

KIC 011092597

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})
011092597-01	OBS	No	0.774770	131.766026	0.0	1.632	9.6	0.0	2.35	7329	0.05	37390.83
011092597-02	OBS	No	0.774901	131.823348	13.7	2.152	10.1	6.4	2.35	7329	1.02	37382.40
011092597-03	OBS	No	38.442336	134.481726	127.7	3.221	7.6	8.2	2.35	7329	3.05	205.08
011092597-04	OBS	No	102.696517	163.087439	186.4	3.610	7.1	7.3	2.35	7329	3.78	55.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011092597-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011092597-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011092597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011092597-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

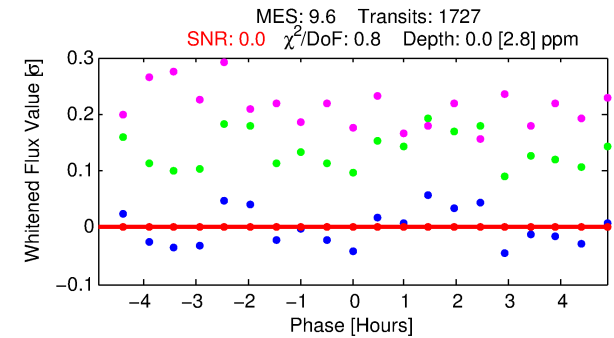
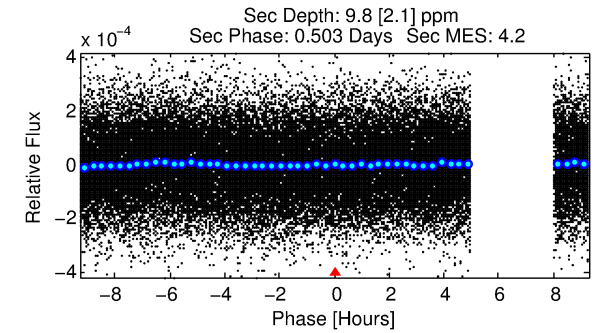
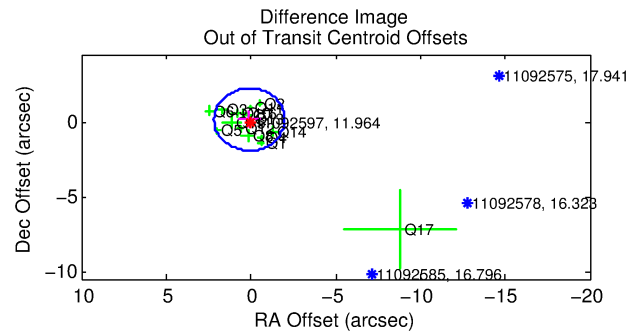
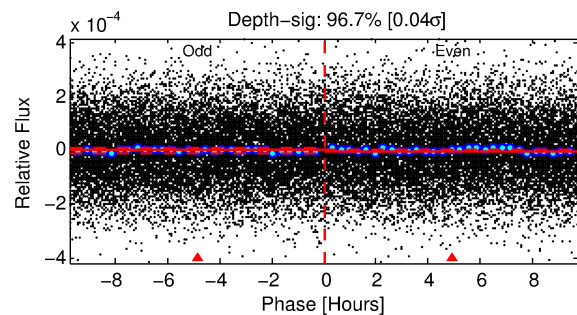
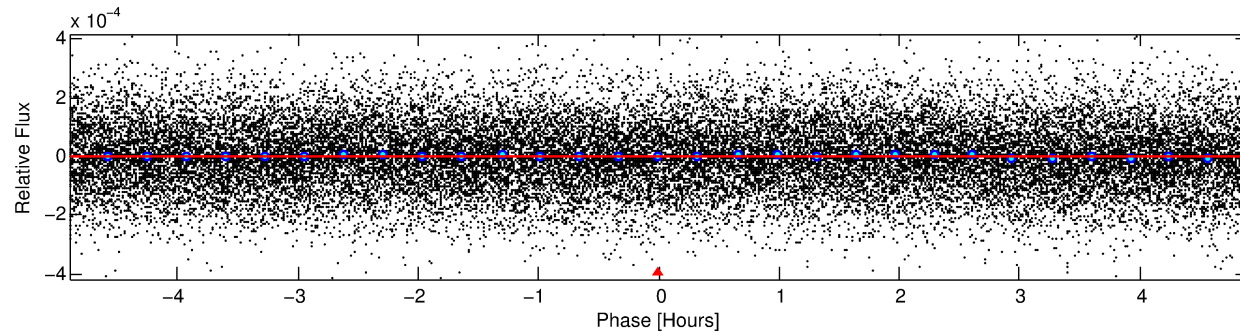
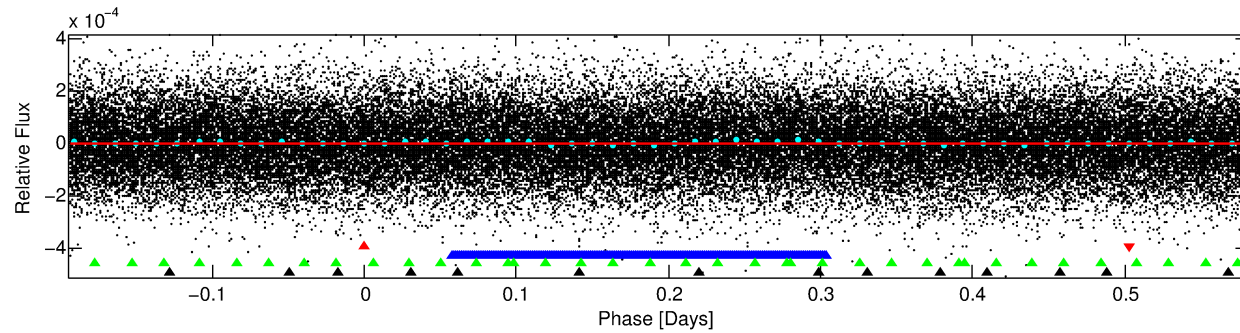
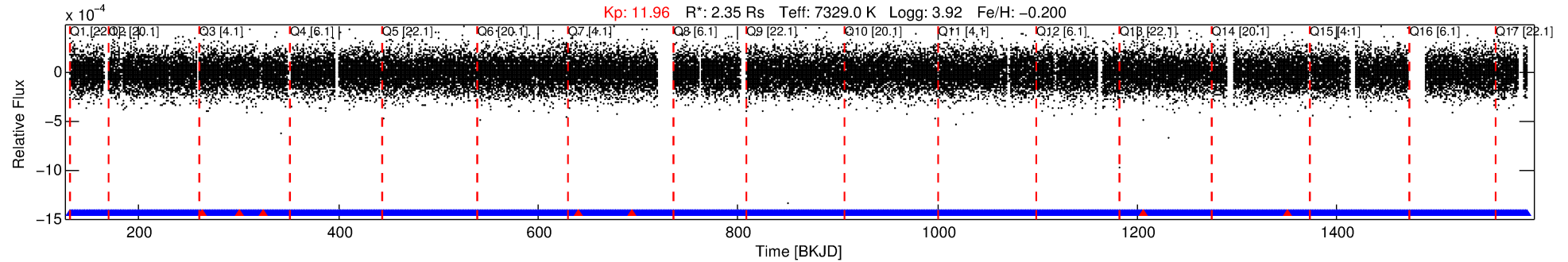
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011092597-01

No Significant Match Found

DV One-Page Summary

KIC: 11092597 Candidate: 1 of 4 Period: 0.775 d



DV Fit Results:

Period = 0.77477 [0.00478] d
Epoch = 131.7660 [0.9266] BKJD
Rp/R* = 0.0002 [0.0065]
a/R* = 2.65 [18.03]
b = 0.72 [6.72]
Seff = 37390.83 [21093.00]
Teq = 3546 [500] K
Rp = 0.05 [1.67] Re
a = 0.0195 [0.0068] AU
Ag = 726.65 [45660.19] [0.02 σ]
Teffp = 28464 [447162] K [0.06 σ]

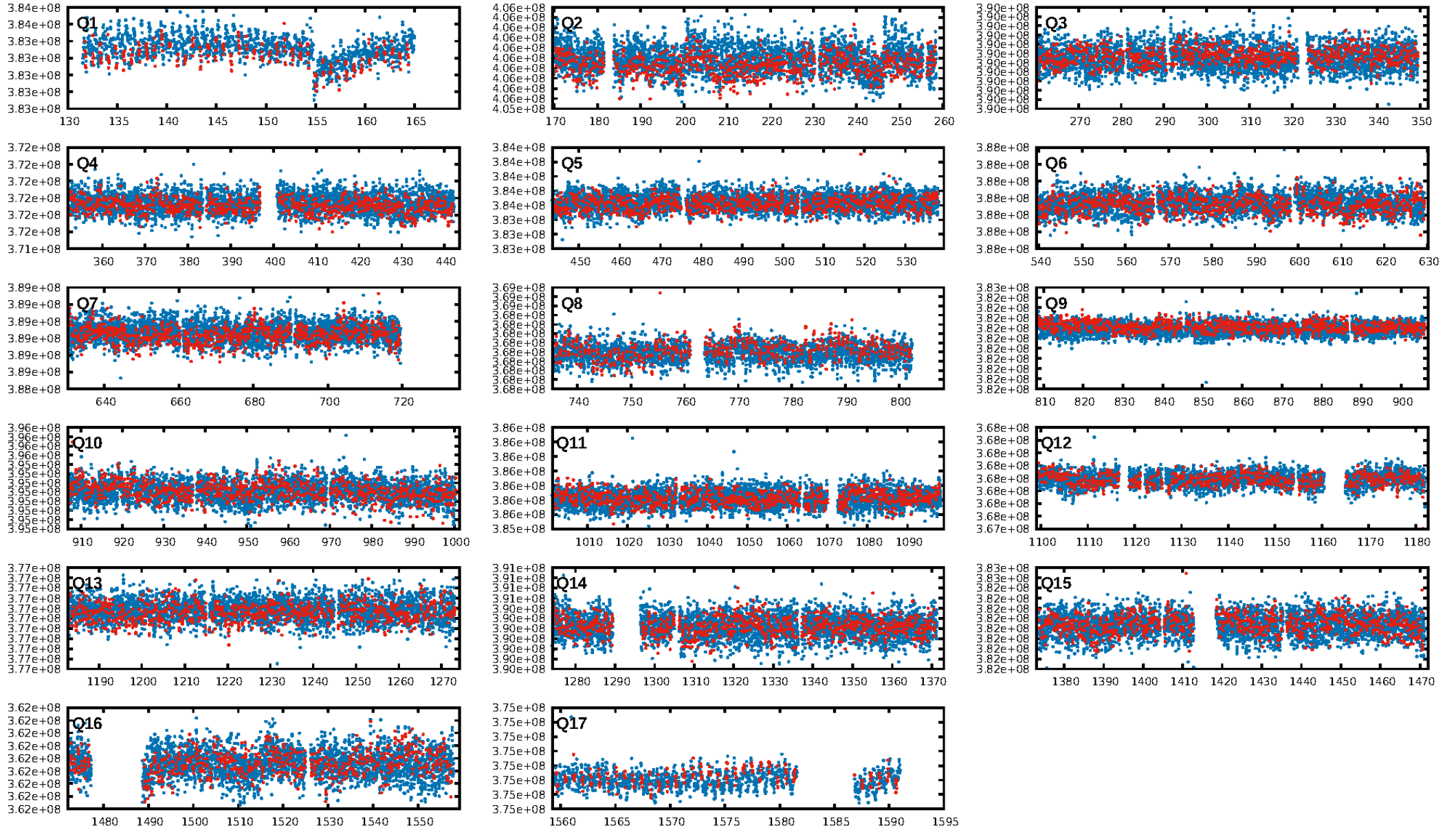
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.58e-17
RollingBand-fgt: 1.00 [1643/1650]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.176 arcsec [0.25 σ]
KicOffset-rm: 0.248 arcsec [0.33 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.75 [12/16]
DiffImageOverlap-fno: 0.18 [3/17]

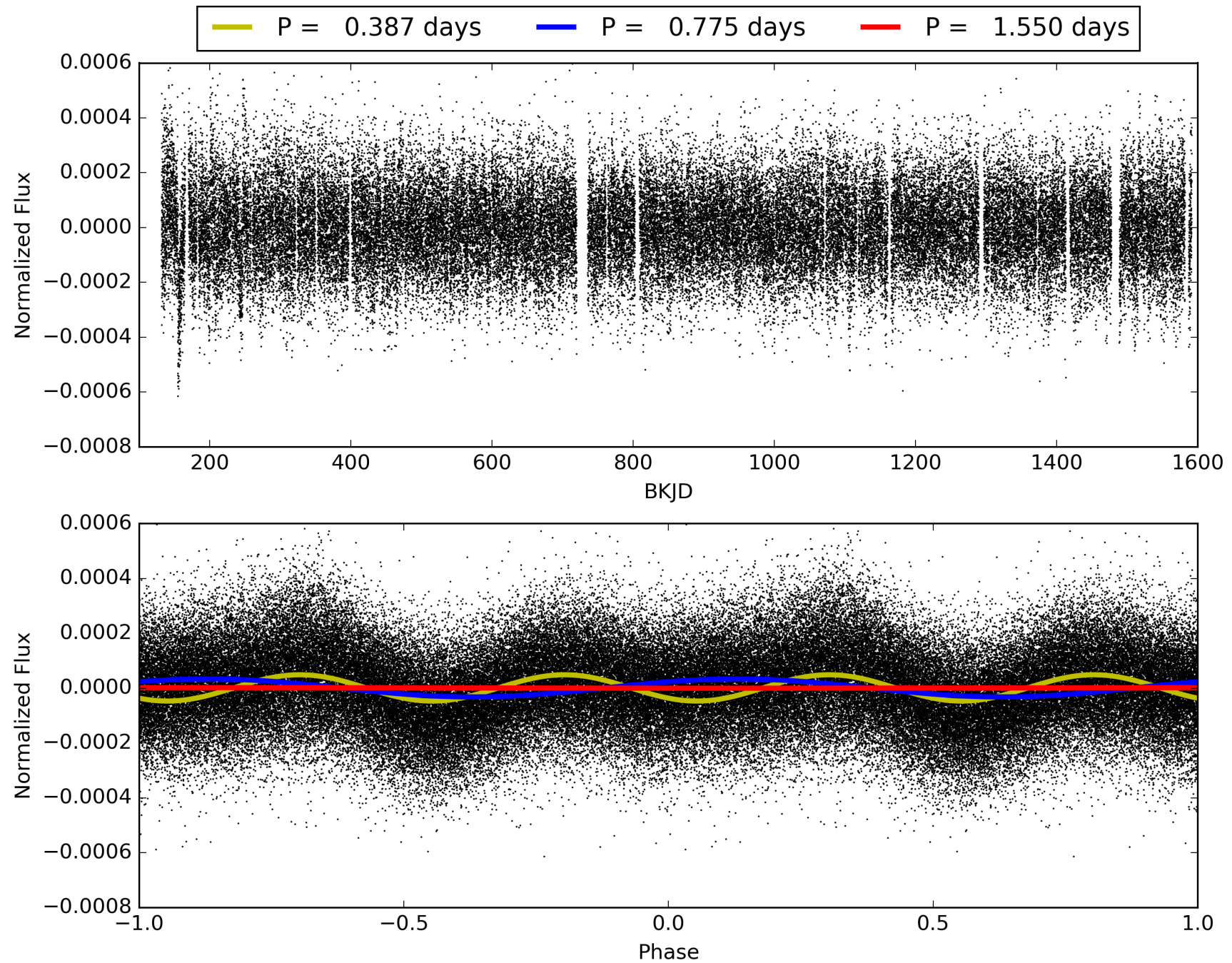
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:43:45 Z

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

TCE 011092597-01, PDC Light Curves

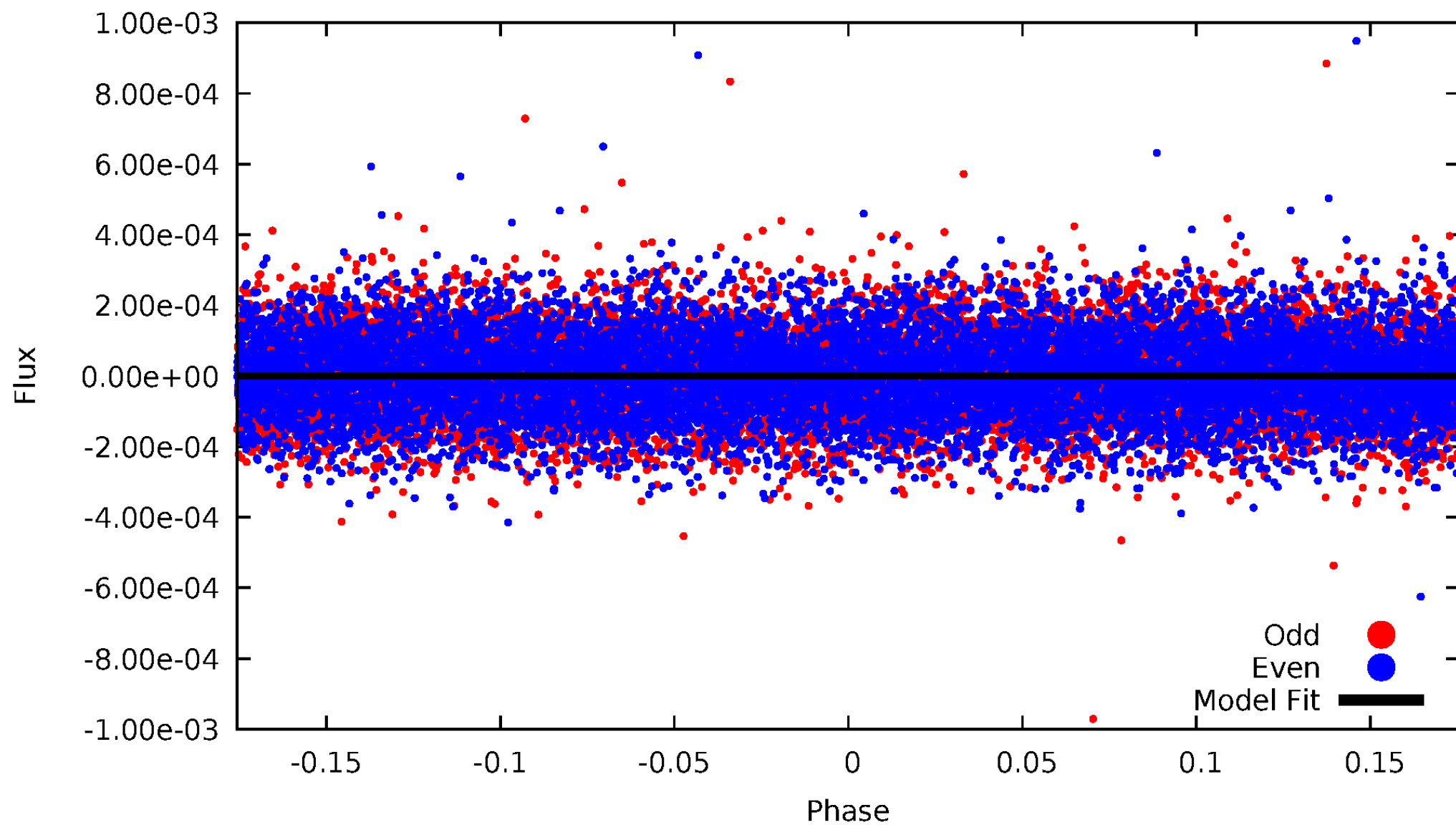


TCE 011092597-01



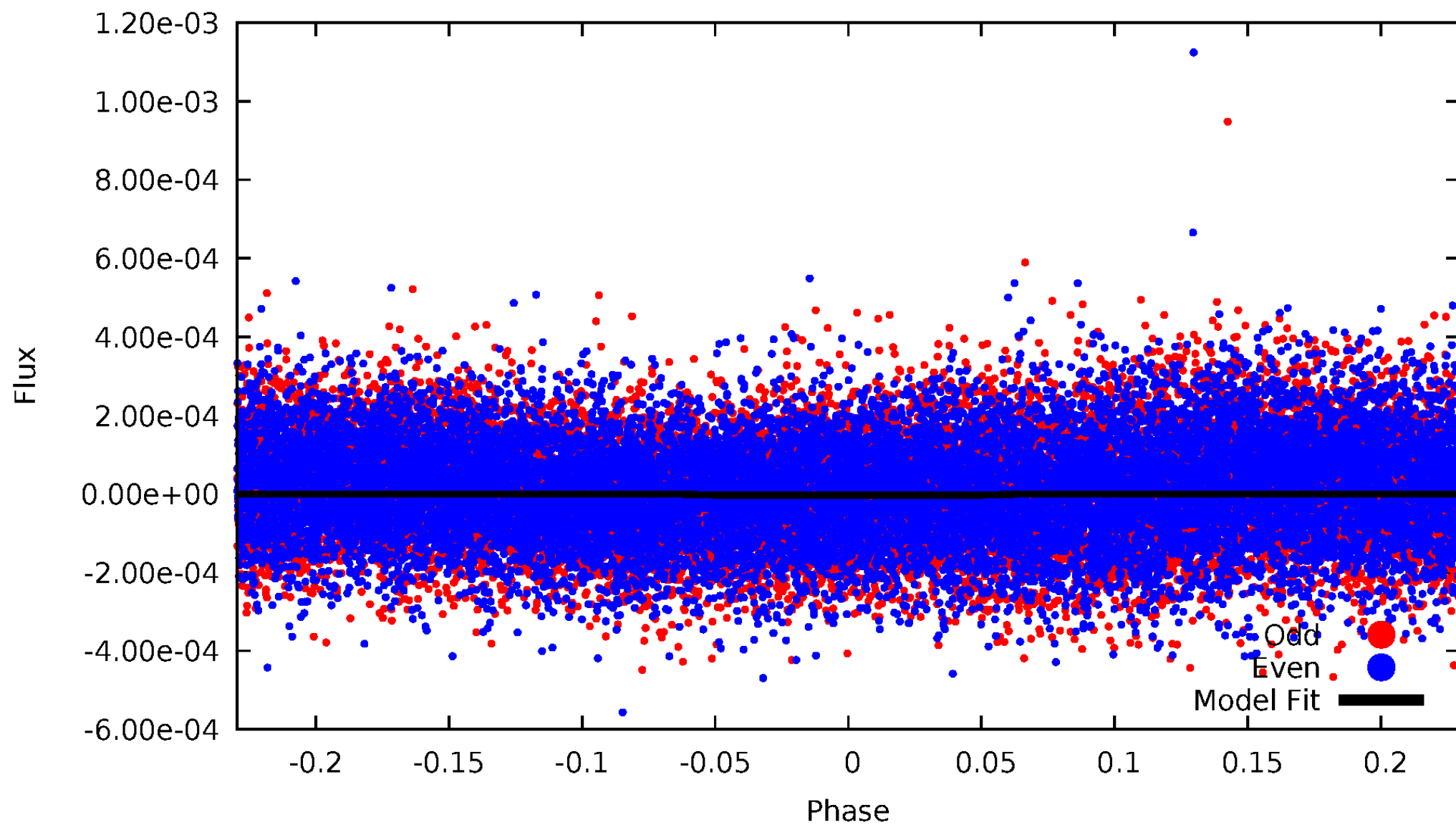
DV Odd/Even

TCE 011092597-01



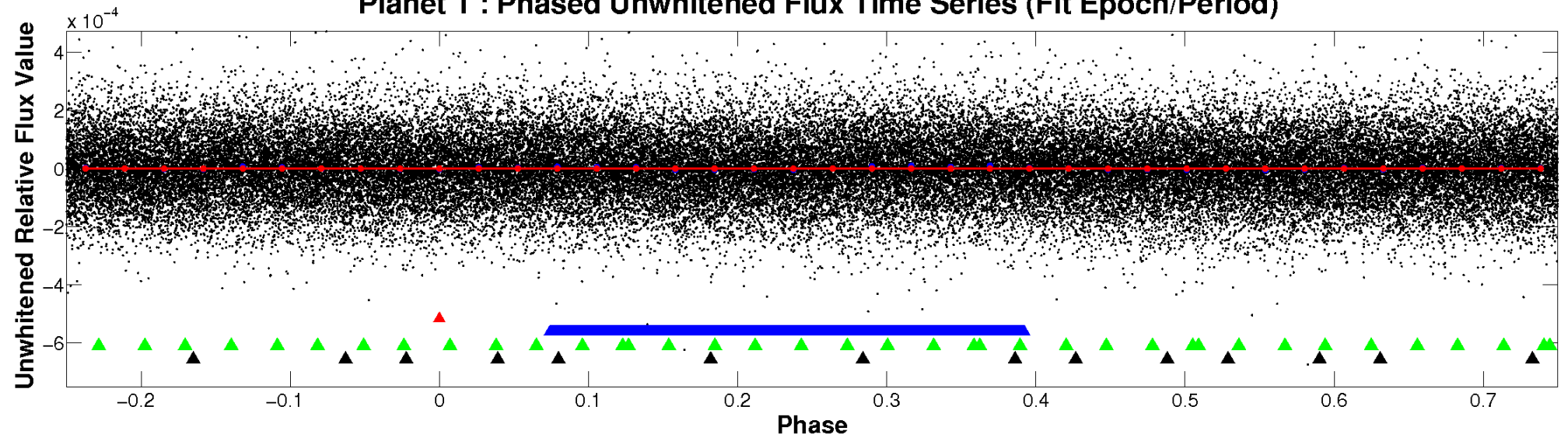
ALT Odd/Even

TCE 011092597-01

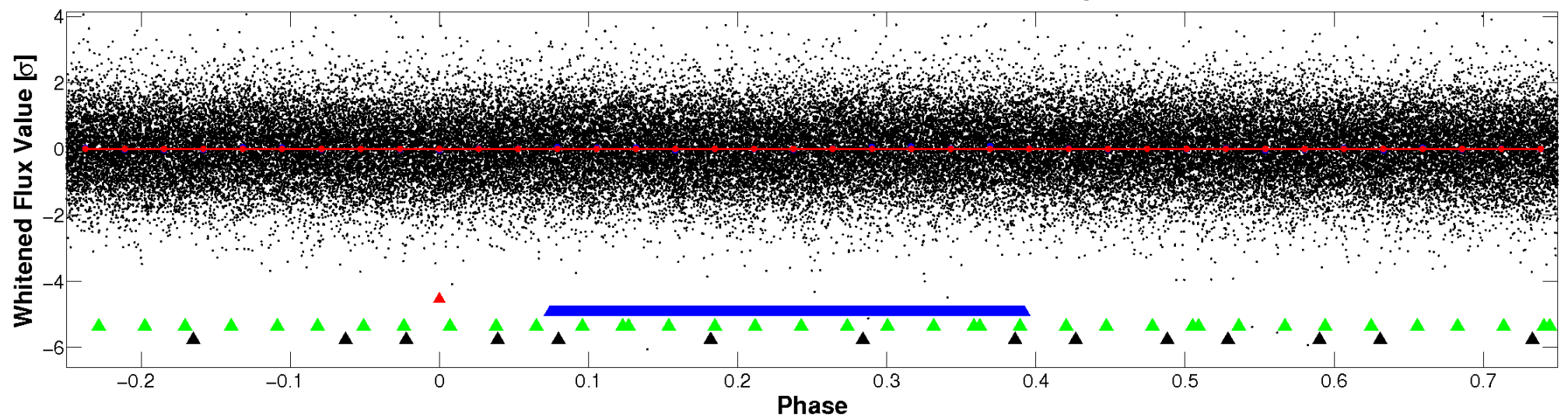


Non-Whitened Vs. Whitened Light Curve

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

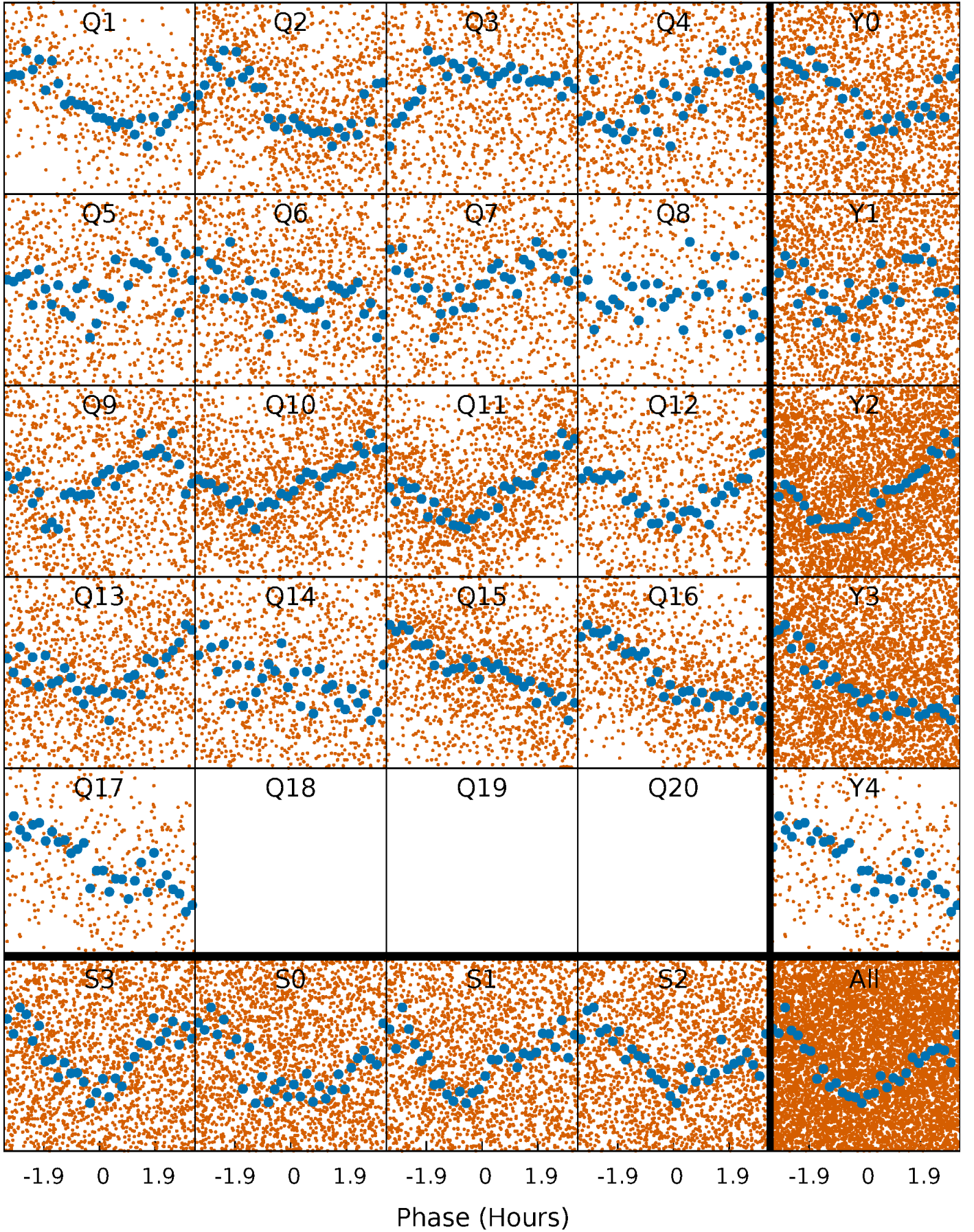


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



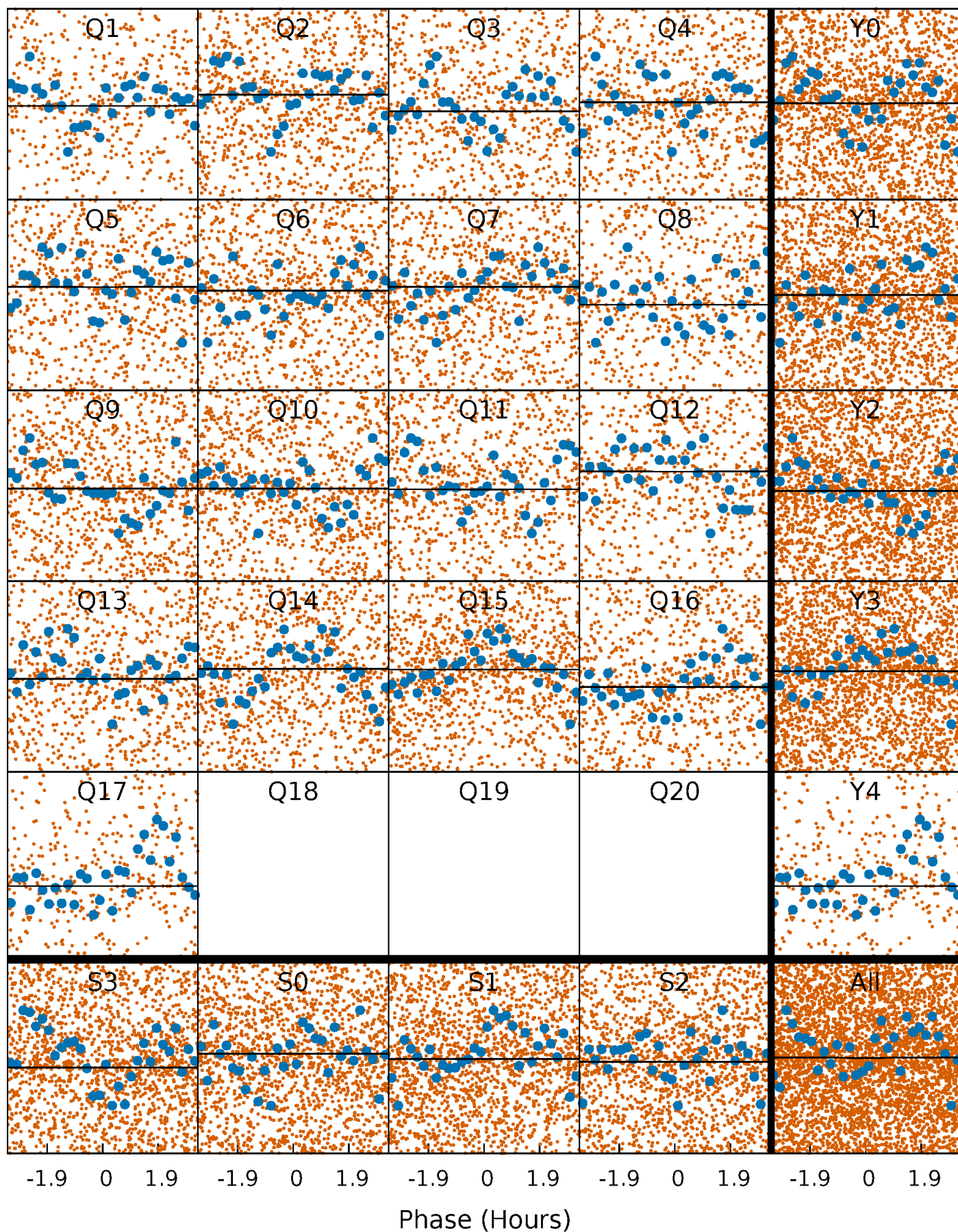
PDC Quarter-Phased Transit Curves

TCE 011092597-01 P= 0.774770 Days $T_0=131.766026$ (BKJD)



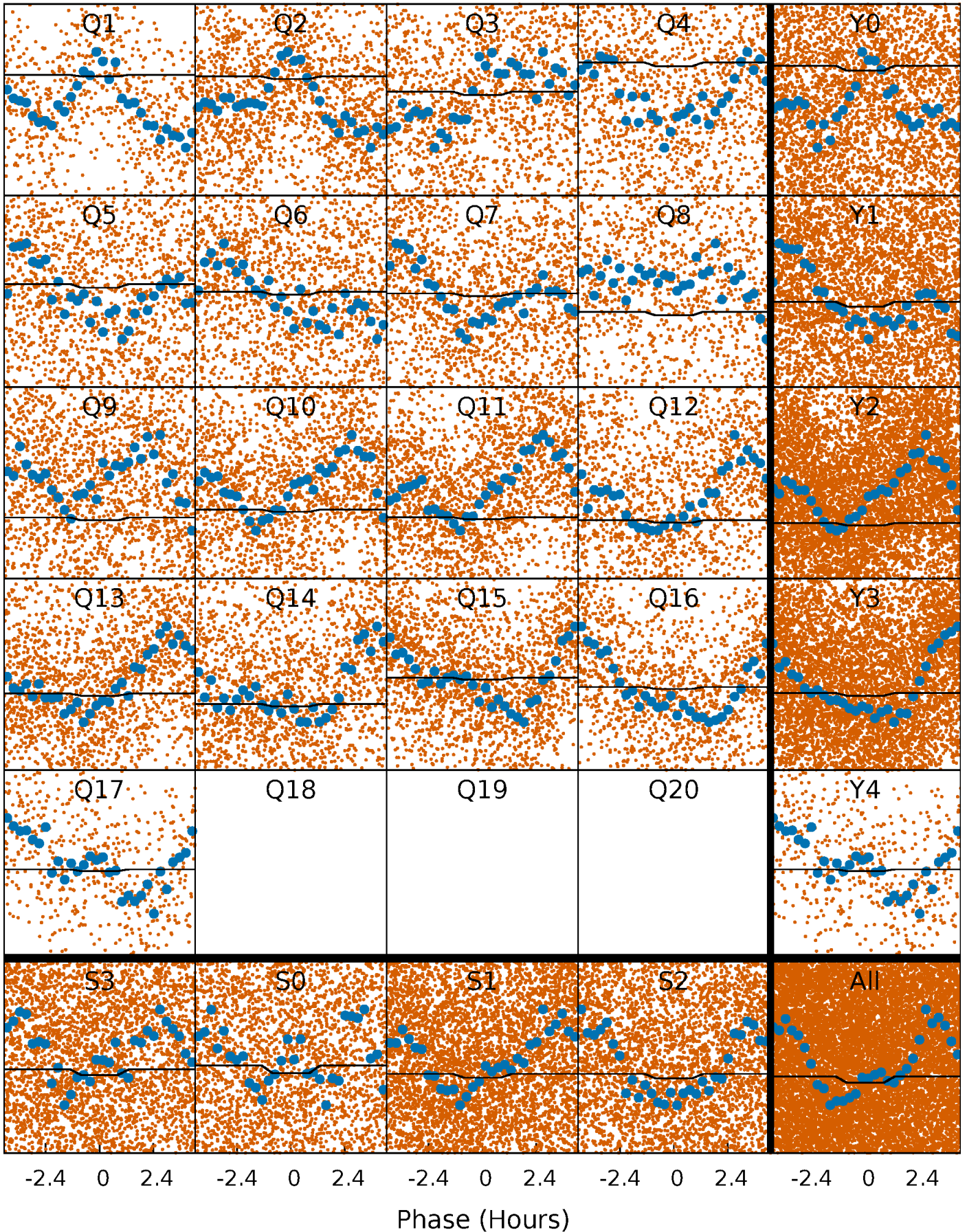
DV Quarter-Phased Transit Curves

TCE 011092597-01 P= 0.774770 Days $T_0=131.766026$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

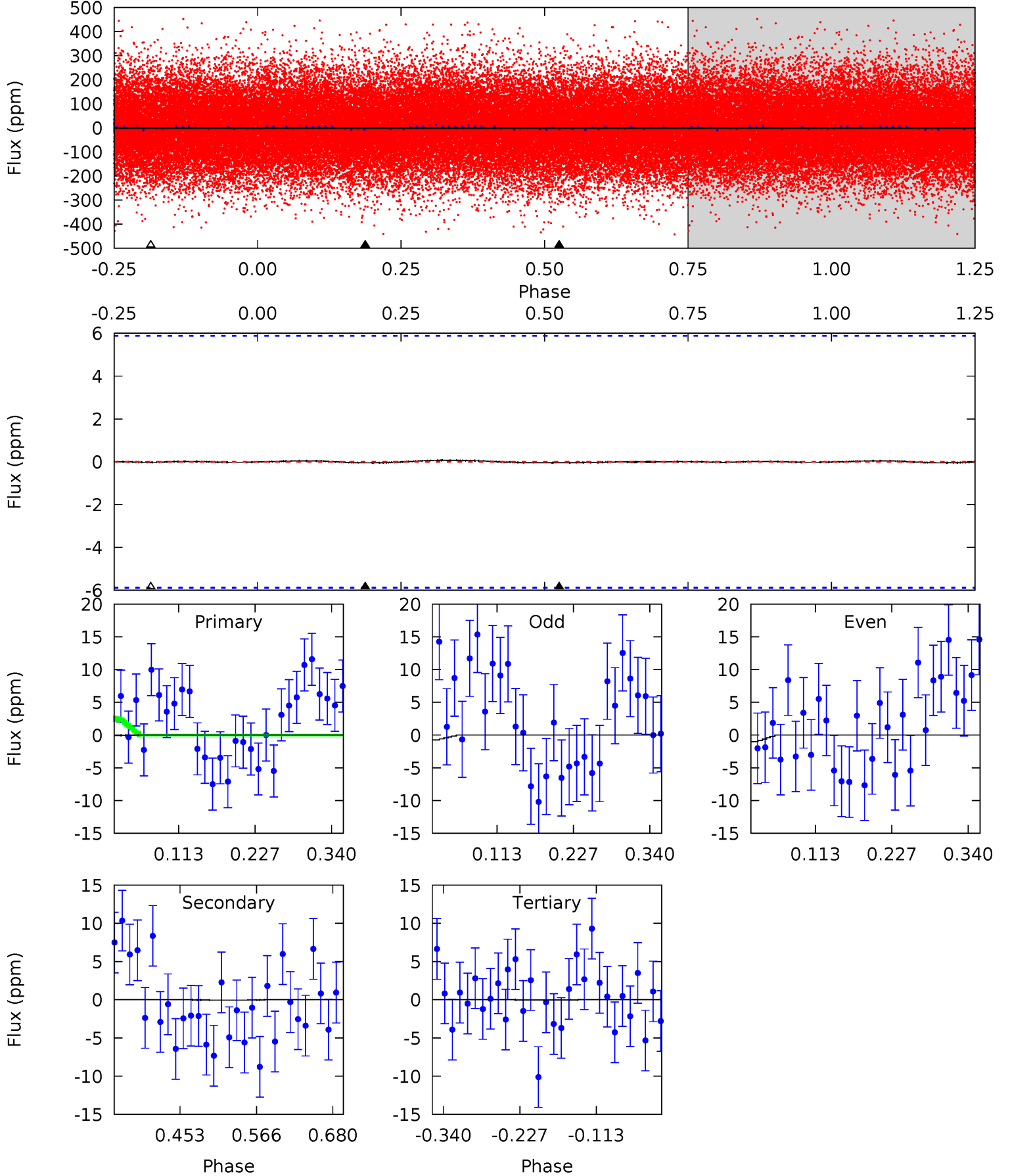
TCE 011092597-01 P= 0.774866 Days $T_0=131.667471$ (BKJD)



DV Model-Shift Uniqueness Test

011092597-01, P = 0.774770 Days, E = 130.991256 Days

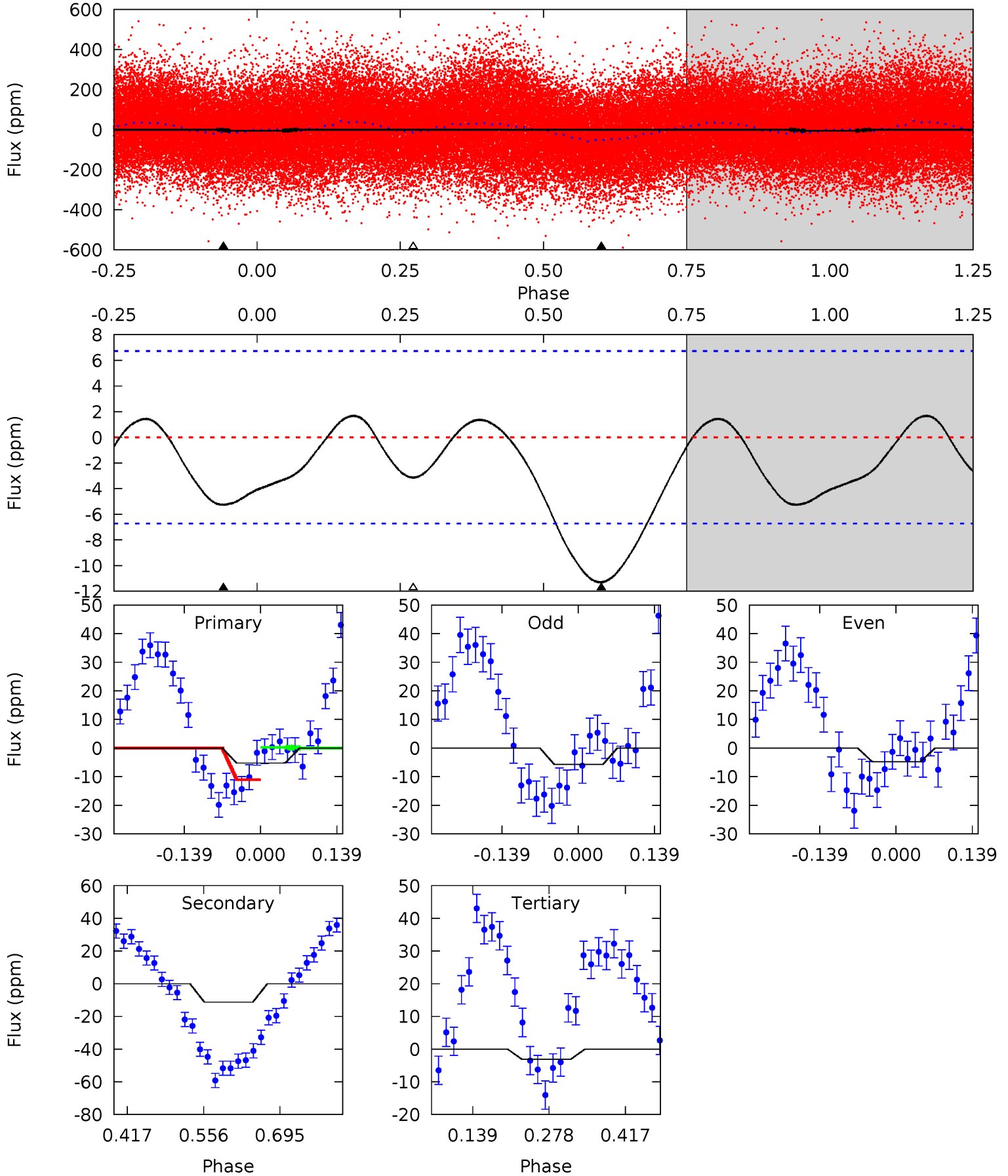
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.04	0.04	0.02	0	4.54	1.58	0.02	0.02	0.04	0.02	0.04	0.11	-0.17	0.59	0.08



Alt Model-Shift Uniqueness Test

011092597-01, P = 0.774866 Days, E = 130.892605 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.52	7.57	2.11	0	4.50	1.48	0.99	1.42	3.52	5.46	7.57	0.32	0.89	0.13	3.86



Stellar Parameters For KIC 011092597

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7329^{+230}_{-307}	$3.915^{+0.308}_{-0.132}$	$-0.200^{+0.250}_{-0.350}$	$2.349^{+0.490}_{-0.909}$	$1.651^{+0.165}_{-0.386}$	$0.179^{+0.397}_{-0.070}$
	+3%/-4%	+8%/-3%	+125%/-175%	+21%/-39%	+10%/-23%	+221%/-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 011092597-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-0 ± 1	$1.10^{+1.19}_{-0.74}$	4892^{+332}_{-465}	-4186^{+7719}_{-743}	$0.005^{+0.439}_{-0.405}$
Alt.	-11 ± 1	$1.27^{+1.25}_{-0.92}$	4834^{+396}_{-478}	5329^{+7465}_{-2200}	$1.407^{+18.100}_{-1.051}$

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

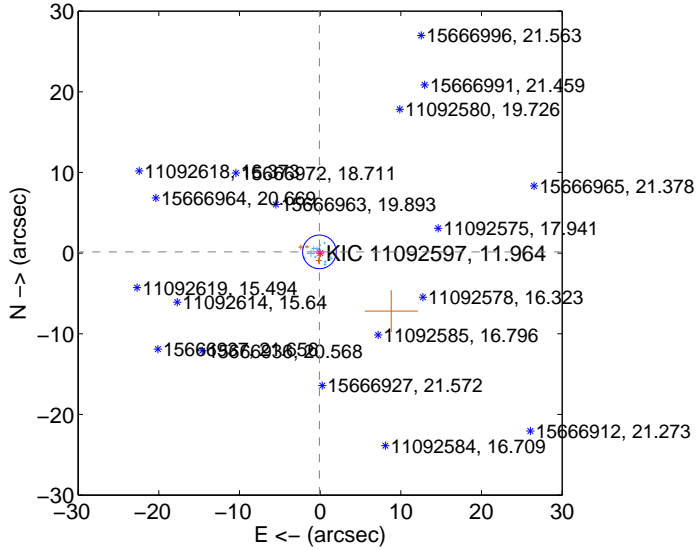
Supplemental centroid analysis for 011092597-01. **Kepler magnitude: 11.96.** Transit SNR 0.02

There are 12 quarters with good PRF difference image offsets

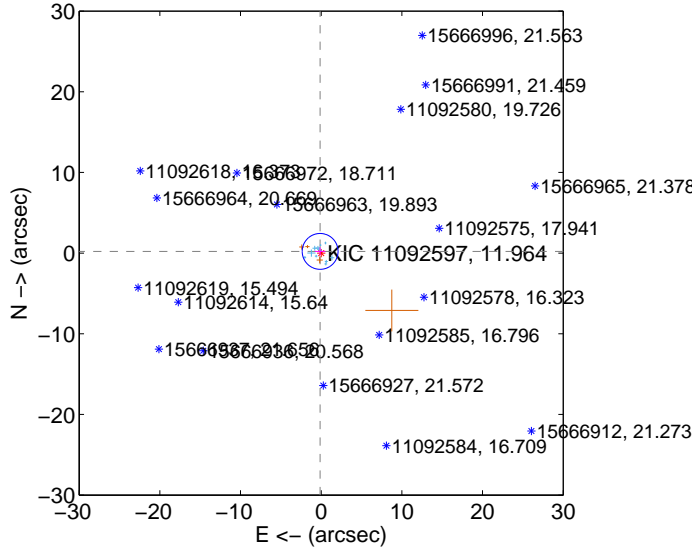
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.176 ± 0.694	0.25	0.090 ± 0.601	0.151 ± 0.477
PRF-fit source offset from KIC position	0.248 ± 0.741	0.33	0.131 ± 0.652	0.211 ± 0.494
photometric centroid source offset	—	—	—	—

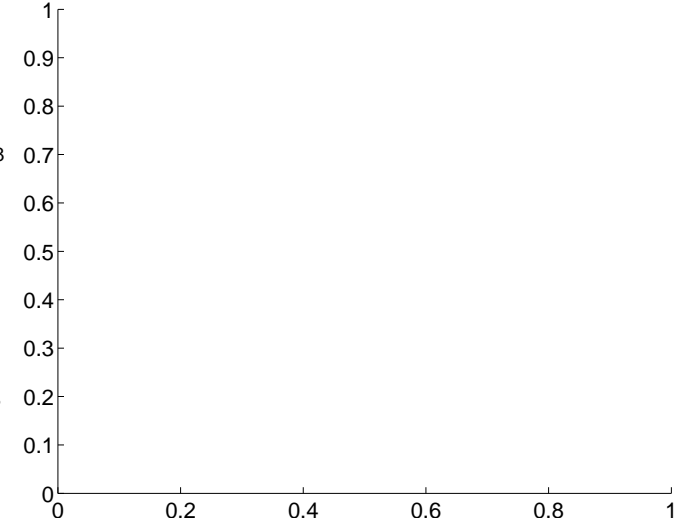
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

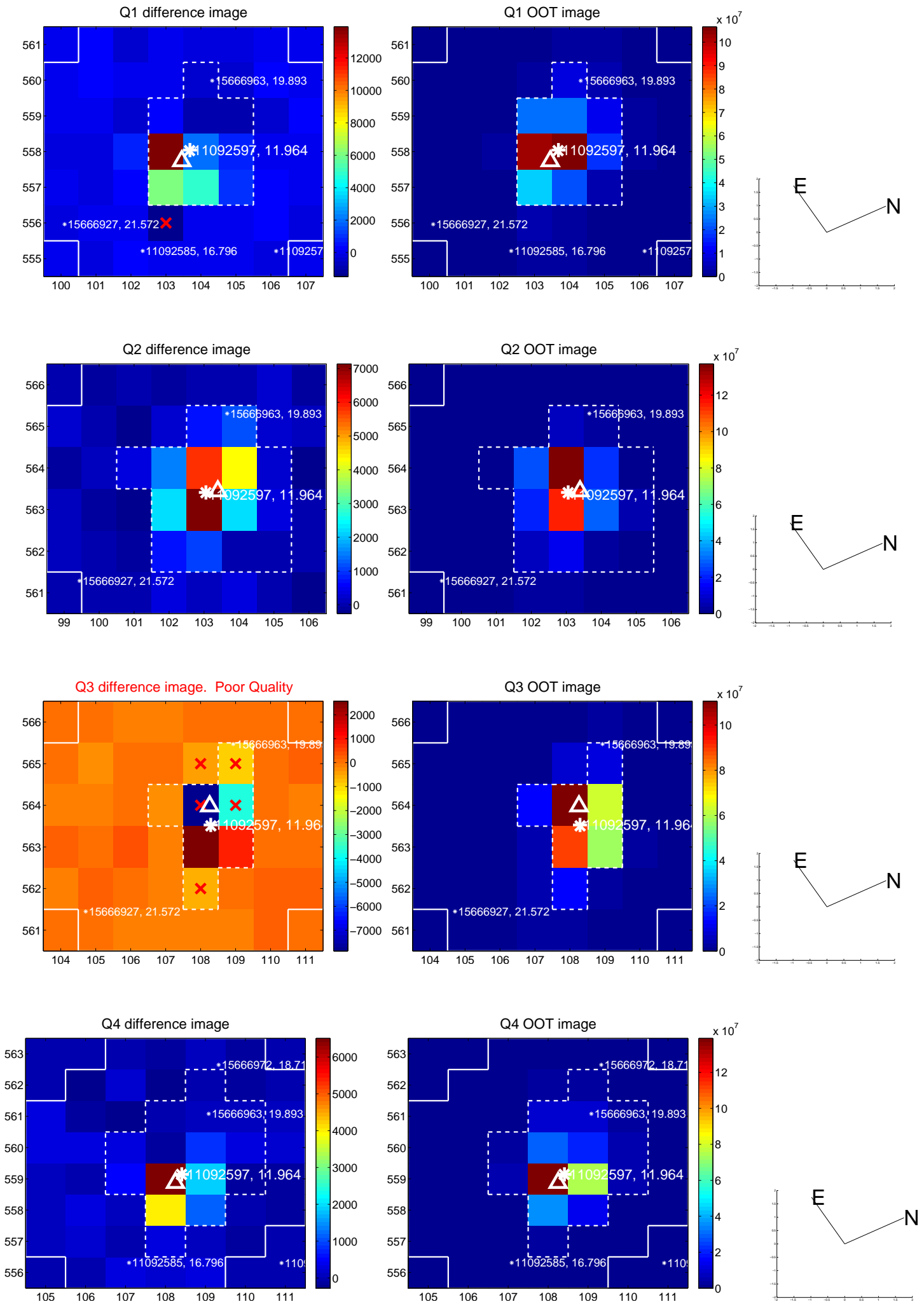


There are no photometric centroids

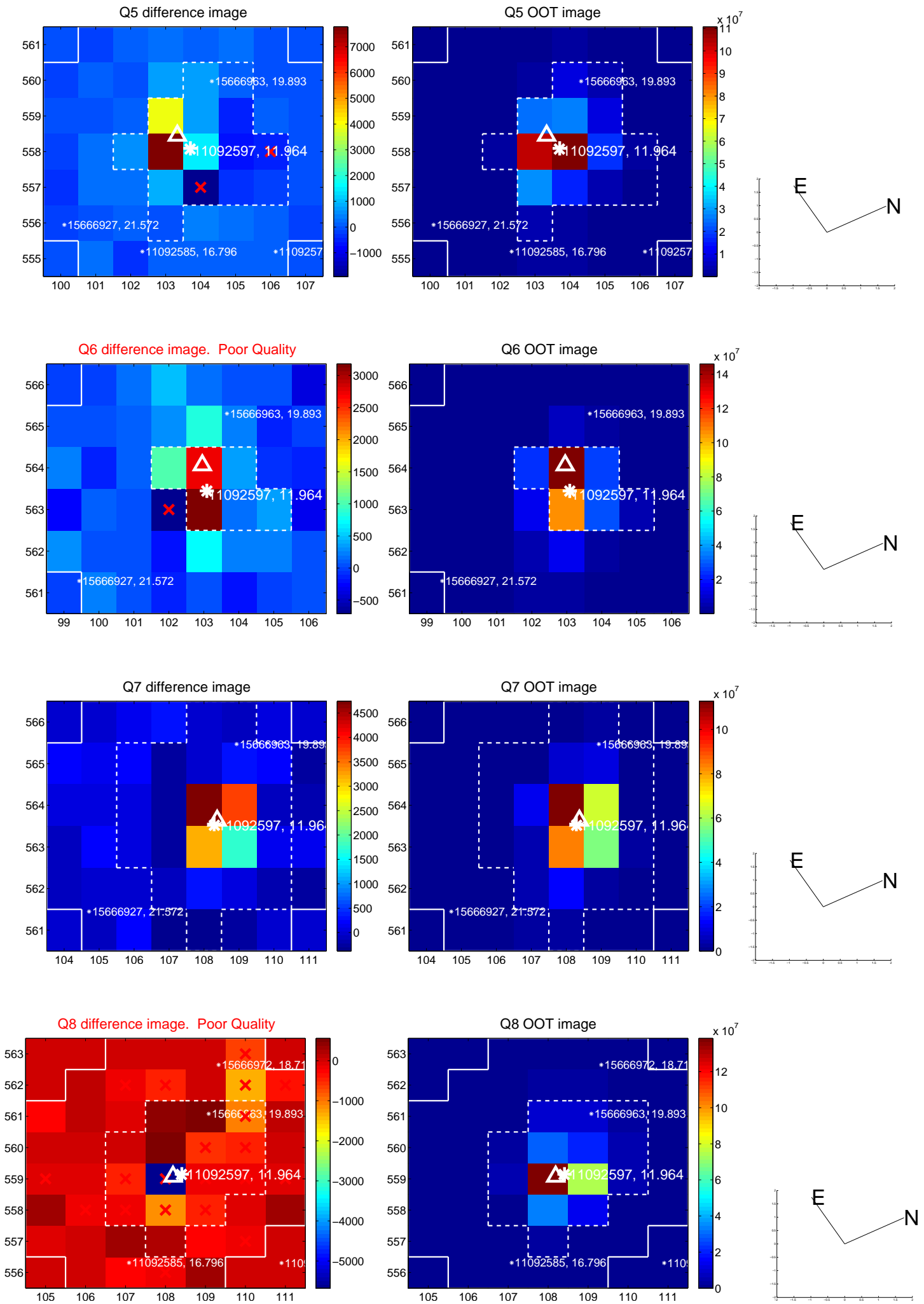


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

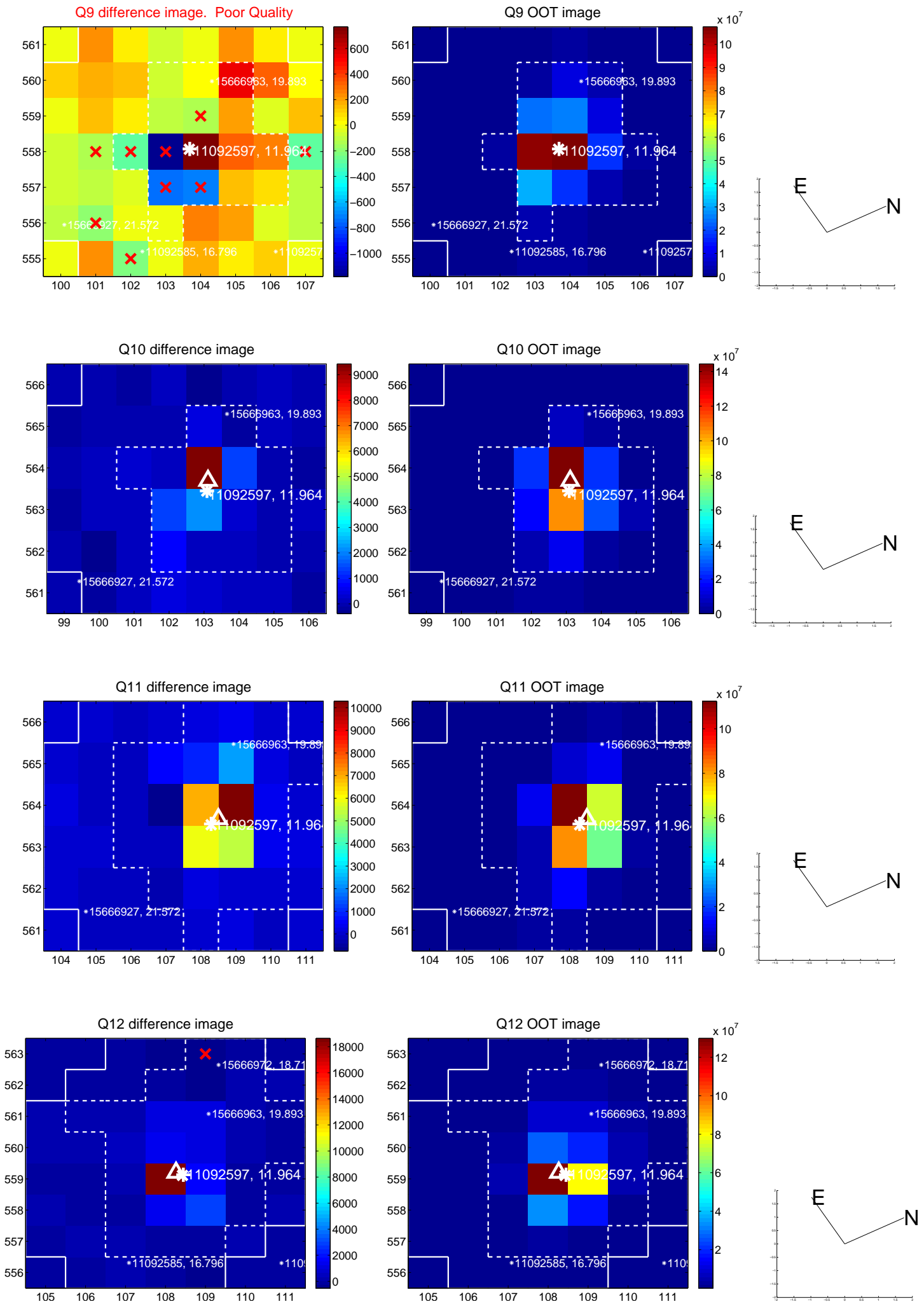
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



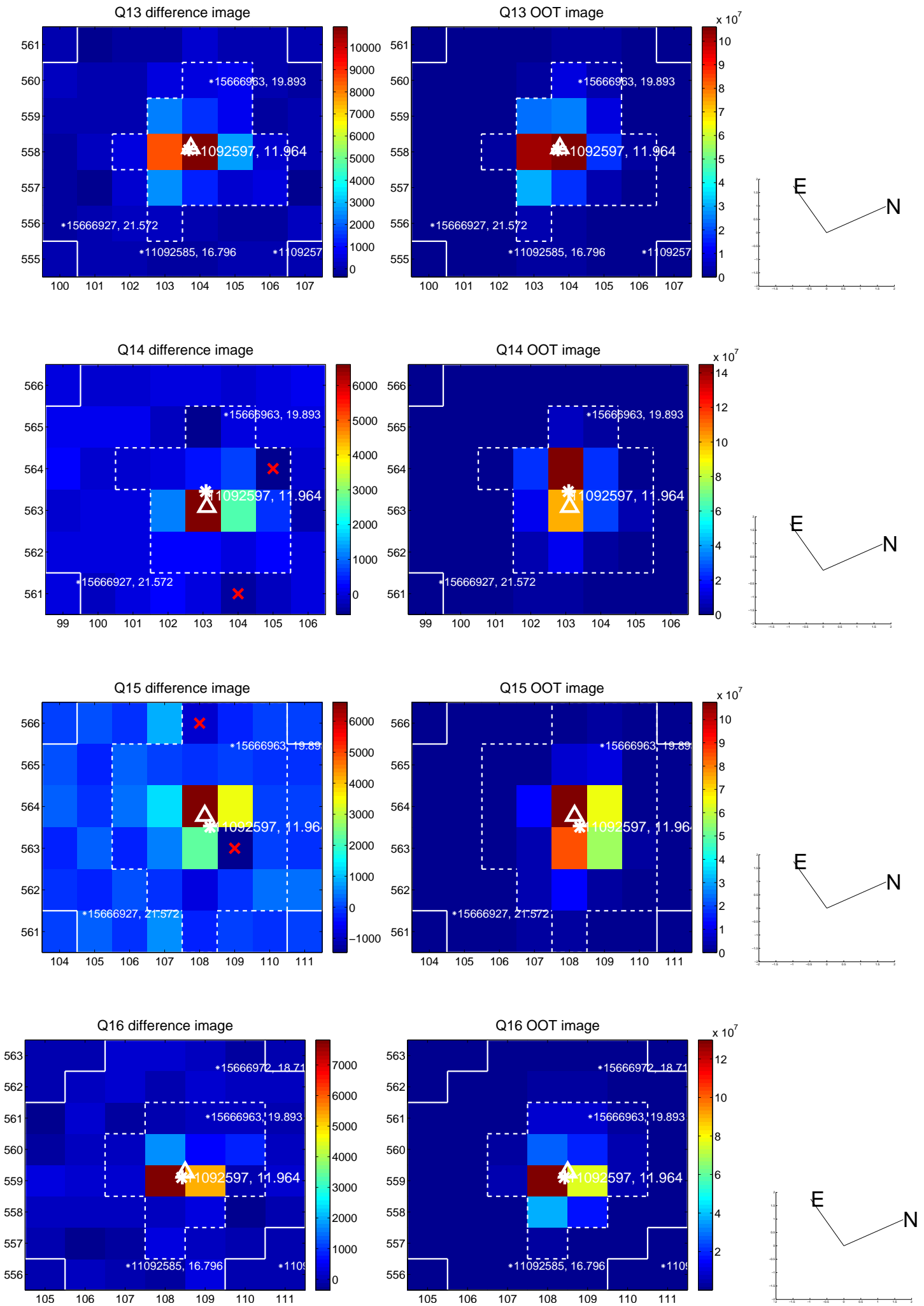
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



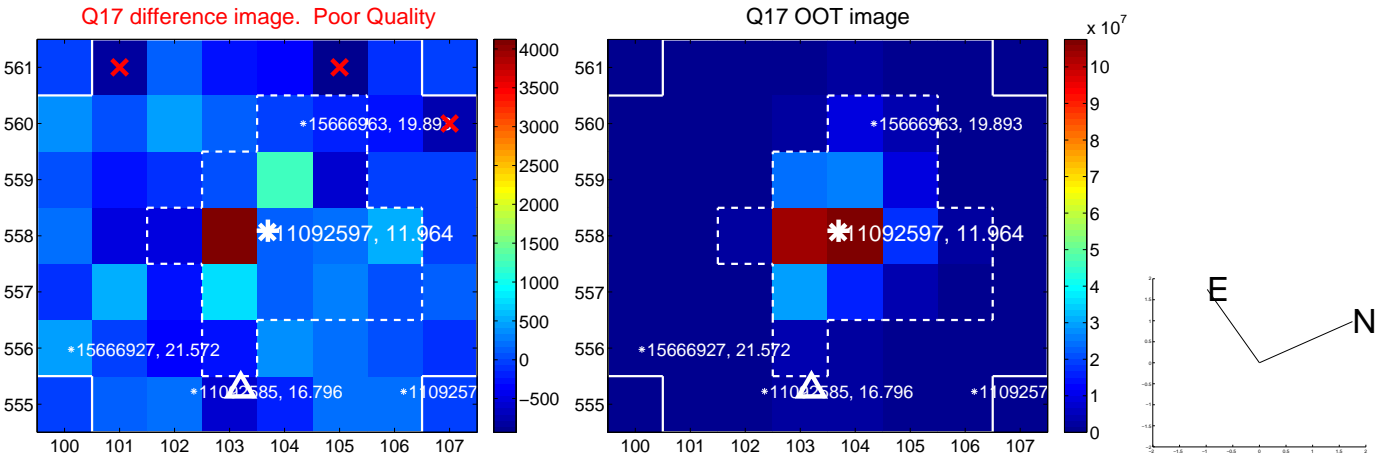
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

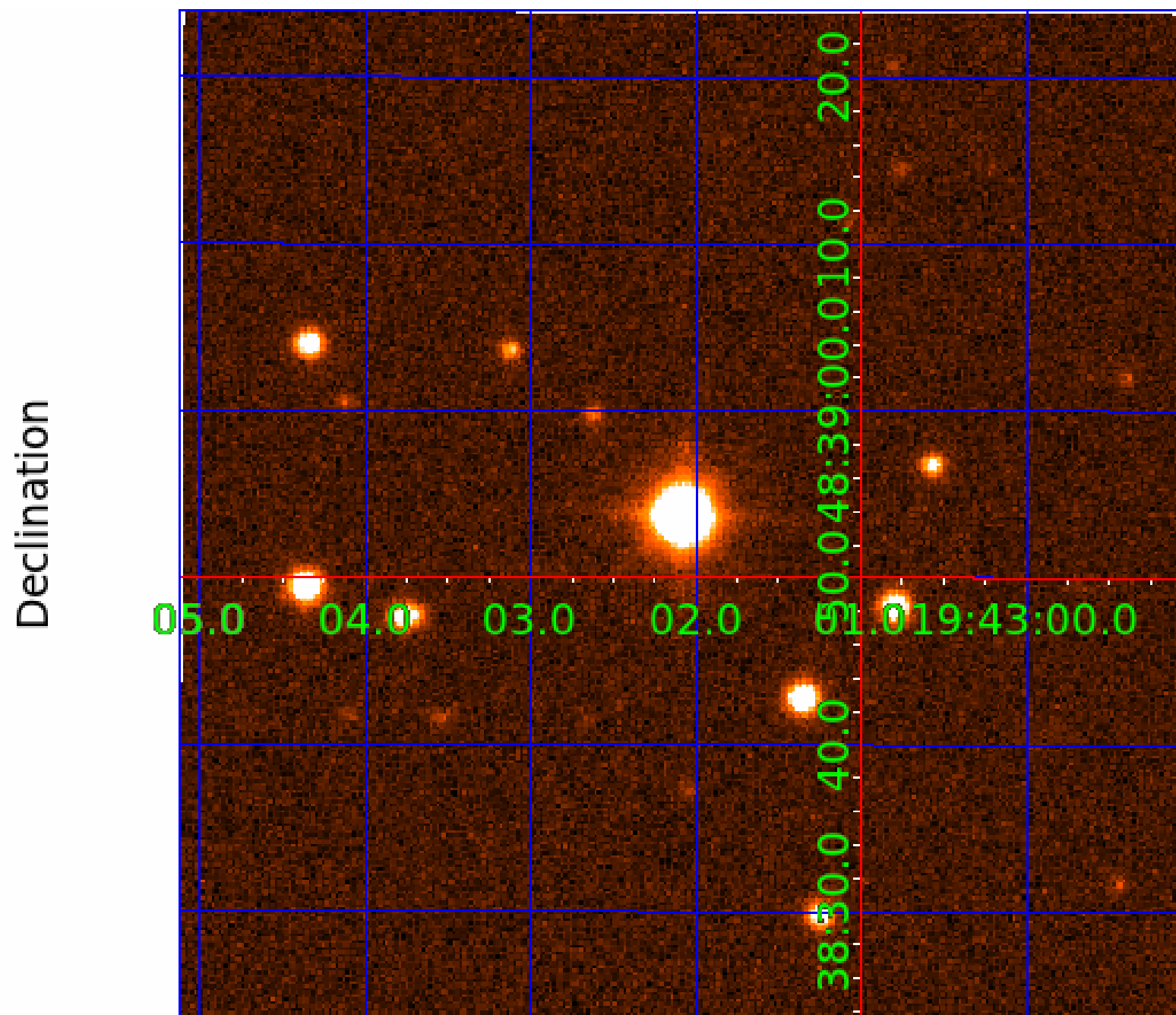


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image



KIC 011092597

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})
011092597-01	OBS	No	0.774770	131.766026	0.0	1.632	9.6	0.0	2.35	7329	0.05	37390.83
011092597-02	OBS	No	0.774901	131.823348	13.7	2.152	10.1	6.4	2.35	7329	1.02	37382.40
011092597-03	OBS	No	38.442336	134.481726	127.7	3.221	7.6	8.2	2.35	7329	3.05	205.08
011092597-04	OBS	No	102.696517	163.087439	186.4	3.610	7.1	7.3	2.35	7329	3.78	55.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011092597-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011092597-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011092597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011092597-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

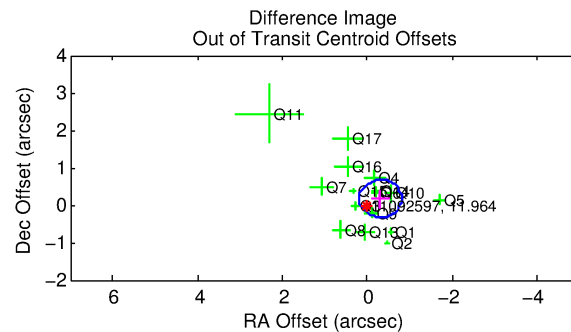
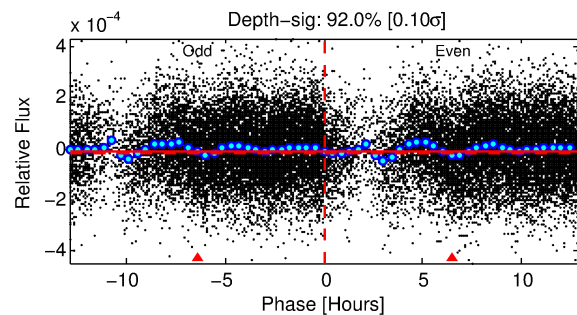
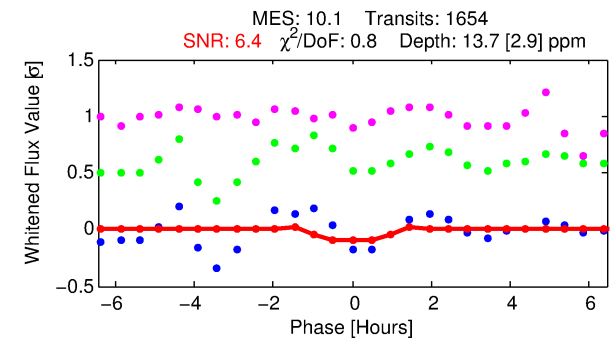
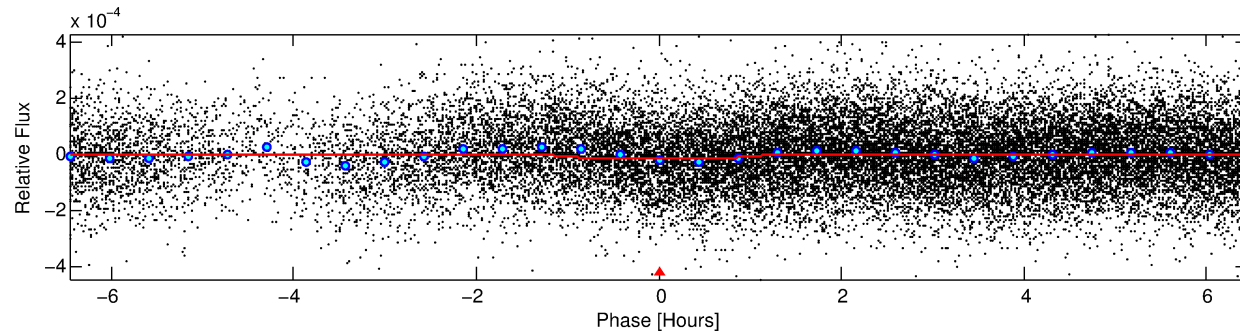
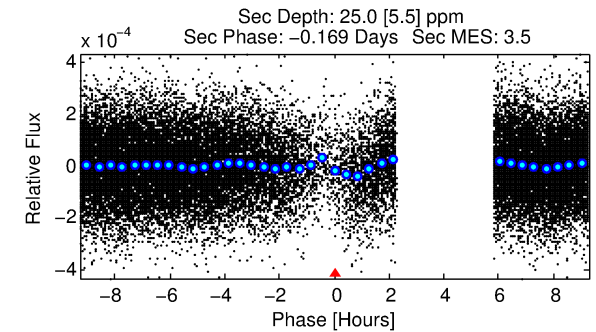
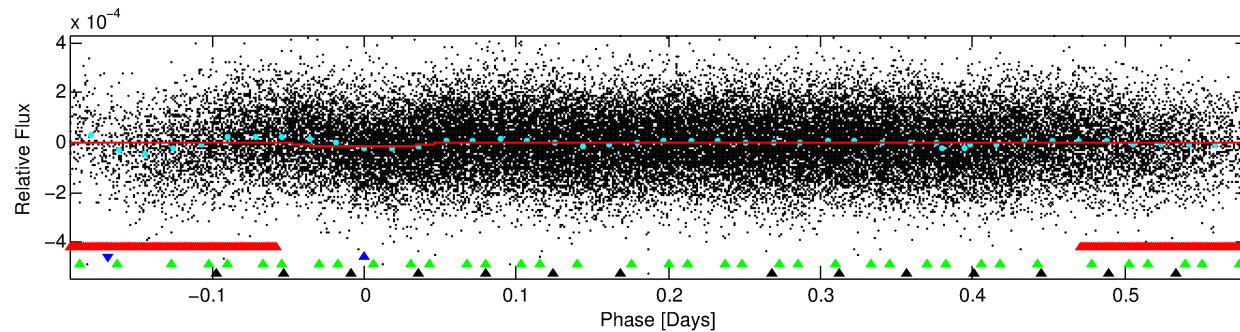
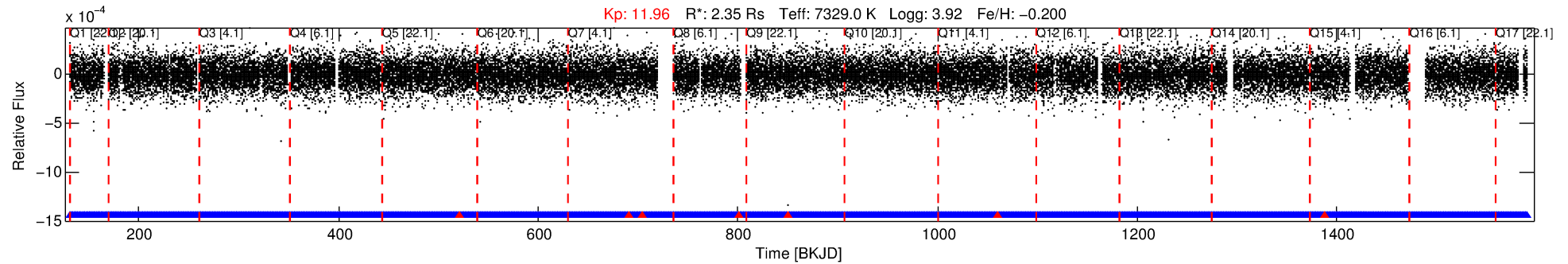
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011092597-02

No Significant Match Found

DV One-Page Summary

KIC: 11092597 Candidate: 2 of 4 Period: 0.775 d



DV Fit Results:

Period = 0.77490 [0.00001] d
Epoch = 131.8233 [0.0036] BKJD
Rp/R* = 0.0040 [0.0011]
a/R* = 1.54 [1.43]
b = 0.90 [0.34]
Seff = 37382.40 [21086.01]
Teq = 3546 [500] K
Rp = 1.02 [0.49] Re
a = 0.0195 [0.0068] AU
Ag = 5.06 [4.14] [0.98σ]
Teffp = 8222 [1309] K [3.34σ]

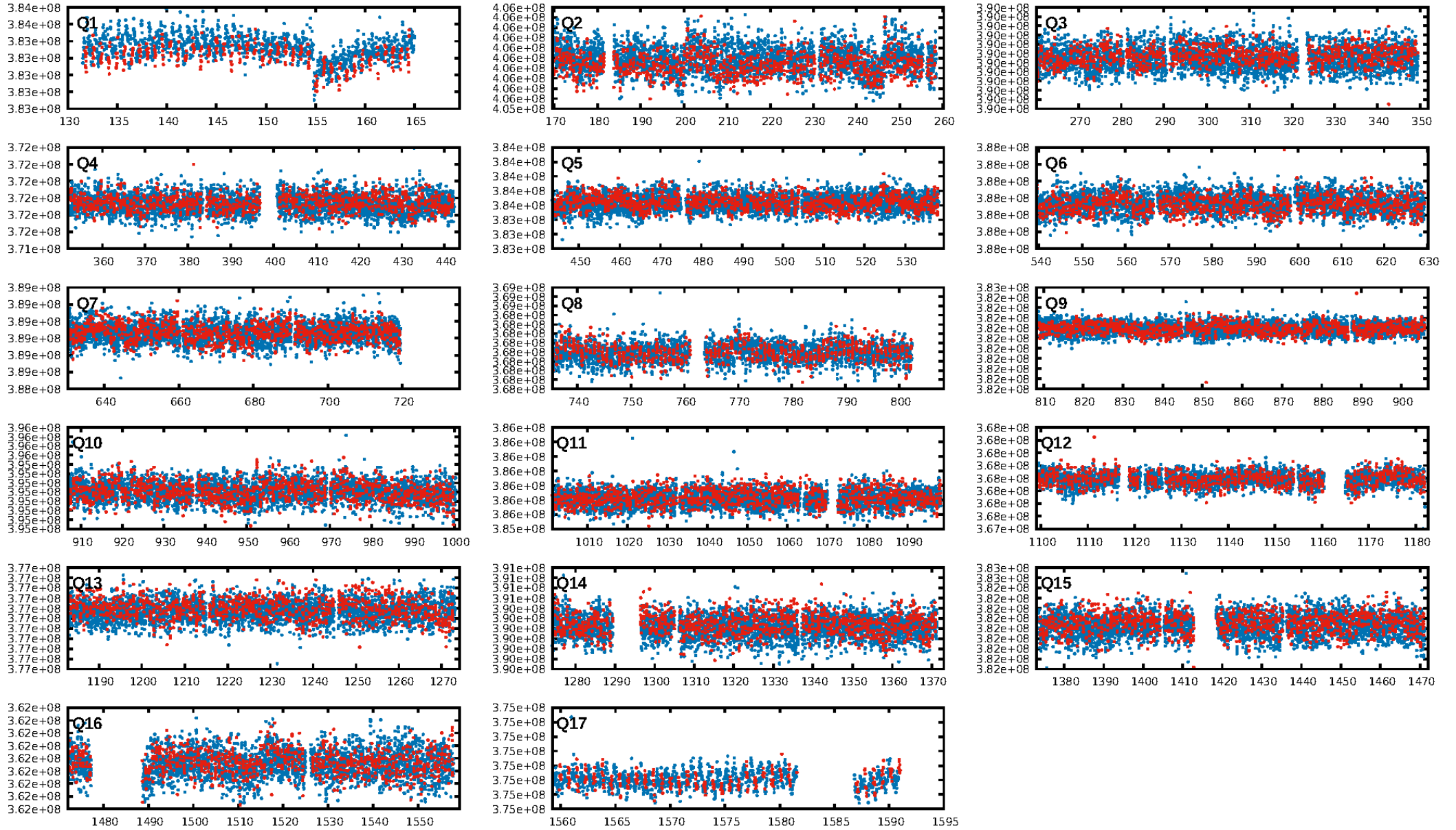
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: 100.0% [233.37σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.18e-19
RollingBand-fgt: 1.00 [1607/1614]
GhostDiagnostic-chr: 1.582
Centroid-sig: 2.7%
Centroid-so: 1.481 arcsec [1.82σ]
OotOffset-rm: 0.363 arcsec [2.19σ]
KicOffset-rm: 0.373 arcsec [2.42σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 0.12 [2/17]

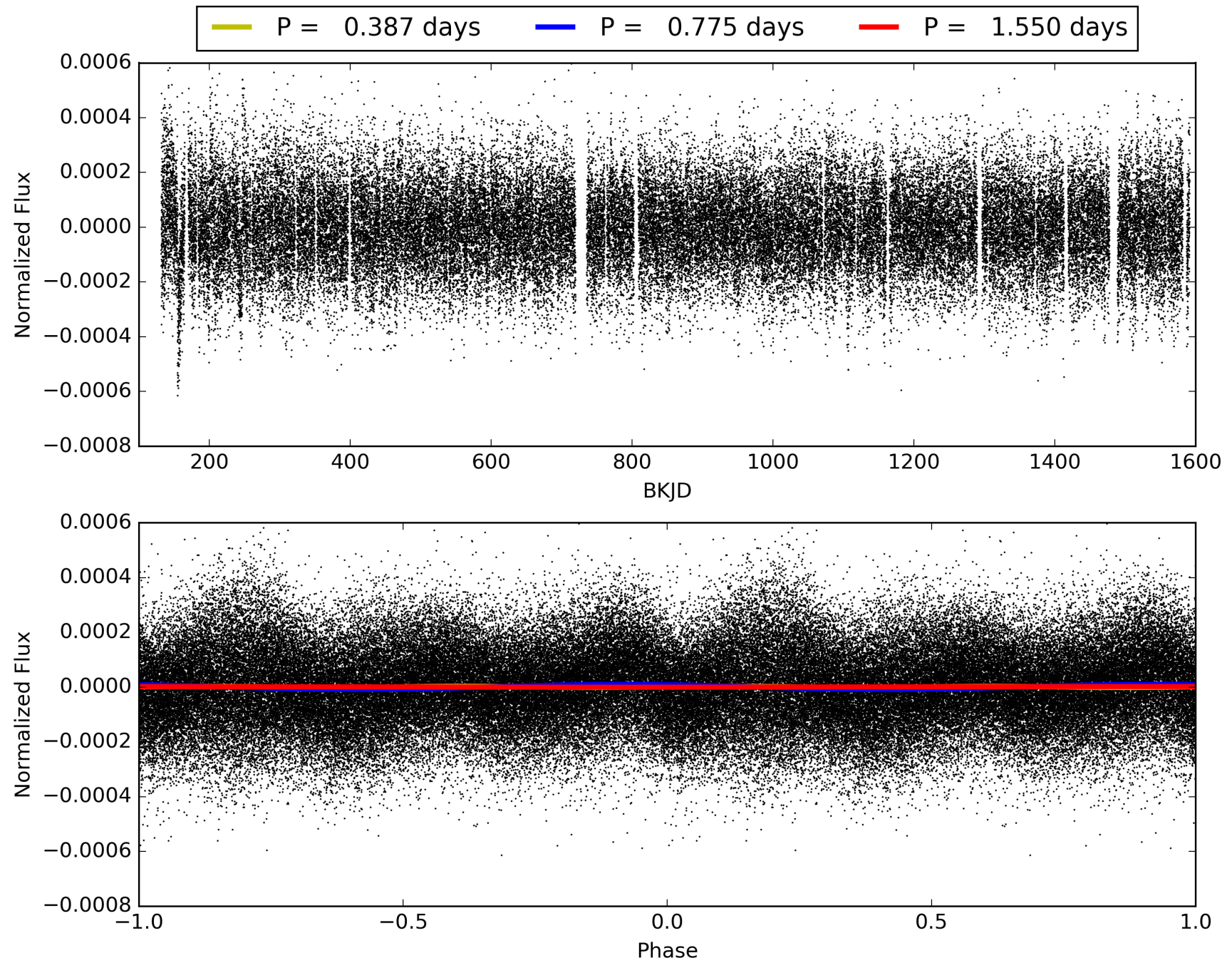
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:43:55 Z

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

TCE 011092597-02, PDC Light Curves

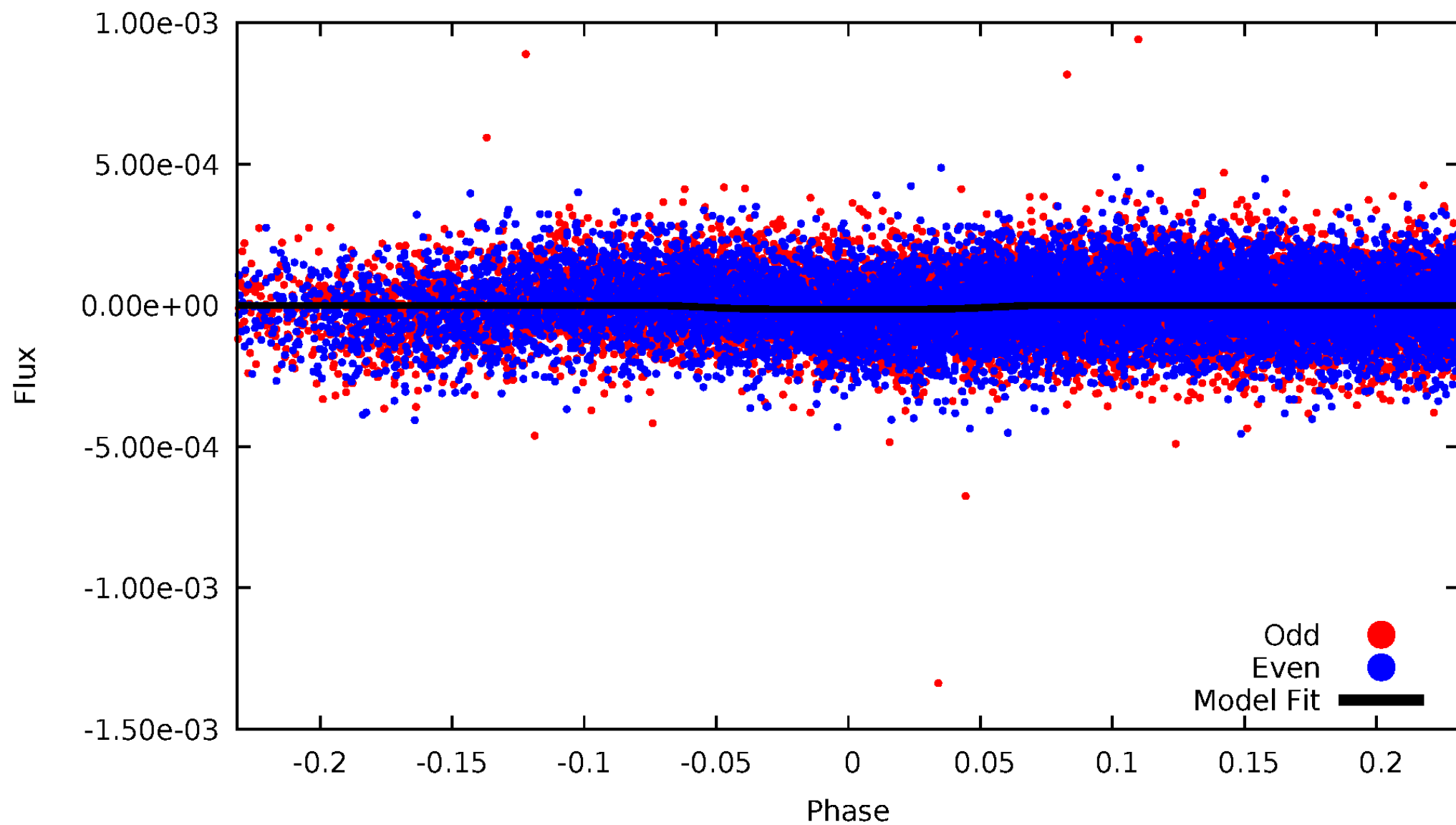


TCE 011092597-02



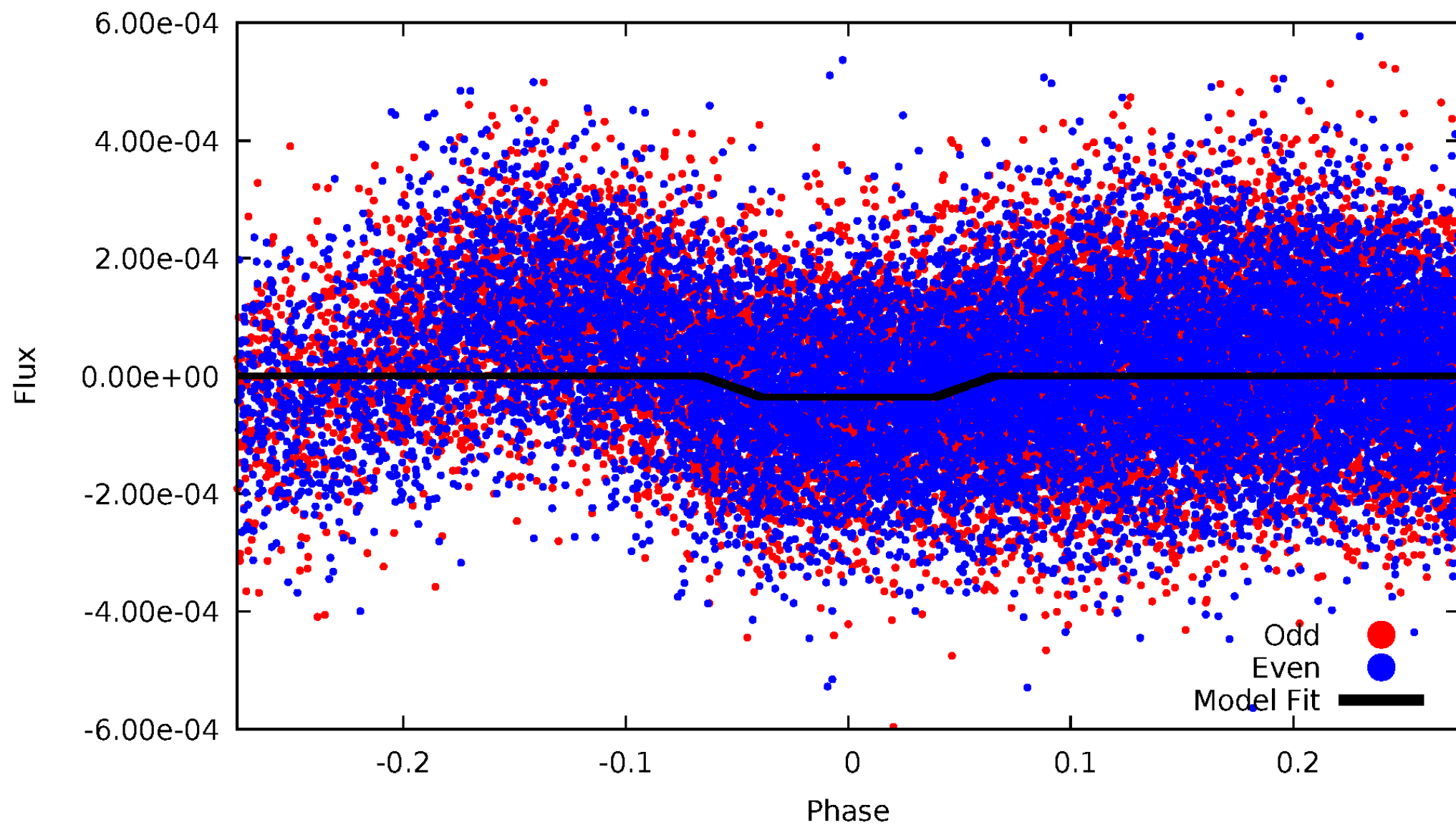
DV Odd/Even

TCE 011092597-02



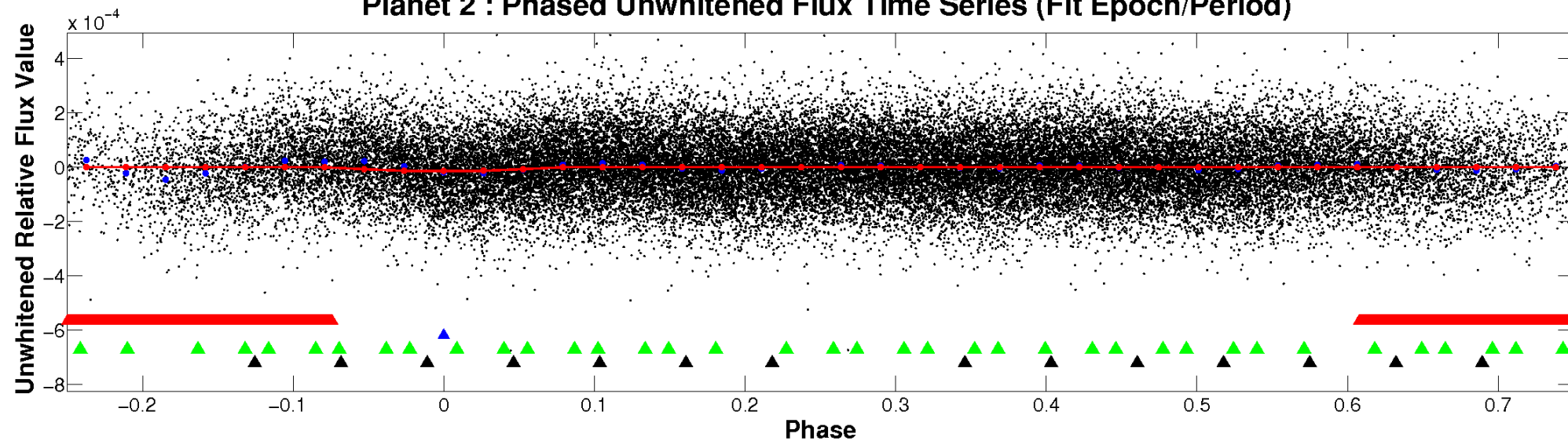
ALT Odd/Even

TCE 011092597-02

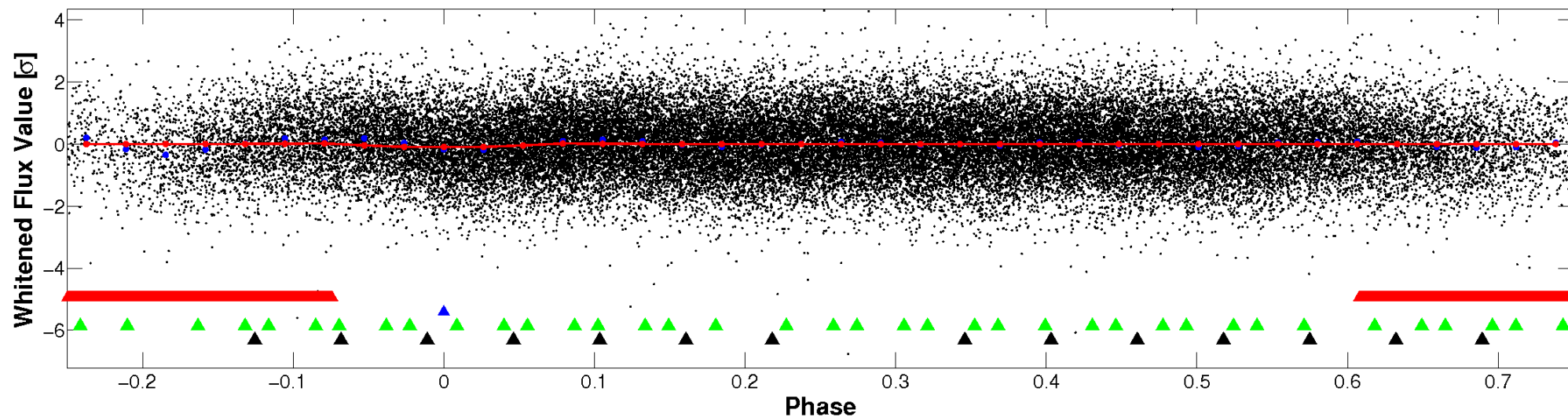


Non-Whitened Vs. Whitened Light Curve

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

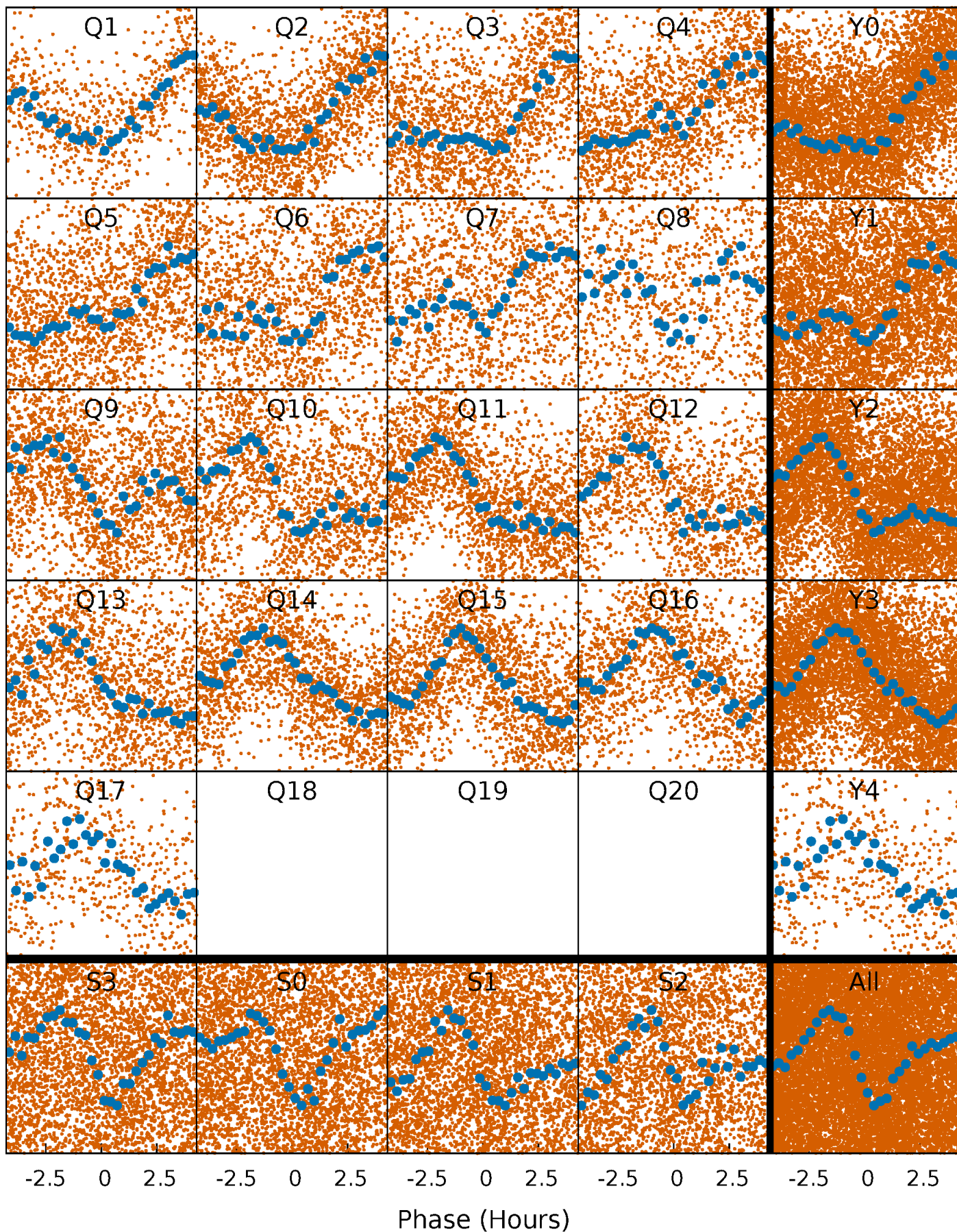


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



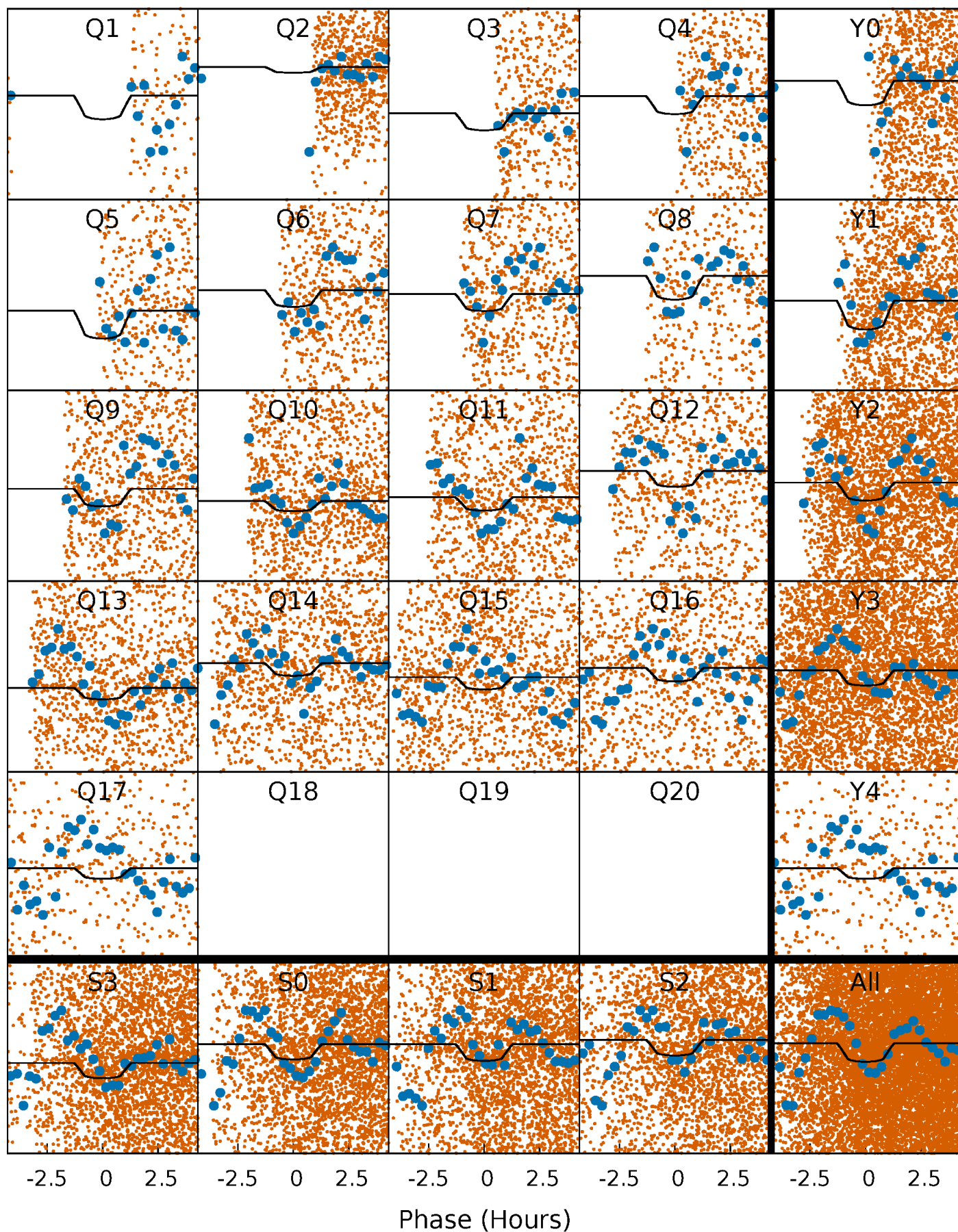
PDC Quarter-Phased Transit Curves

TCE 011092597-02 P= 0.774901 Days $T_0=131.823348$ (BKJD)



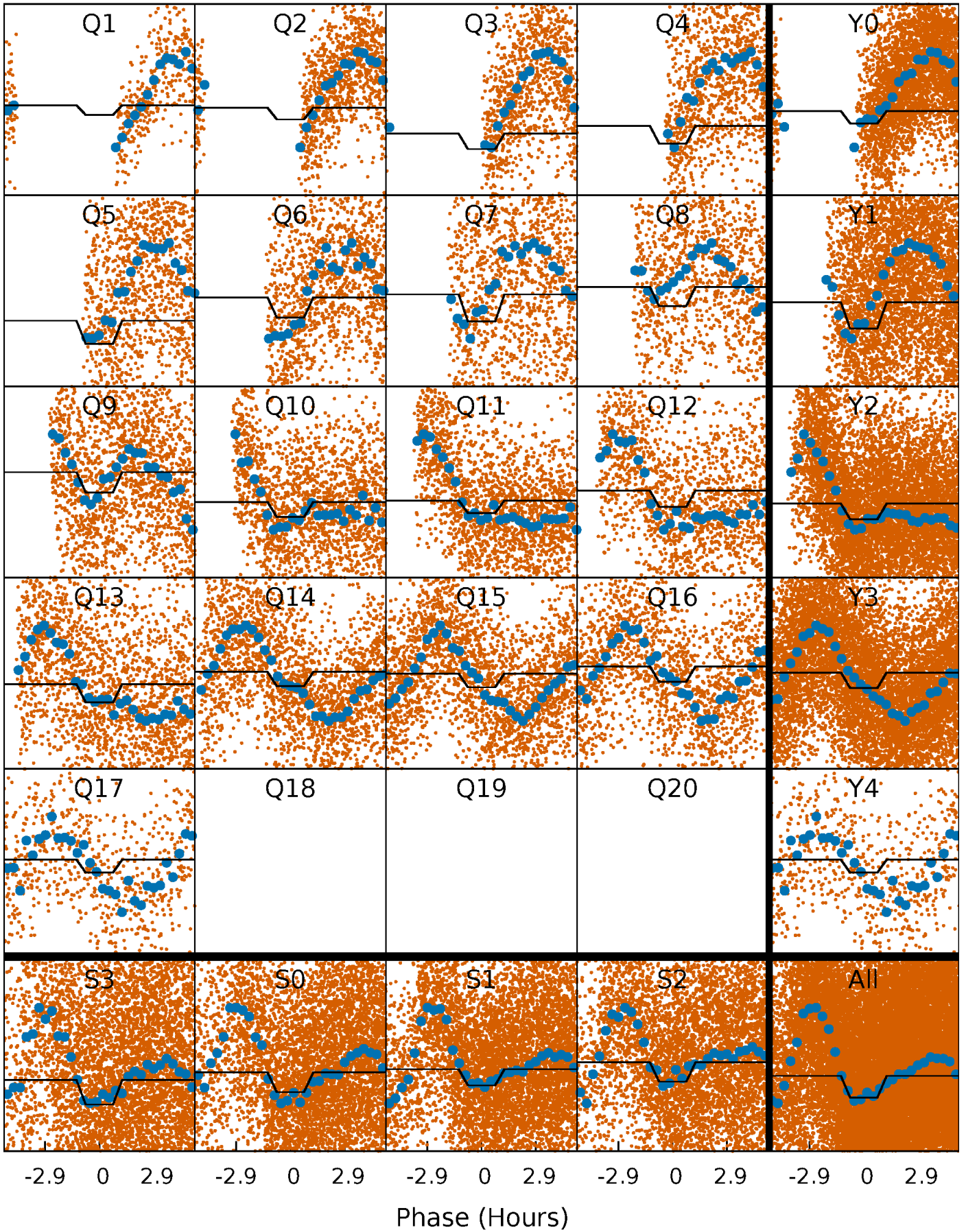
DV Quarter-Phased Transit Curves

TCE 011092597-02 P= 0.774901 Days $T_0=131.823348$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

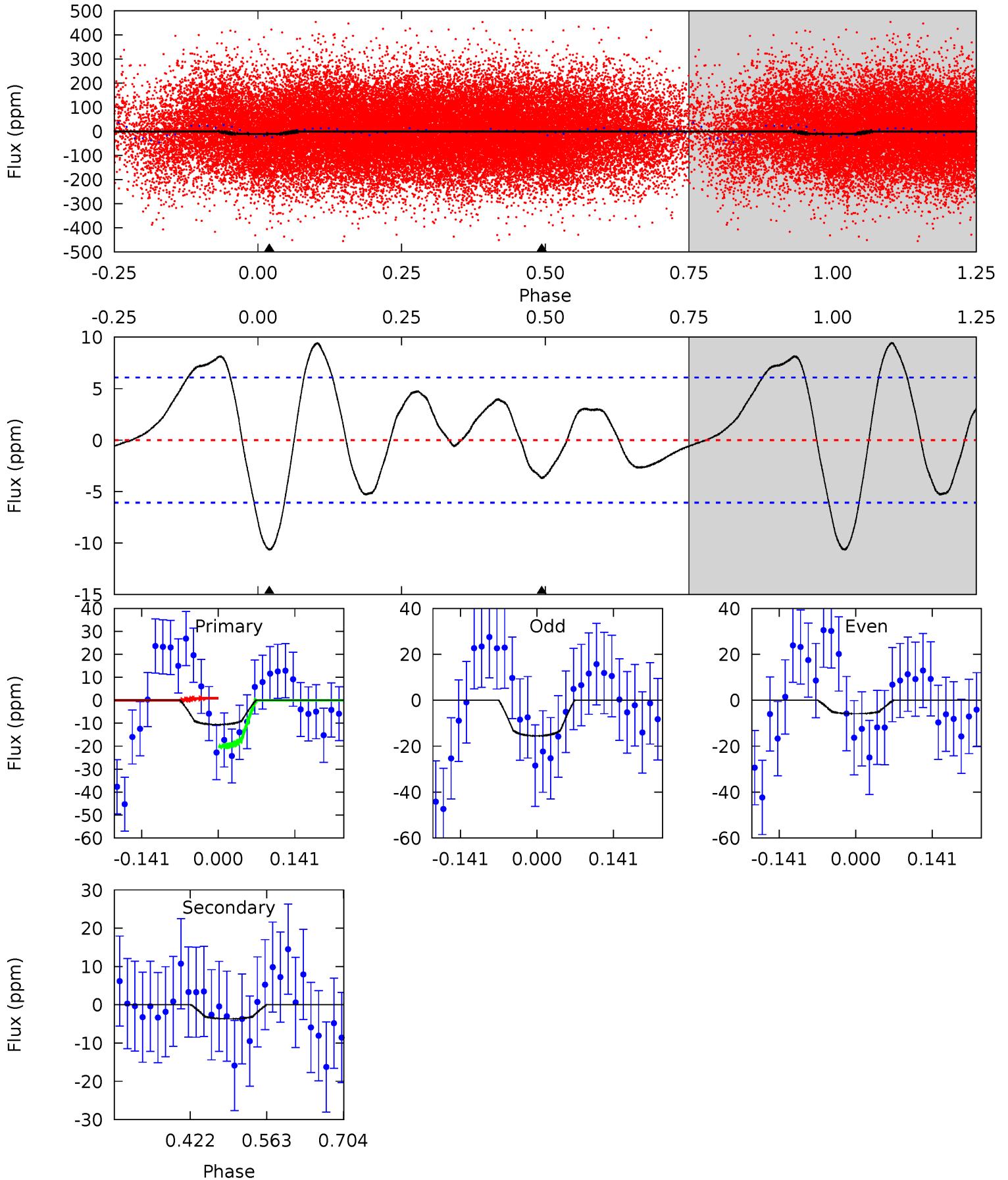
TCE 011092597-02 P= 0.774926 Days $T_0=131.835181$ (BKJD)



DV Model-Shift Uniqueness Test

011092597-02, P = 0.774901 Days, E = 131.048447 Days

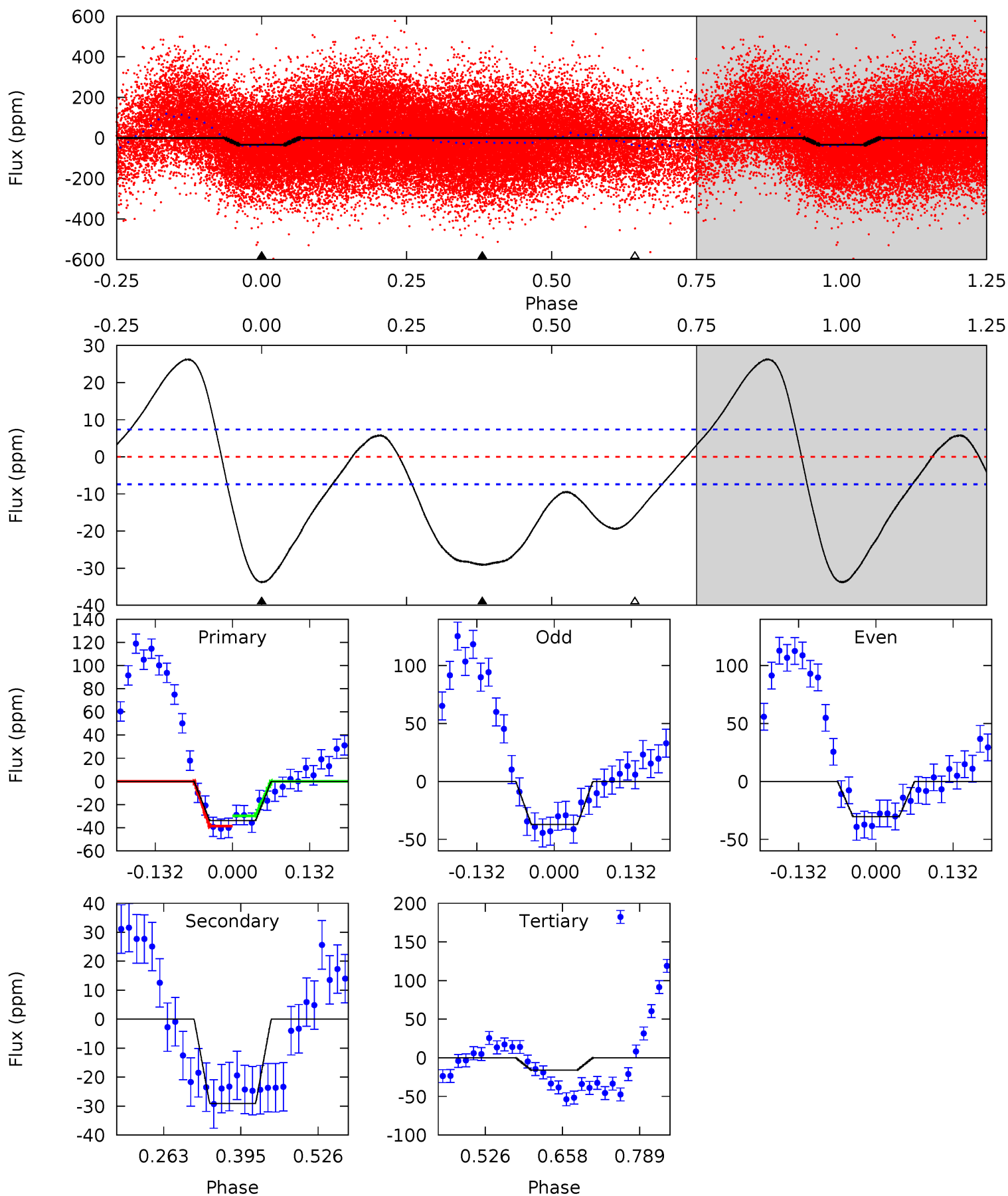
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.87	2.72	0	0	4.49	1.47	2.38	7.87	7.87	2.72	2.72	3.58	1.20	0.47	6.98



Alt Model-Shift Uniqueness Test

011092597-02, P = 0.774926 Days, E = 131.060255 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	17.7	9.68	0	4.51	1.51	6.90	10.9	20.6	8.05	17.7	2.02	0.90	0.44	2.79



Stellar Parameters For KIC 011092597

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7329^{+230}_{-307}	$3.915^{+0.308}_{-0.132}$	$-0.200^{+0.250}_{-0.350}$	$2.349^{+0.490}_{-0.909}$	$1.651^{+0.165}_{-0.386}$	$0.179^{+0.397}_{-0.070}$
	+3%/-4%	+8%/-3%	+125%/-175%	+21%/-39%	+10%/-23%	+221%/-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 011092597-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 1	$0.95^{+0.34}_{-0.30}$	4874^{+363}_{-444}	4634^{+1044}_{-1125}	$0.832^{+0.974}_{-0.425}$
Alt.	-29 ± 2	$1.43^{+0.40}_{-0.36}$	4862^{+362}_{-454}	6723^{+949}_{-724}	$2.925^{+2.191}_{-1.112}$

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

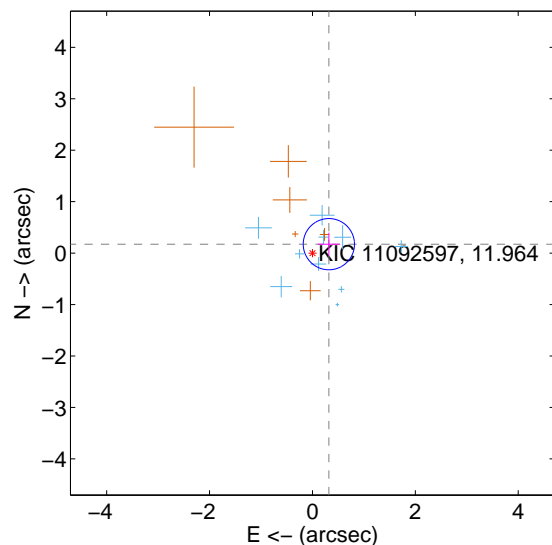
Supplemental centroid analysis for 011092597-02. **Kepler magnitude: 11.96.** Transit SNR 6.36

There are 10 quarters with good PRF difference image offsets

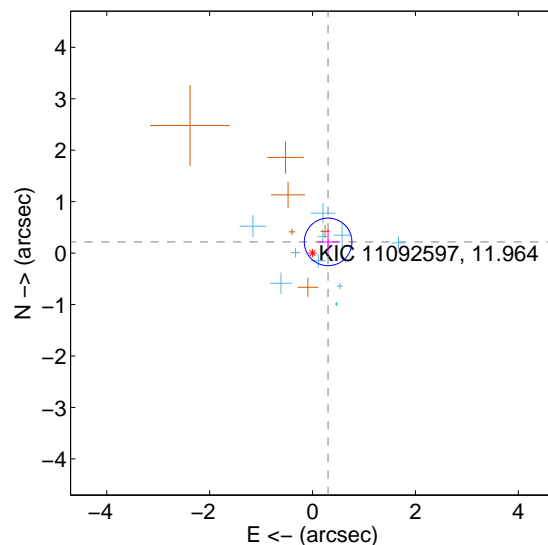
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.363 ± 0.166	2.19	-0.319 ± 0.213	0.173 ± 0.225
PRF-fit source offset from KIC position	0.373 ± 0.154	2.42	-0.303 ± 0.218	0.218 ± 0.240
photometric centroid source offset	1.48 ± 0.81	1.82	1.19 ± 0.78	-0.89 ± 0.87

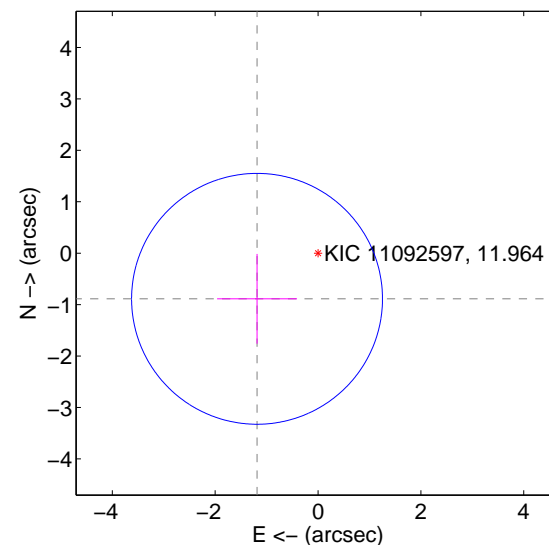
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

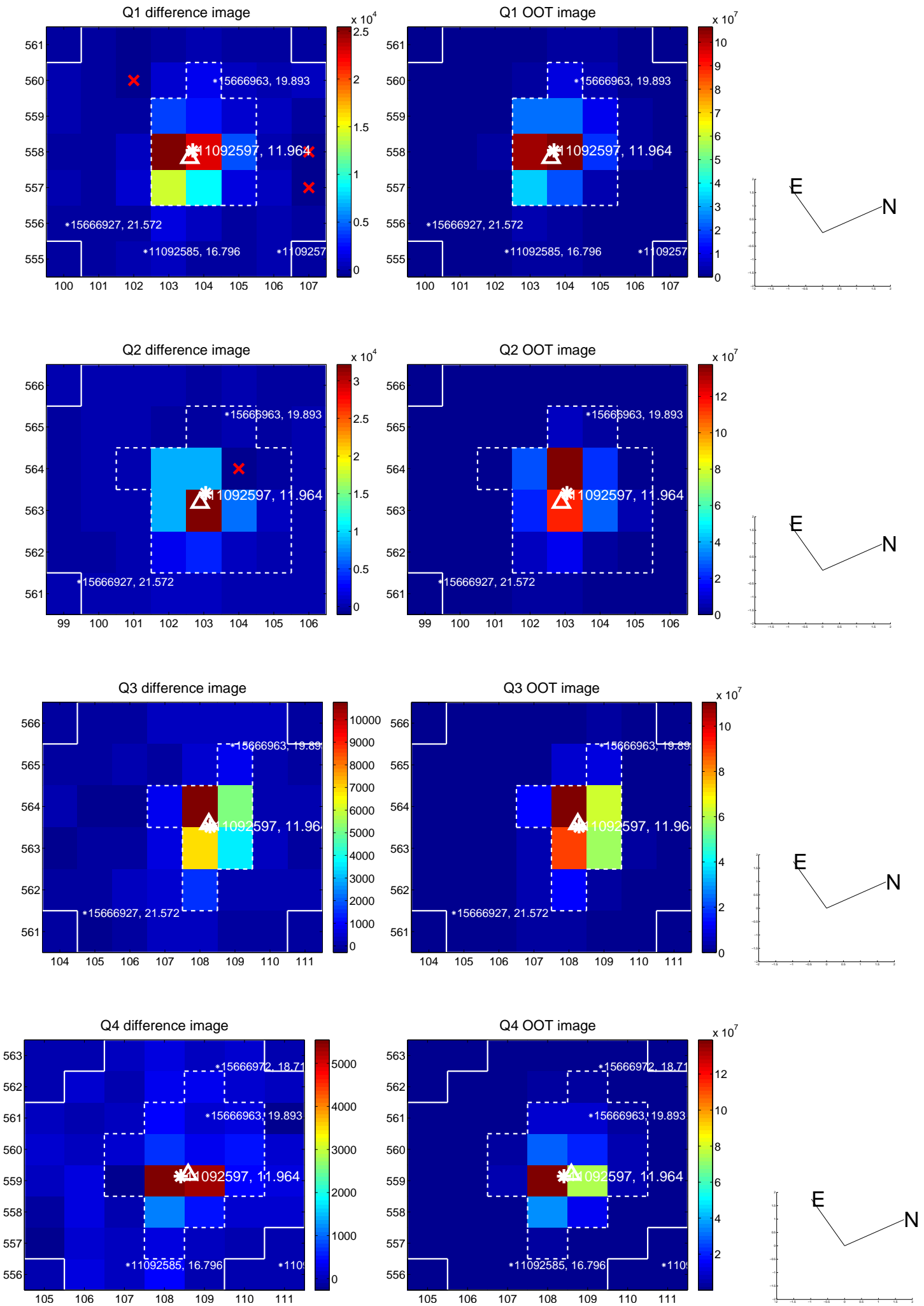


offset from photometric centroids

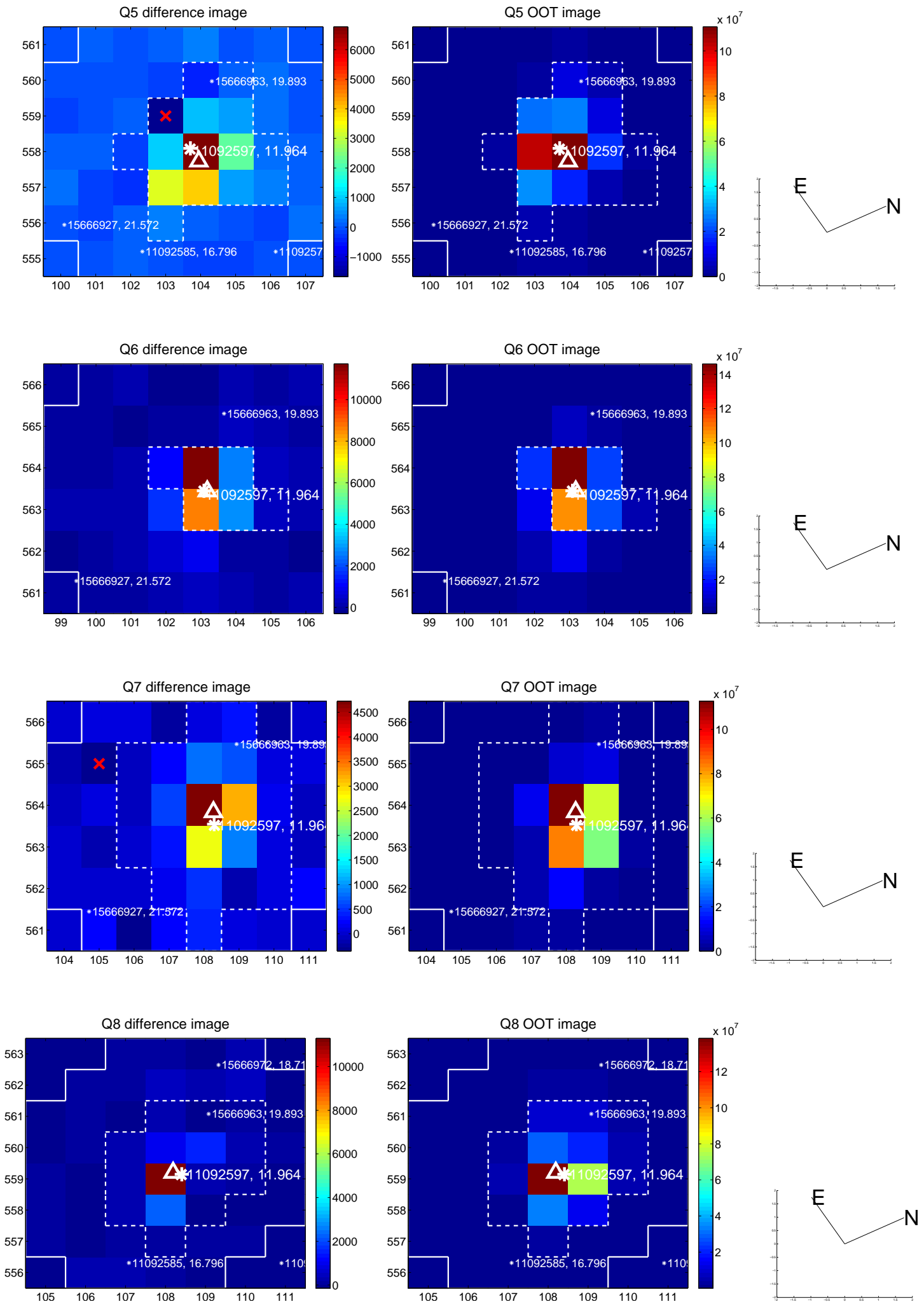


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

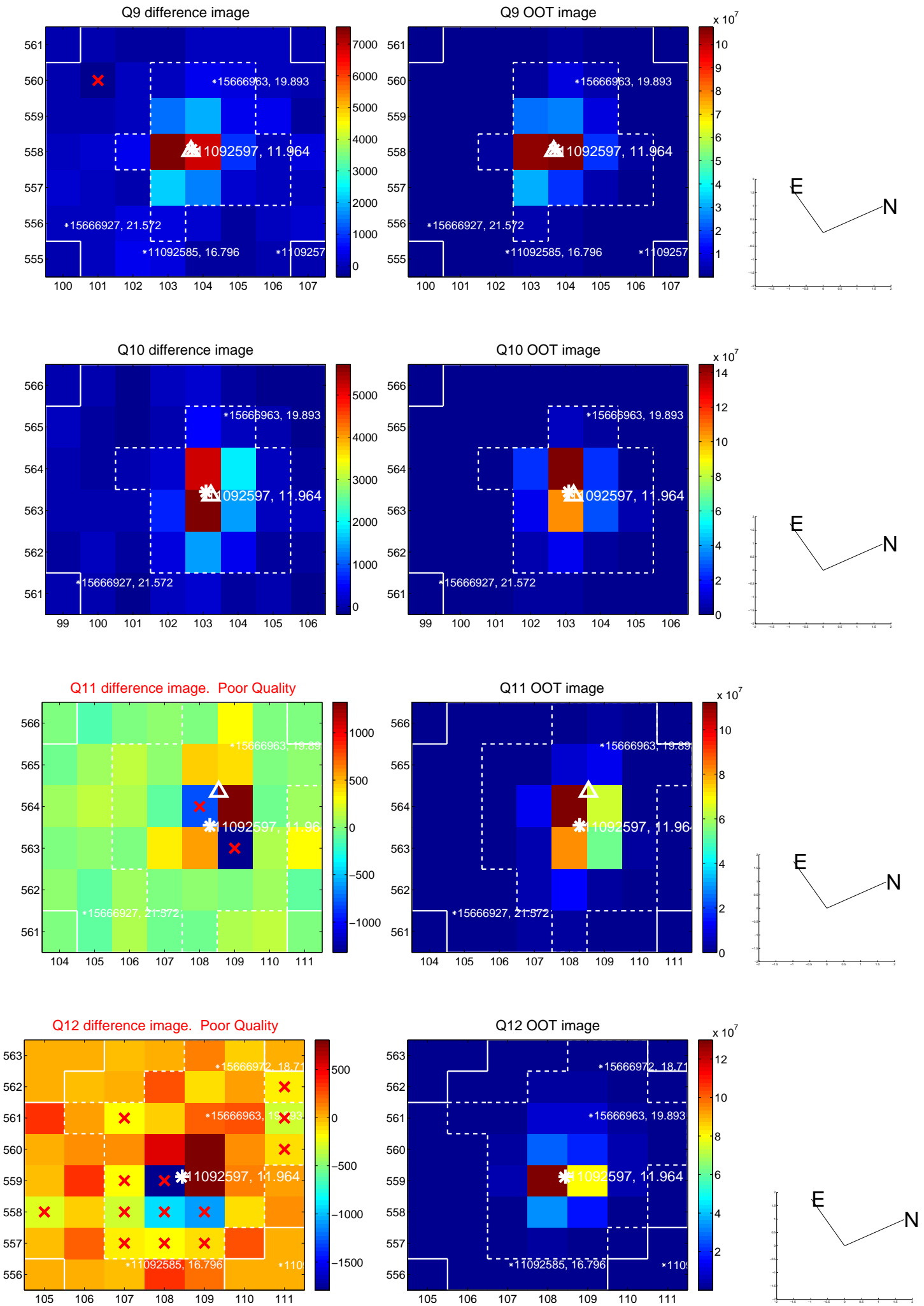
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



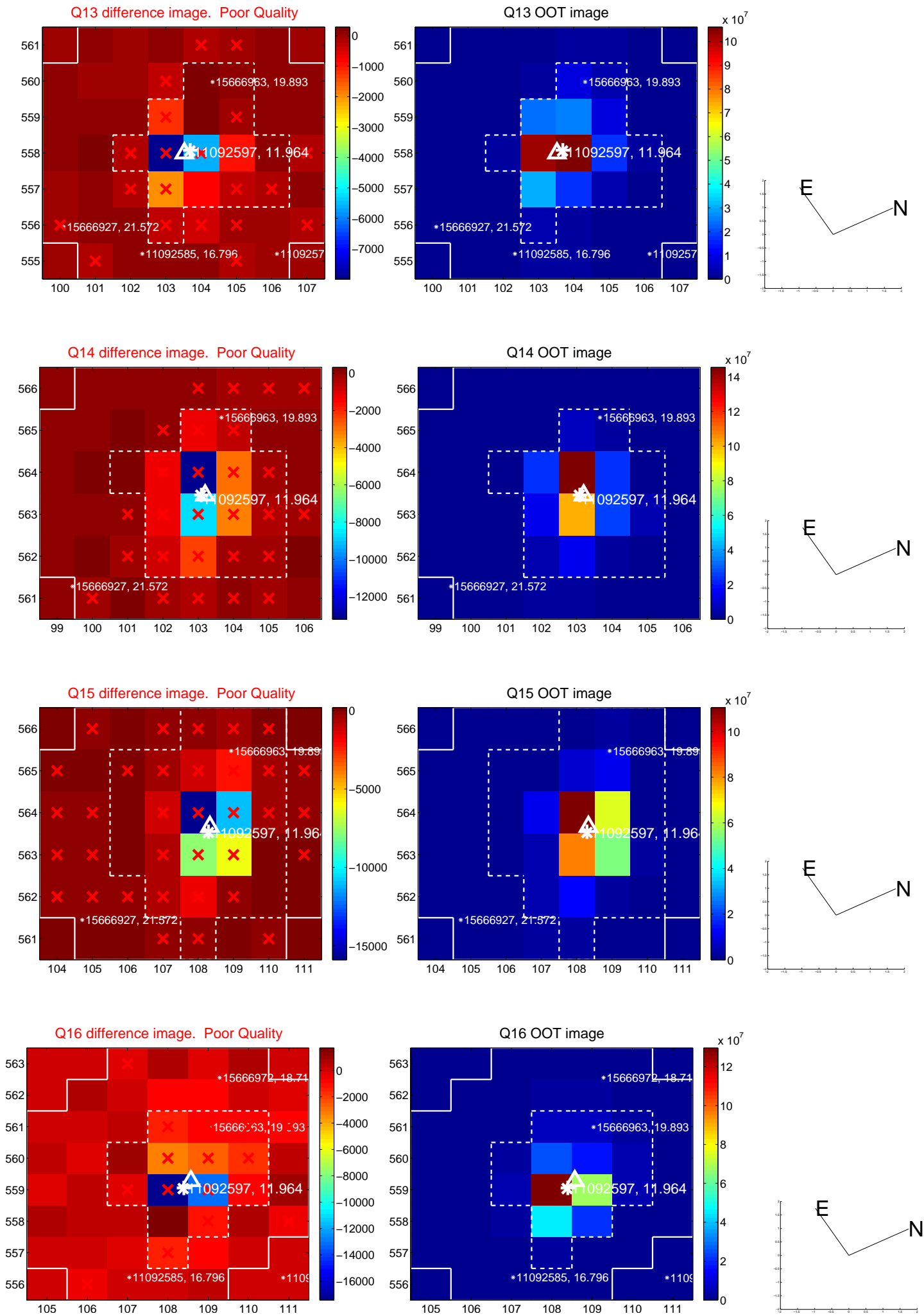
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



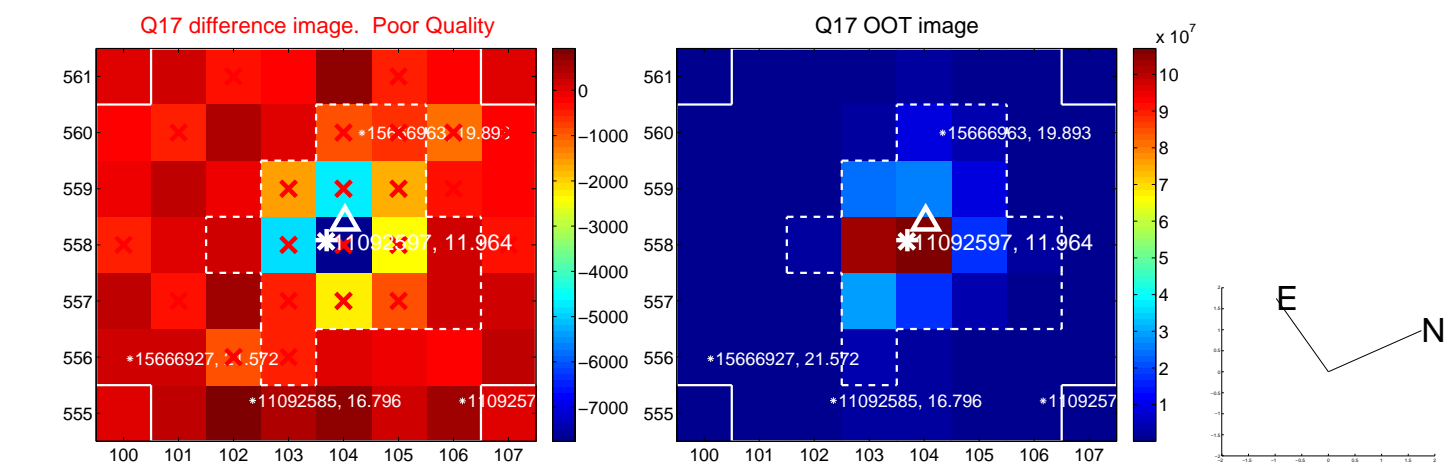
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



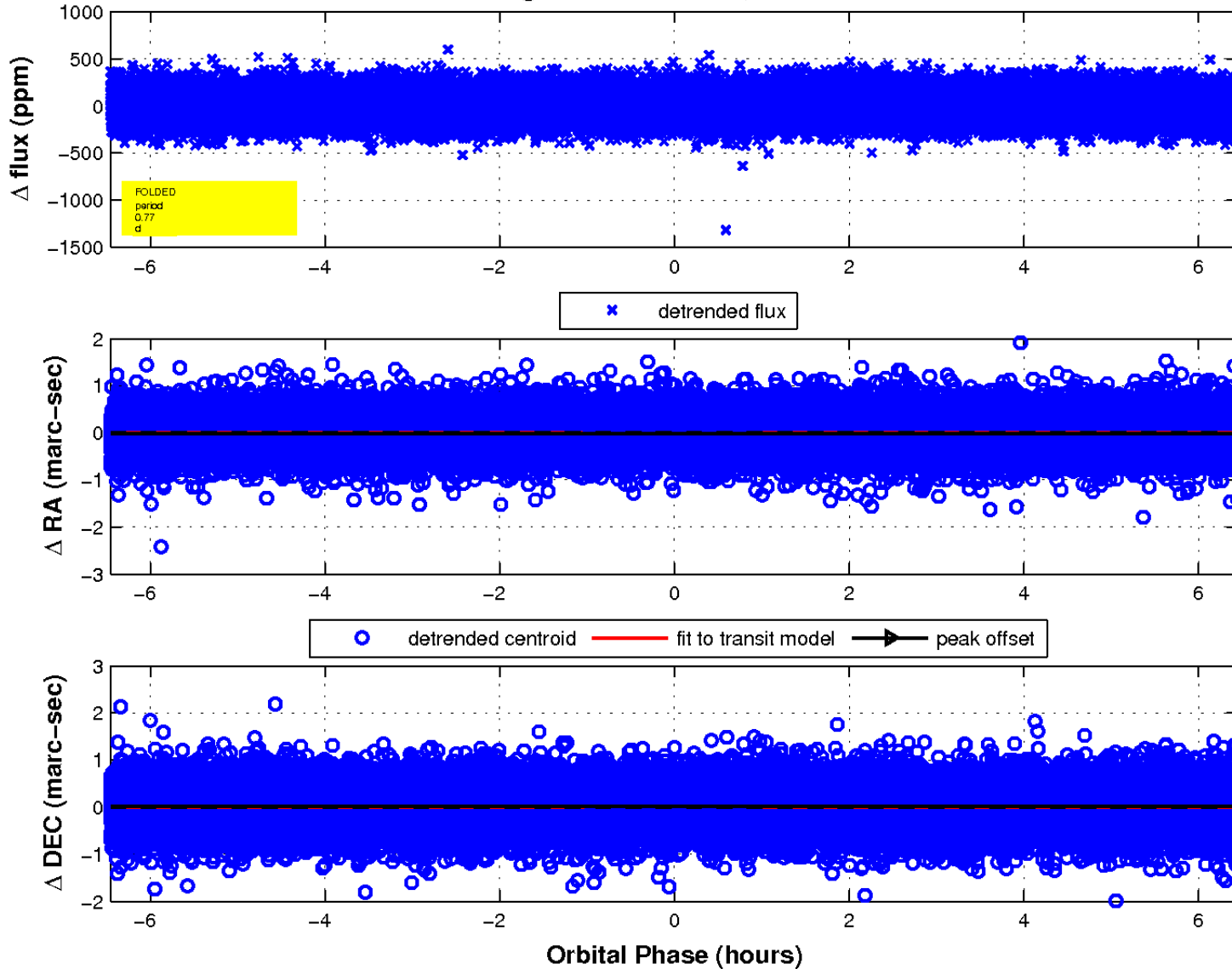
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



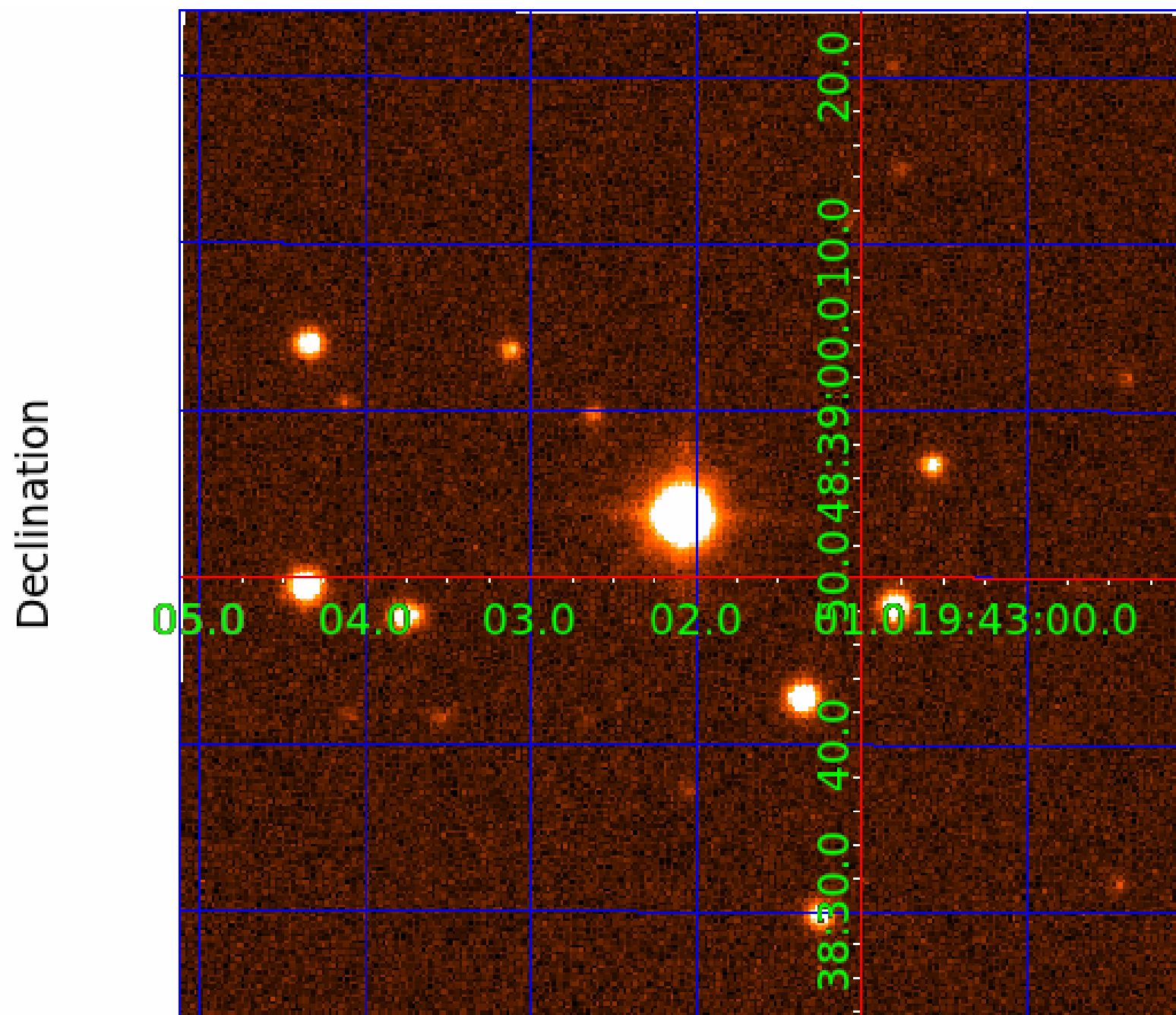
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 4



UKIRT Image



KIC 011092597

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})
011092597-01	OBS	No	0.774770	131.766026	0.0	1.632	9.6	0.0	2.35	7329	0.05	37390.83
011092597-02	OBS	No	0.774901	131.823348	13.7	2.152	10.1	6.4	2.35	7329	1.02	37382.40
011092597-03	OBS	No	38.442336	134.481726	127.7	3.221	7.6	8.2	2.35	7329	3.05	205.08
011092597-04	OBS	No	102.696517	163.087439	186.4	3.610	7.1	7.3	2.35	7329	3.78	55.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011092597-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011092597-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011092597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011092597-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

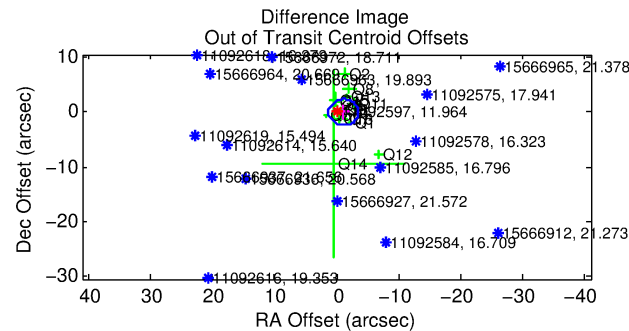
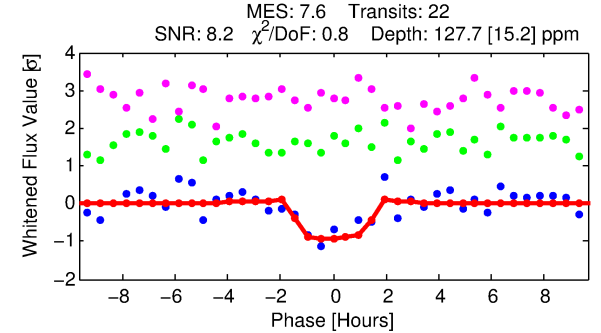
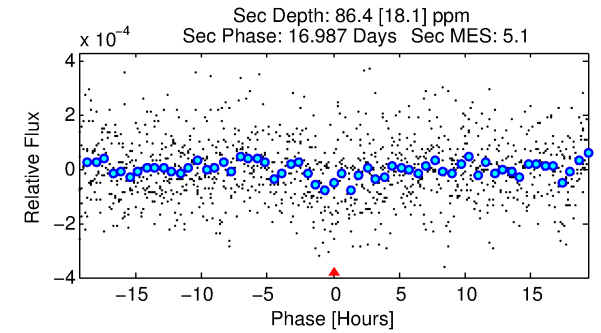
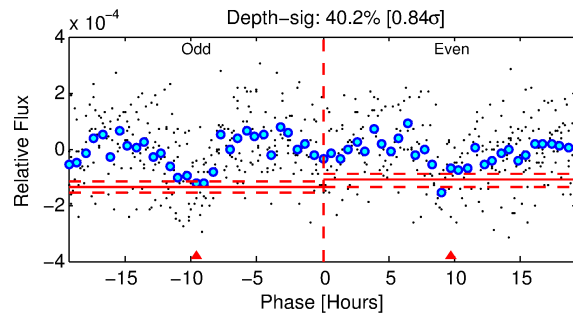
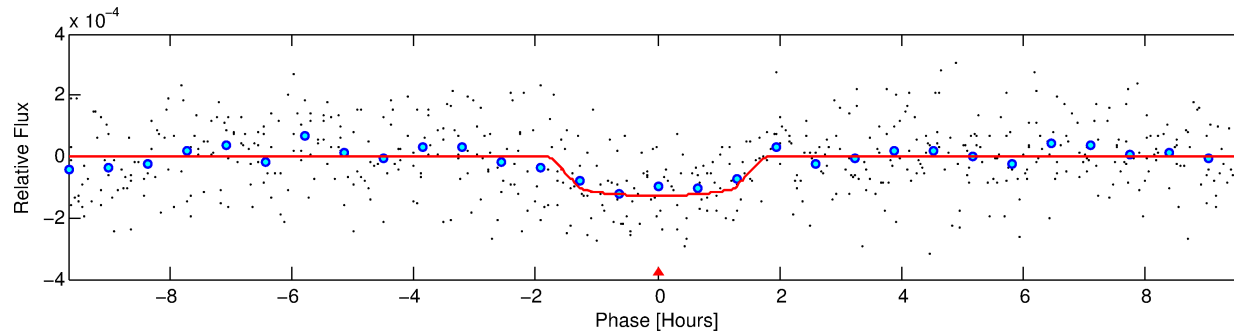
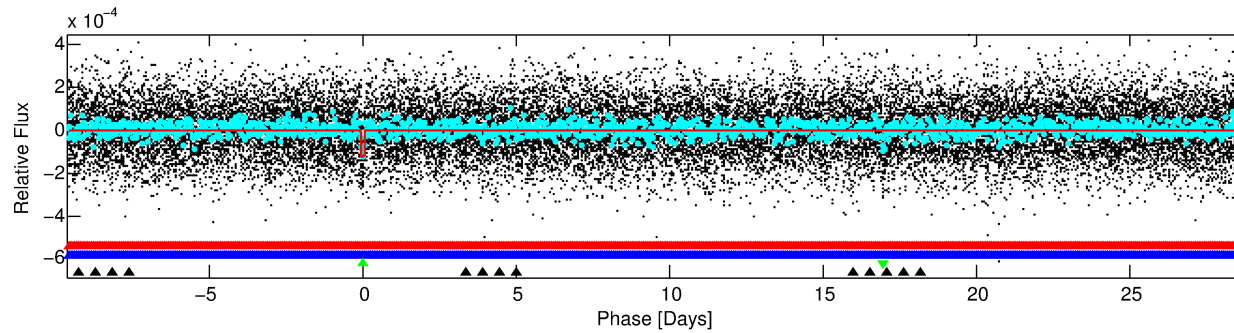
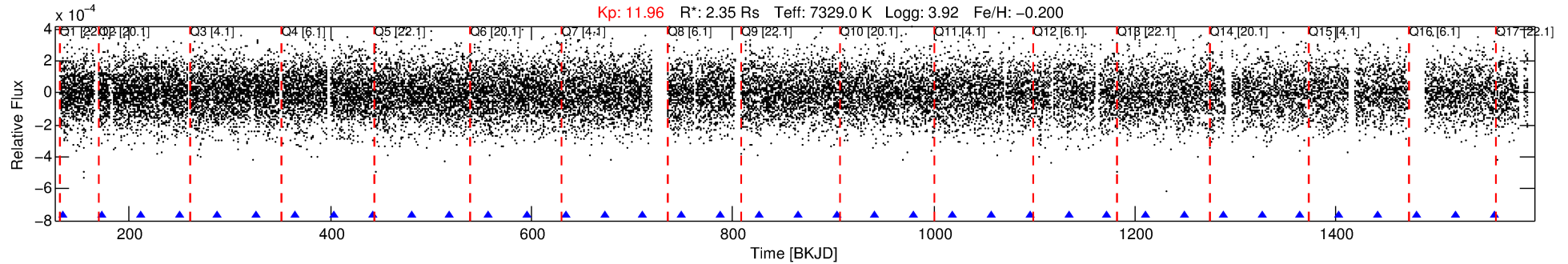
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011092597-03

No Significant Match Found

DV One-Page Summary

KIC: 11092597 Candidate: 3 of 4 Period: 38.442 d



DV Fit Results:

Period = 38.44234 [0.00035] d
Epoch = 134.4817 [0.0066] BKJD
Rp/R* = 0.0119 [0.0061]
a/R* = 45.83 [136.01]
b = 0.88 [0.78]
Seff = 205.08 [115.68]
Teq = 965 [136] K
Rp = 3.05 [1.96] Re
a = 0.2637 [0.0923] AU
Ag = 355.06 [418.46] [0.85 σ]
Teffp = 6476 [1719] K [3.20 σ]

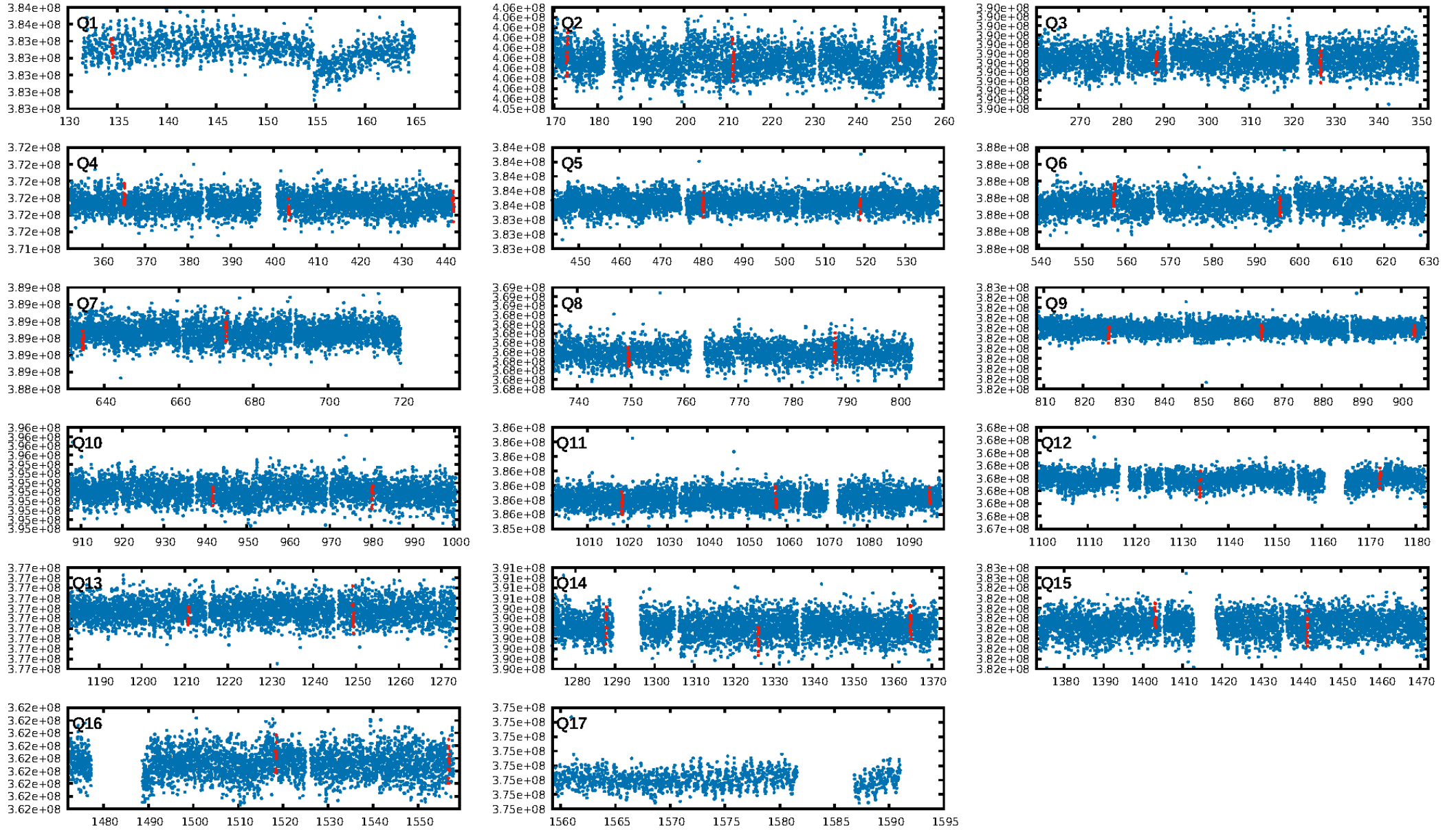
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [233.37 σ]
LongPeriod-sig: 100.0% [318.75 σ]
ModelChiSquare2-sig: 84.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.13e-10
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: -1.749
Centroid-sig: 32.3%
Centroid-so: 0.666 arcsec [1.30 σ]
OotOffset-rm: 1.112 arcsec [1.40 σ]
KicOffset-rm: 1.108 arcsec [1.40 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 0.00 [0/16]

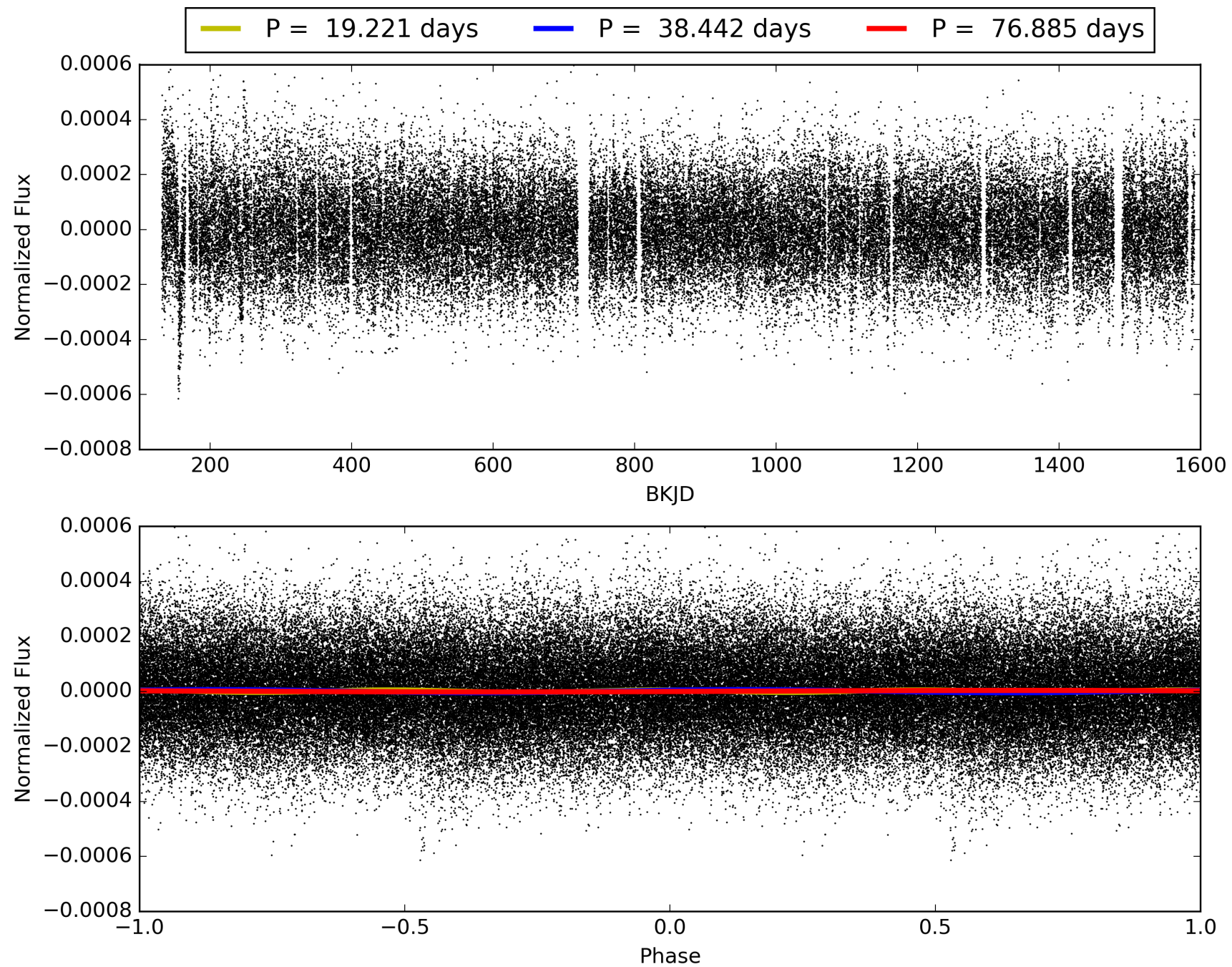
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:44:03 Z

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

TCE 011092597-03, PDC Light Curves

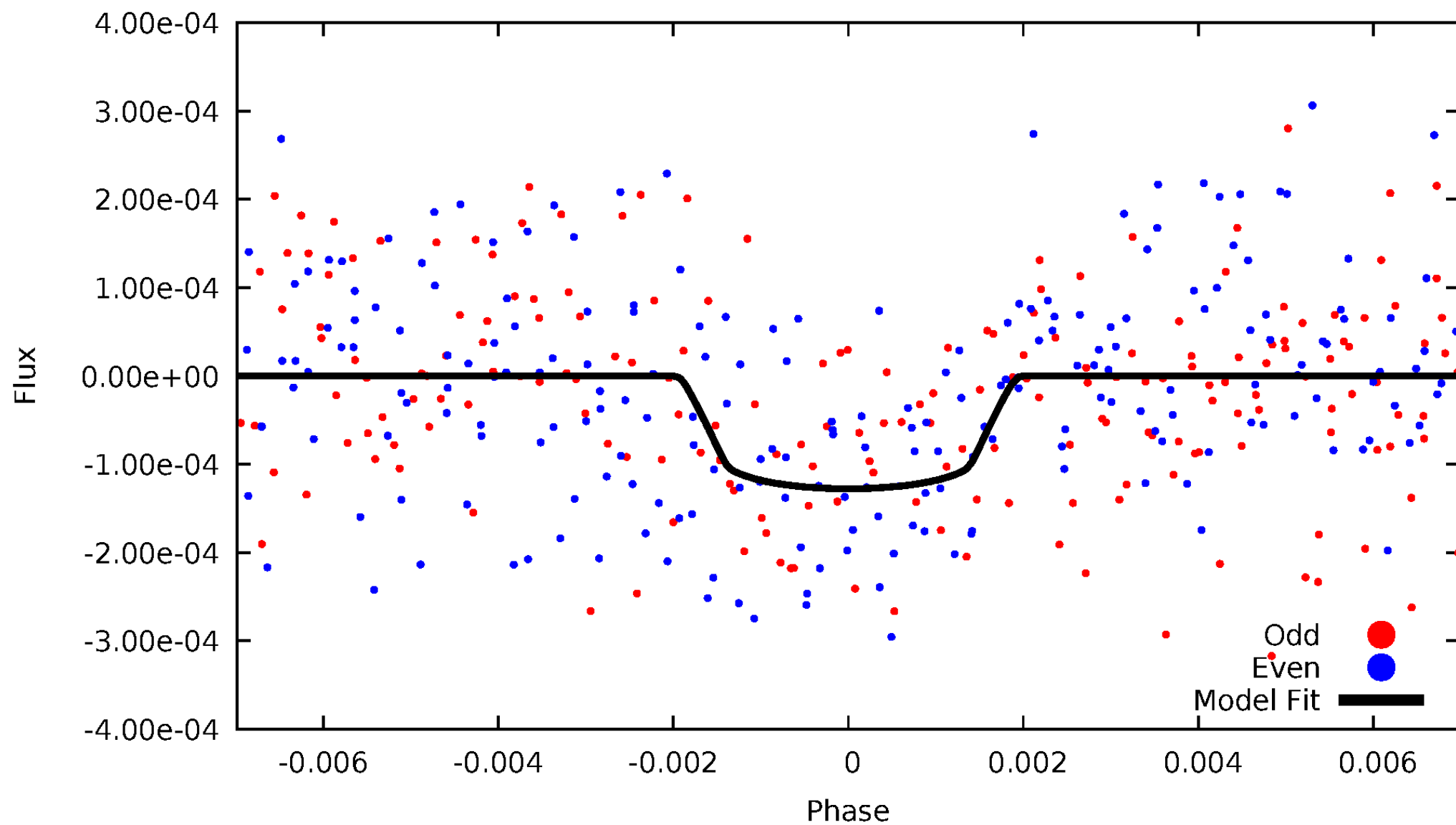


TCE 011092597-03



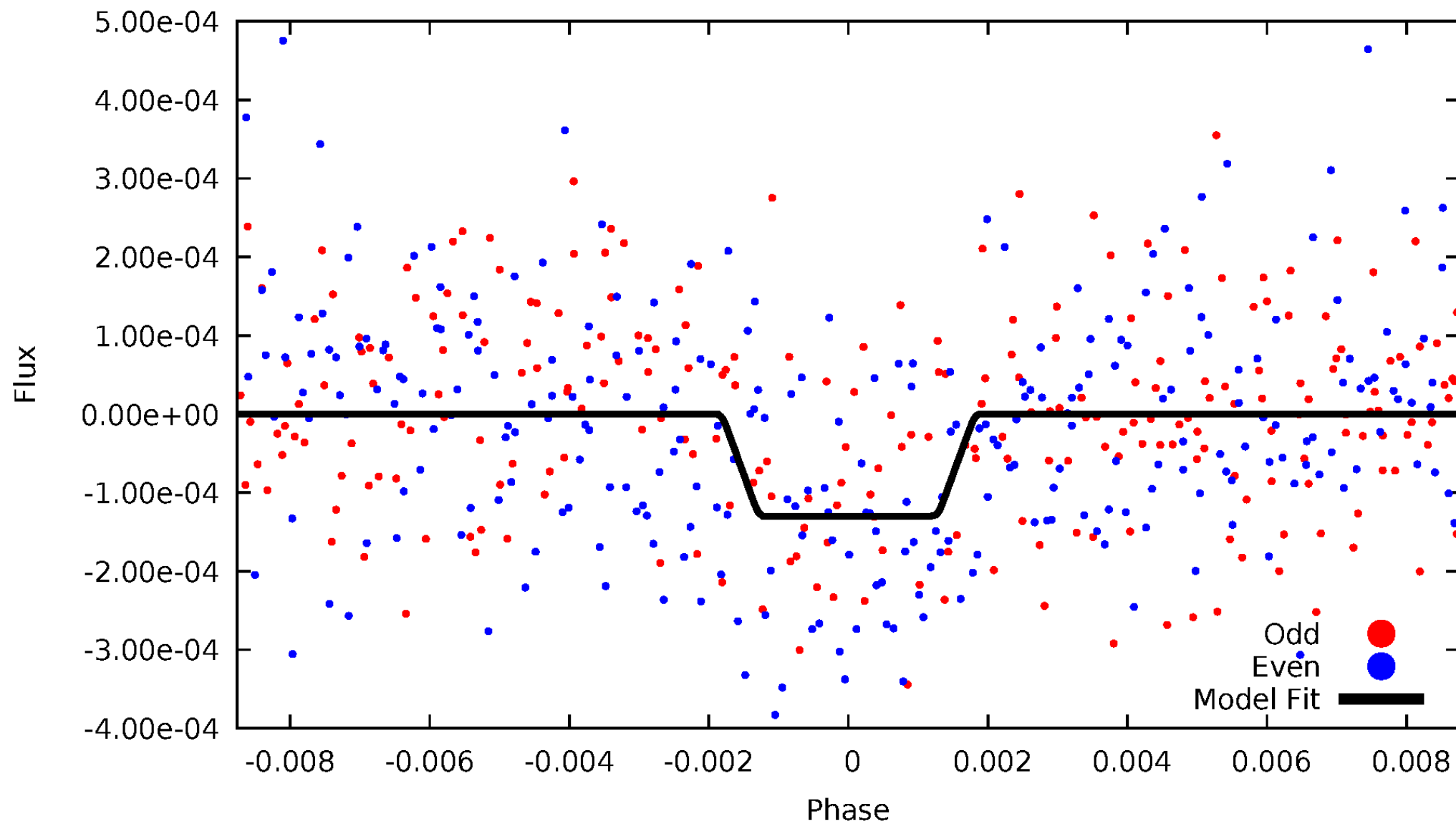
DV Odd/Even

TCE 011092597-03

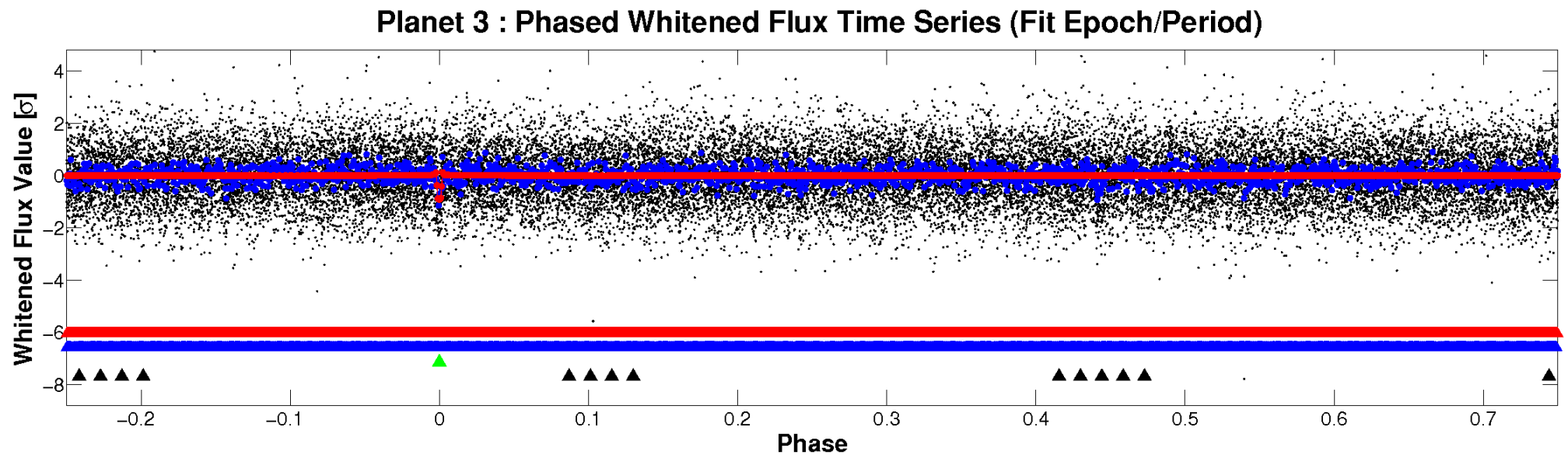
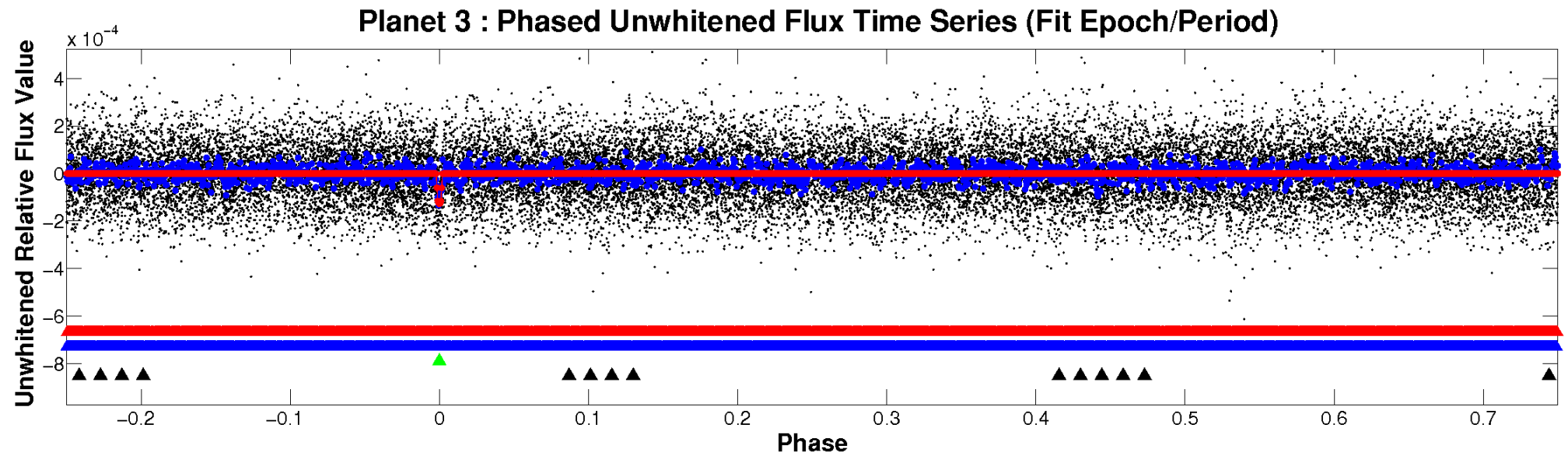


ALT Odd/Even

TCE 011092597-03

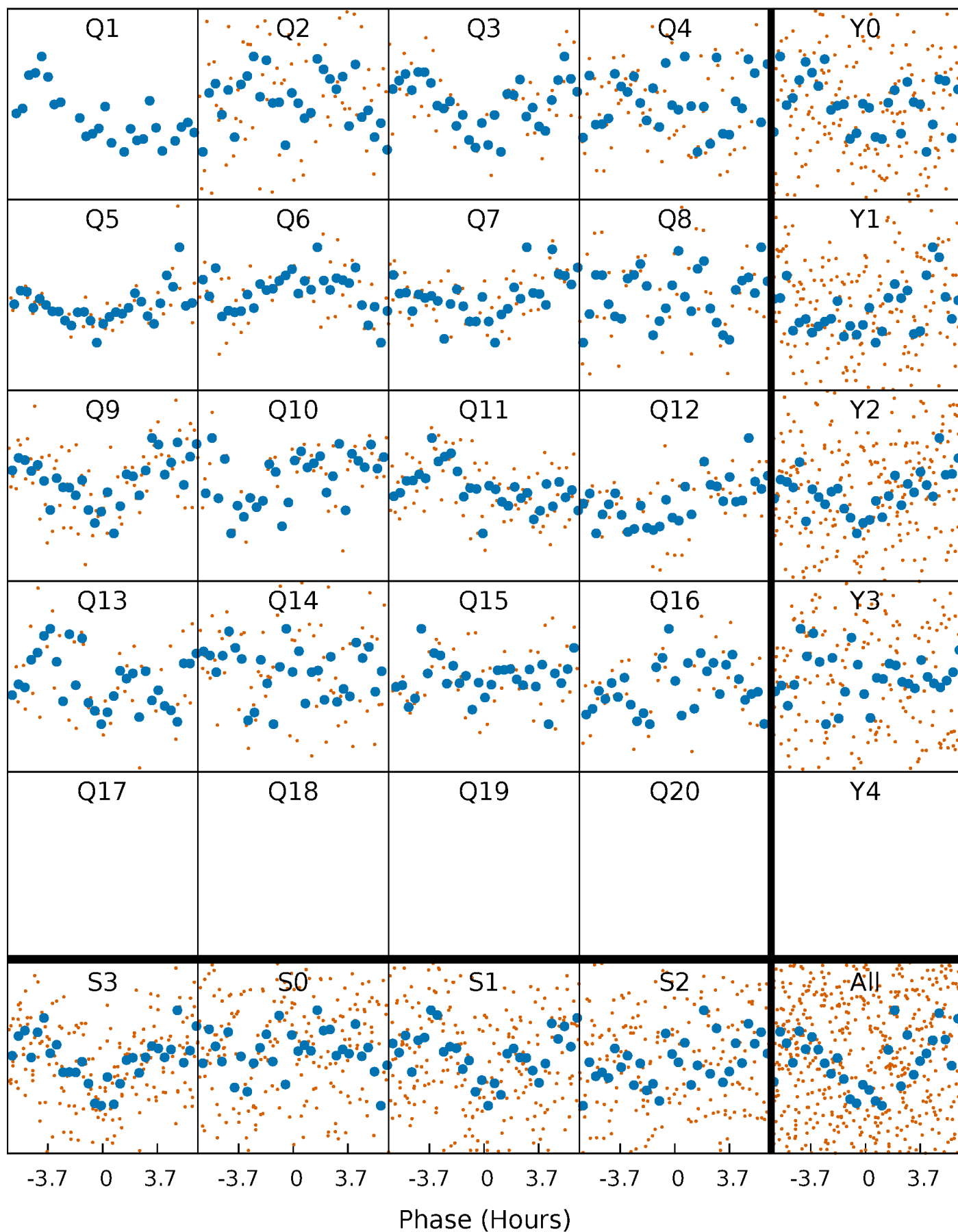


Non-Whitened Vs. Whitened Light Curve



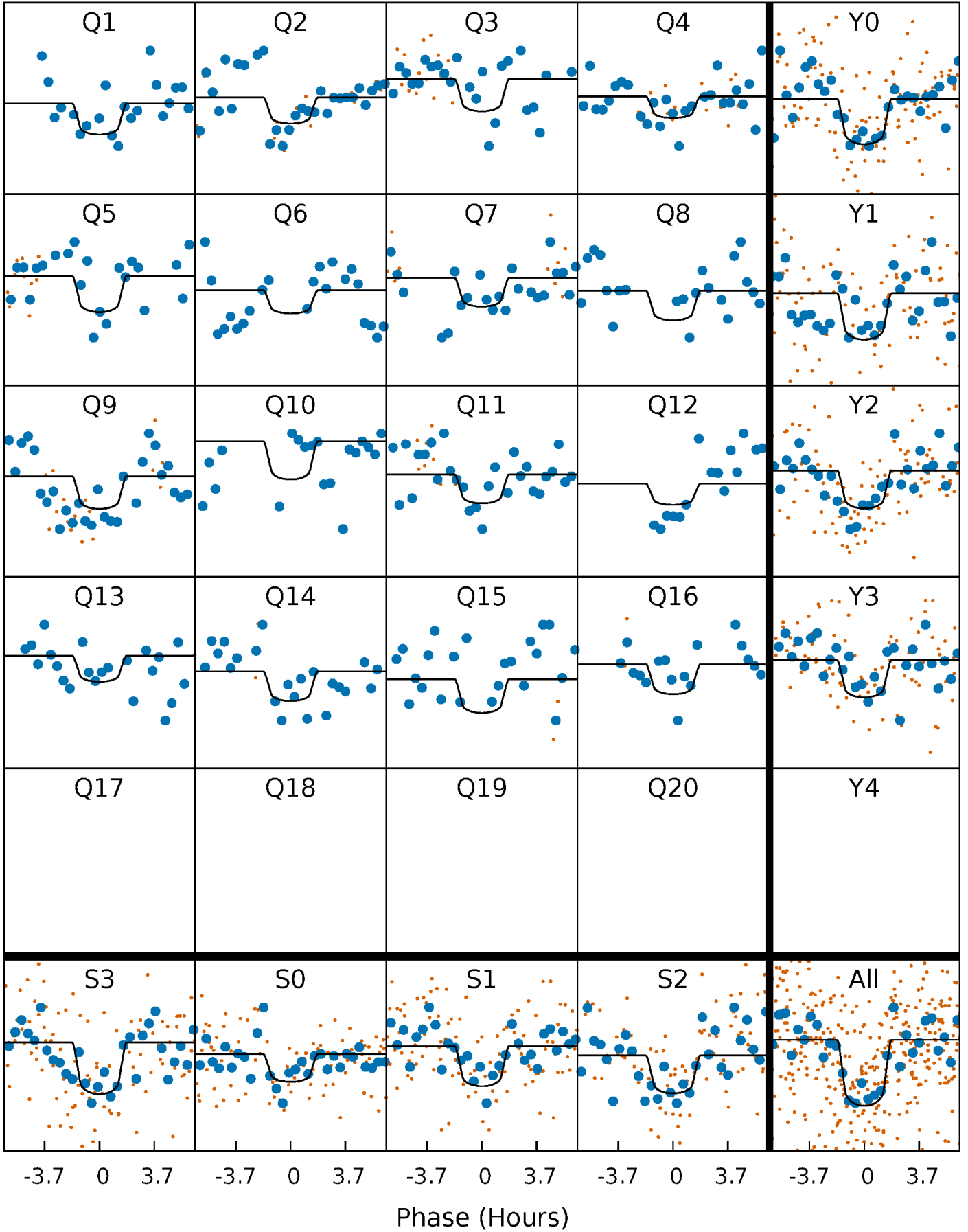
PDC Quarter-Phased Transit Curves

TCE 011092597-03 P= 38.442336 Days $T_0=134.481726$ (BKJD)



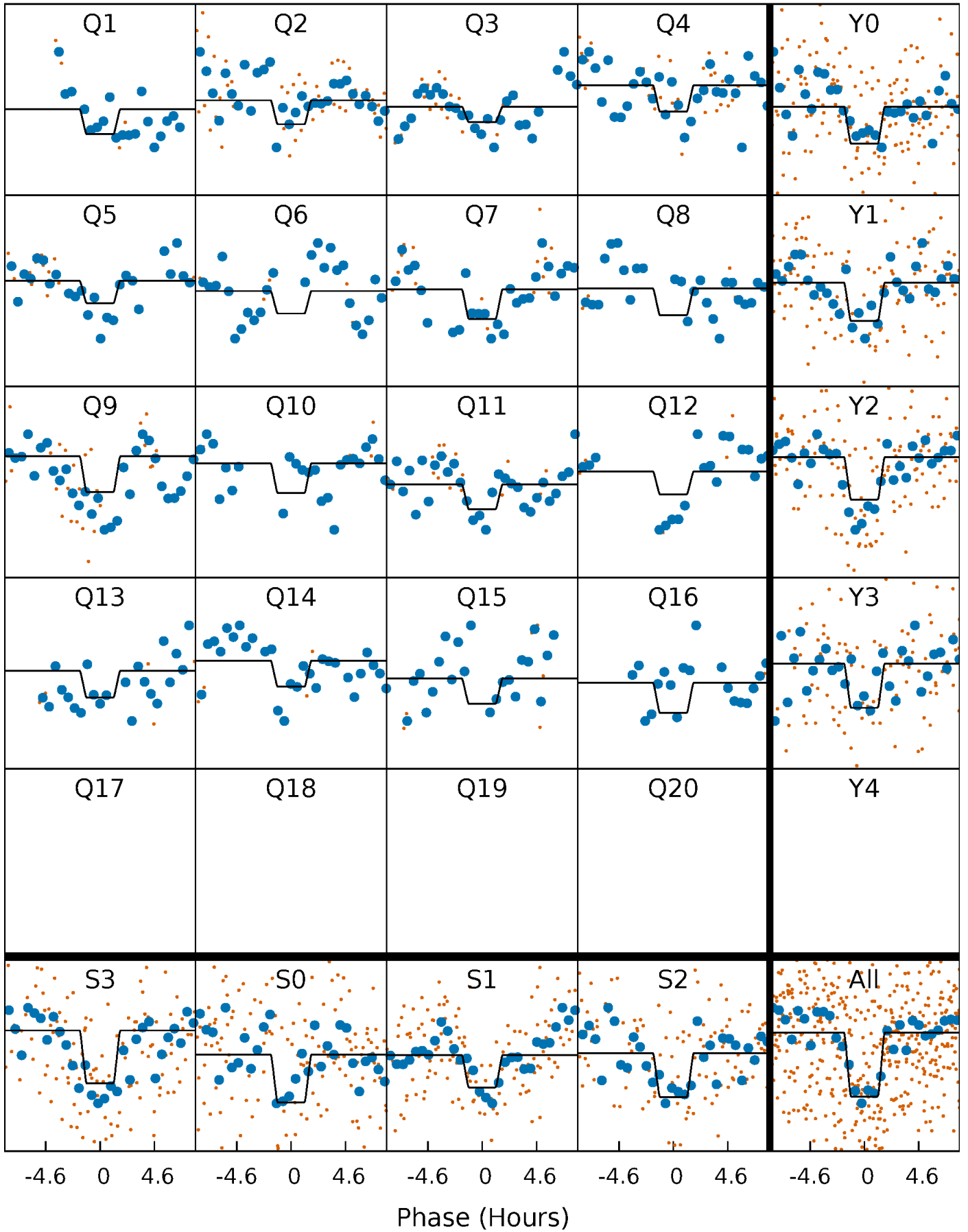
DV Quarter-Phased Transit Curves

TCE 011092597-03 P= 38.442336 Days $T_0=134.481726$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

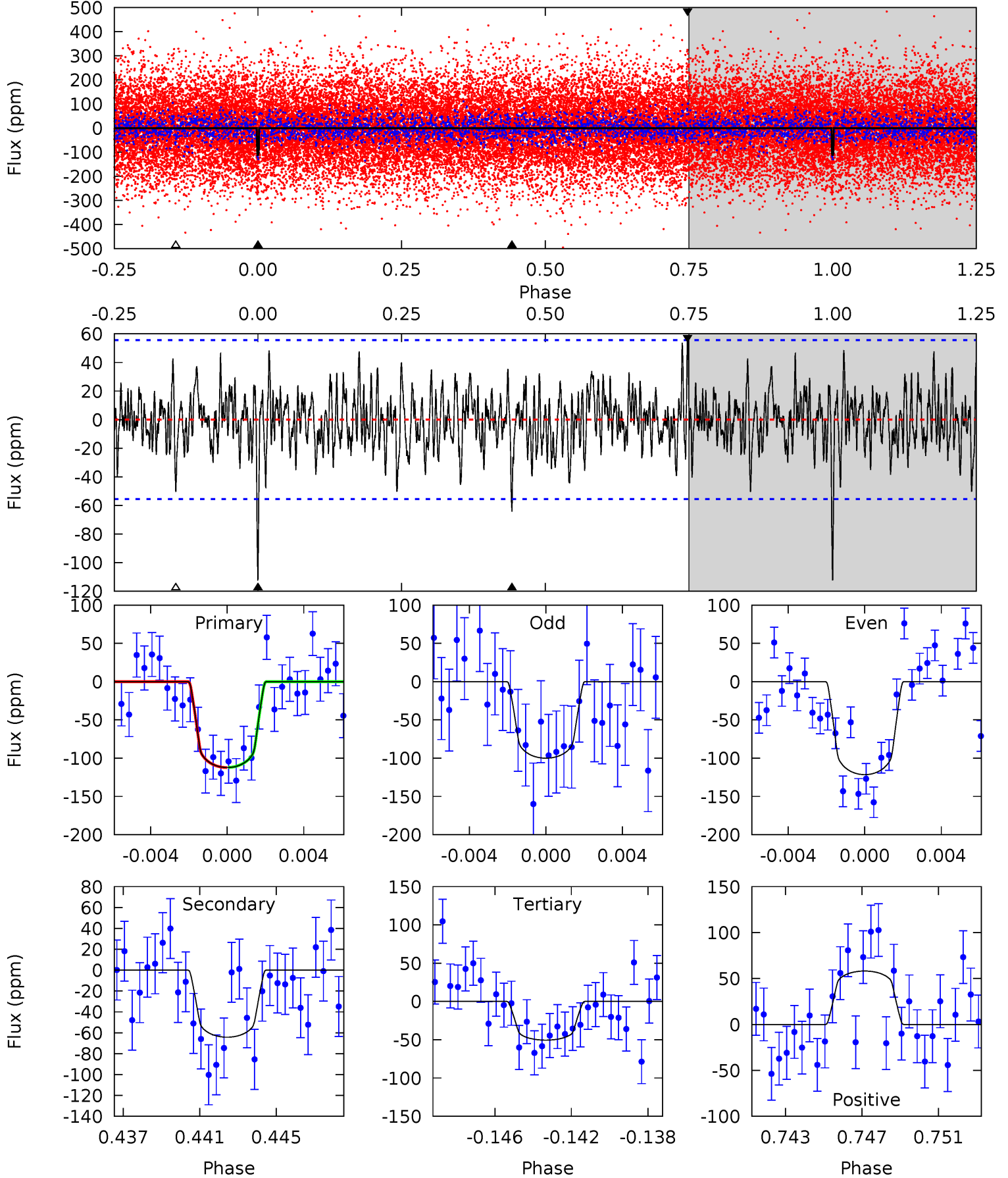
TCE 011092597-03 $P = 38.442693$ Days $T_0 = 134.467492$ (BKJD)



DV Model-Shift Uniqueness Test

011092597-03, P = 38.442336 Days, E = 96.039390 Days

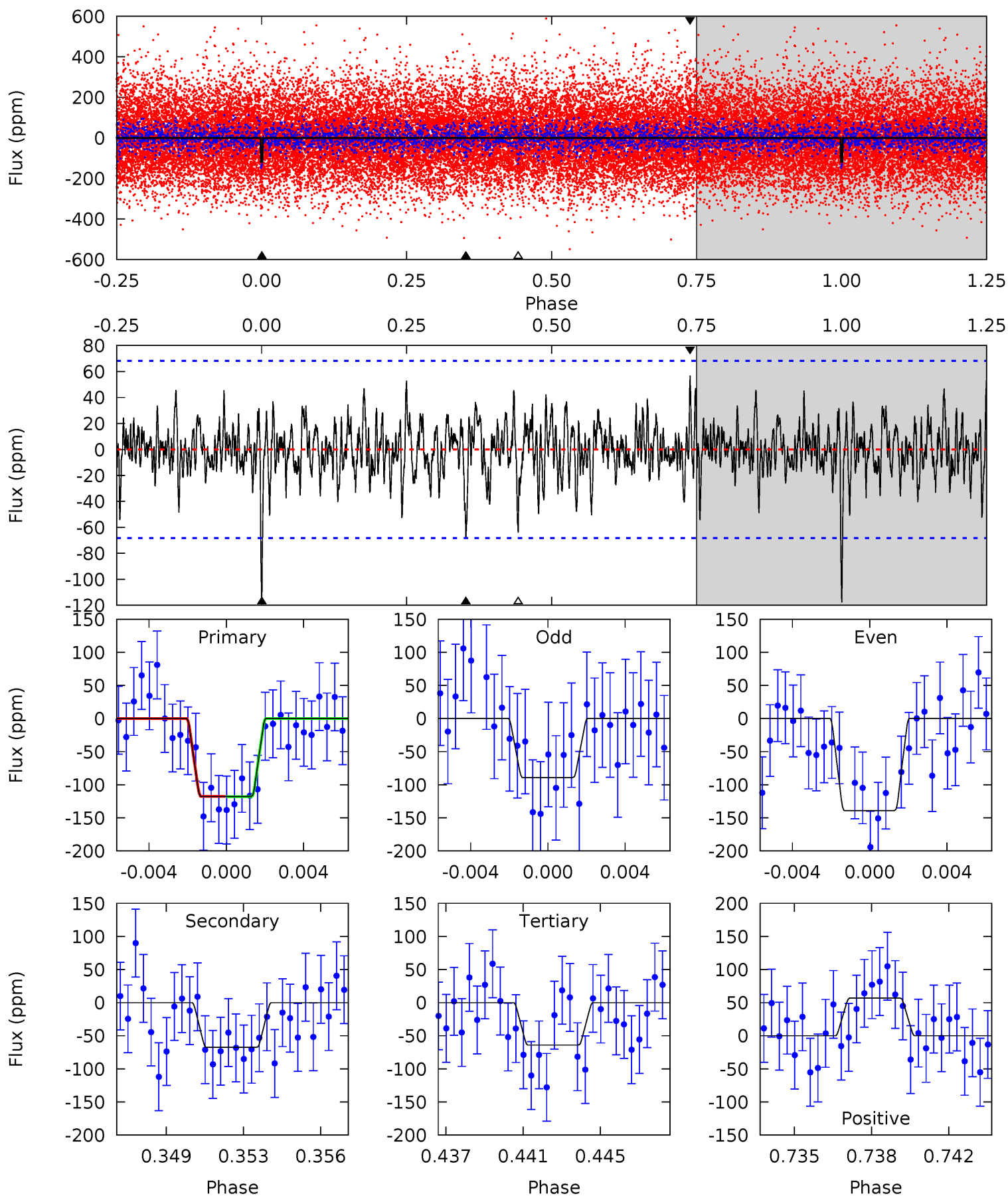
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	6.02	4.73	5.45	5.20	2.88	1.54	5.78	5.07	1.29	0.57	0.99	1.07	0.34	0.01



Alt Model-Shift Uniqueness Test

011092597-03, P = 38.442693 Days, E = 96.024799 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.00	5.16	4.90	4.35	5.22	2.90	1.29	4.10	4.65	0.27	0.81	1.90	0.98	0.33	0.02



Stellar Parameters For KIC 011092597

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7329^{+230}_{-307}	$3.915^{+0.308}_{-0.132}$	$-0.200^{+0.250}_{-0.350}$	$2.349^{+0.490}_{-0.909}$	$1.651^{+0.165}_{-0.386}$	$0.179^{+0.397}_{-0.070}$
	+3%/-4%	+8%/-3%	+125%/-175%	+21%/-39%	+10%/-23%	+221%/-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 011092597-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-64 ± 11	$2.86^{+1.72}_{-1.47}$	1321^{+100}_{-125}	5908^{+2836}_{-1054}	296^{+985}_{-184}
Alt.	-68 ± 13	$2.71^{+1.61}_{-1.42}$	1324^{+99}_{-114}	6222^{+3238}_{-1264}	336^{+1162}_{-207}

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 $A_{obs} \gg 1.0$

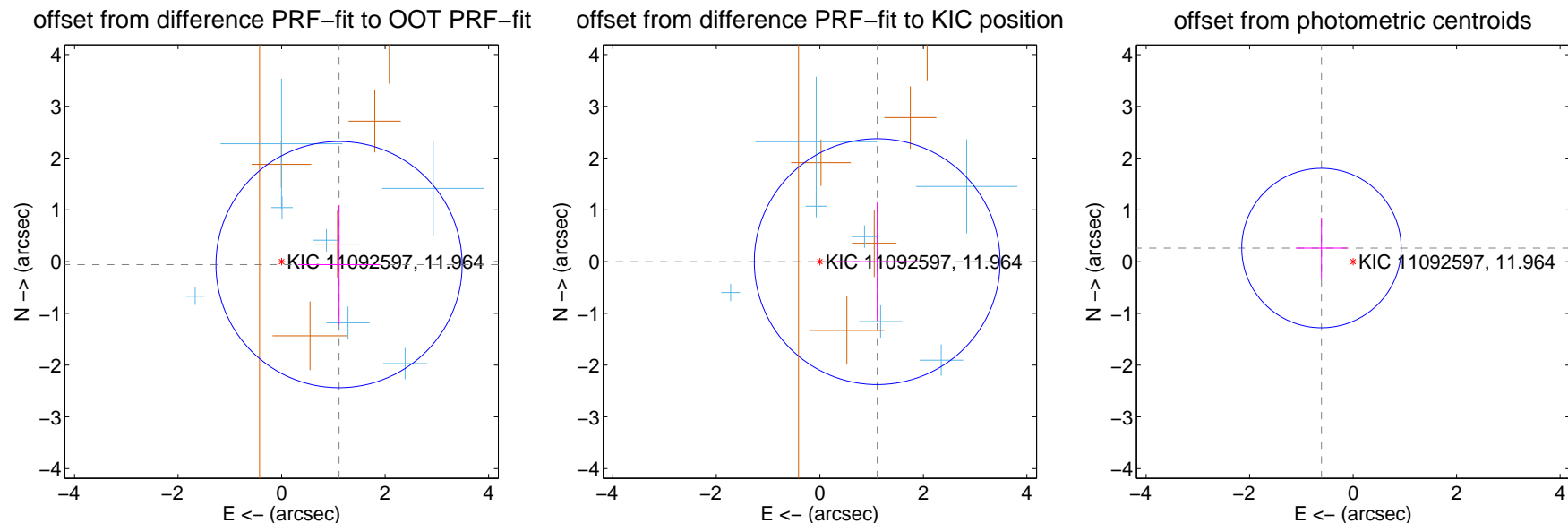
DV Centroid Data

Supplemental centroid analysis for 011092597-03. **Kepler magnitude: 11.96.** Transit SNR 8.17

There are 7 quarters with good PRF difference image offsets

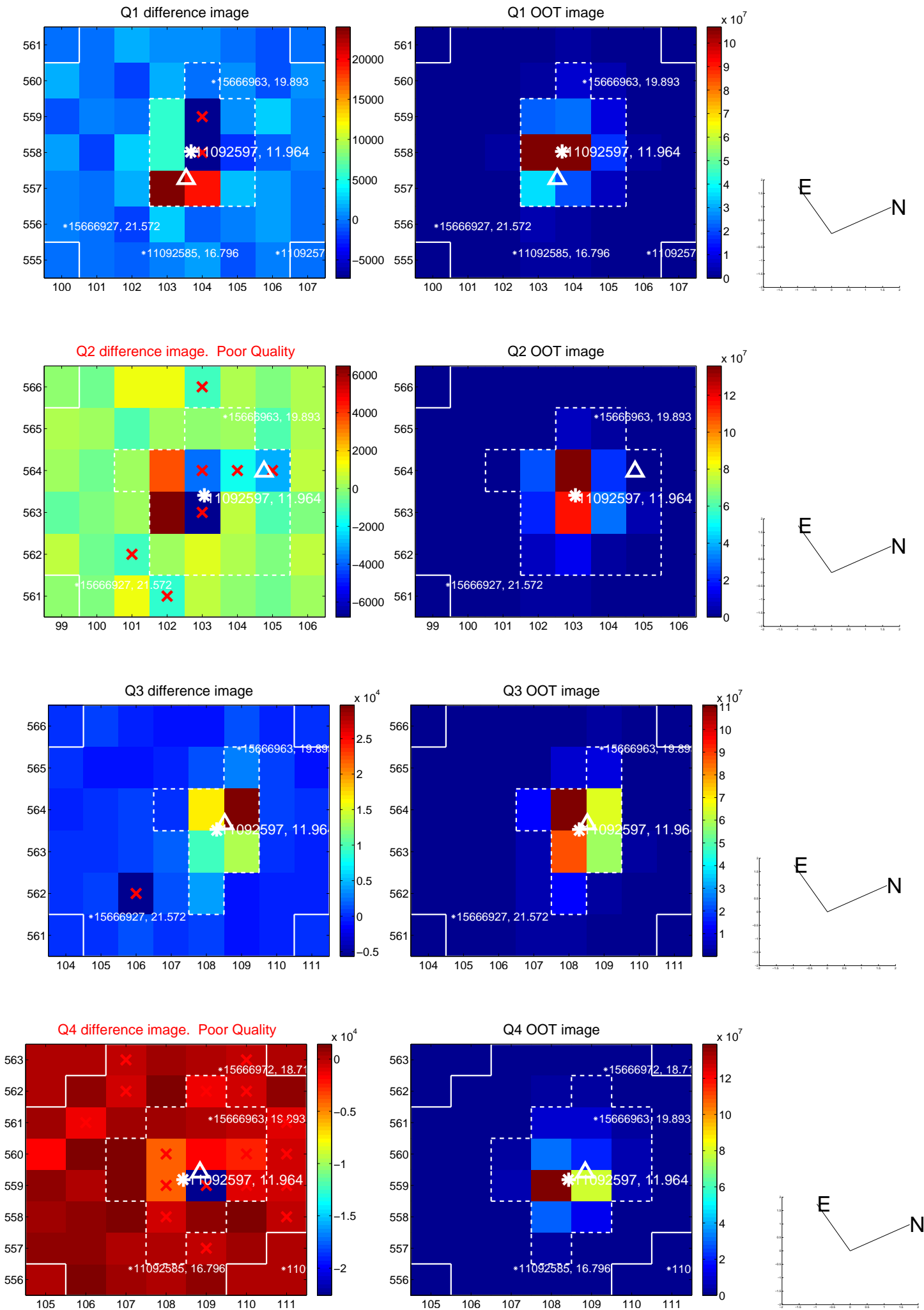
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.112 ± 0.793	1.40	-1.110 ± 0.792	-0.059 ± 1.147
PRF-fit source offset from KIC position	1.108 ± 0.792	1.40	-1.108 ± 0.792	-0.002 ± 1.147
photometric centroid source offset	0.67 ± 0.51	1.30	0.61 ± 0.50	0.26 ± 0.59

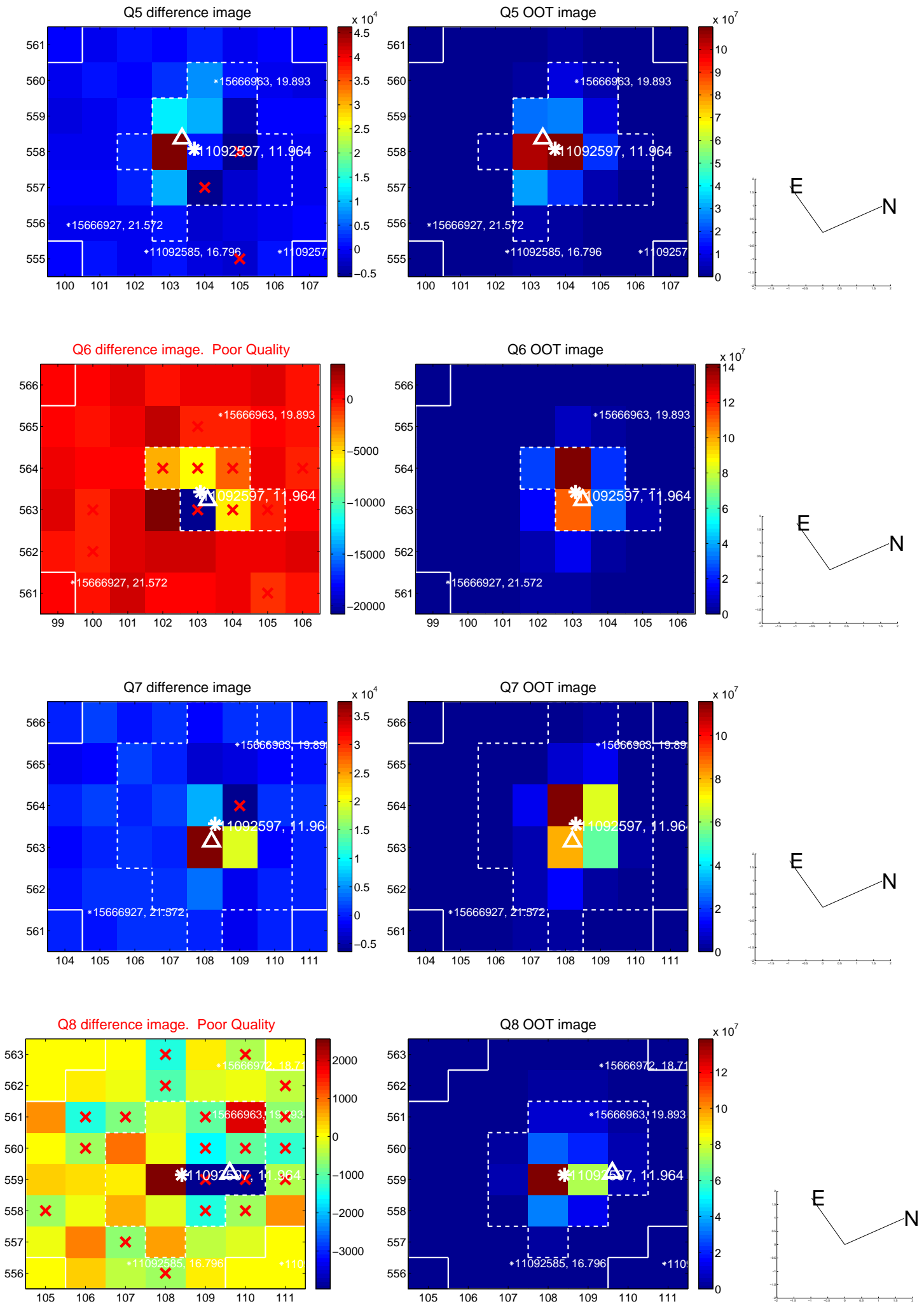


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

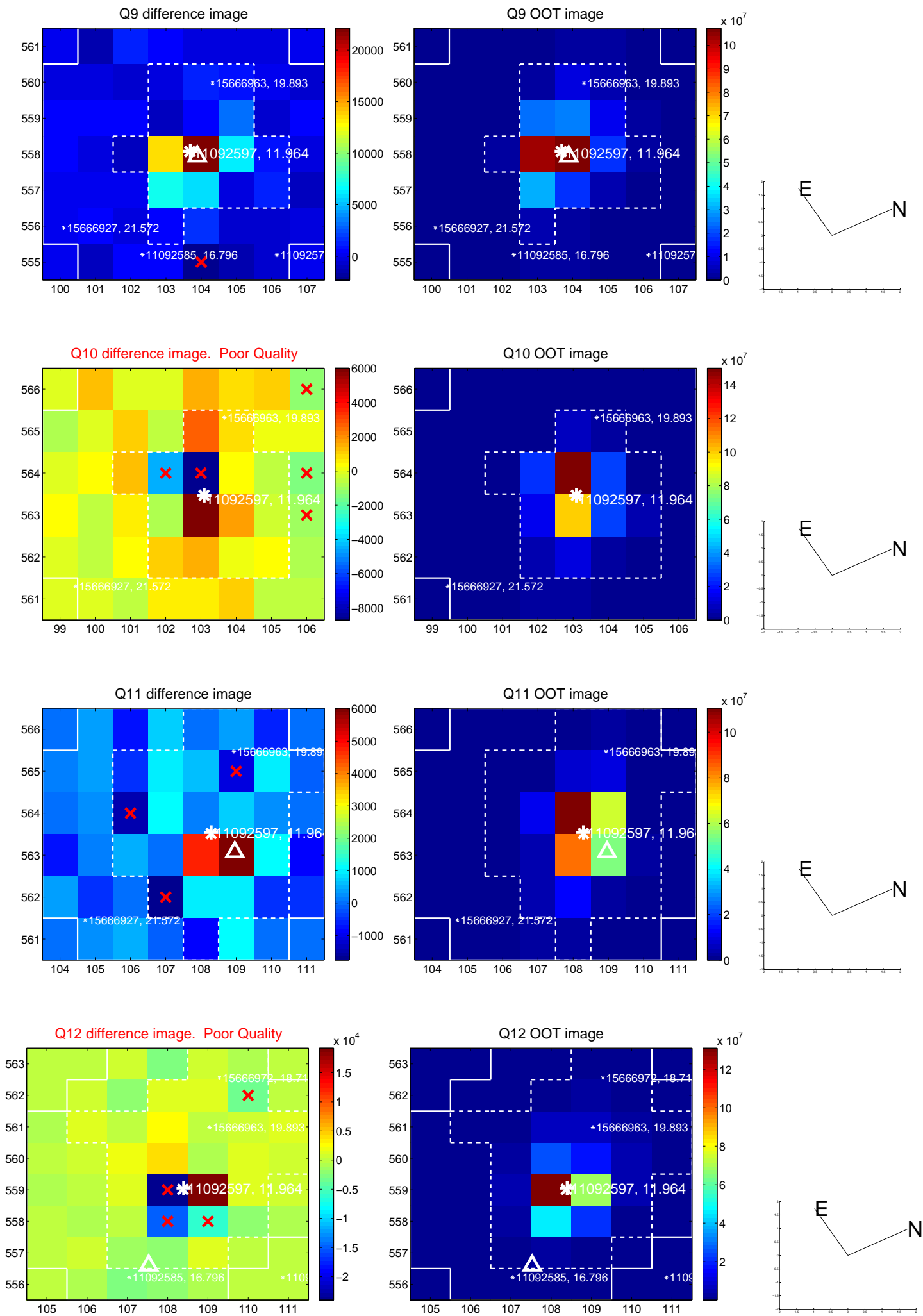
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



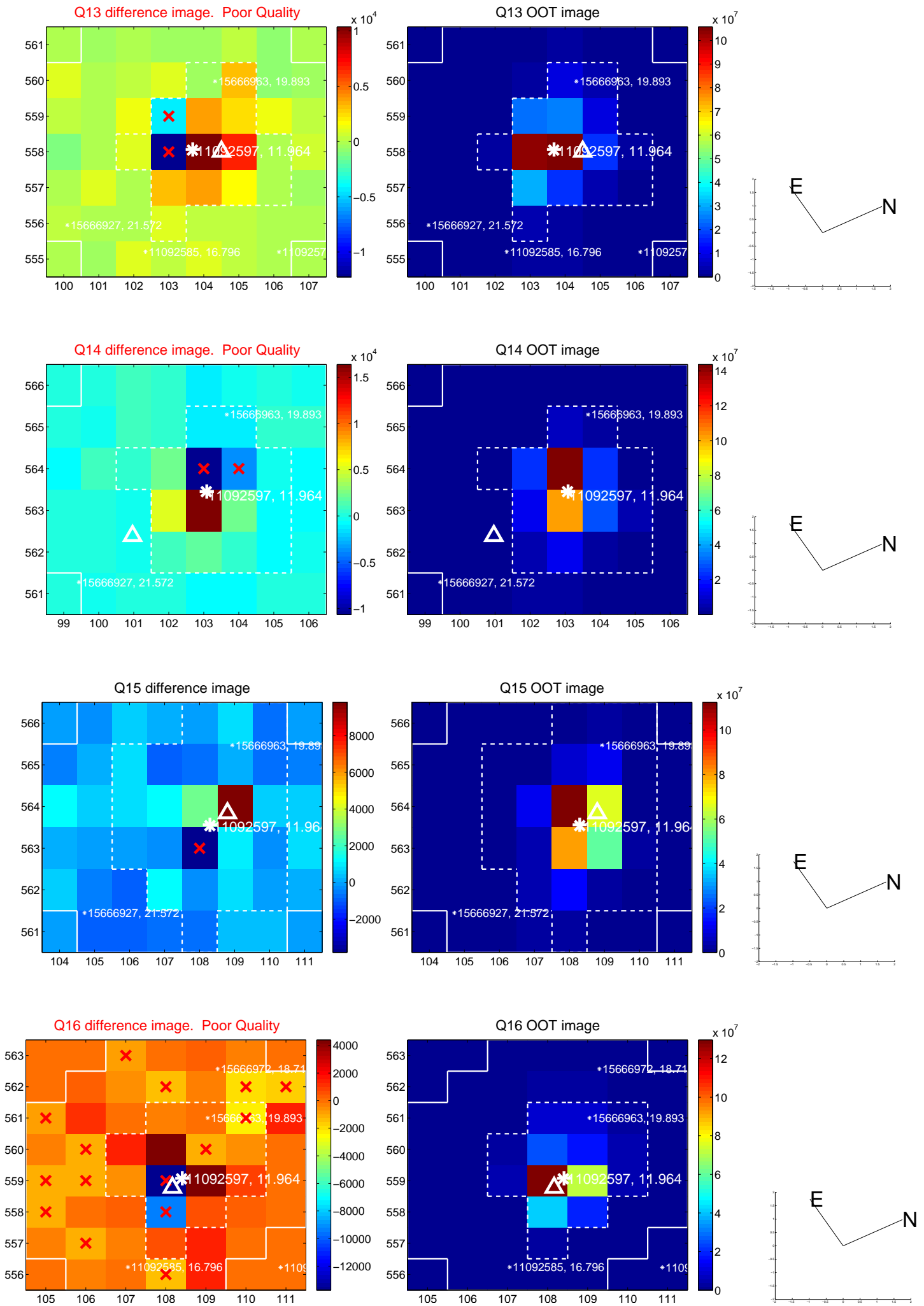
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



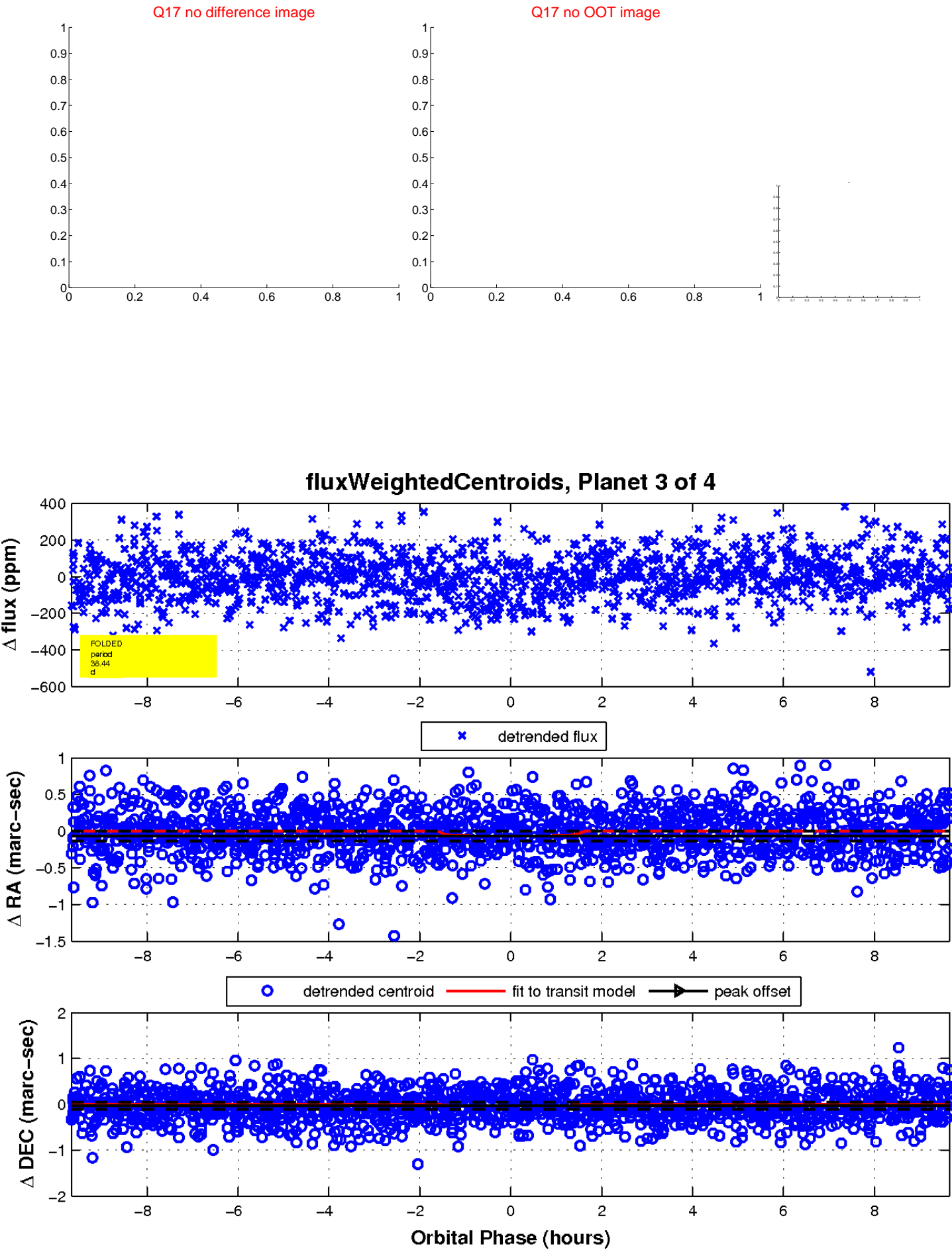
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



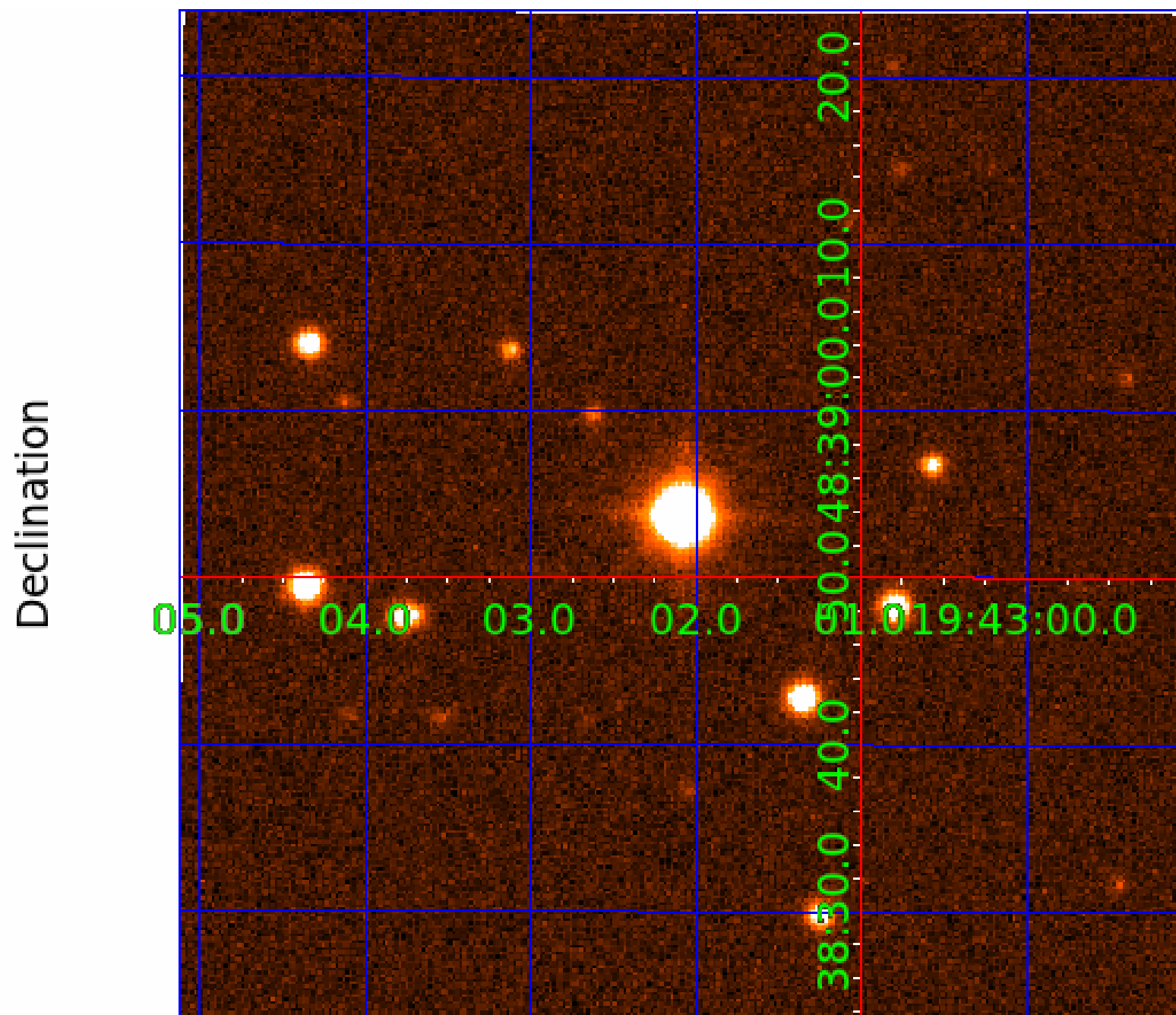
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011092597

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})
011092597-01	OBS	No	0.774770	131.766026	0.0	1.632	9.6	0.0	2.35	7329	0.05	37390.83
011092597-02	OBS	No	0.774901	131.823348	13.7	2.152	10.1	6.4	2.35	7329	1.02	37382.40
011092597-03	OBS	No	38.442336	134.481726	127.7	3.221	7.6	8.2	2.35	7329	3.05	205.08
011092597-04	OBS	No	102.696517	163.087439	186.4	3.610	7.1	7.3	2.35	7329	3.78	55.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011092597-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011092597-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
011092597-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT
011092597-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT

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

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

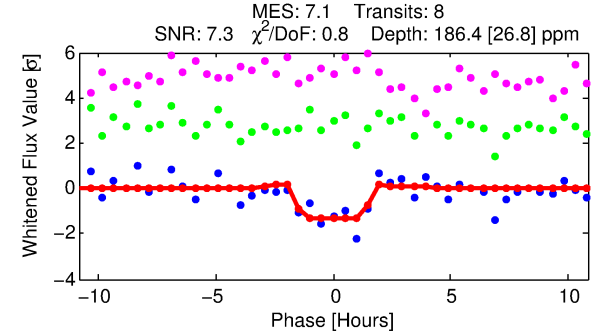
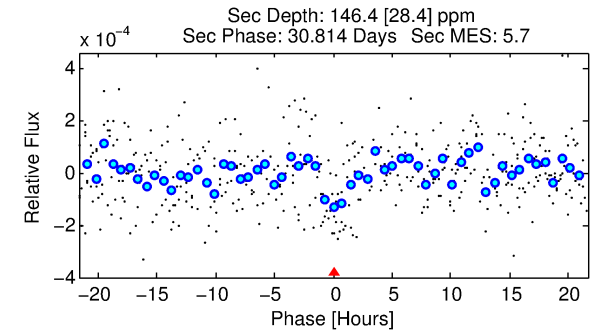
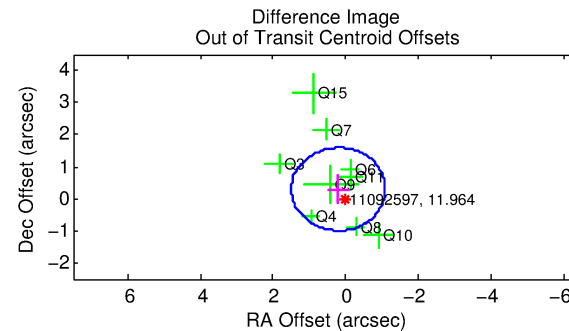
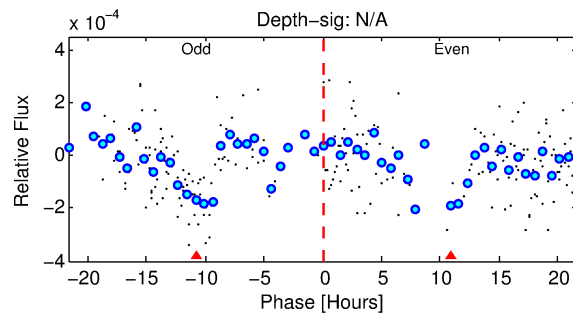
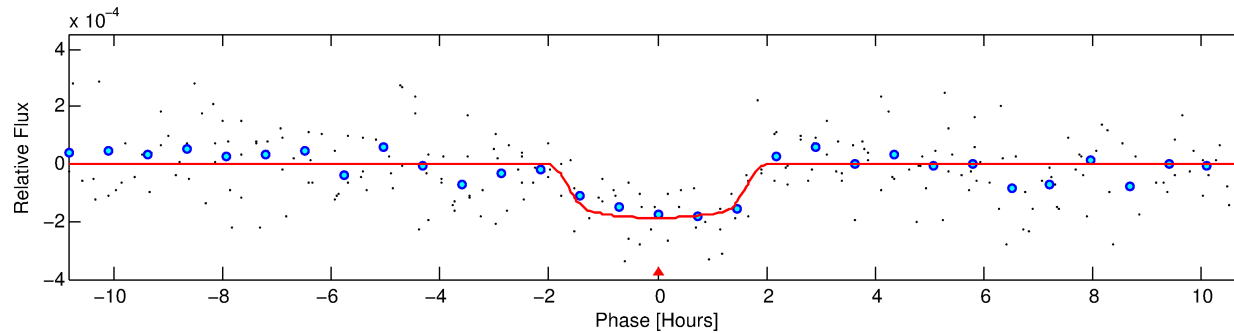
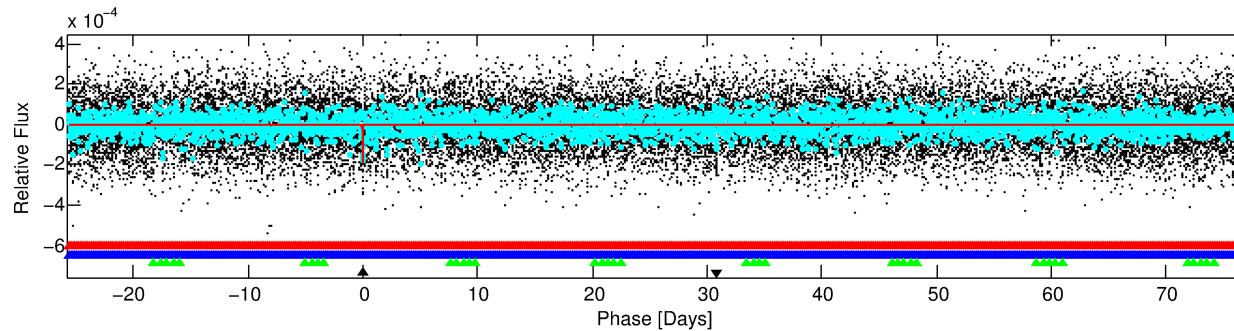
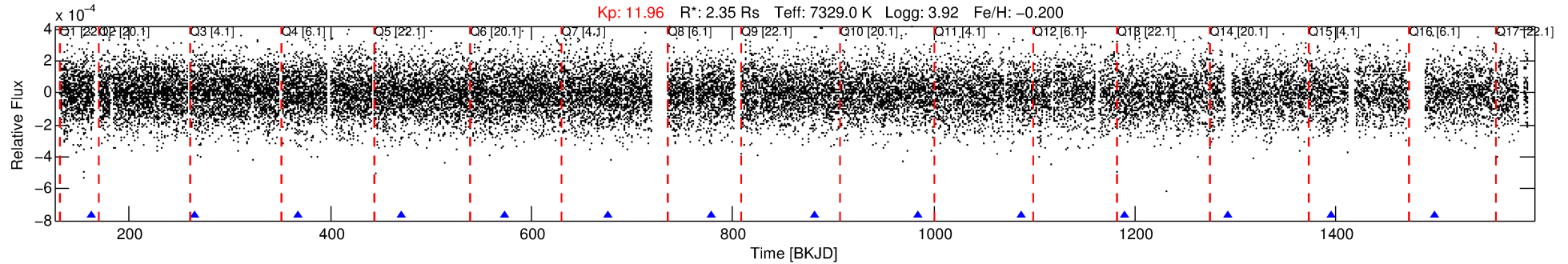
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011092597-04

No Significant Match Found

DV One-Page Summary

KIC: 11092597 Candidate: 4 of 4 Period: 102.697 d



DV Fit Results:

Period = 102.69652 [0.00115] d
Epoch = 163.0874 [0.0073] BKJD
Rp/R* = 0.0148 [0.0054]
a/R* = 96.69 [204.79]
b = 0.91 [0.40]
Seff = 55.32 [31.21]
Teq = 695 [98] K
Rp = 3.78 [2.02] Re
a = 0.5078 [0.1777] AU
Ag = 1449.96 [1352.77] [1.07σ]
Teffp = 6635 [1294] K [4.58σ]

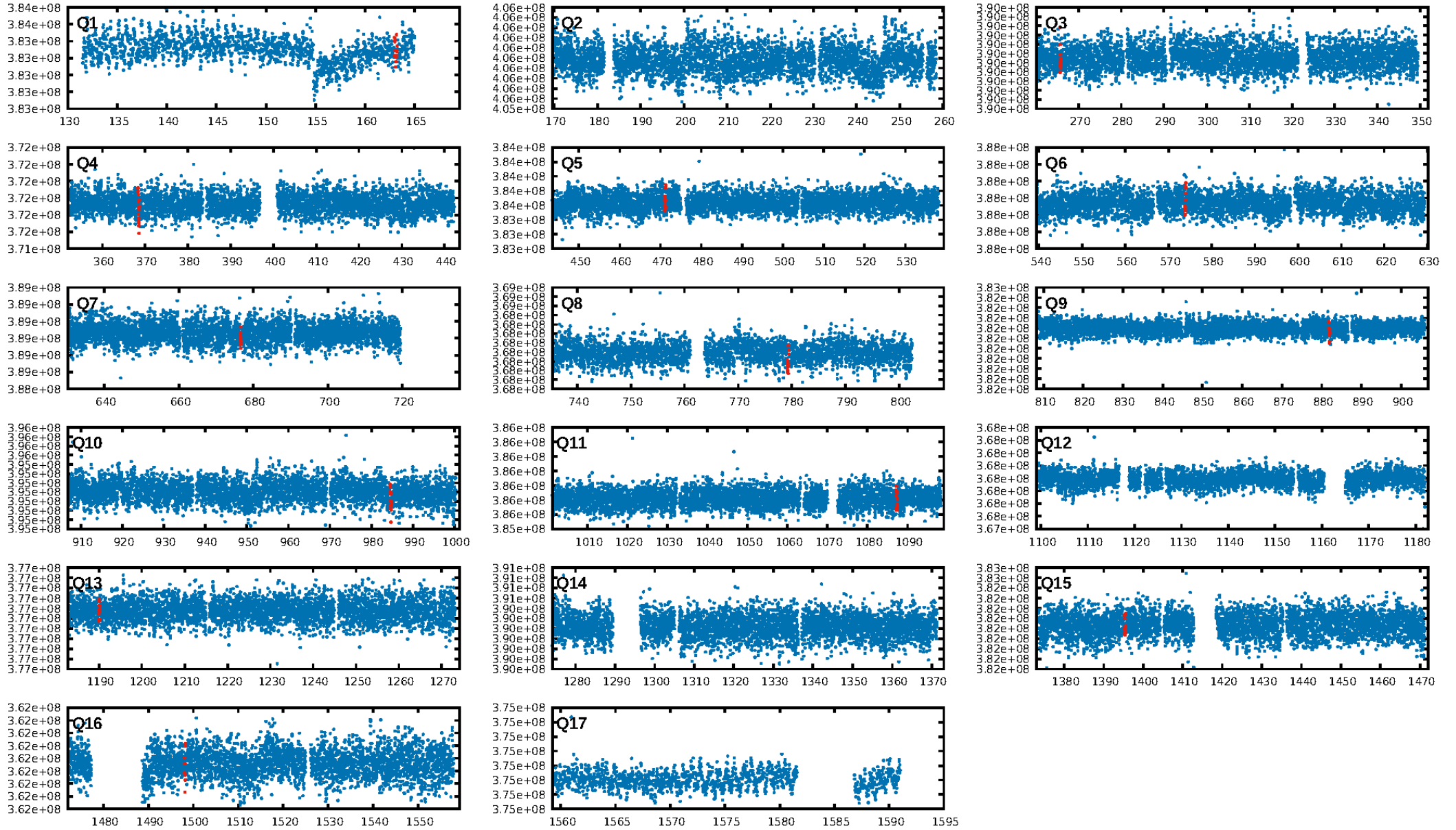
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [318.75σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 85.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.12e-09
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 4.862
Centroid-sig: 22.6%
Centroid-so: 0.547 arcsec [0.93σ]
OotOffset-rm: 0.359 arcsec [0.83σ]
OotOffset-st: 2/4/2/1 [9]
KicOffset-rm: 0.421 arcsec [0.75σ]
KicOffset-st: 2/4/2/1 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 0.00 [0/12]

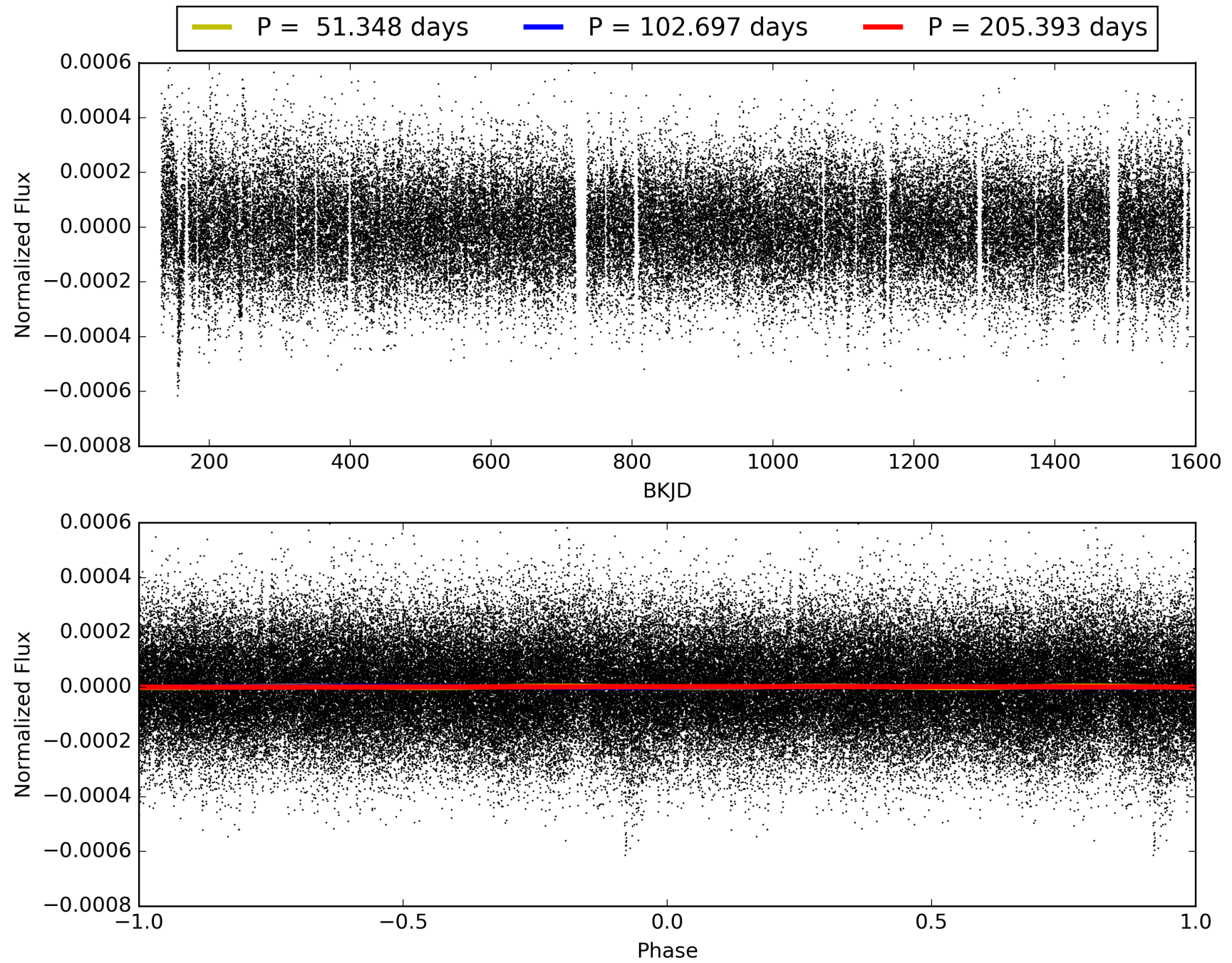
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:44:09 Z

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

TCE 011092597-04, PDC Light Curves

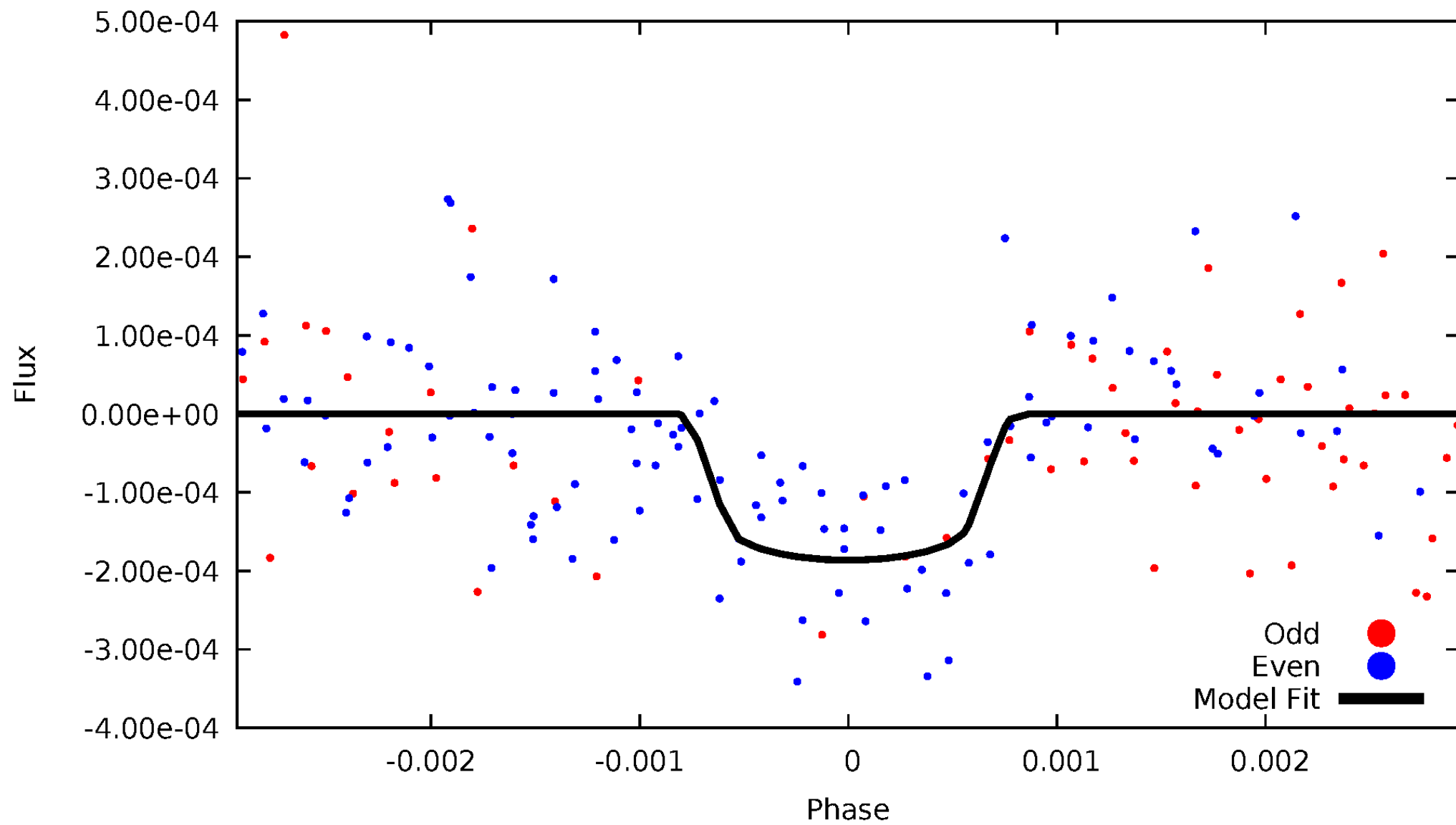


TCE 011092597-04



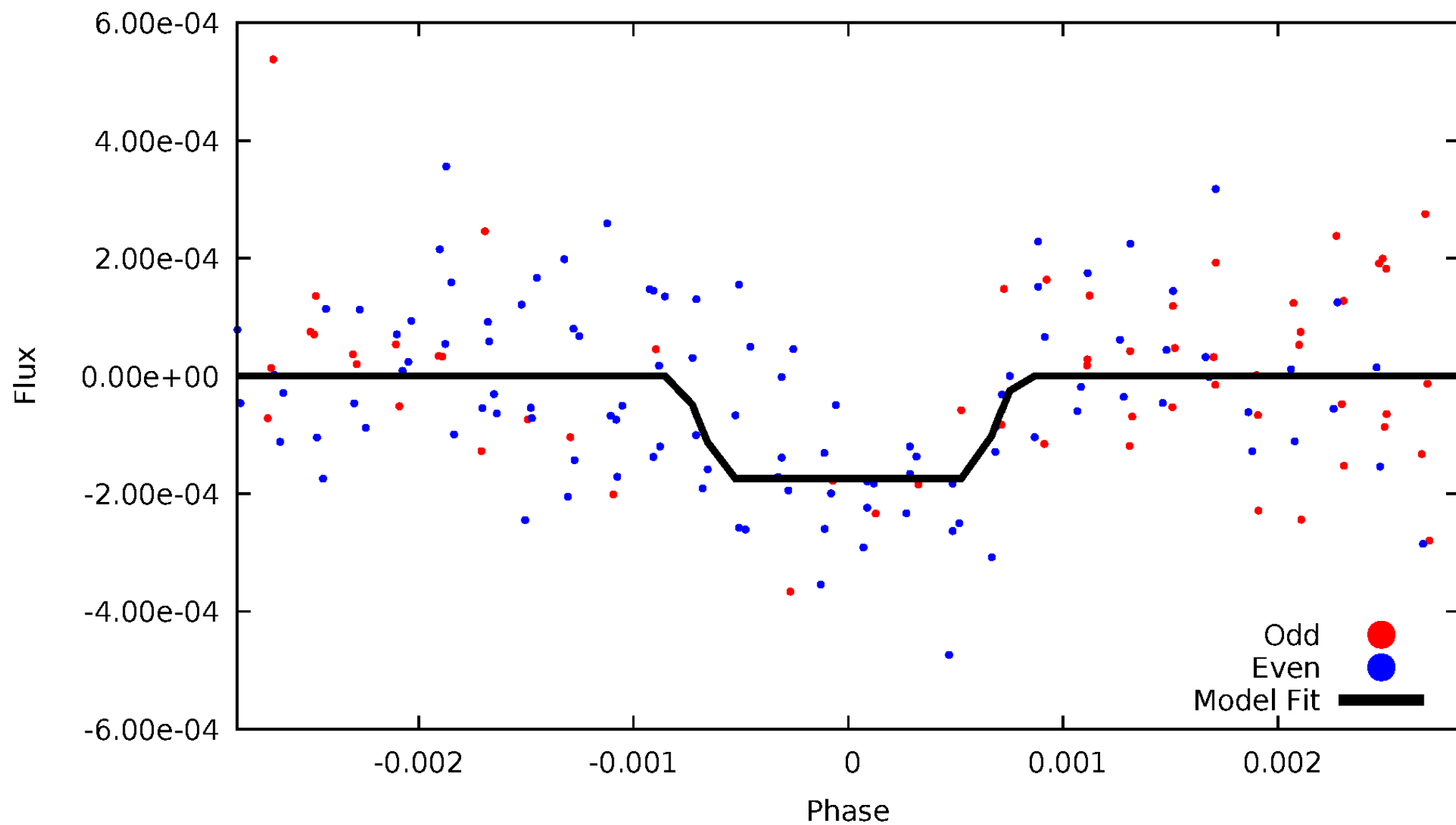
DV Odd/Even

TCE 011092597-04



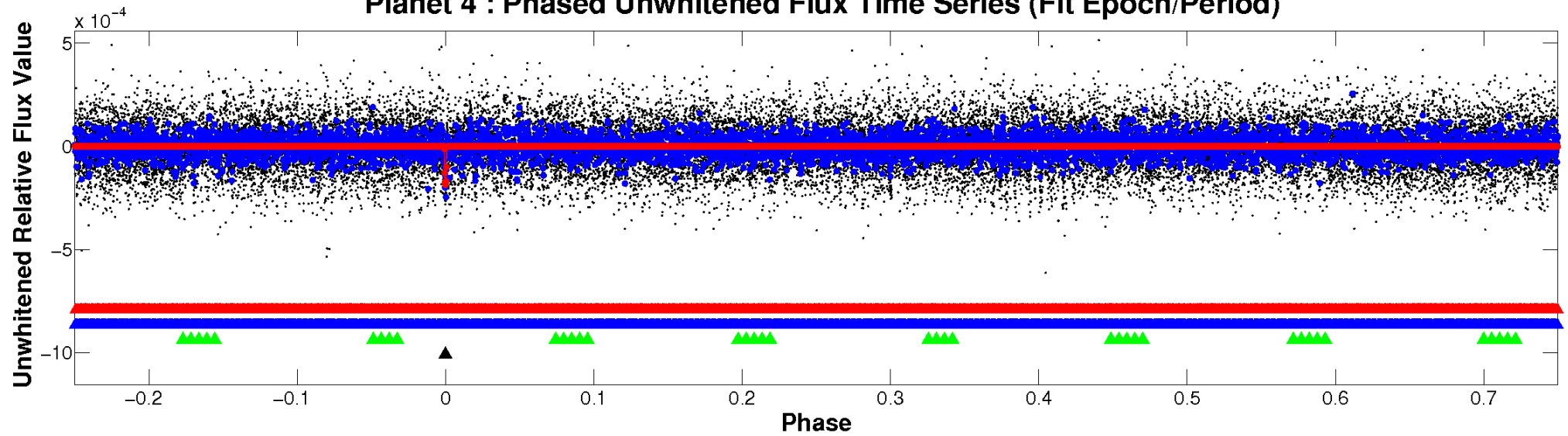
ALT Odd/Even

TCE 011092597-04

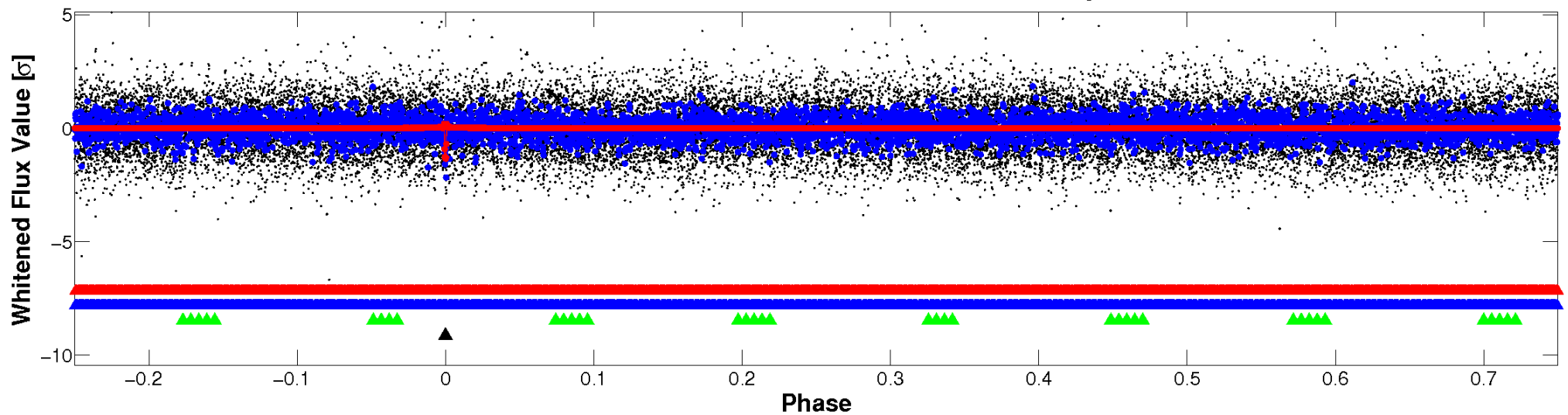


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

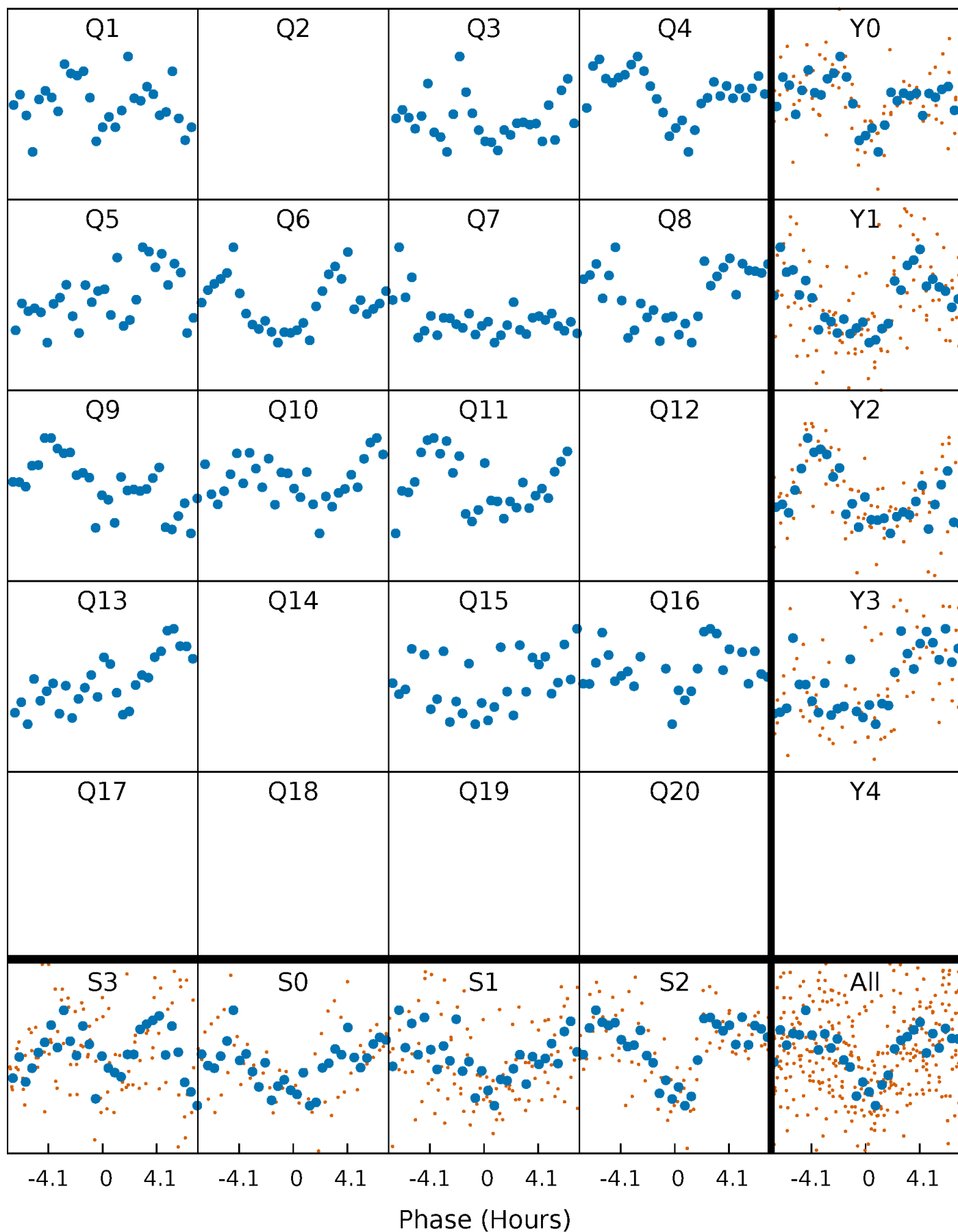


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



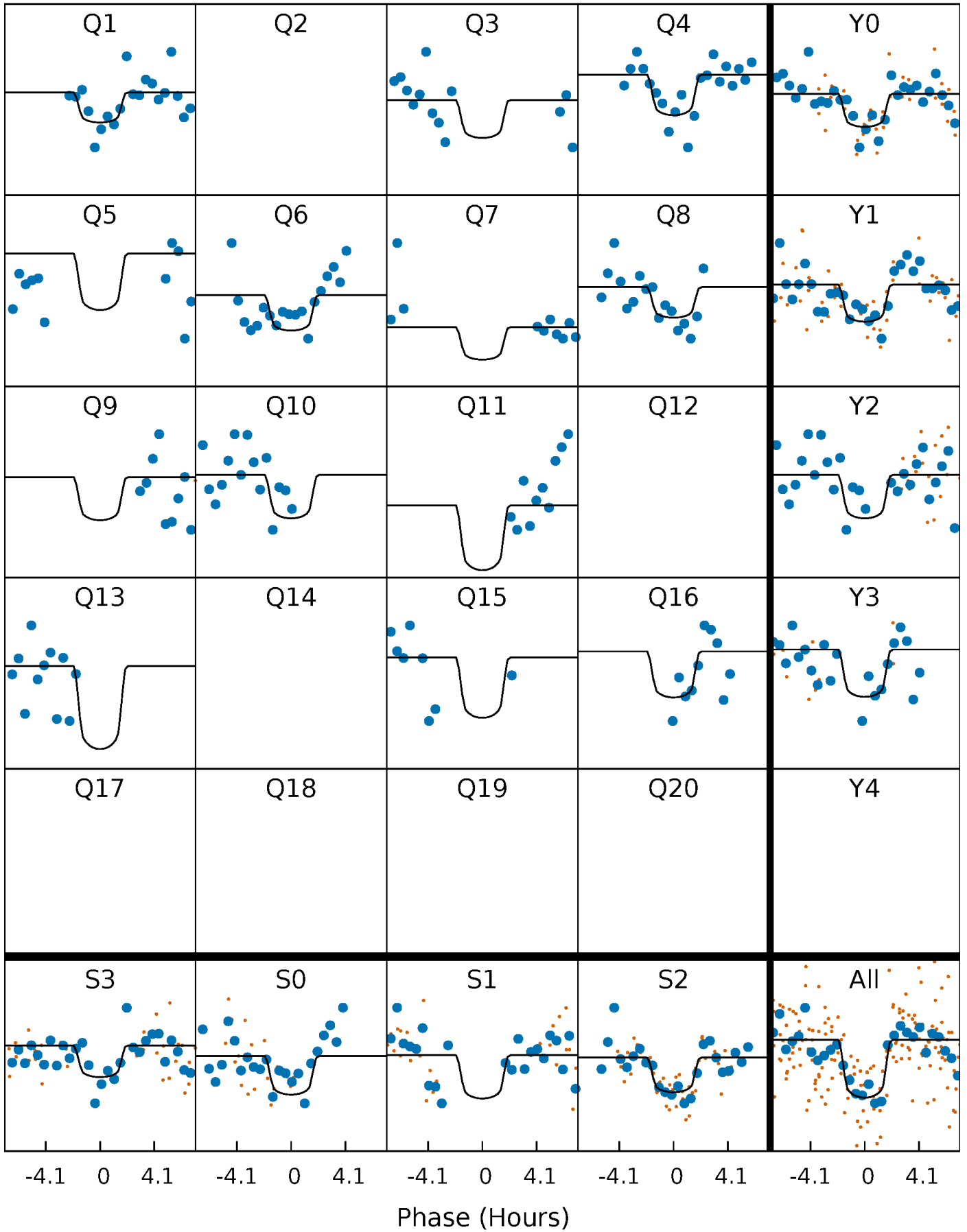
PDC Quarter-Phased Transit Curves

TCE 011092597-04 P=102.696517 Days $T_0=163.087439$ (BKJD)



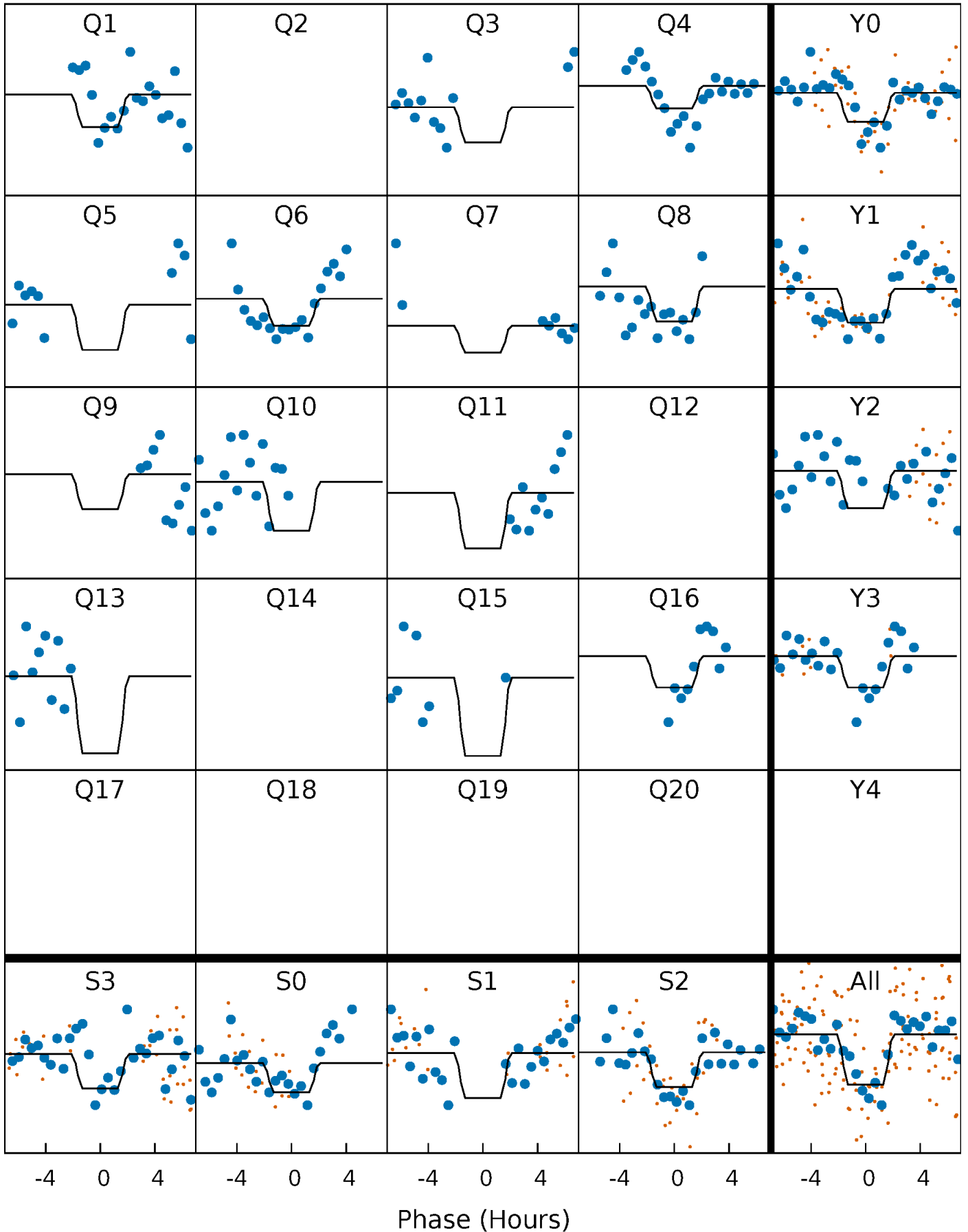
DV Quarter-Phased Transit Curves

TCE 011092597-04 P=102.696517 Days $T_0=163.087439$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

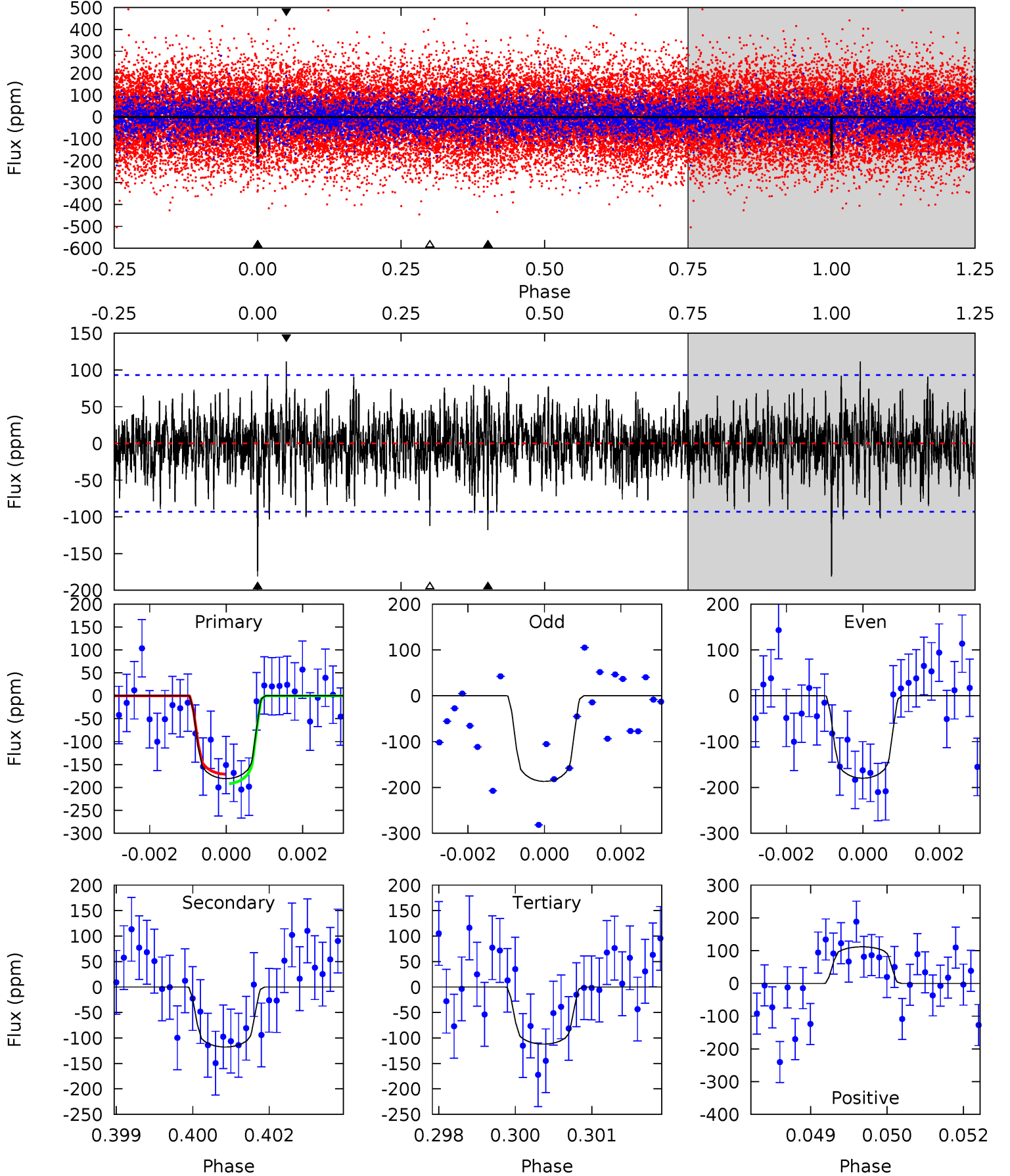
TCE 011092597-04 $P=102.698712$ Days $T_0=163.073780$ (BKJD)



DV Model-Shift Uniqueness Test

011092597-04, $P = 102.696517$ Days, $E = 60.390922$ Days

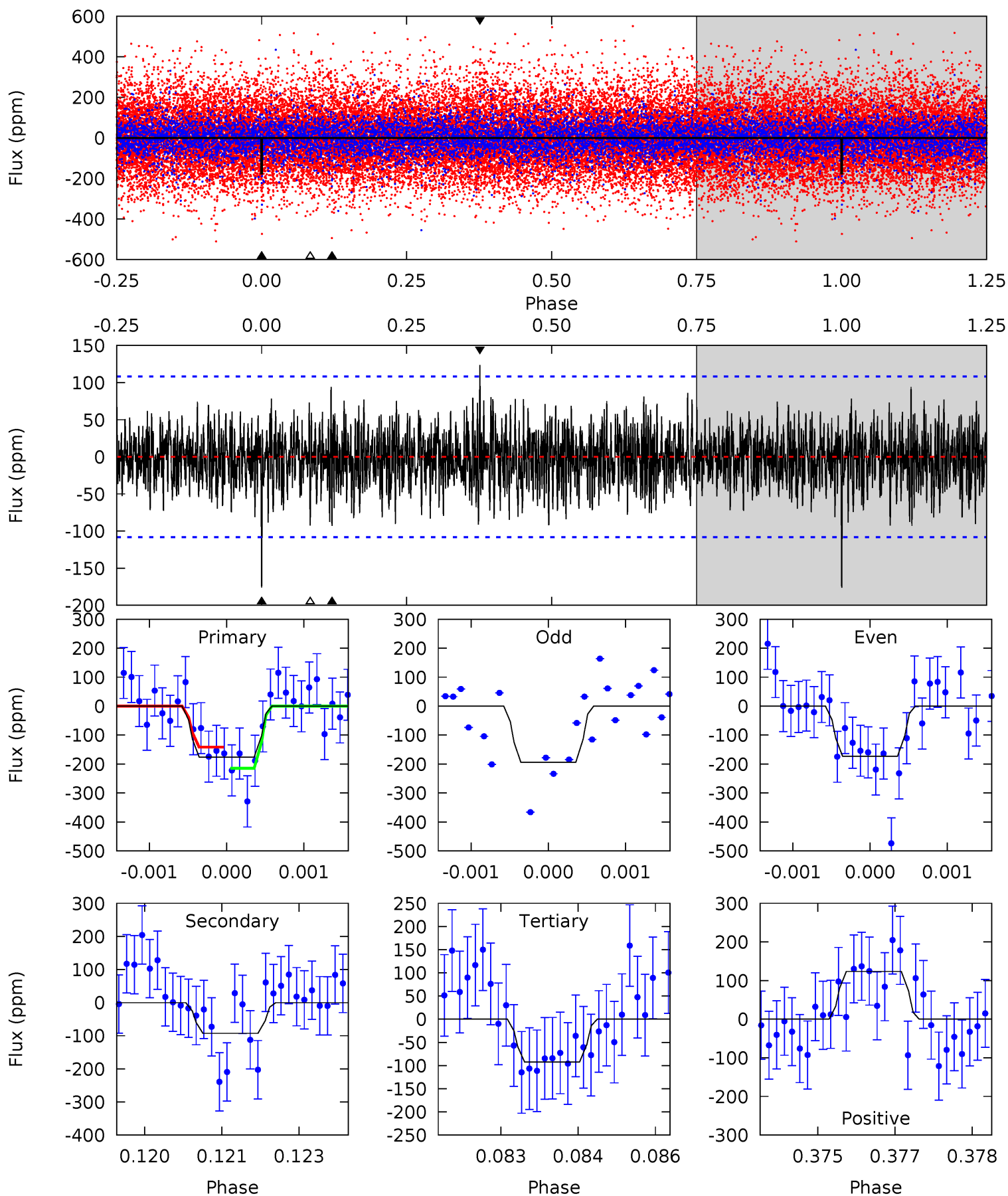
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	6.77	6.45	6.42	5.36	3.14	1.68	3.96	3.98	0.33	0.35	0.14	0.94	0.38	0.60



Alt Model-Shift Uniqueness Test

011092597-04, P = 102.698712 Days, E = 60.375068 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.75	4.61	4.59	6.14	5.38	3.18	1.55	4.16	2.61	0.02	-1.53	0.39	0.83	0.41	1.80



Stellar Parameters For KIC 011092597

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7329^{+230}_{-307}	$3.915^{+0.308}_{-0.132}$	$-0.200^{+0.250}_{-0.350}$	$2.349^{+0.490}_{-0.909}$	$1.651^{+0.165}_{-0.386}$	$0.179^{+0.397}_{-0.070}$
	+3%/-4%	+8%/-3%	+125%/-175%	+21%/-39%	+10%/-23%	+221%/-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 011092597-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-118 ± 17	$3.54^{+1.50}_{-1.43}$	956^{+64}_{-95}	6165^{+1862}_{-845}	1305^{+2368}_{-650}
Alt.	-93 ± 20	$3.13^{+1.52}_{-1.27}$	953^{+70}_{-91}	6124^{+2116}_{-959}	1350^{+2294}_{-763}

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

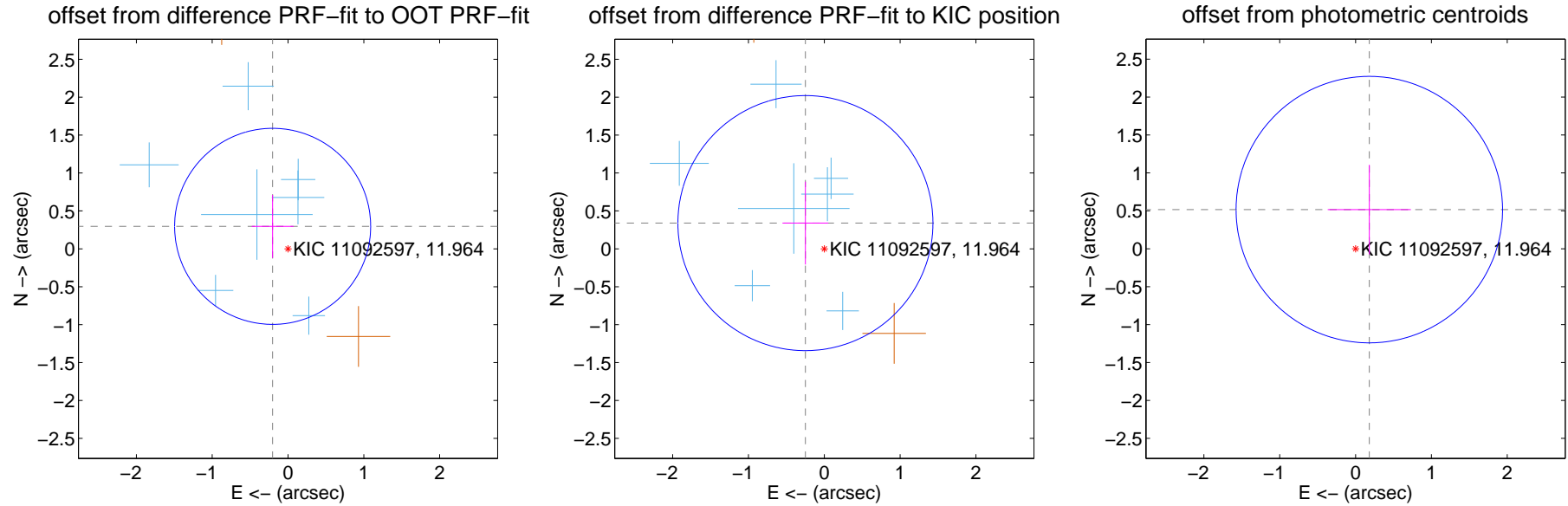
DV Centroid Data

Supplemental centroid analysis for 011092597-04. **Kepler magnitude: 11.96.** Transit SNR 7.32

There are 7 quarters with good PRF difference image offsets

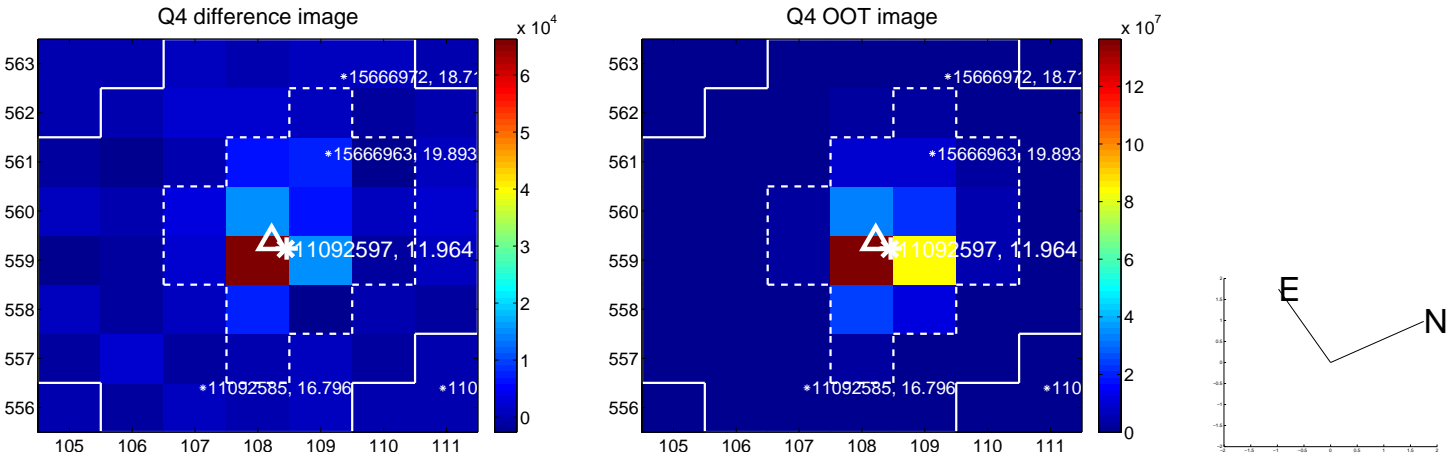
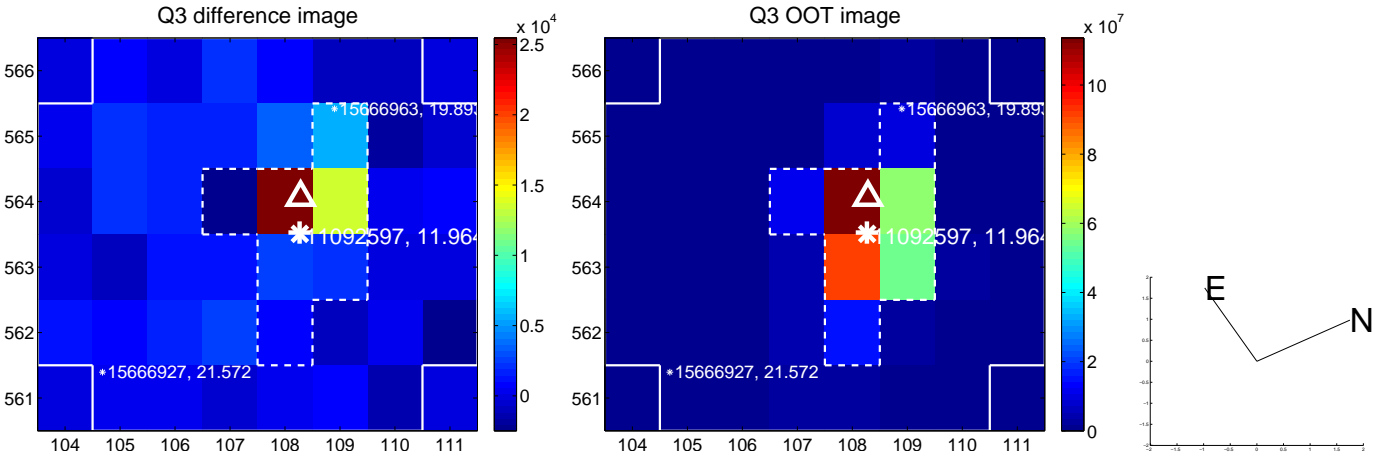
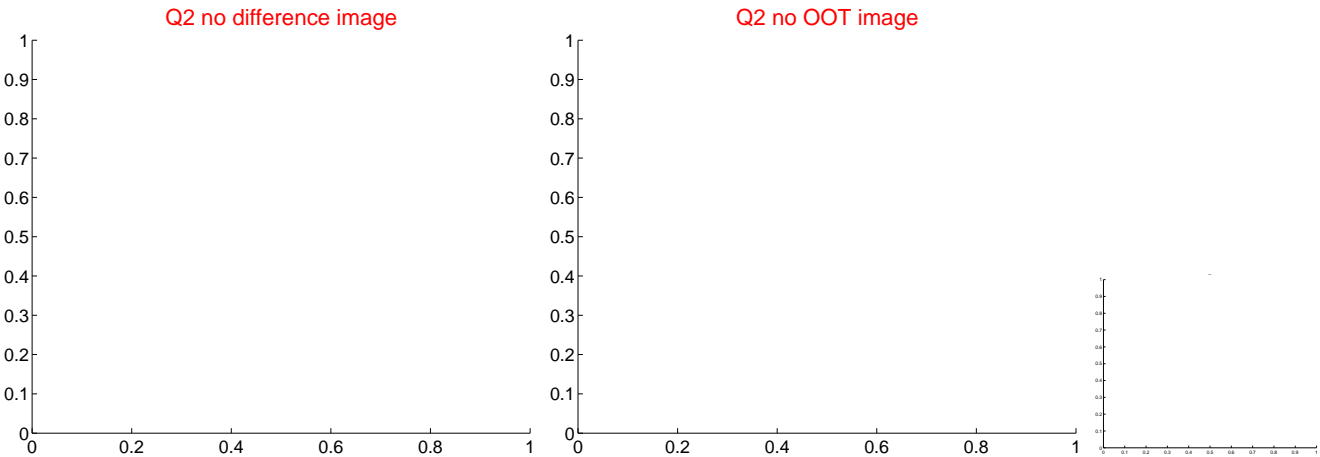
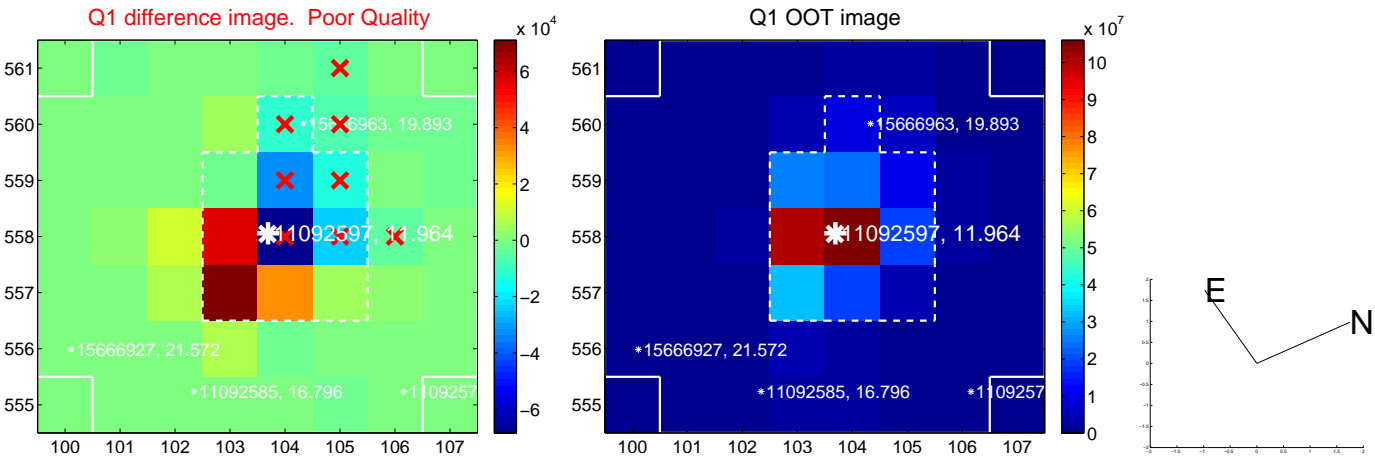
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.359 ± 0.431	0.83	0.203 ± 0.276	0.296 ± 0.415
PRF-fit source offset from KIC position	0.421 ± 0.561	0.75	0.249 ± 0.302	0.339 ± 0.546
photometric centroid source offset	0.55 ± 0.59	0.93	-0.18 ± 0.55	0.52 ± 0.59

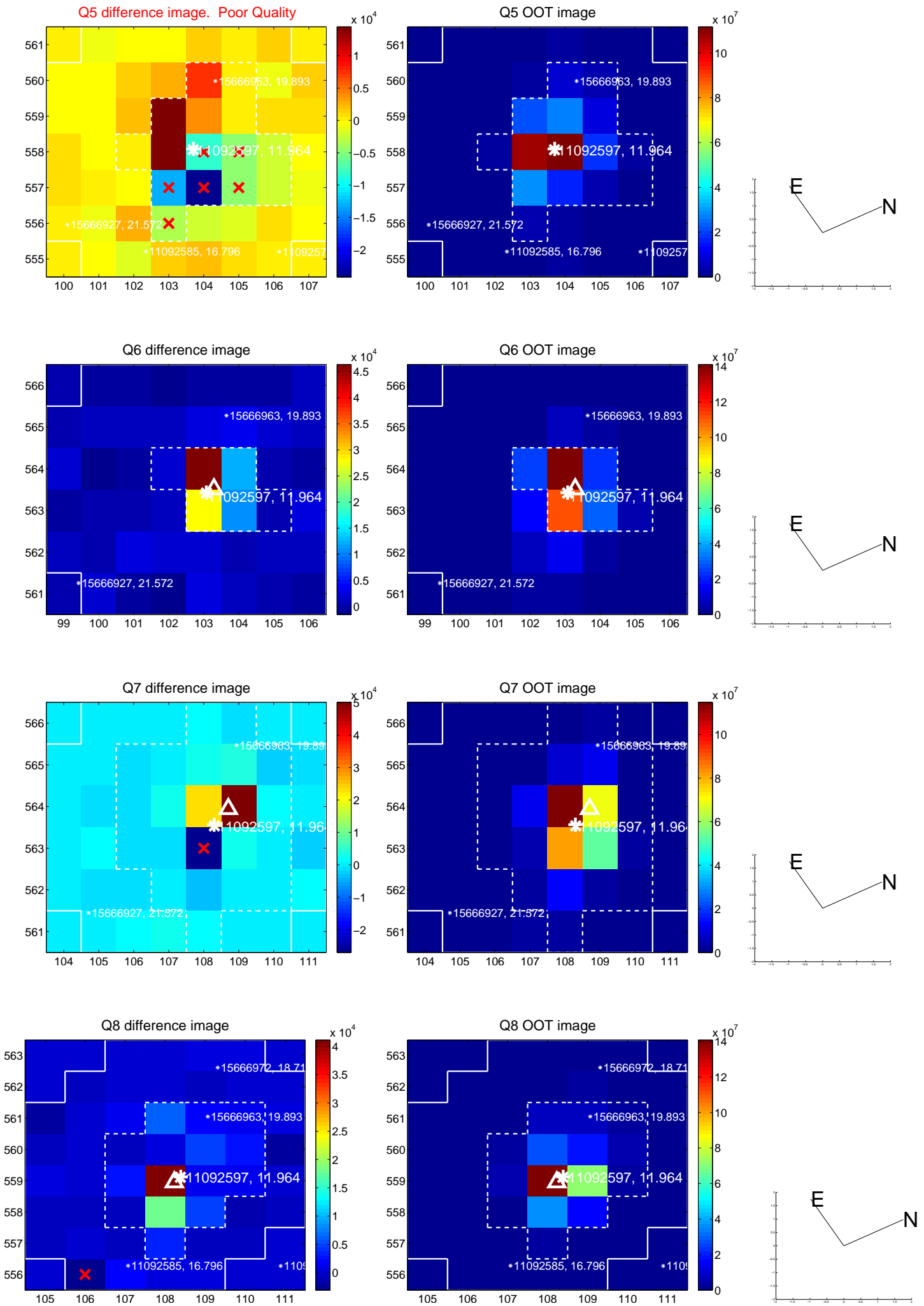


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

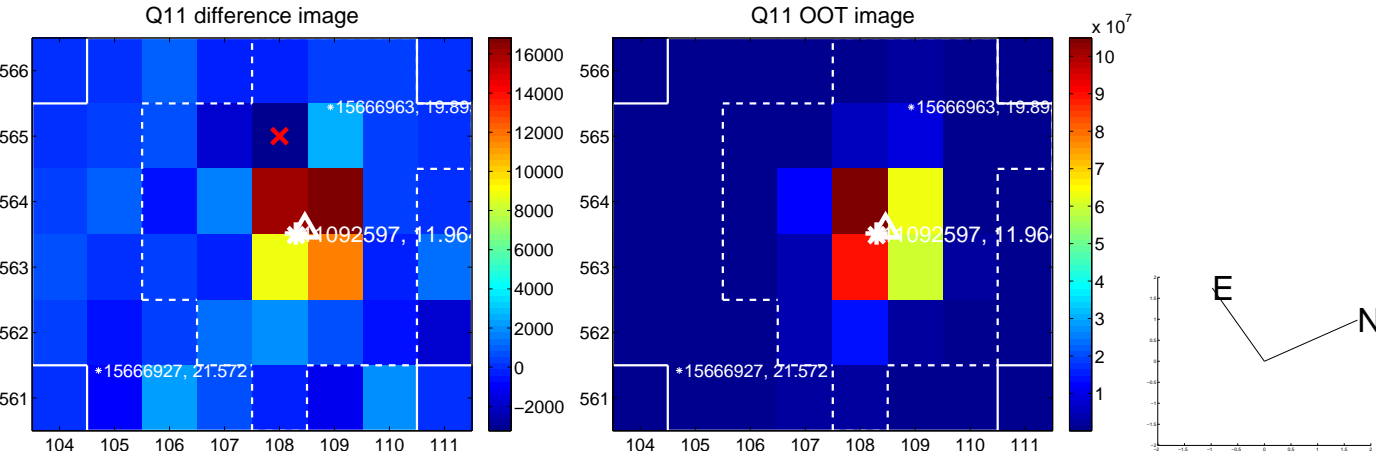
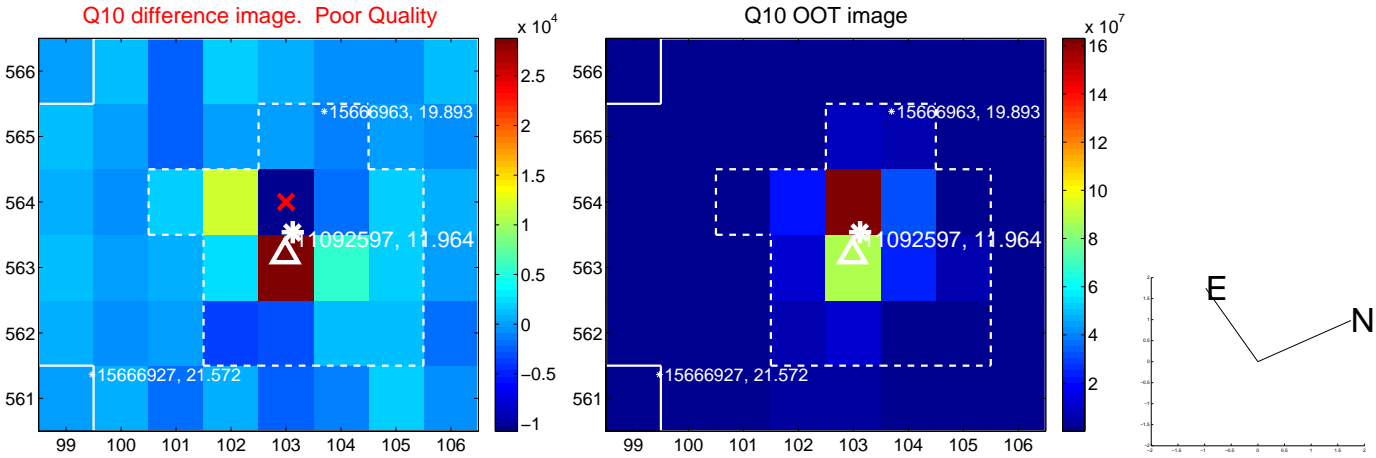
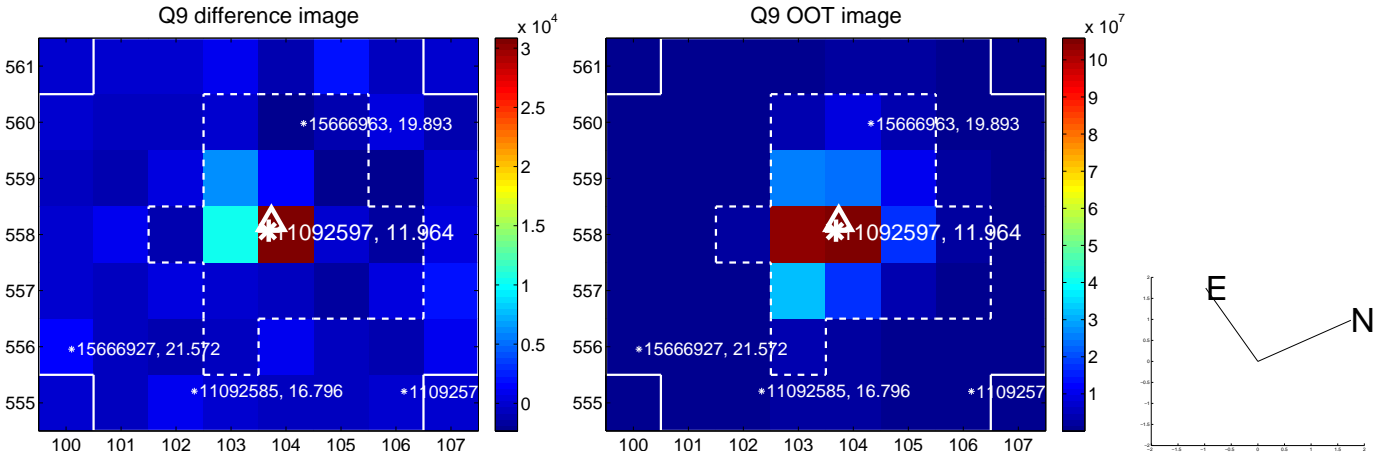
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



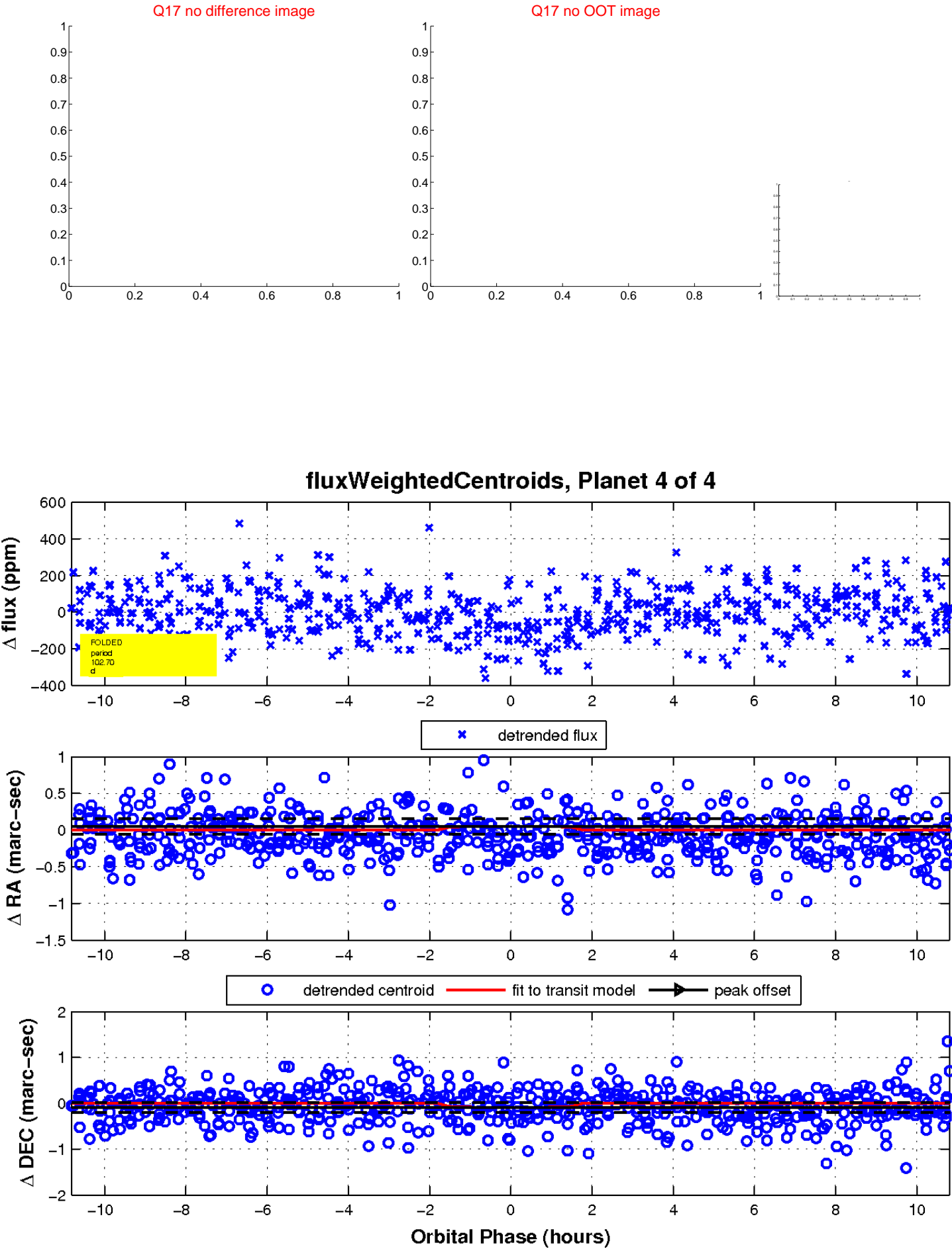
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

