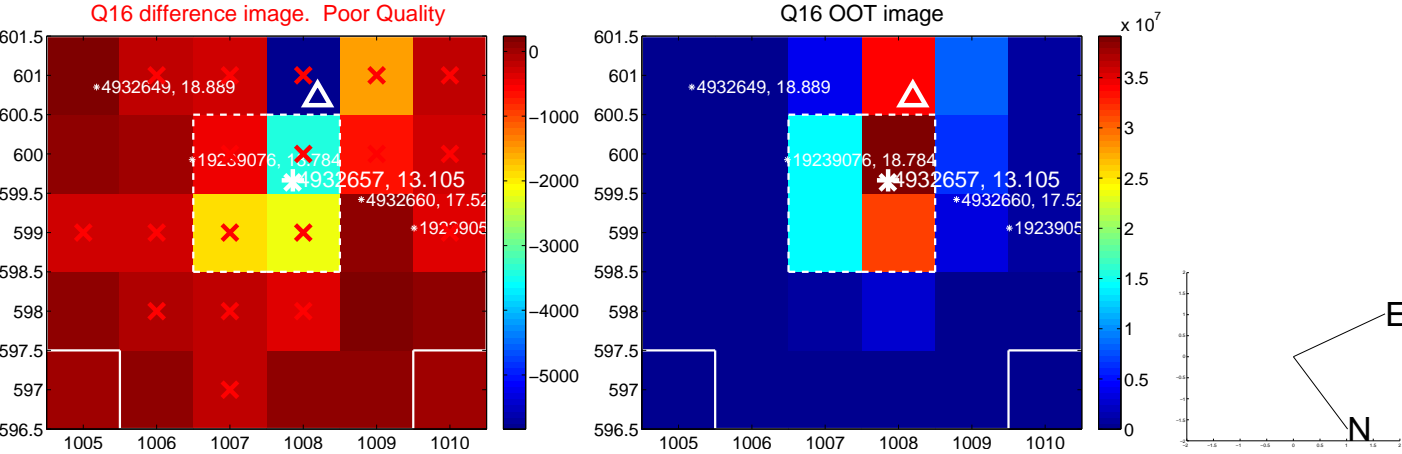
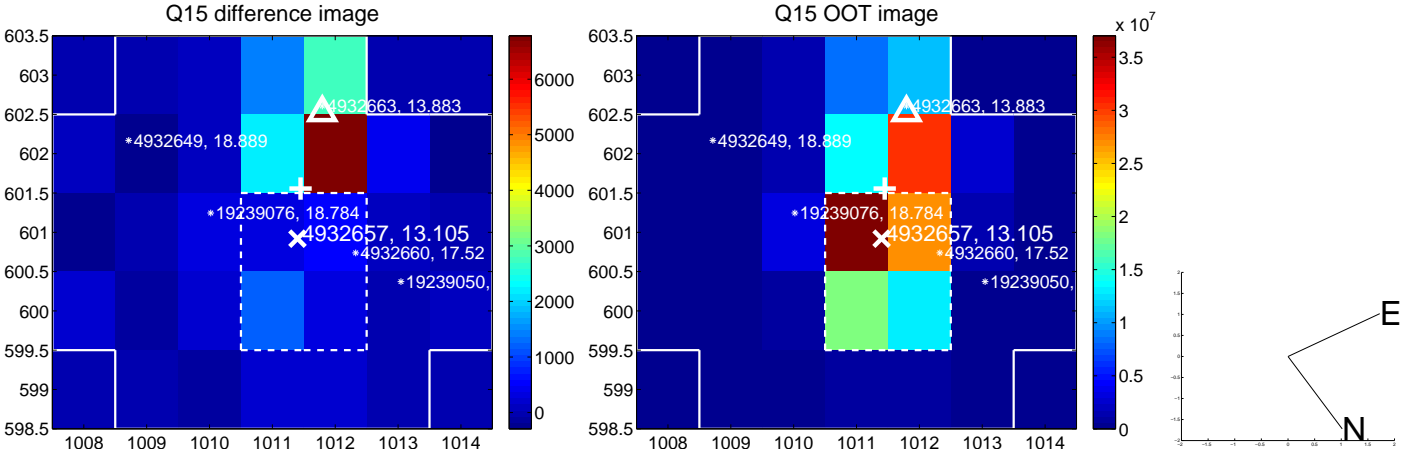
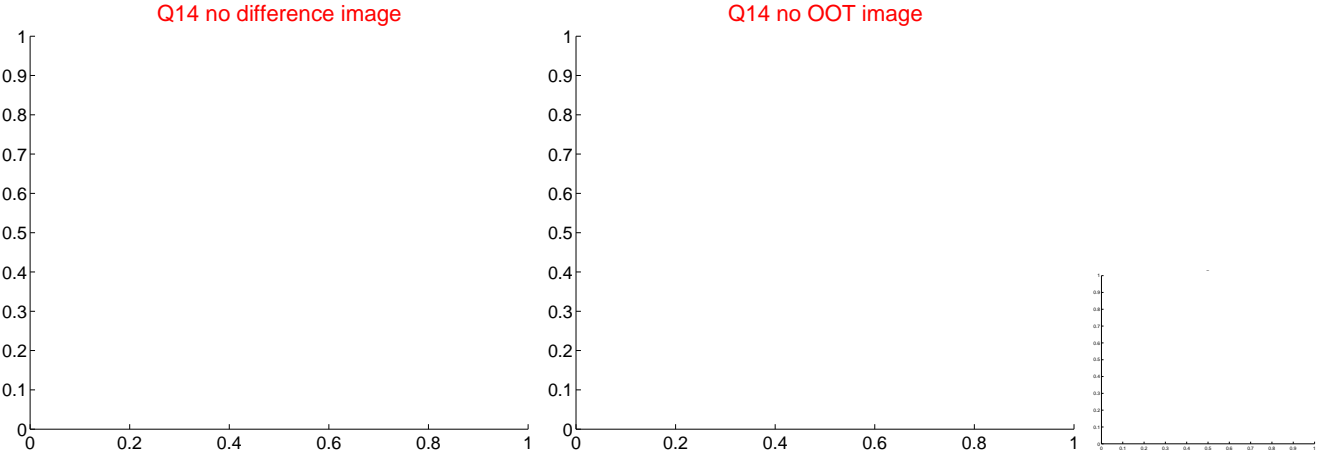
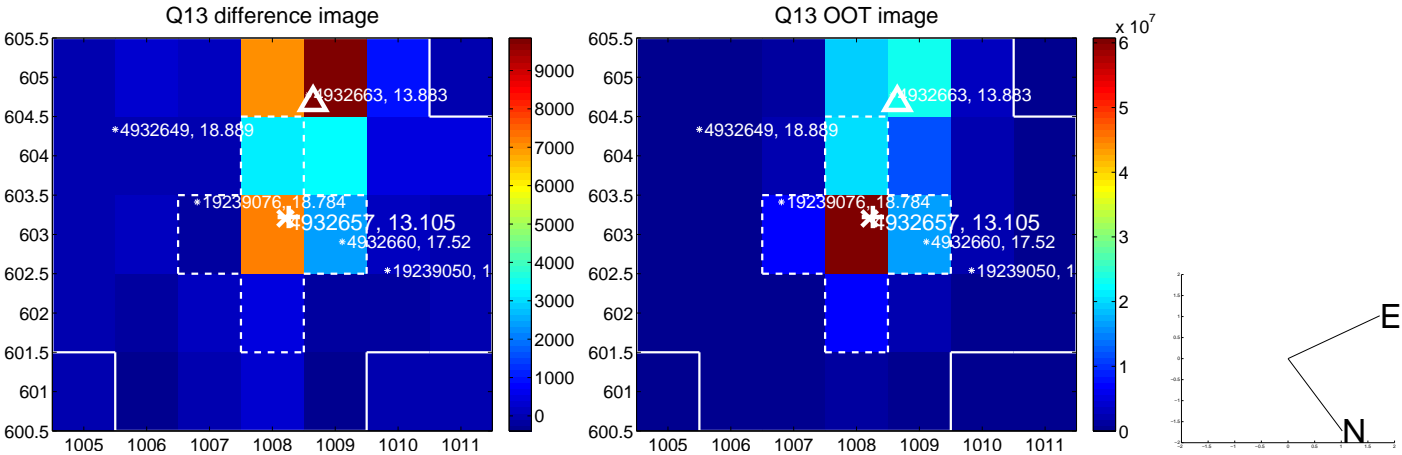
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



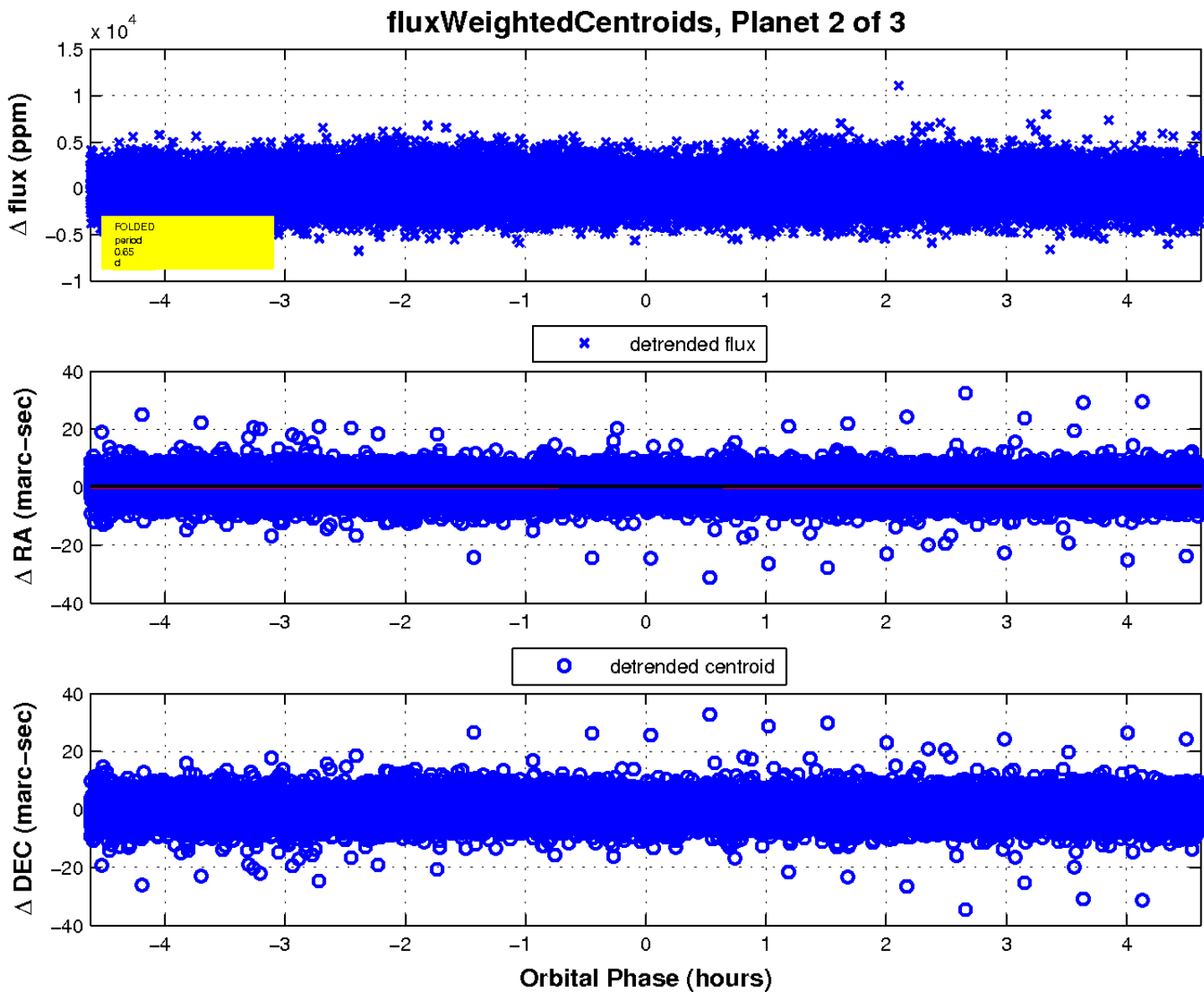
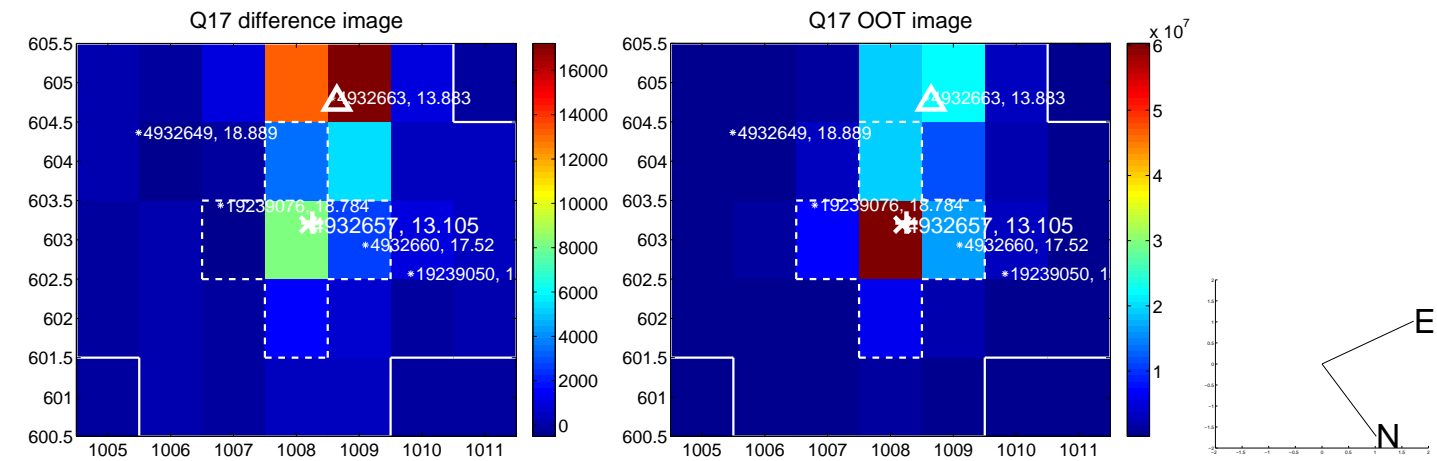
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

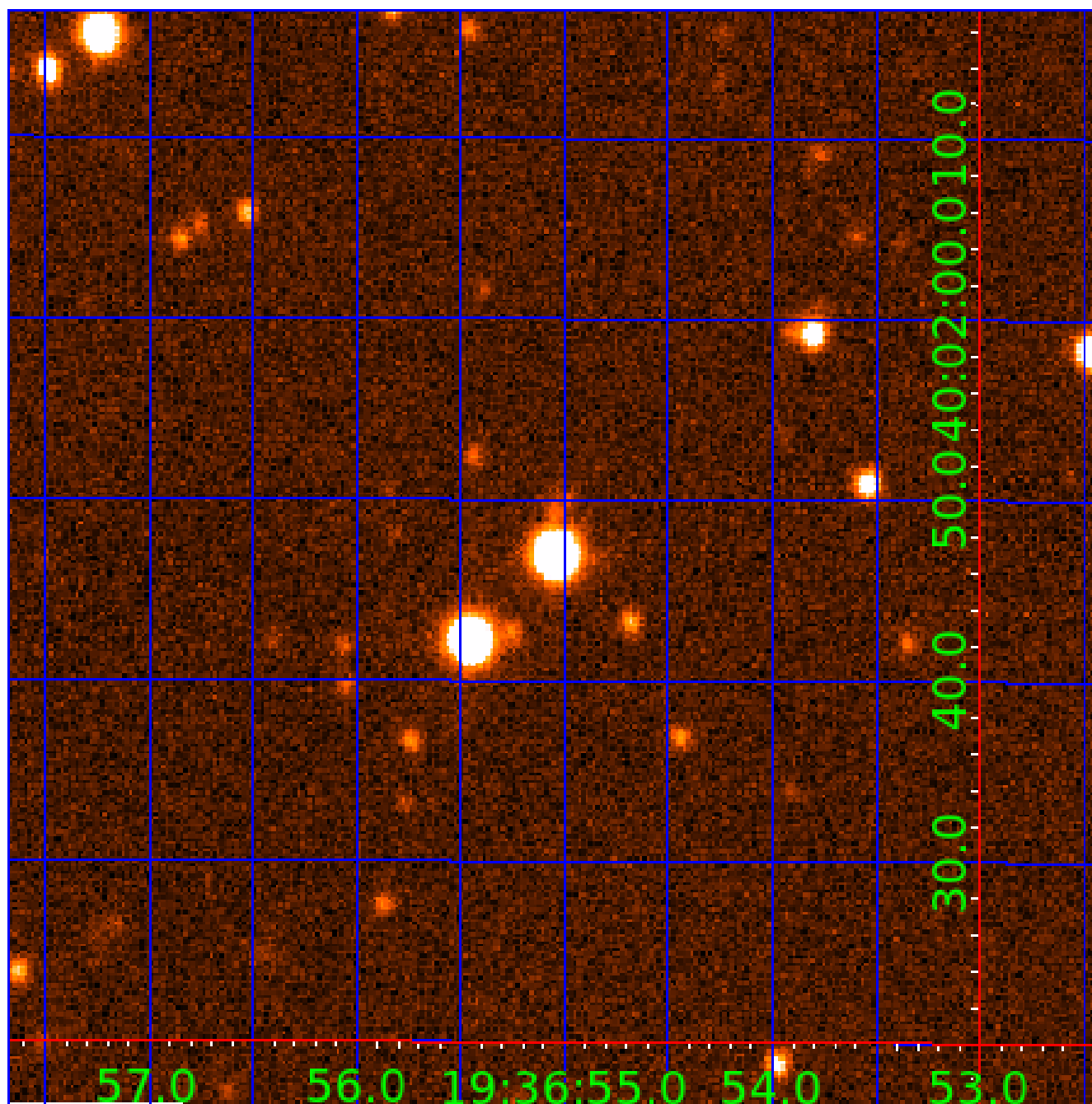


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004932657

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})
004932657-01	OBS	No	1.781700	132.838217	252.2	1.549	9.4	9.3	2.16	8104	4.02	14725.98
004932657-02	OBS	No	0.653305	131.653774	144.2	1.540	8.1	8.2	2.16	8104	3.03	56110.25
004932657-03	OBS	No	0.653305	131.821363	127.3	1.640	7.5	6.8	2.16	8104	2.85	56110.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004932657-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
004932657-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_KIC_POS
004932657-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD—CENT_KIC_POS

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

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

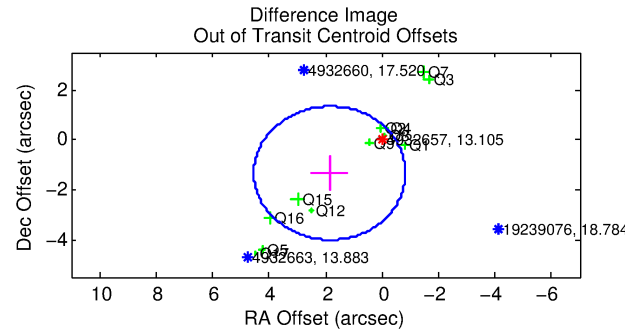
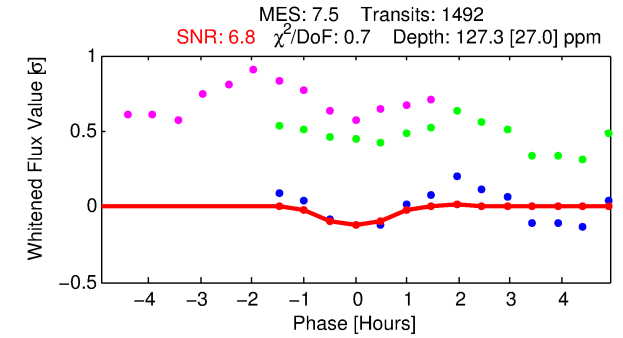
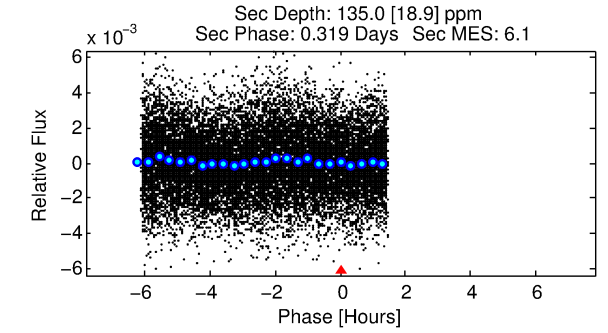
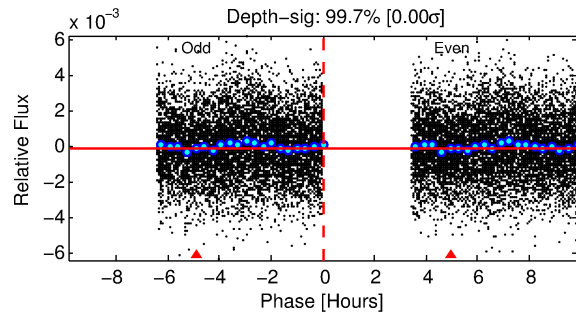
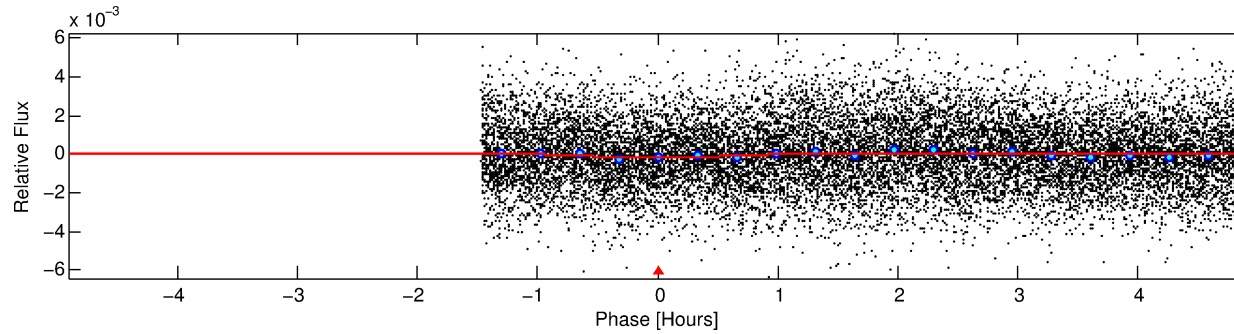
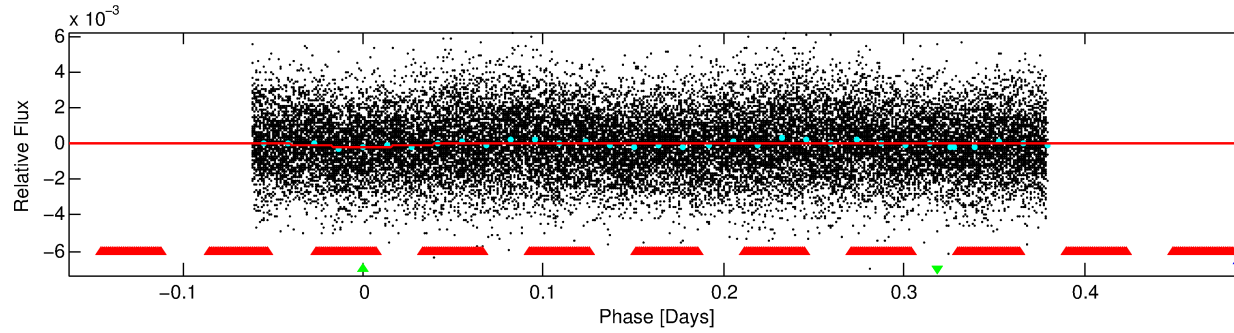
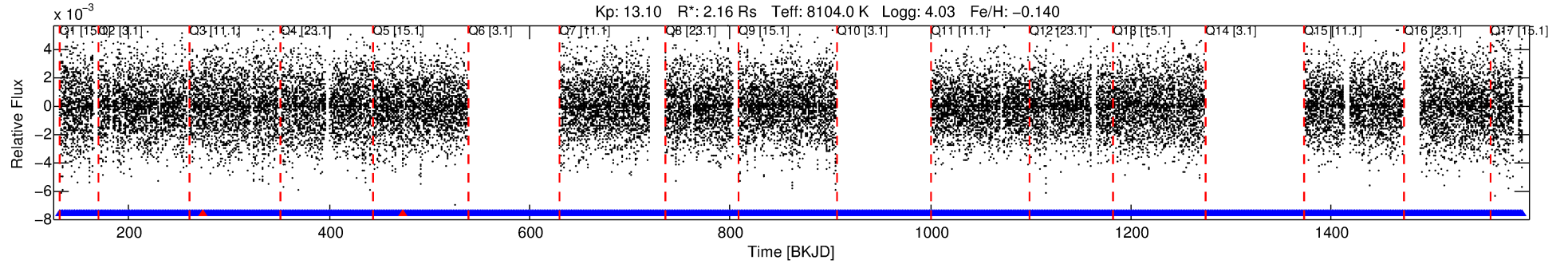
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004932657-03

No Significant Match Found

DV One-Page Summary

KIC: 4932657 Candidate: 3 of 3 Period: 0.653 d



DV Fit Results:

Period = 0.65331 [0.00001] d
Epoch = 131.8214 [0.0037] BKJD
Rp/R* = 0.0121 [0.0145]
a/R* = 1.69 [8.10]
b = 0.90 [1.58]
Seff = 56110.24 [20650.09]
Teq = 3925 [361] K
Rp = 2.85 [3.51] Re
a = 0.0180 [0.0040] AU
Ag = 2.95 [7.17] [0.27σ]
Teffp = 7952 [4801] K [0.84σ]

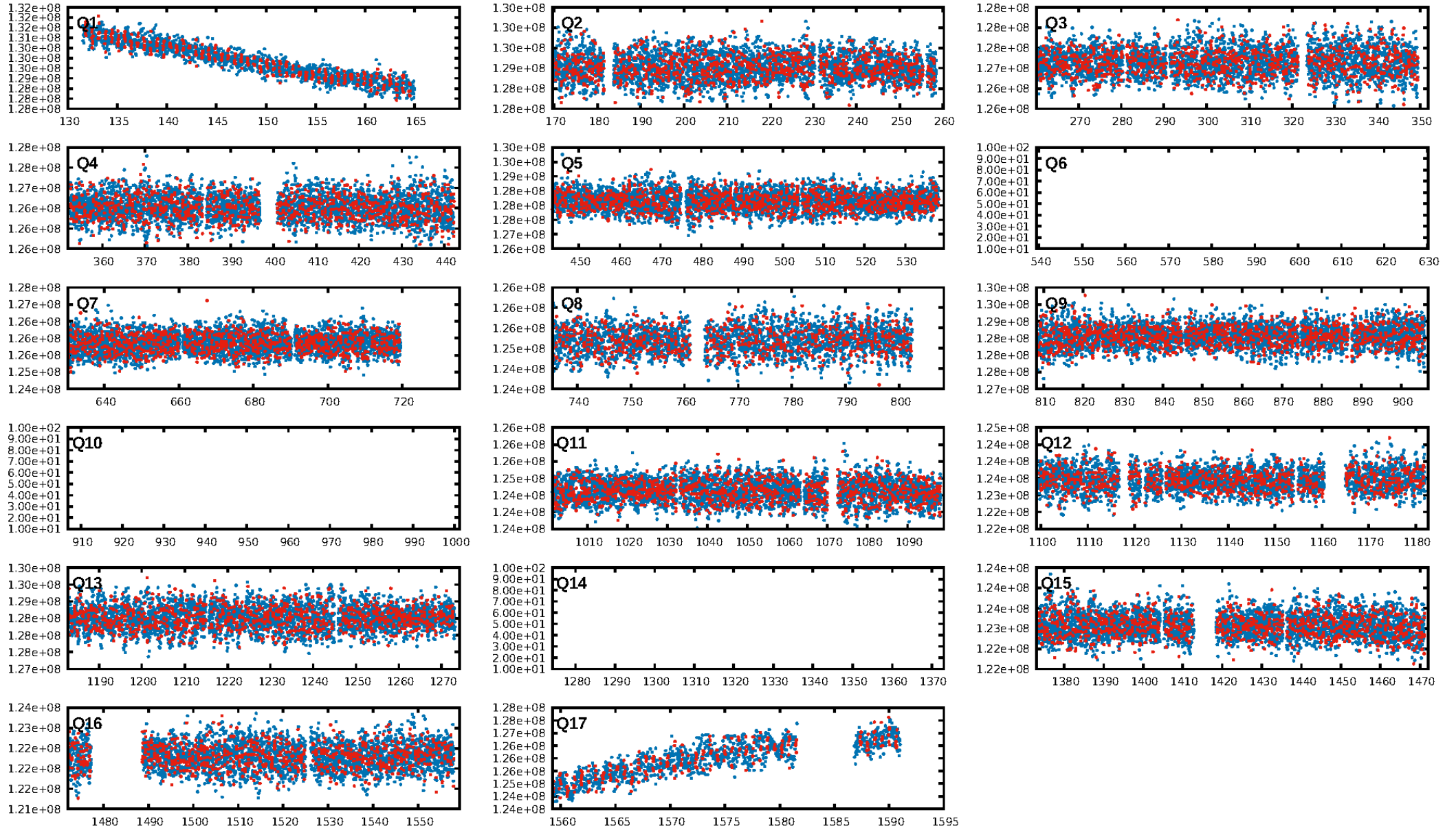
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [12.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.68e-14
RollingBand-fgt: 1.00 [1406/1408]
GhostDiagnostic-chr: 1.304
Centroid-sig: N/A
Centroid-so: 1.628 arcsec [2.48σ]
OotOffset-rm: 2.287 arcsec [2.56σ]
KicOffset-rm: 1.985 arcsec [2.65σ]
OotOffset-st: 1/3/4/4 [12]
KicOffset-st: 1/3/4/4 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 0.00 [0/14]

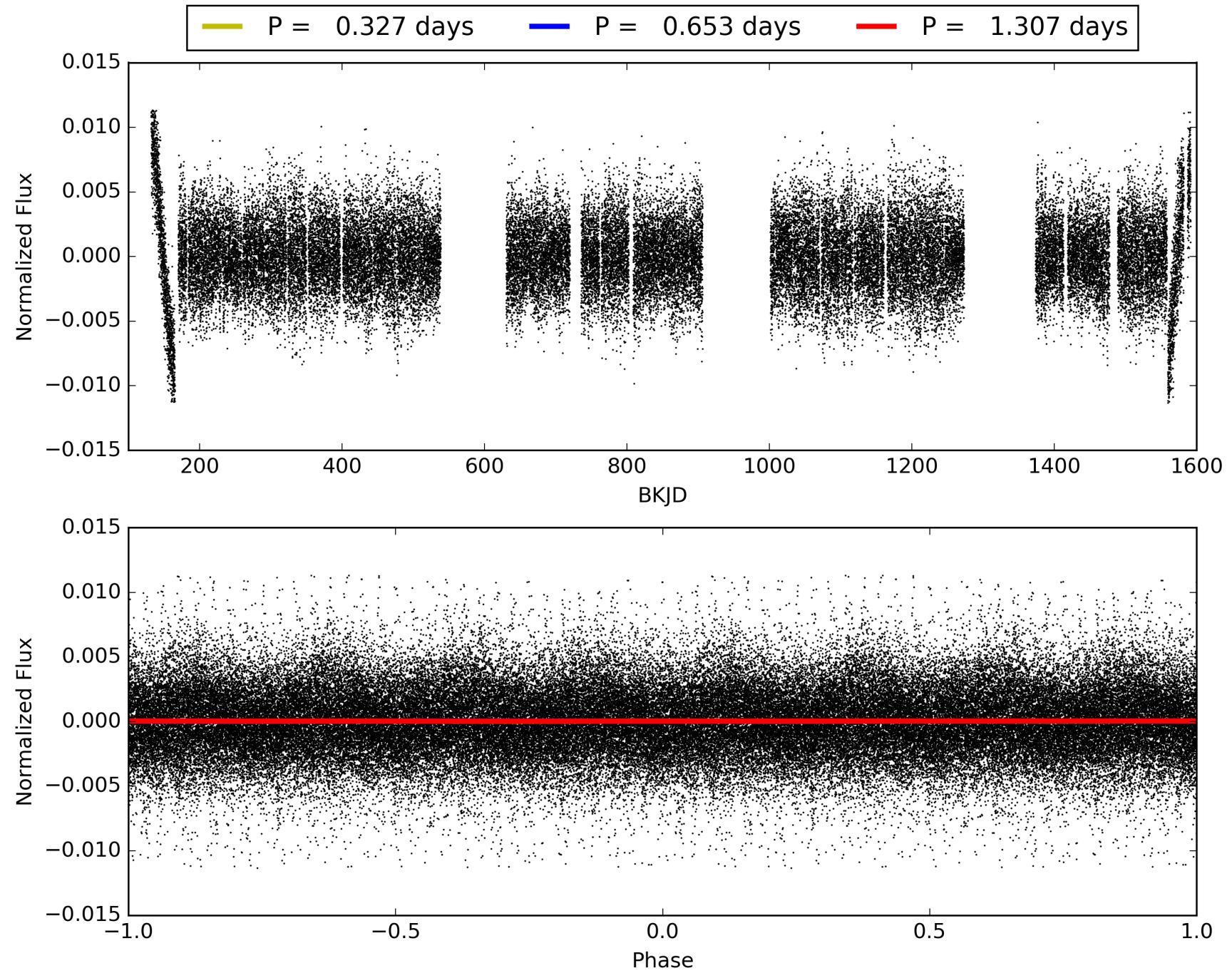
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:23:09 Z

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

TCE 004932657-03, PDC Light Curves

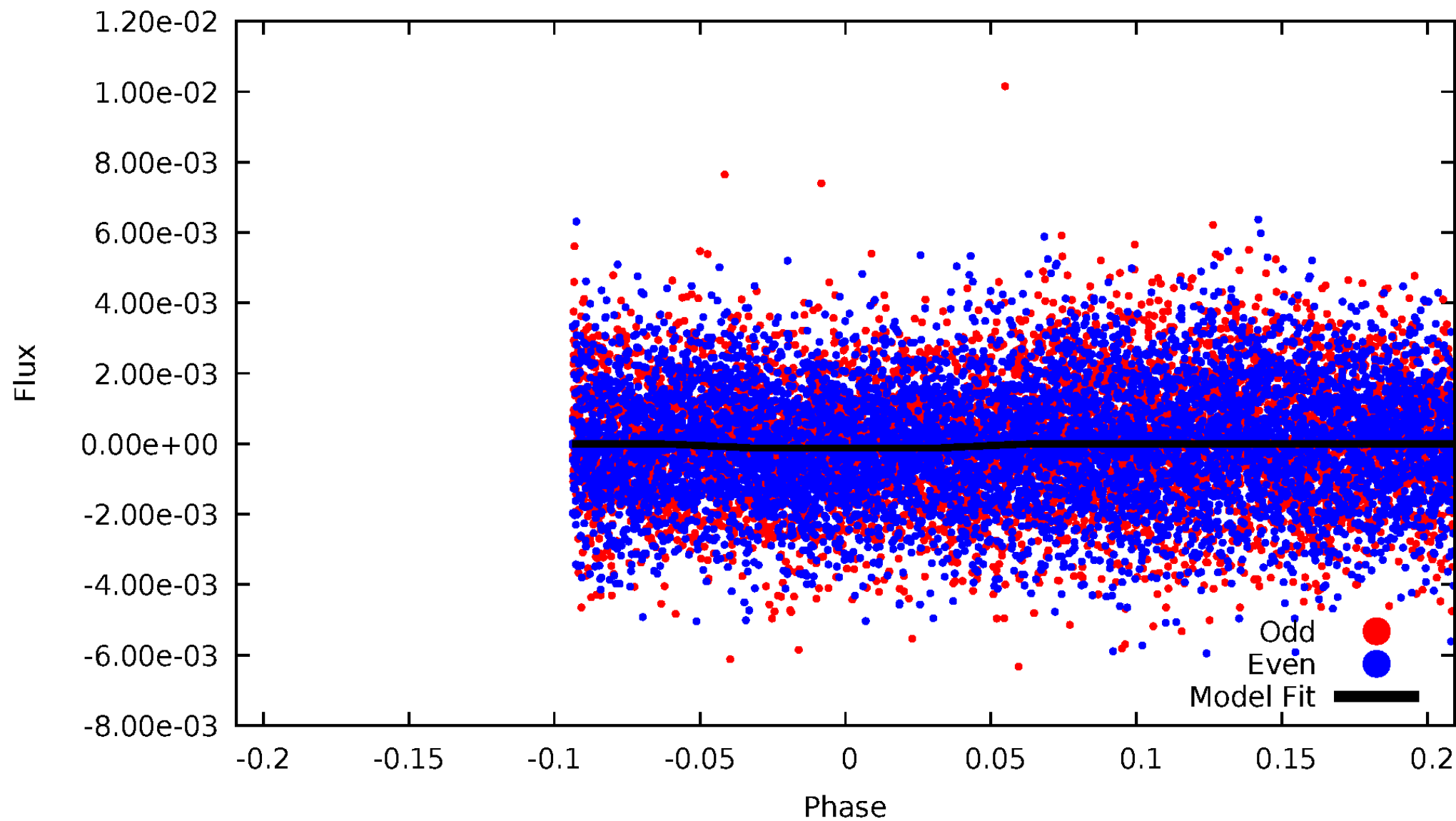


TCE 004932657-03



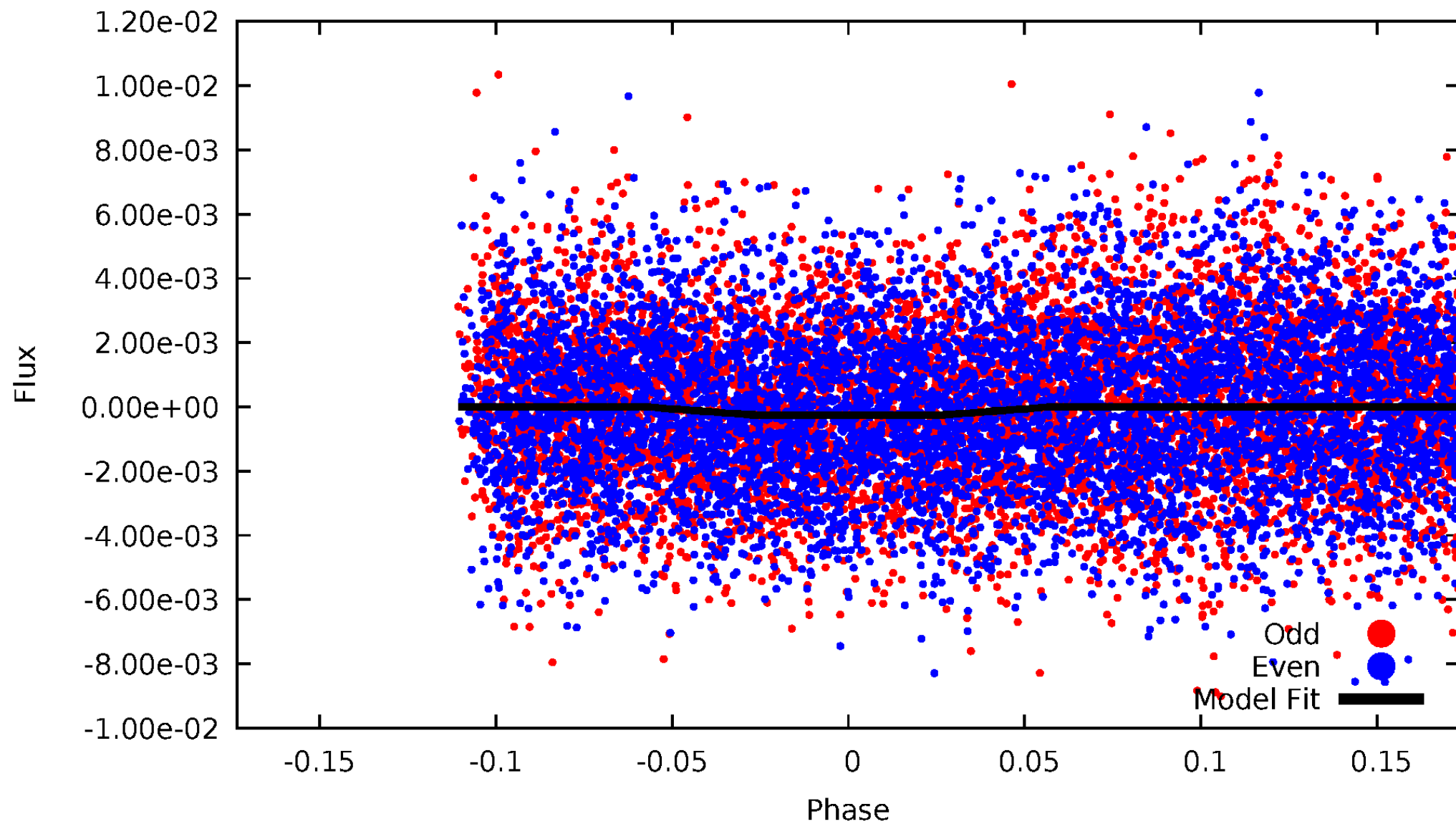
DV Odd/Even

TCE 004932657-03



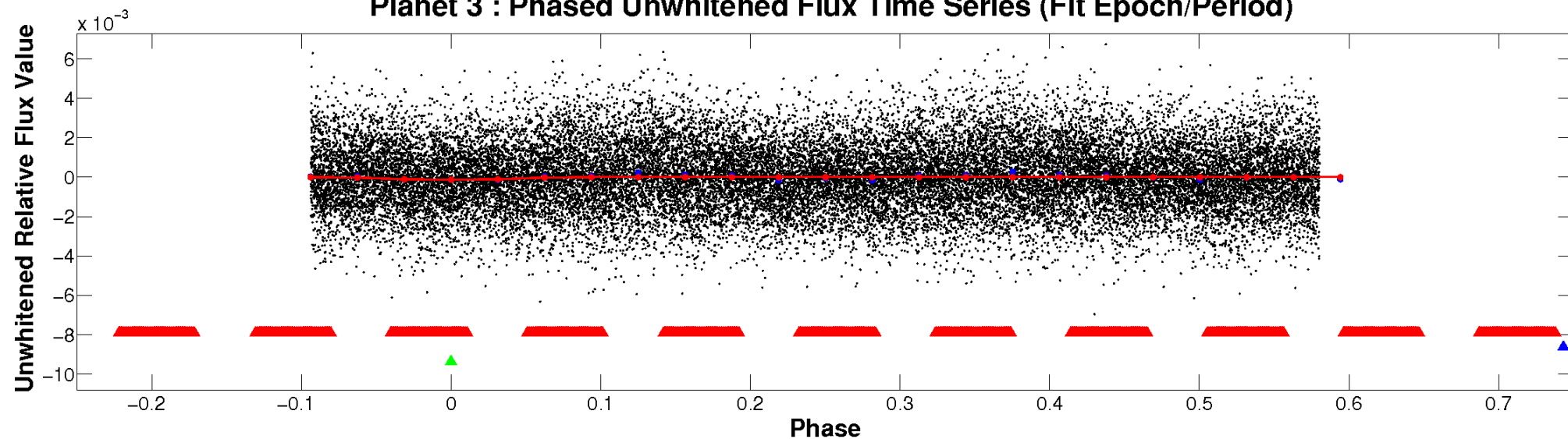
ALT Odd/Even

TCE 004932657-03

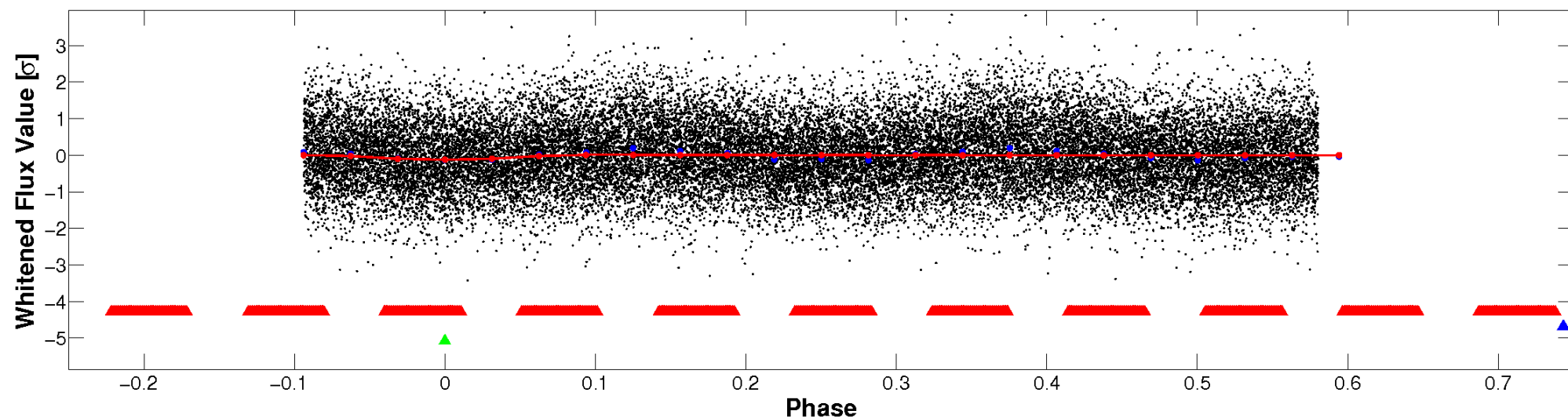


Non-Whitened Vs. Whitened Light Curve

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

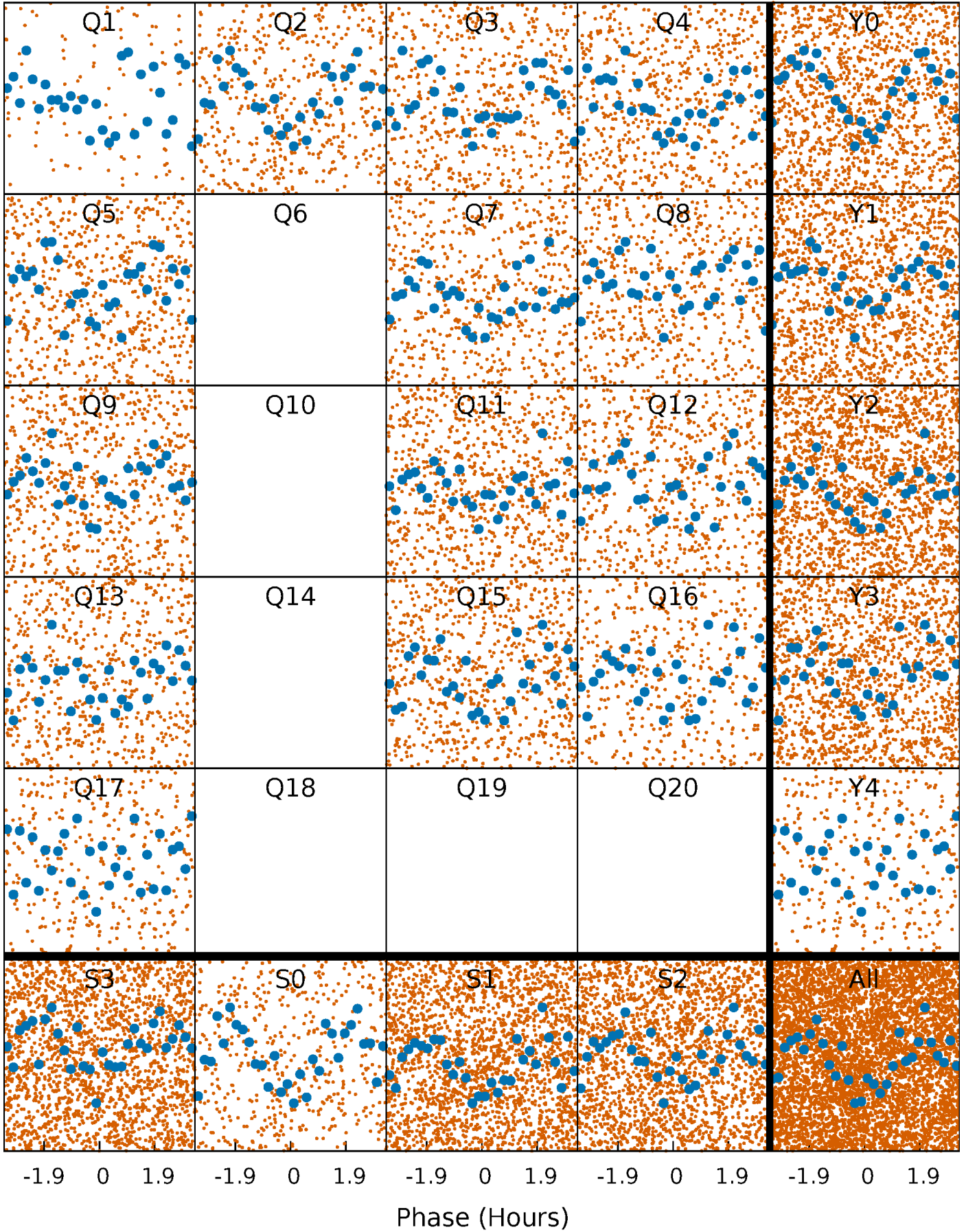


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



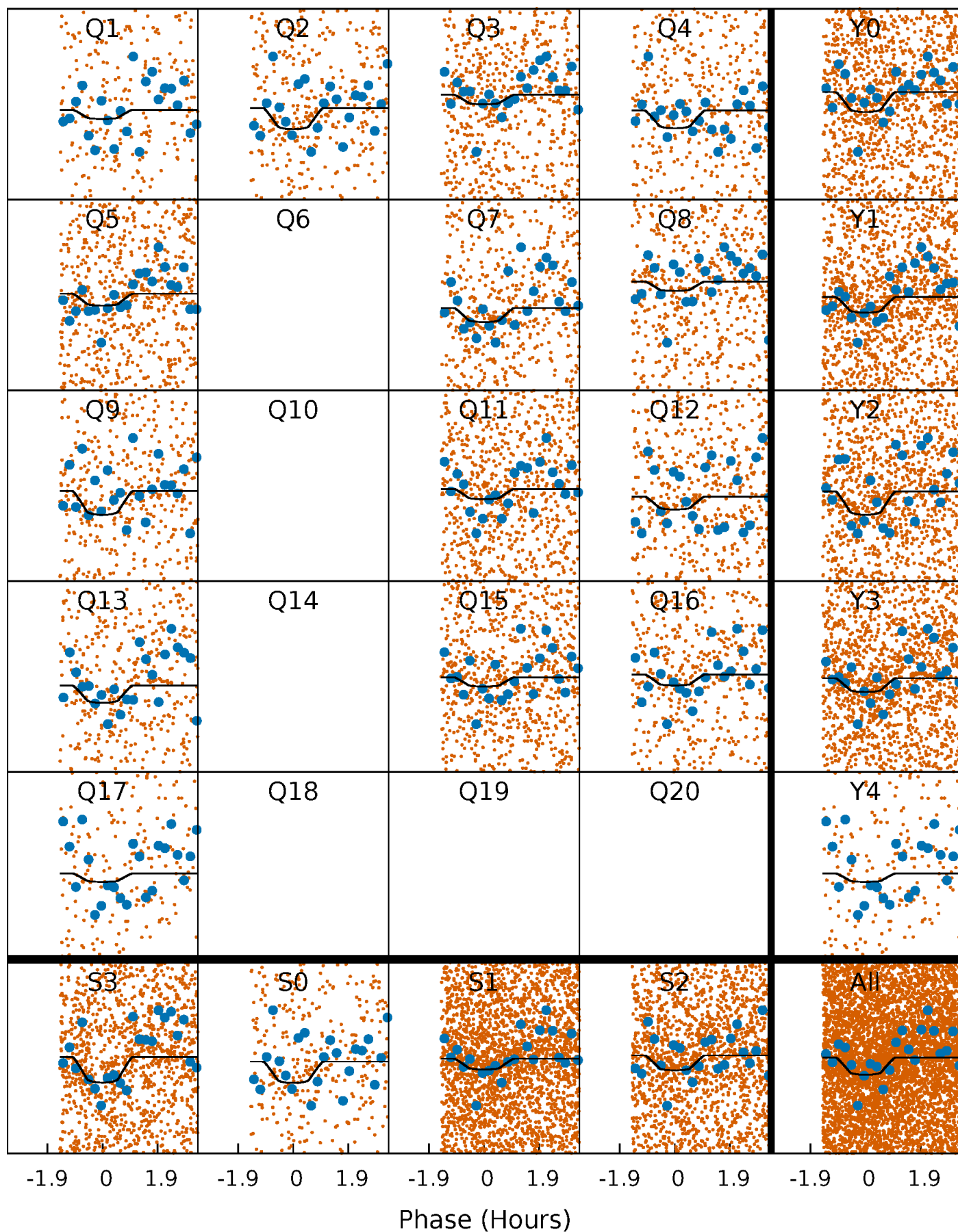
PDC Quarter-Phased Transit Curves

TCE 004932657-03 P= 0.653305 Days $T_0=131.821363$ (BKJD)



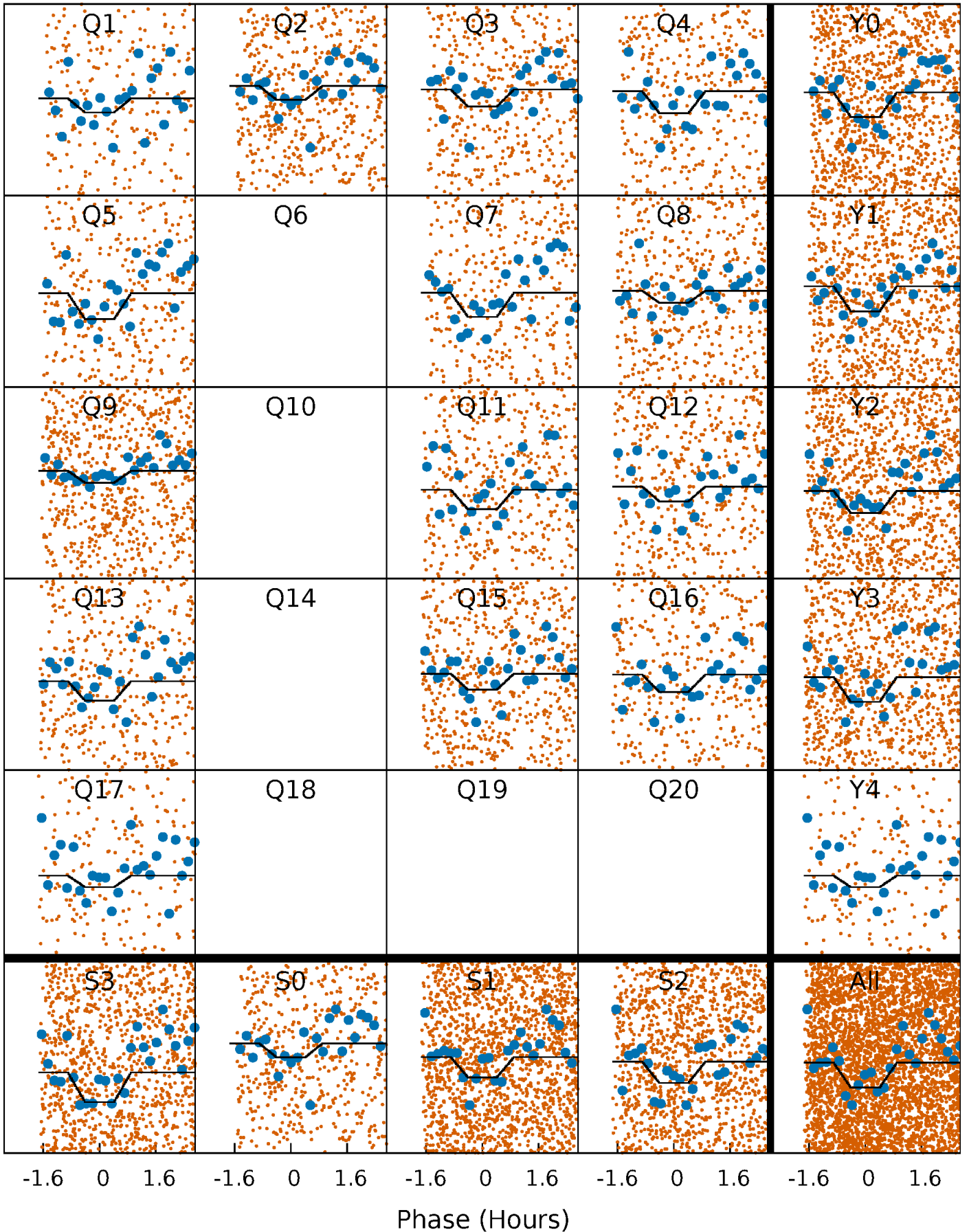
DV Quarter-Phased Transit Curves

TCE 004932657-03 $P = 0.653305$ Days $T_0 = 131.821363$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

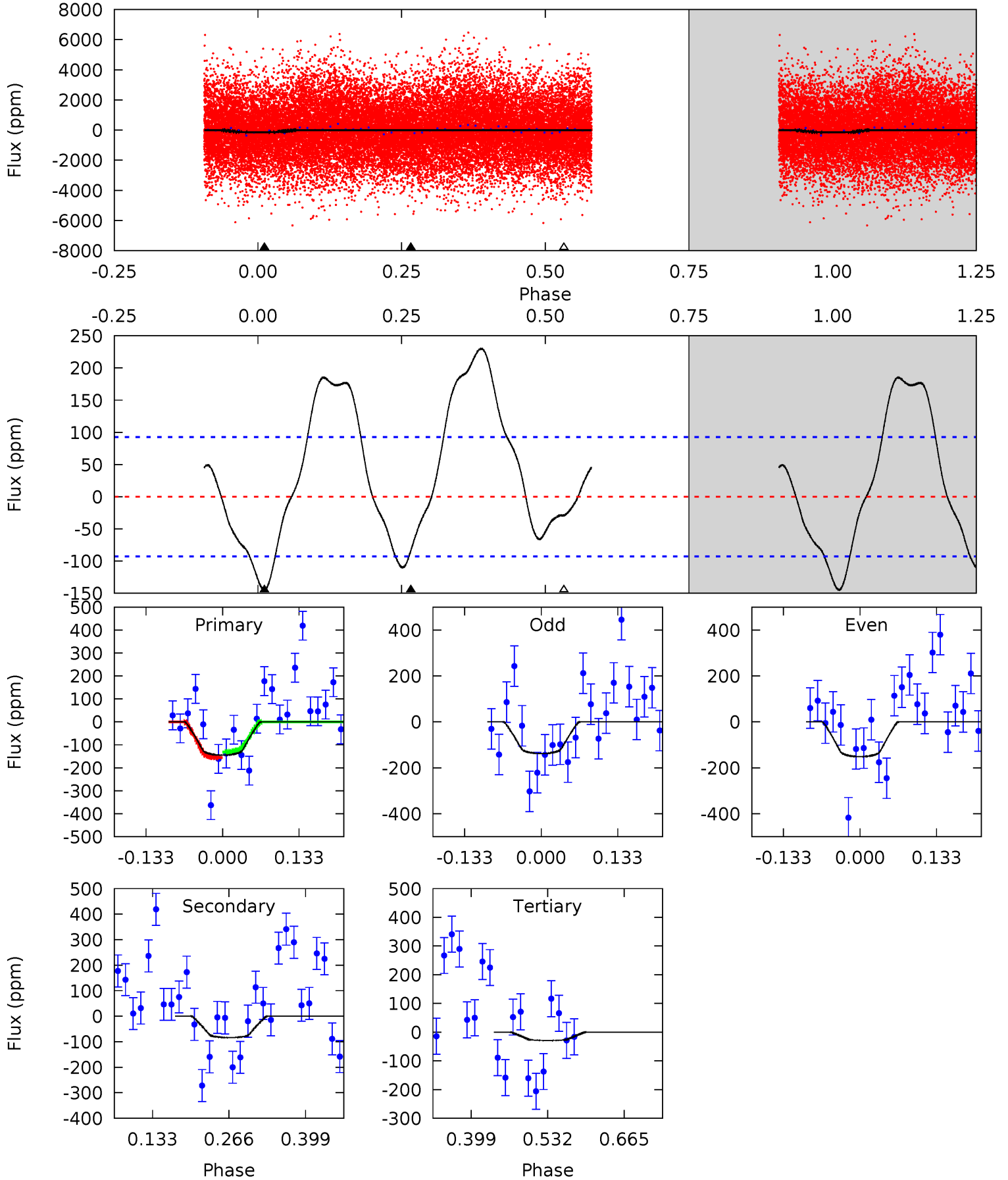
TCE 004932657-03 P= 0.653309 Days $T_0=131.823606$ (BKJD)



DV Model-Shift Uniqueness Test

004932657-03, P = 0.653305 Days, E = 131.168058 Days

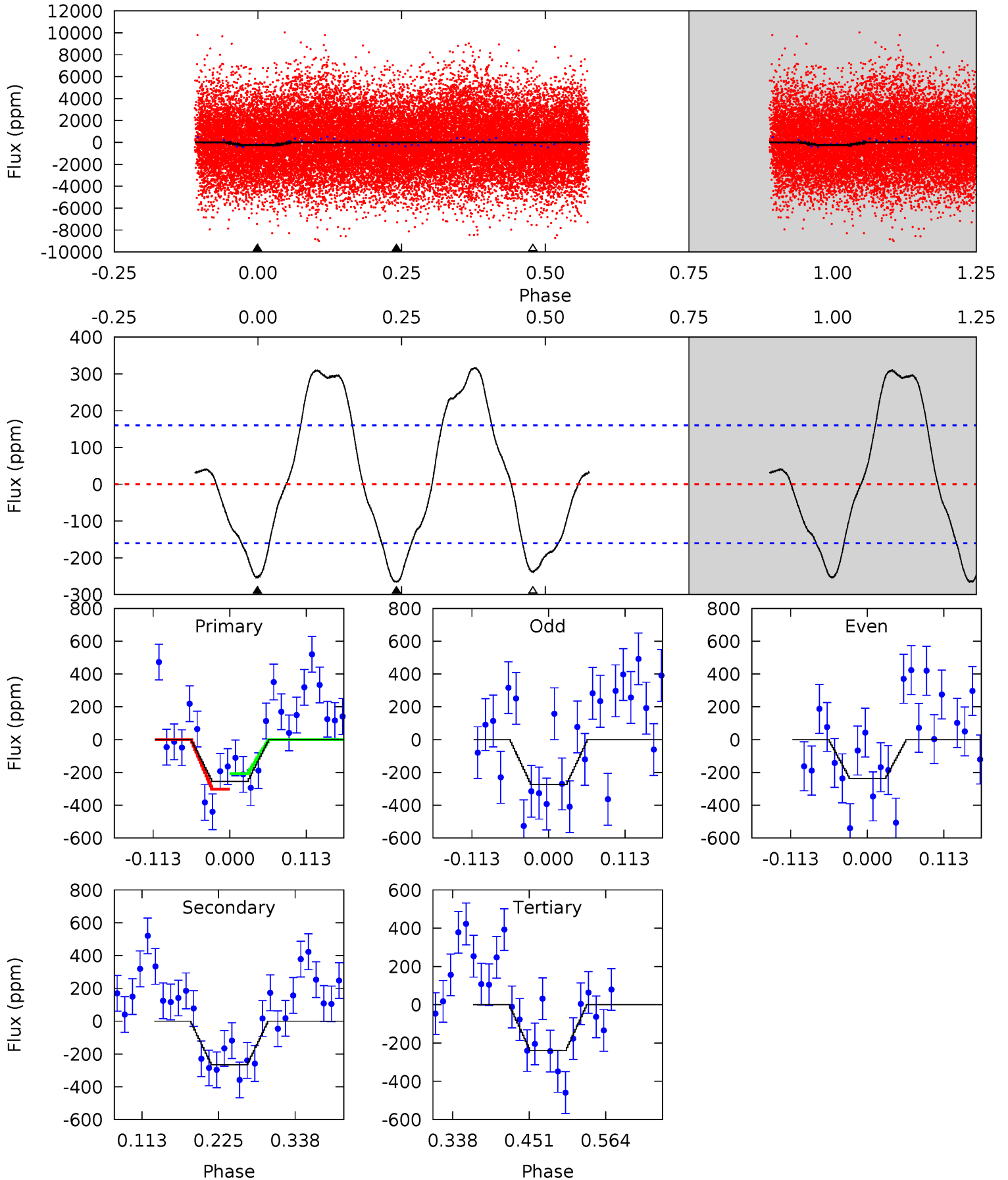
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.04	4.09	1.41	0	4.50	1.50	3.59	5.63	7.04	2.67	4.09	0.33	0.90	0.61	0.56



Alt Model-Shift Uniqueness Test

004932657-03, P = 0.653309 Days, E = 131.170297 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.21	7.54	6.78	0	4.54	1.59	5.46	0.42	7.21	0.76	7.54	0.51	1.03	0.54	1.34



Stellar Parameters For KIC 004932657

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8104^{+226}_{-340}	$4.025^{+0.181}_{-0.132}$	$-0.140^{+0.250}_{-0.300}$	$2.164^{+0.461}_{-0.563}$	$1.809^{+0.134}_{-0.314}$	$0.251^{+0.279}_{-0.098}$
	+3%/-4%	+4%/-3%	+179%/-214%	+21%/-26%	+7%/-17%	+111%/-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 004932657-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-84 ± 21	$3.44^{+3.17}_{-2.26}$	5418^{+385}_{-397}	5639^{+6267}_{-3079}	$1.249^{+10.419}_{-0.942}$
Alt.	-267 ± 35	$4.18^{+3.33}_{-2.56}$	5441^{+351}_{-369}	7187^{+8404}_{-2132}	$2.637^{+15.279}_{-1.837}$

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 $A_{obs} \gg 1.0$

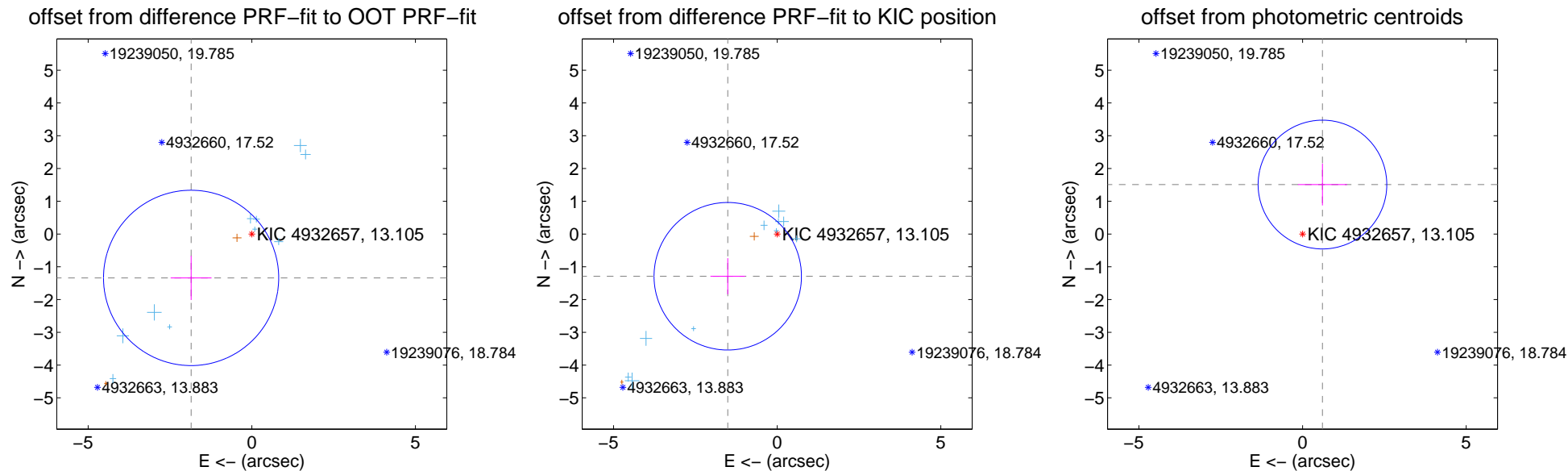
DV Centroid Data

Supplemental centroid analysis for 004932657-03. Kepler magnitude: 13.11. Transit SNR 6.84

There are 10 quarters with good PRF difference image offsets

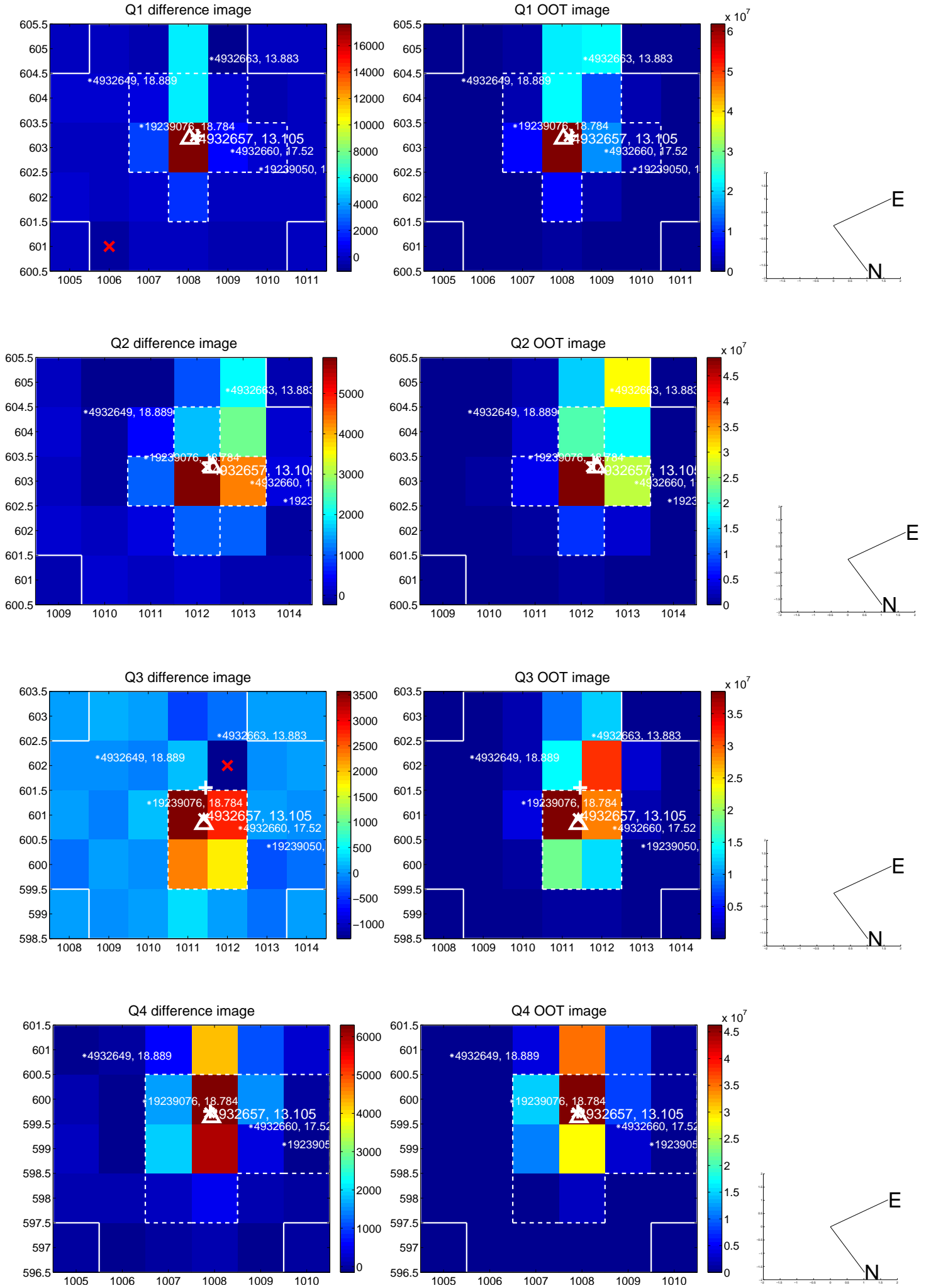
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.287 ± 0.892	2.56	1.854 ± 0.624	-1.339 ± 0.673
PRF-fit source offset from KIC position	1.985 ± 0.751	2.65	1.510 ± 0.529	-1.289 ± 0.550
photometric centroid source offset	1.63 ± 0.66	2.48	-0.61 ± 0.75	1.51 ± 0.64

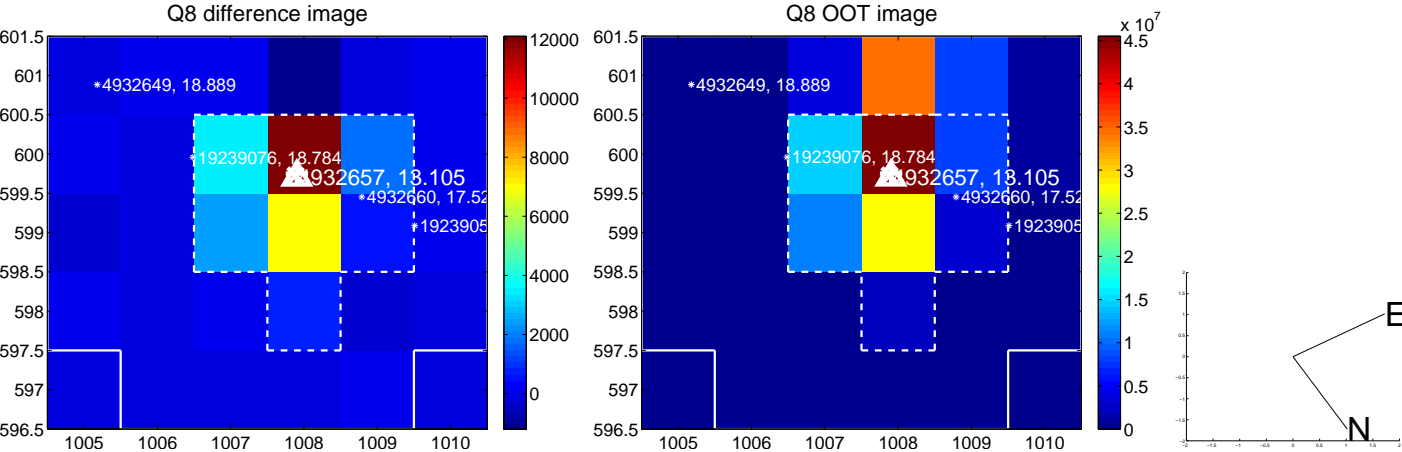
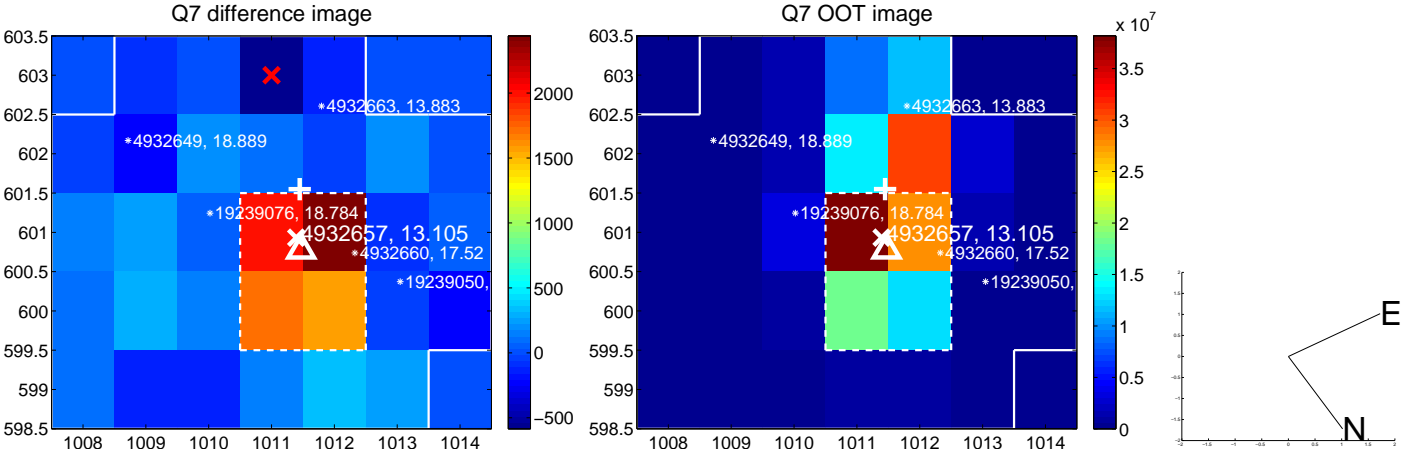
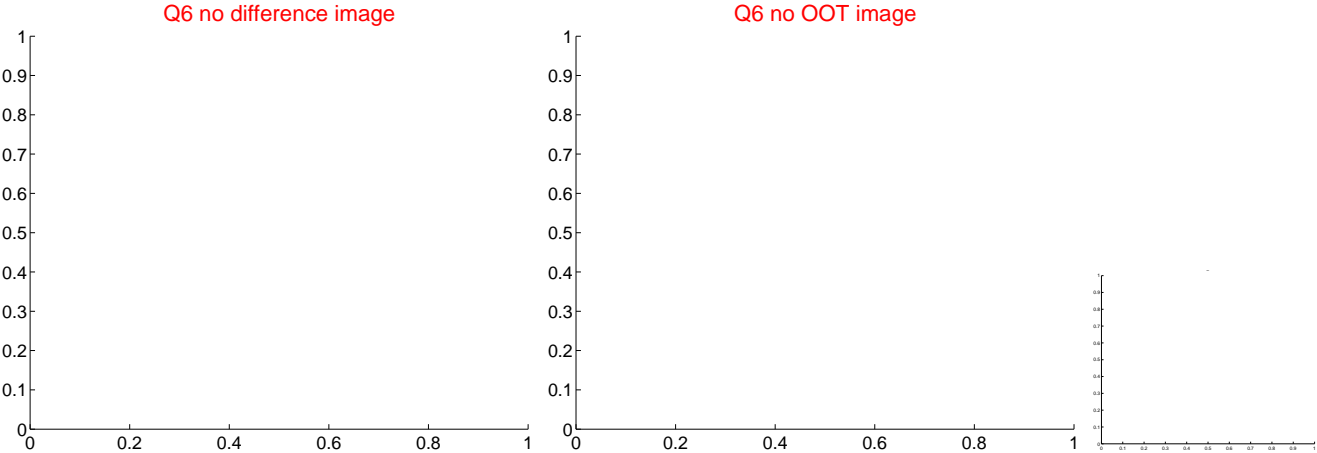
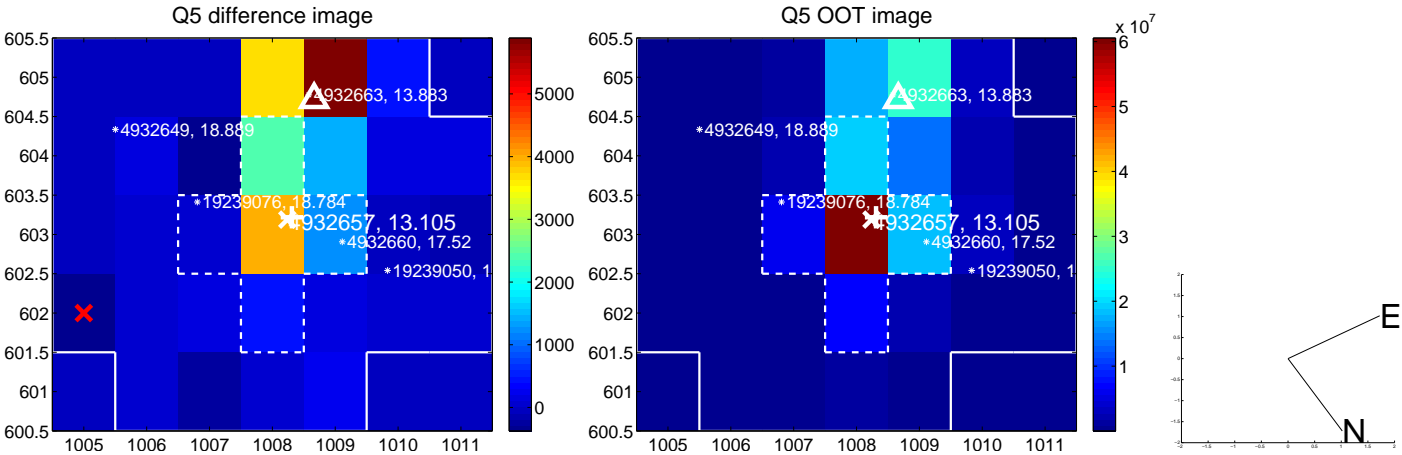


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

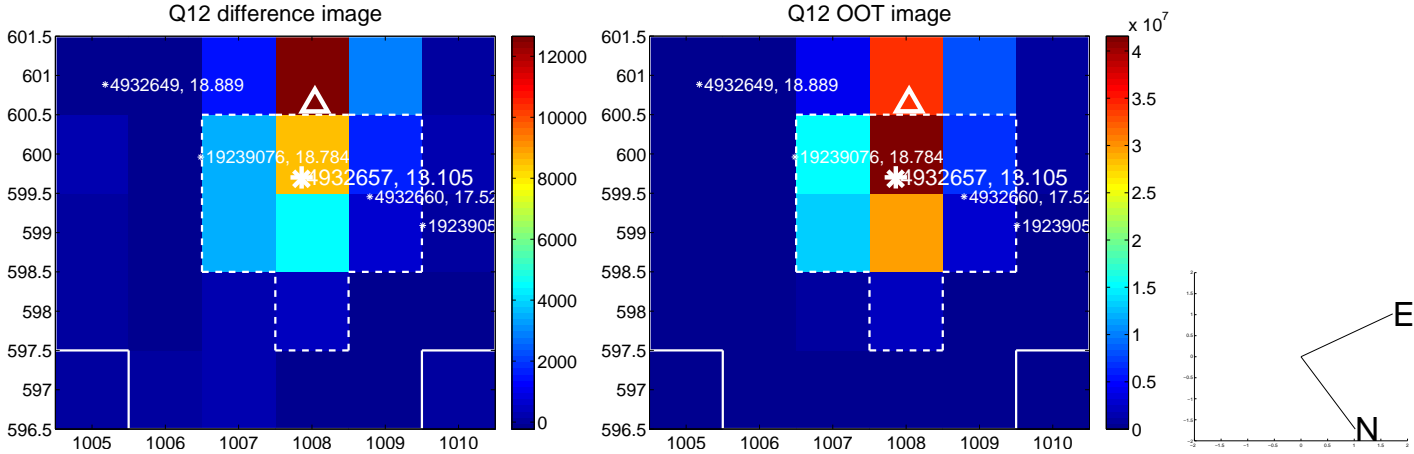
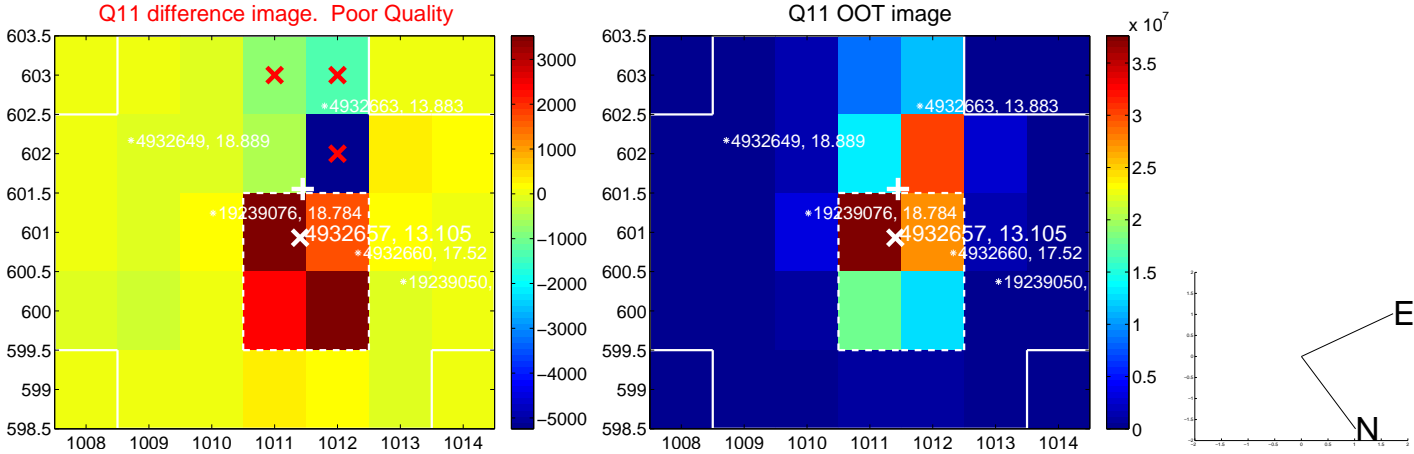
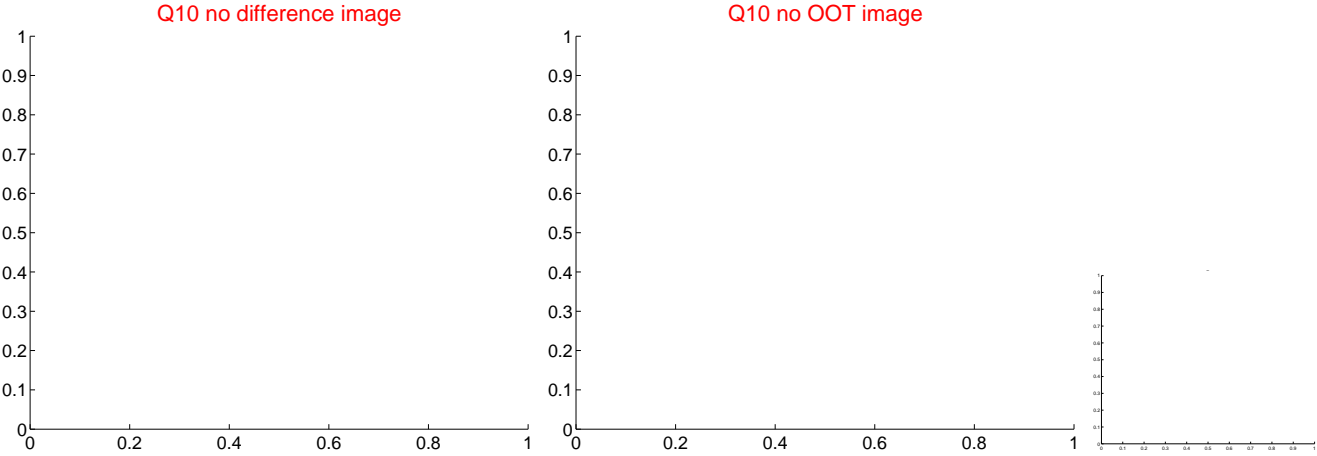
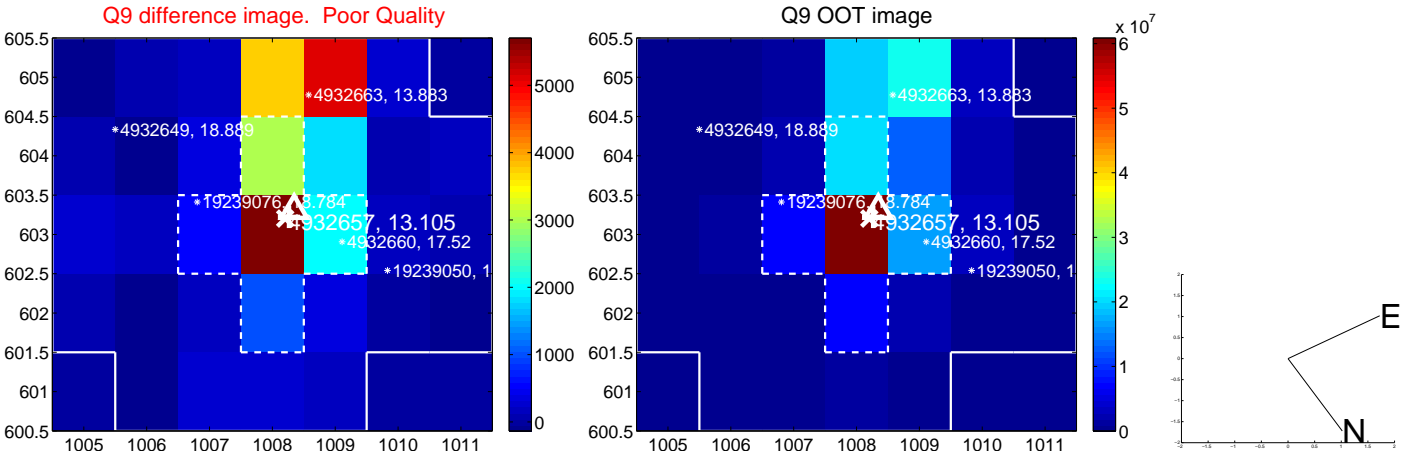
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



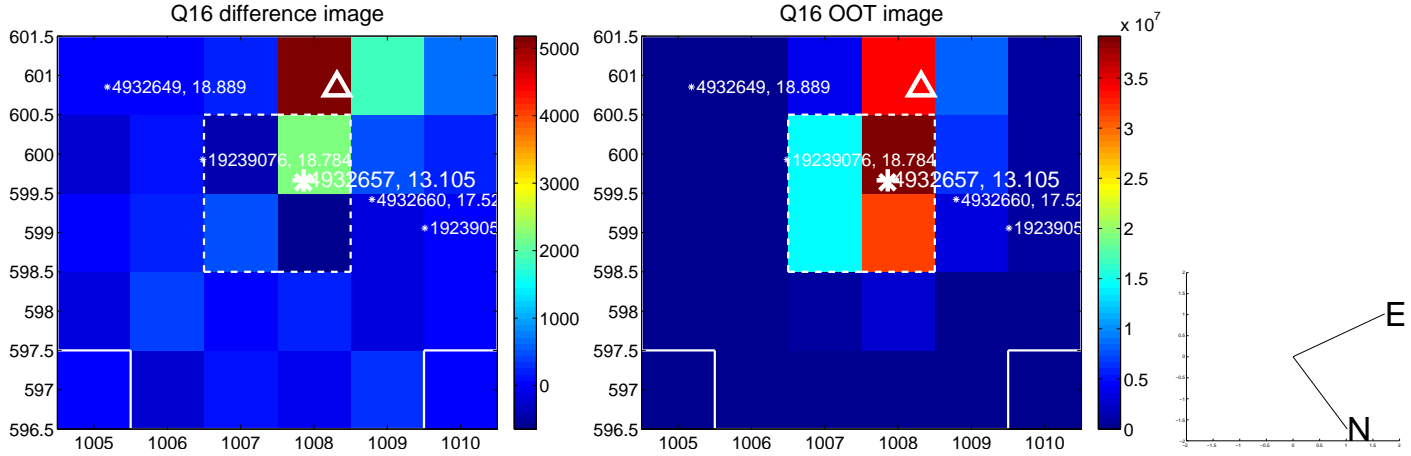
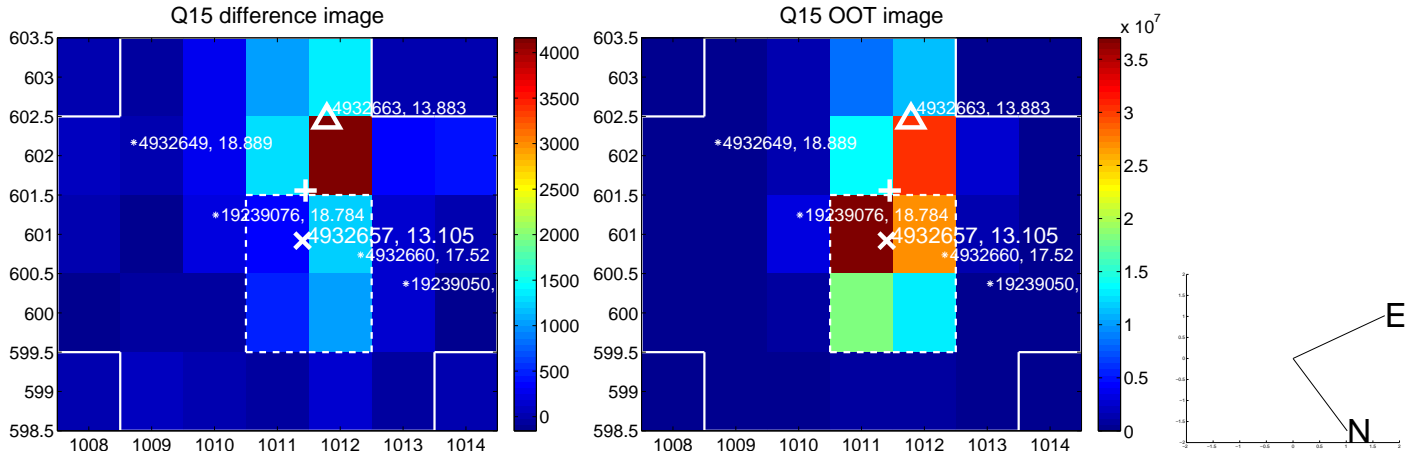
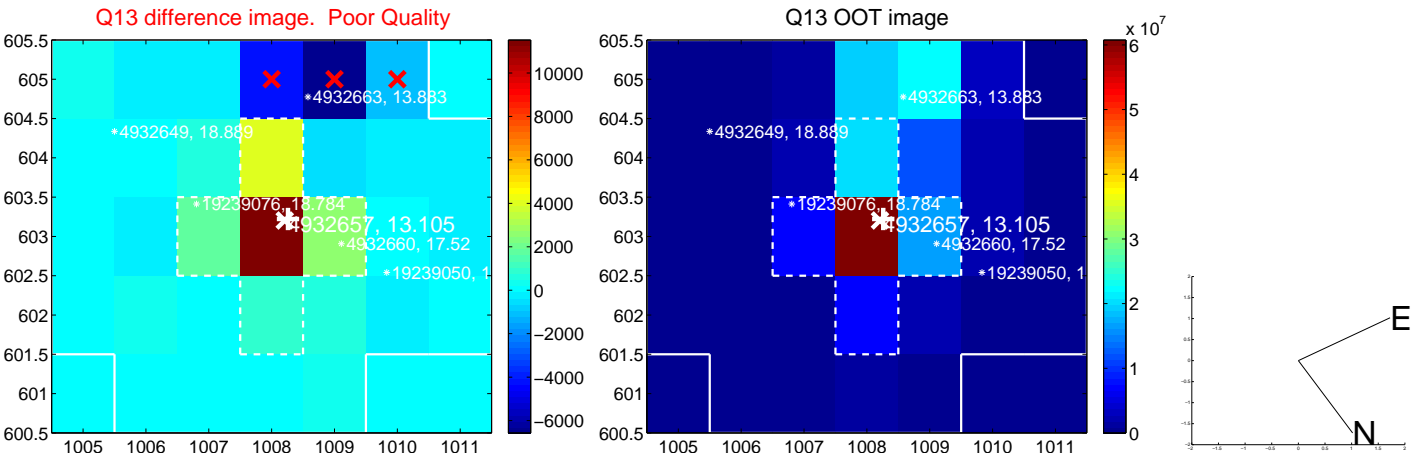
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



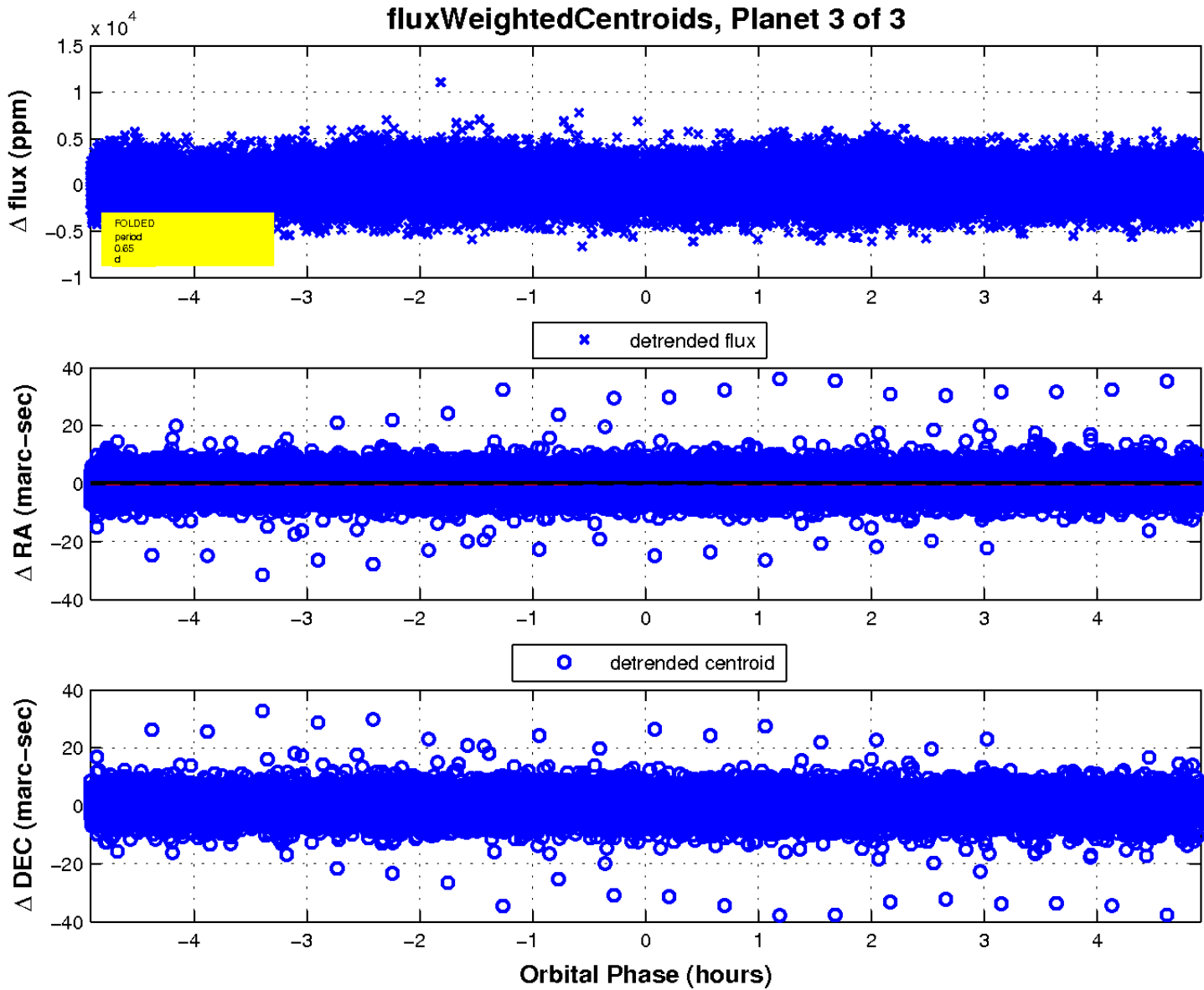
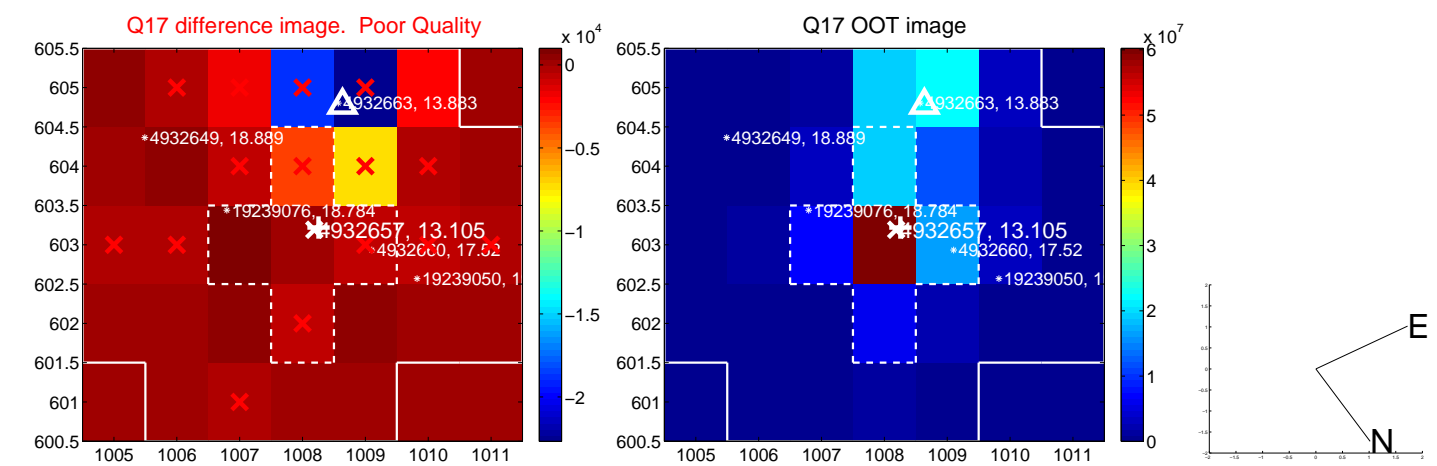
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

