

KIC 011769929

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})
011769929-01	OBS	No	1.002947	131.672977	369.3	4.194	14.0	9.8	1.76	7266	3.87	16991.03
011769929-02	OBS	No	3.799893	132.916189	1566.2	12.482	10.0	13.2	1.76	7266	8.18	2876.70
011769929-03	OBS	No	3.800188	133.653865	549.5	6.801	12.0	3.9	1.76	7266	4.66	2876.41
011769929-04	OBS	No	1.900059	132.420287	109.9	6.000	9.9	-1.0	1.76	7266	1.87	7248.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011769929-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
011769929-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011769929-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
011769929-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

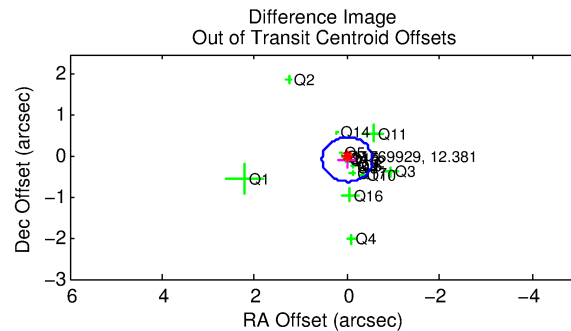
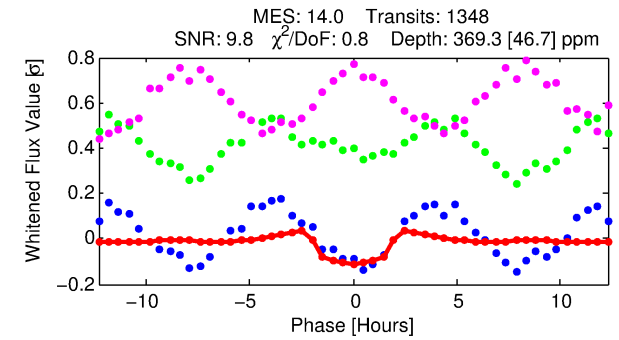
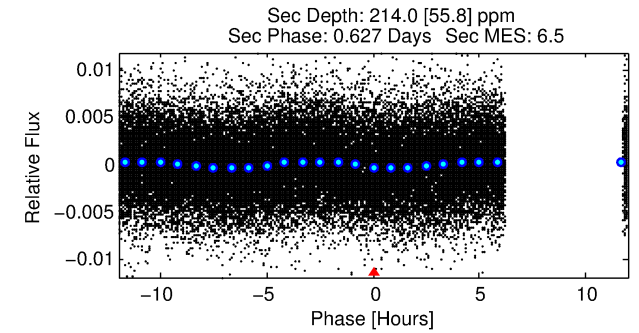
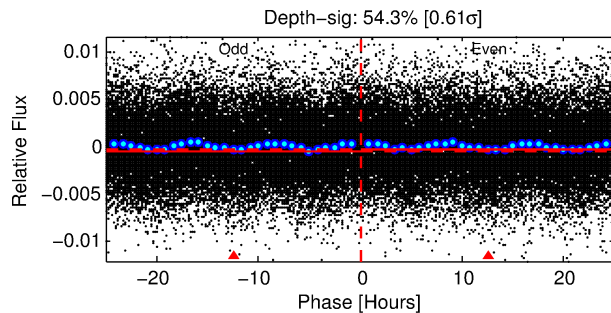
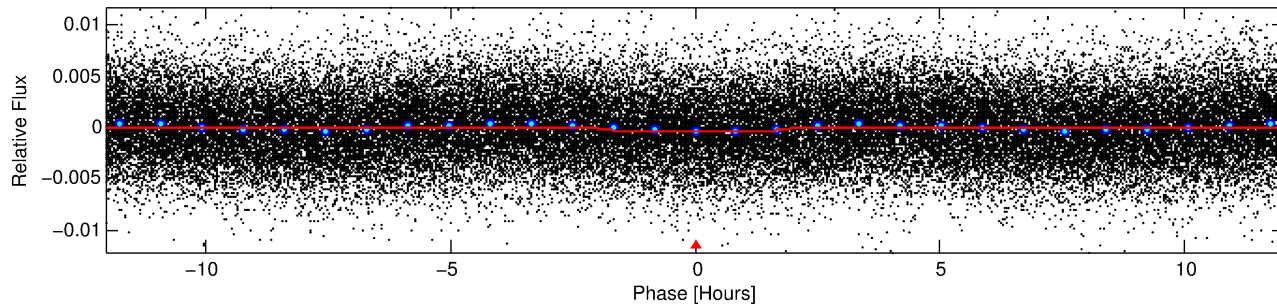
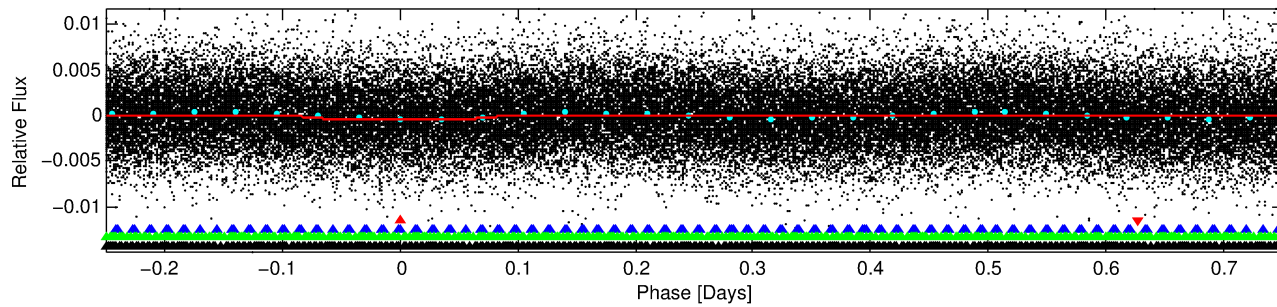
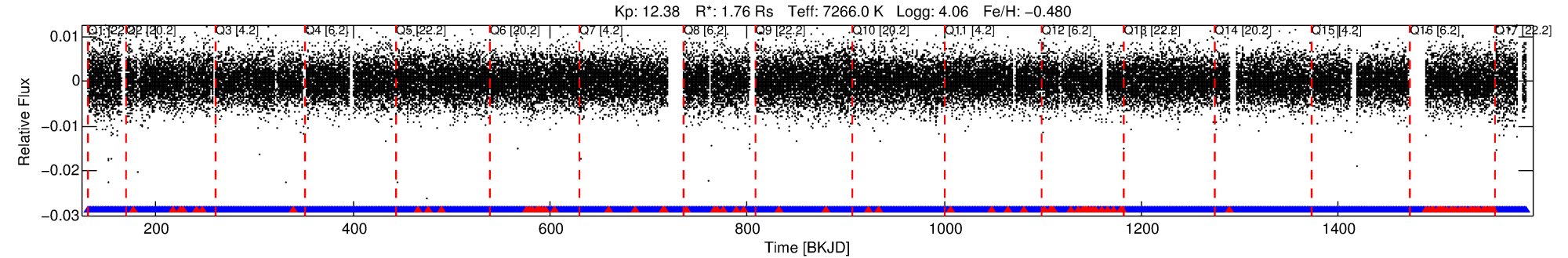
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011769929-01

No Significant Match Found

DV One-Page Summary

KIC: 11769929 Candidate: 1 of 4 Period: 1.003 d



DV Fit Results:

Period = 1.00295 [0.00001] d
Epoch = 131.6730 [0.0042] BKJD
Rp/R* = 0.0202 [0.0045]
a/R* = 1.32 [0.72]
b = 0.88 [0.32]
Seff = 16991.03 [5340.68]
Teq = 2911 [229] K
Rp = 3.87 [1.16] Re
a = 0.0213 [0.0042] AU
Ag = 3.56 [2.14] [1.20 σ]
Teffp = 6183 [797] K [3.95 σ]

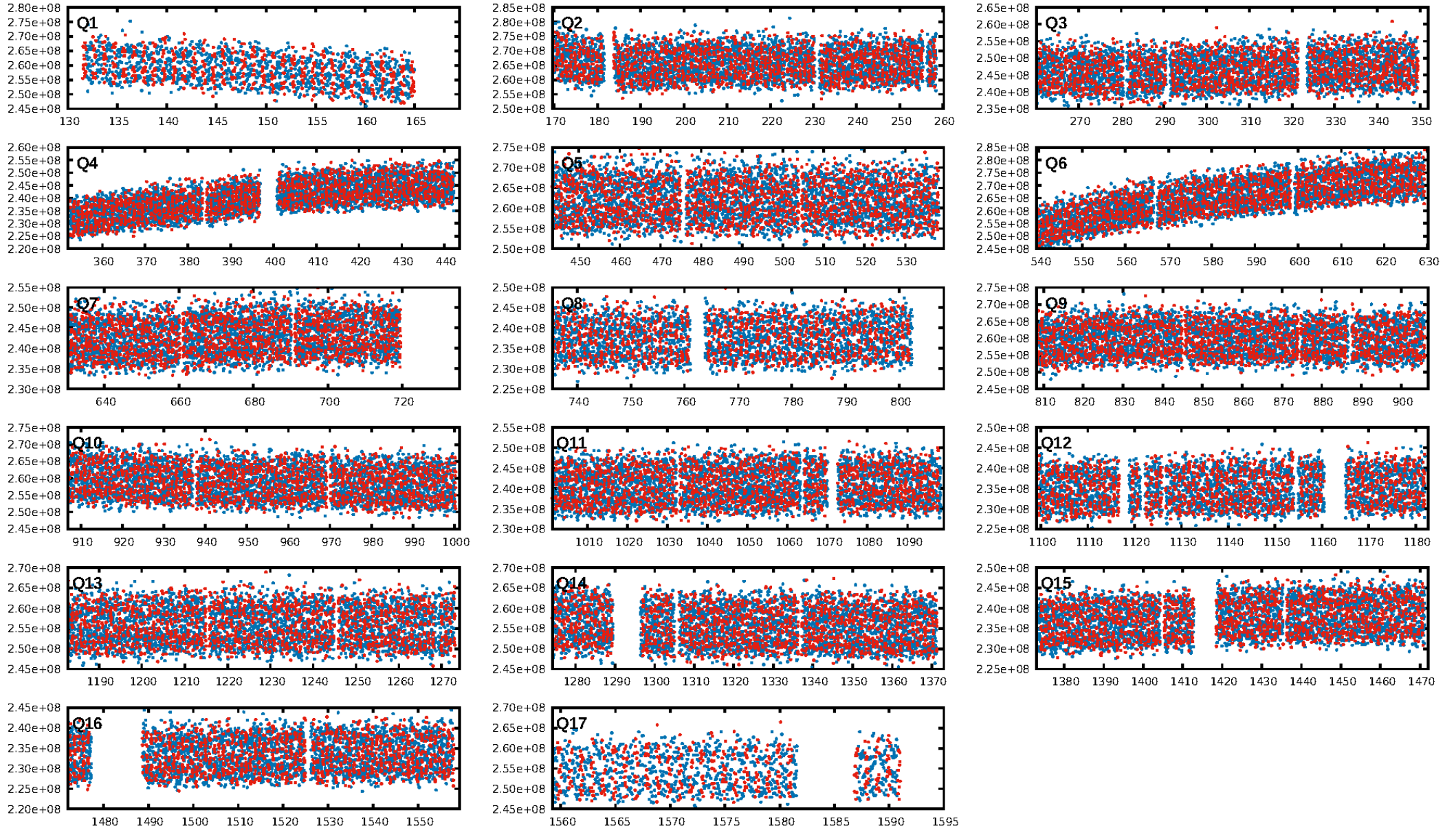
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.7% [2.94 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [1196/1287]
GhostDiagnostic-chr: 1.619
Centroid-sig: 0.0%
Centroid-so: 0.311 arcsec [6.35 σ]
OotOffset-rm: 0.075 arcsec [0.41 σ]
KicOffset-rm: 0.168 arcsec [0.86 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.71 [12/17]
DiffImageOverlap-fno: 1.00 [17/17]

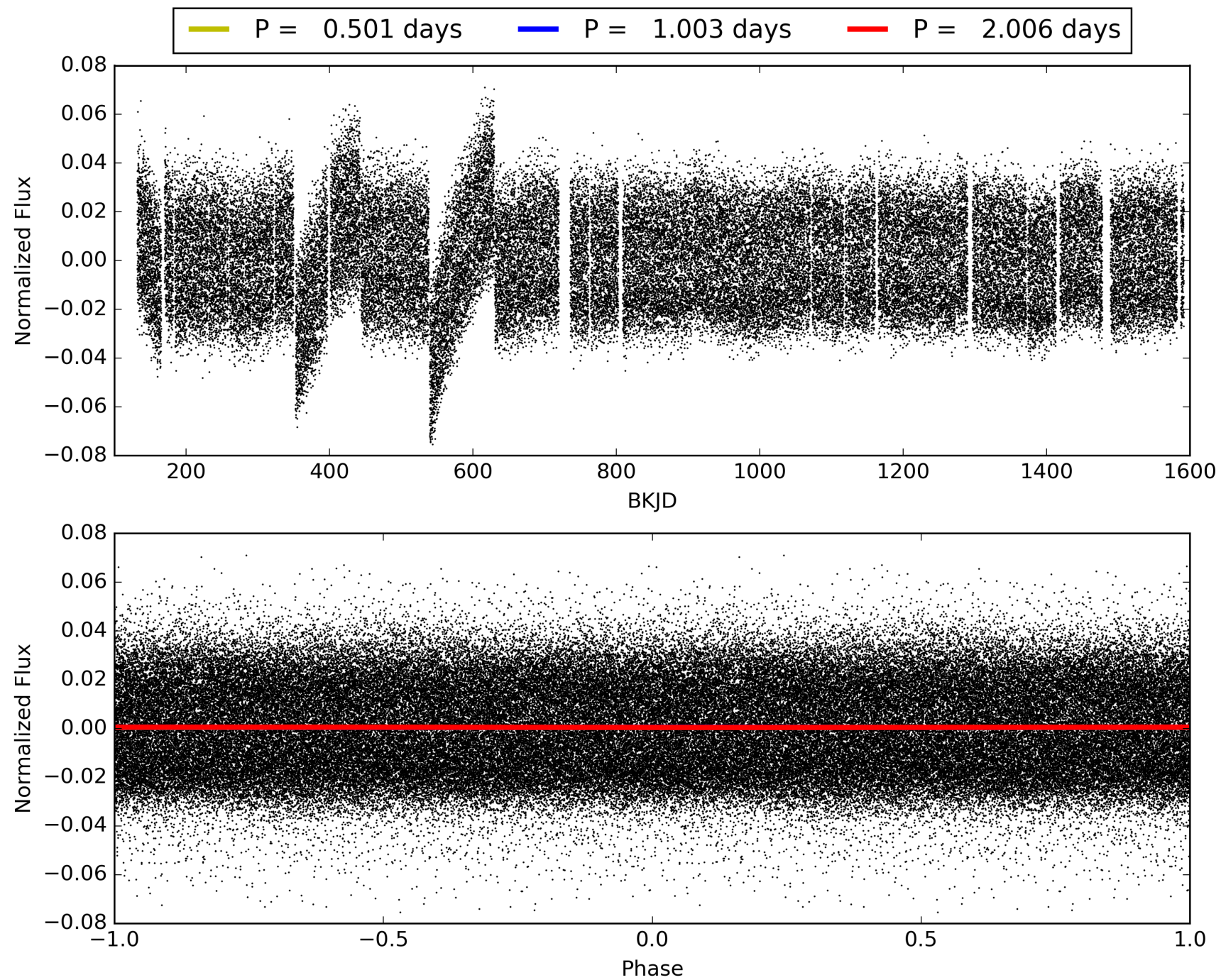
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:43:36 Z

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

TCE 011769929-01, PDC Light Curves

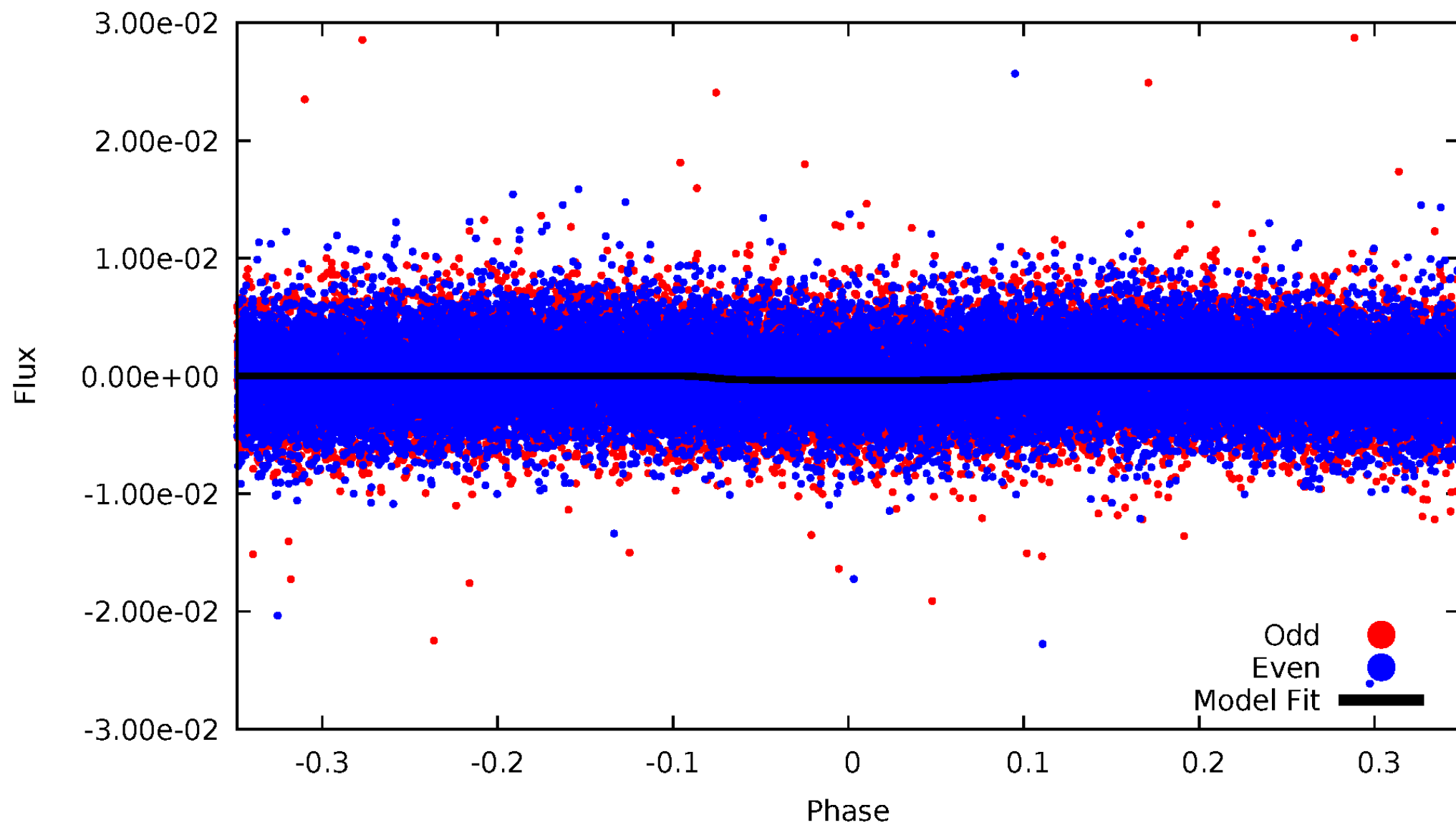


TCE 011769929-01



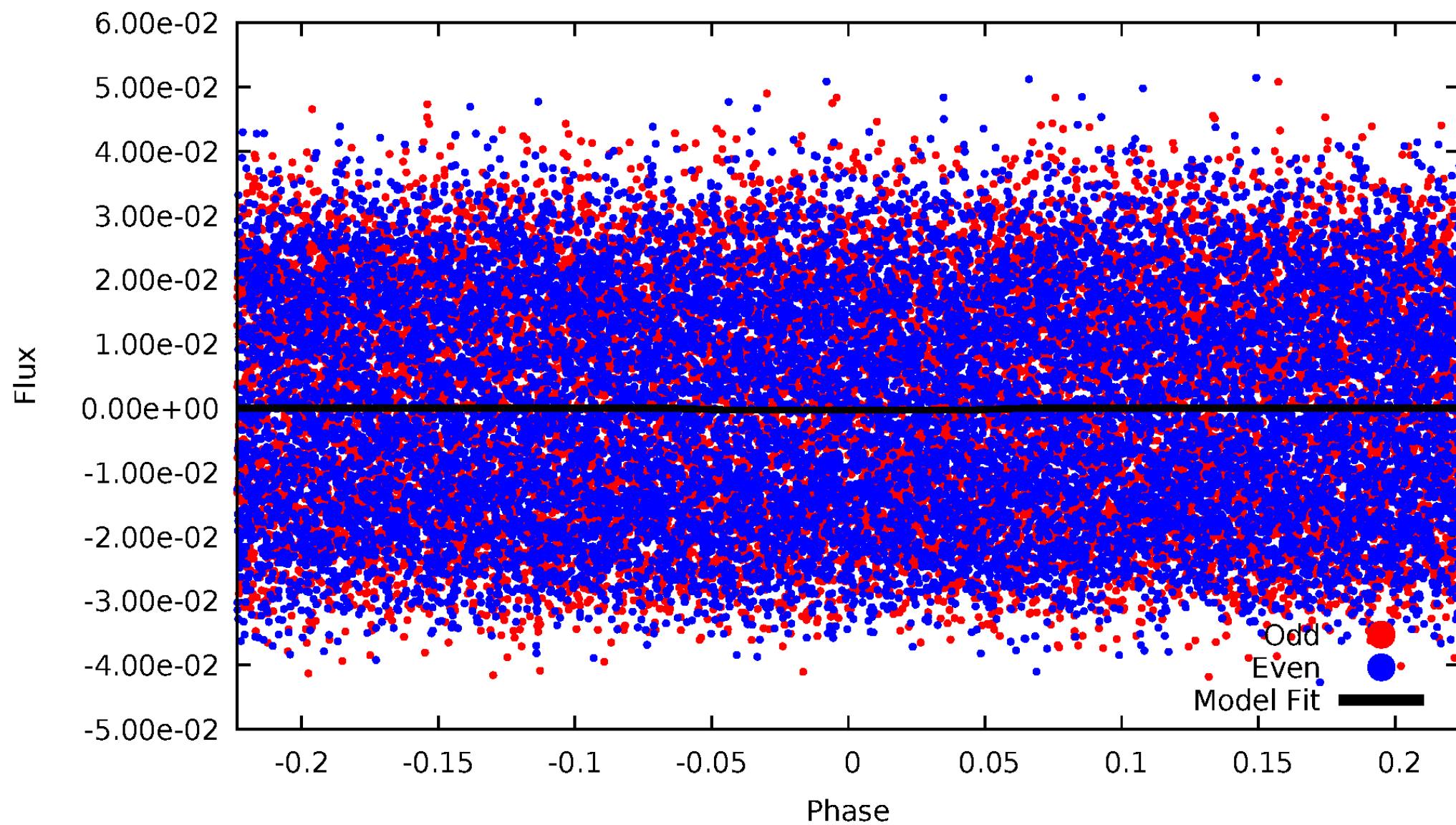
DV Odd/Even

TCE 011769929-01



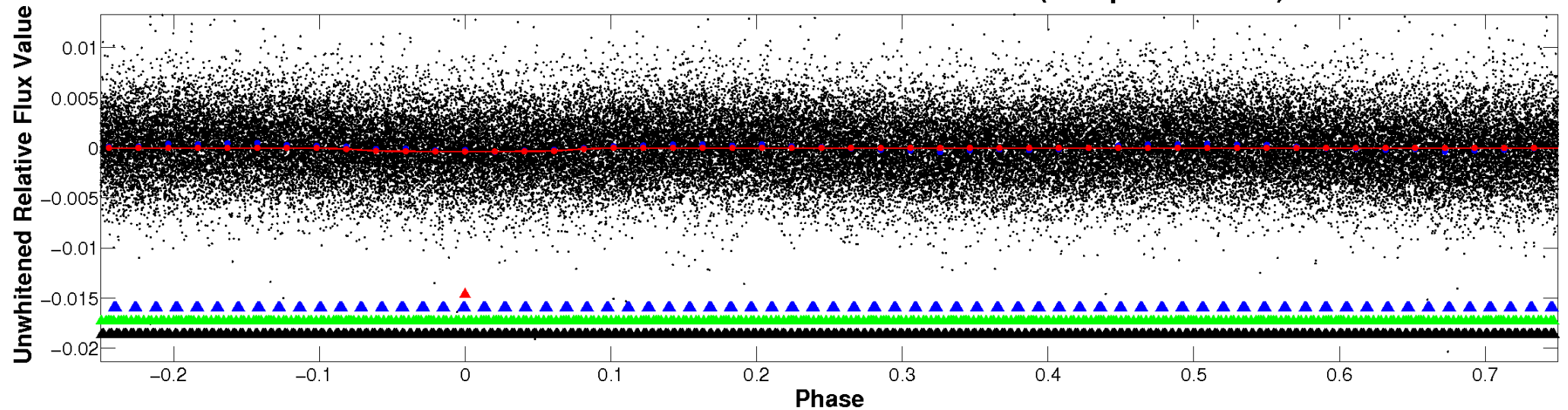
ALT Odd/Even

TCE 011769929-01

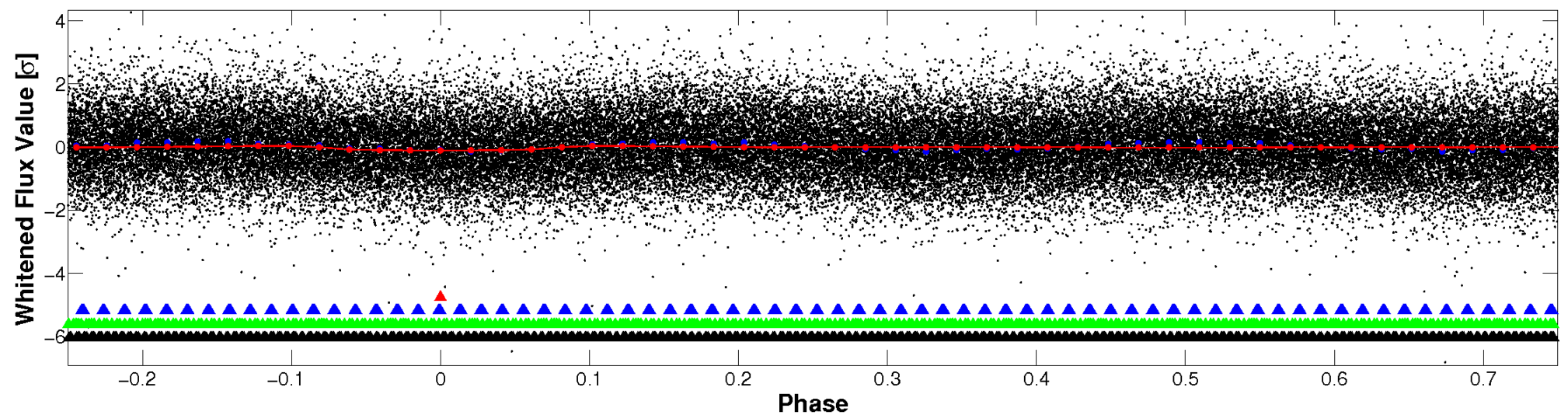


Non-Whitened Vs. Whitened Light Curve

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

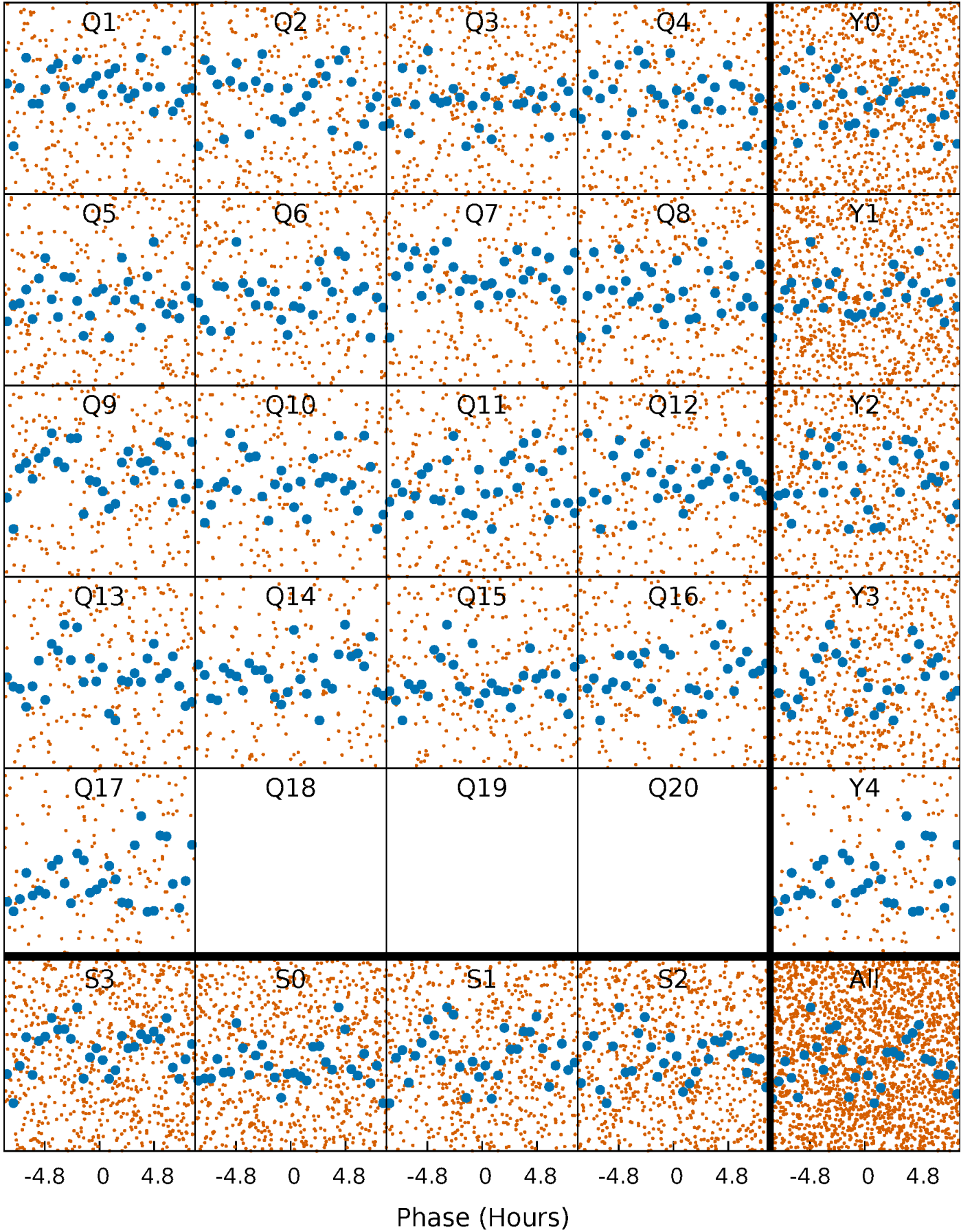


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



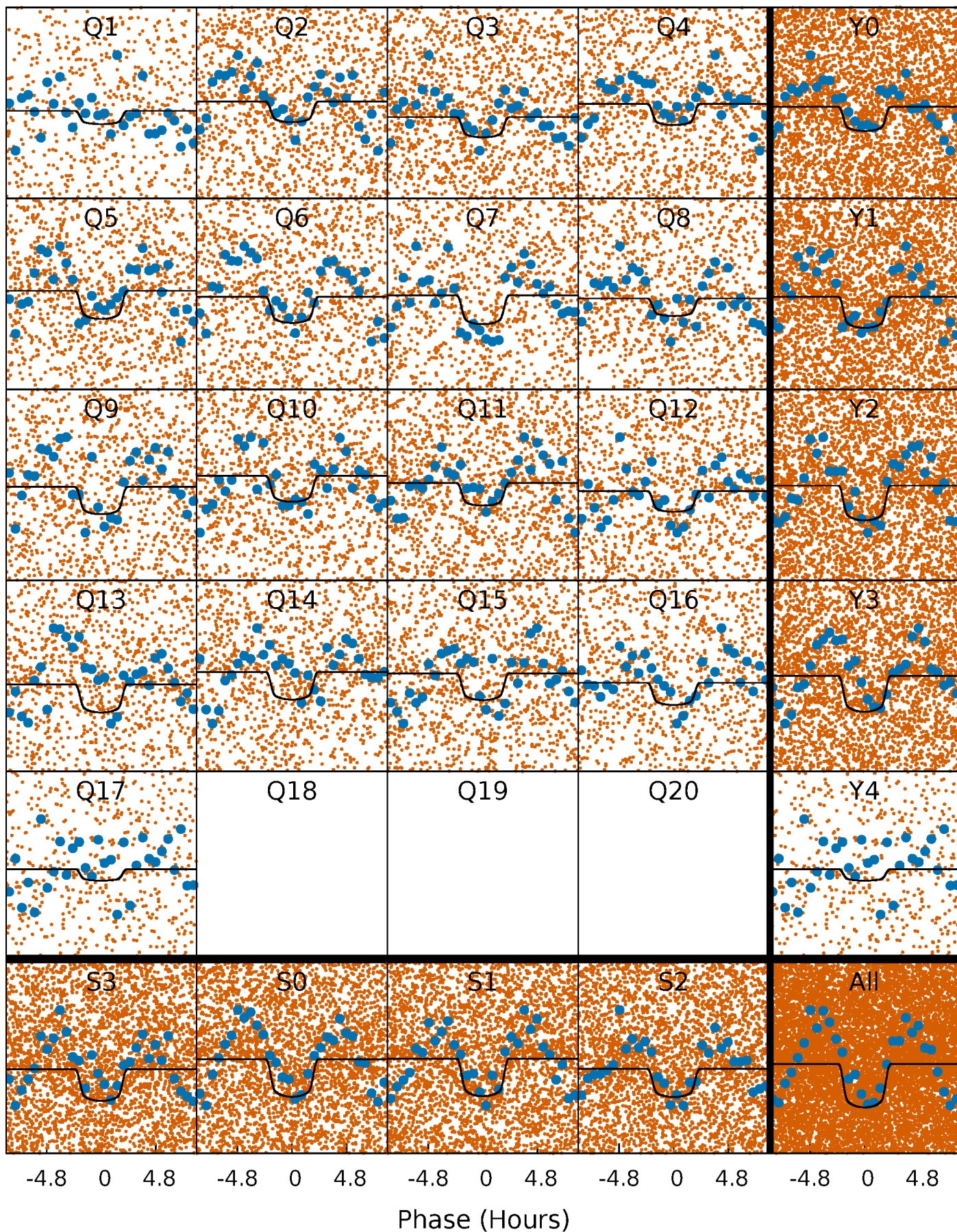
PDC Quarter-Phased Transit Curves

TCE 011769929-01 P= 1.002947 Days $T_0=131.672977$ (BKJD)



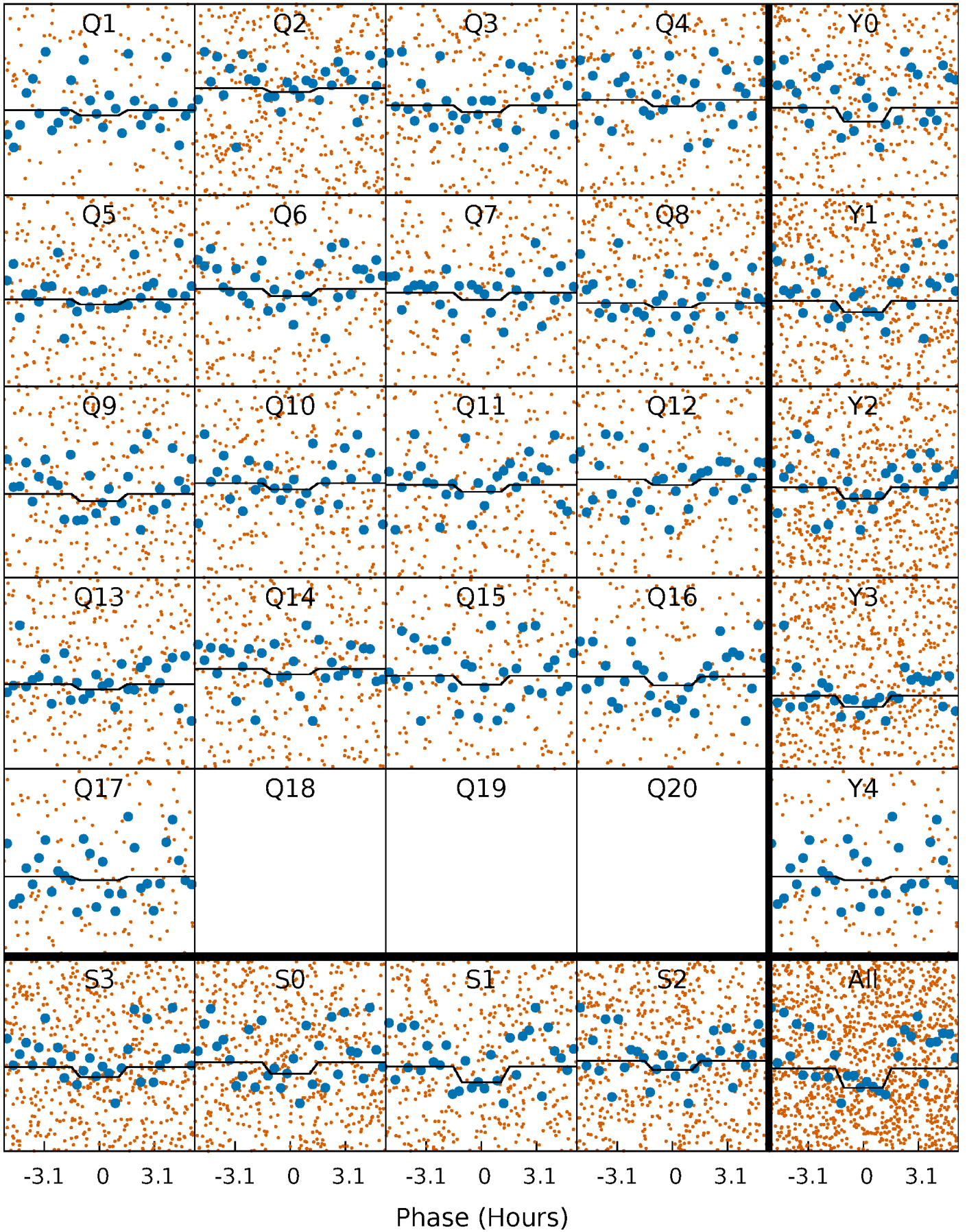
DV Quarter-Phased Transit Curves

TCE 011769929-01 P= 1.002947 Days $T_0=131.672977$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

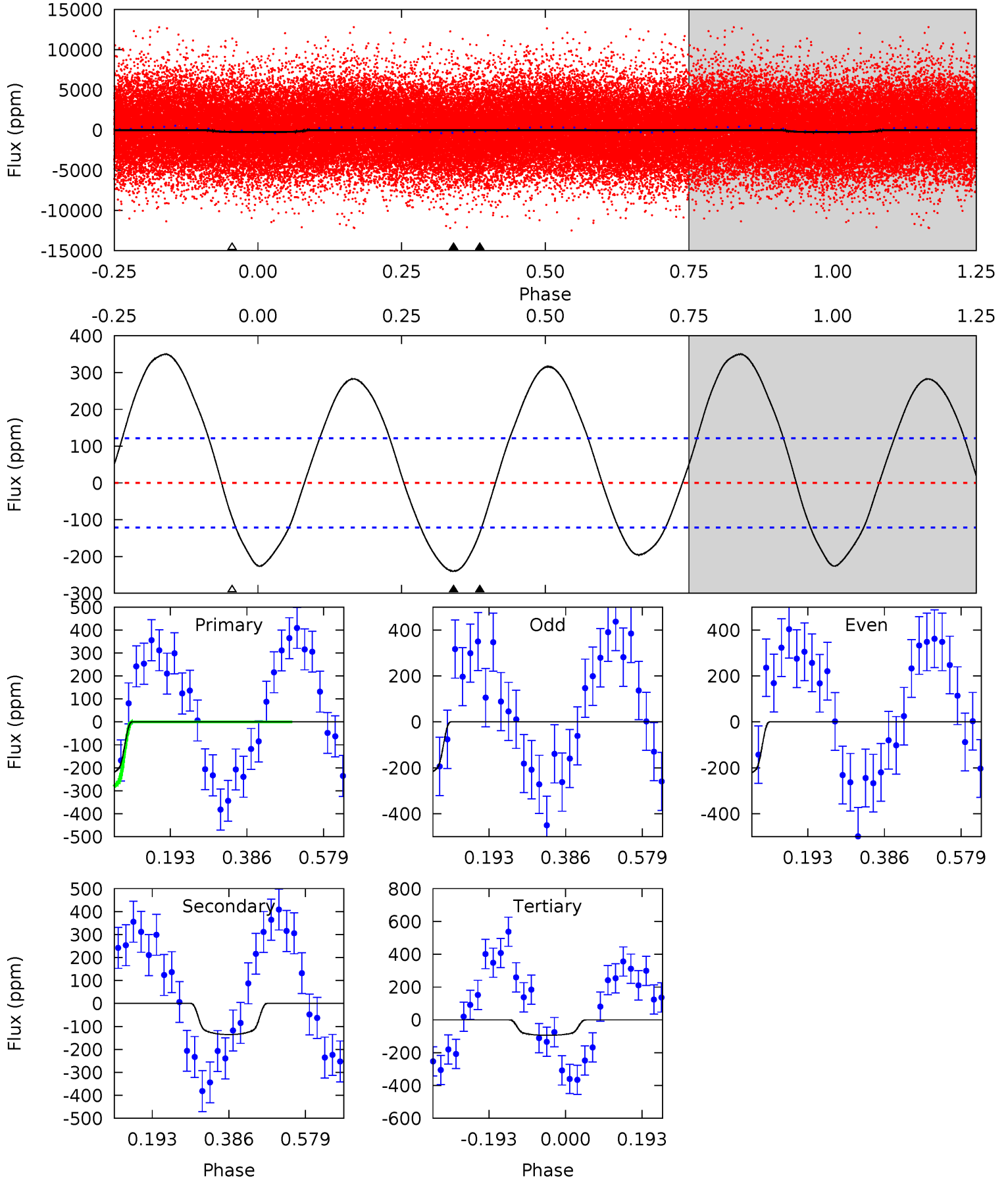
TCE 011769929-01 P= 1.003006 Days $T_0=131.656165$ (BKJD)



DV Model-Shift Uniqueness Test

011769929-01, P = 1.002947 Days, E = 130.670030 Days

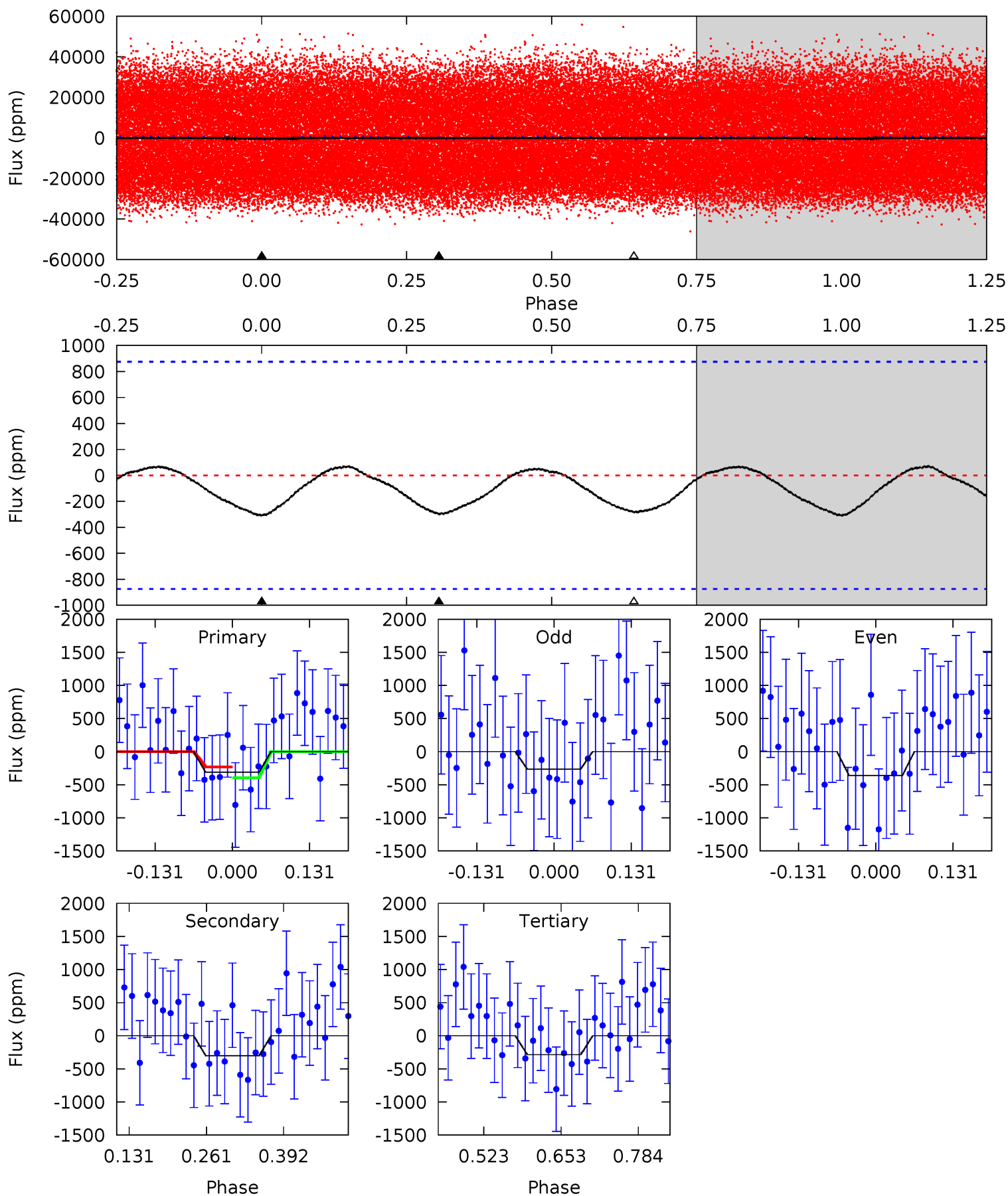
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.73	4.93	3.43	0	4.43	1.30	6.72	5.30	8.73	1.51	4.93	0.12	1.09	0.59	2.45



Alt Model-Shift Uniqueness Test

011769929-01, P = 1.003006 Days, E = 130.653159 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.61	1.55	1.47	0	4.51	1.51	0.63	0.14	1.61	0.07	1.55	0.25	2.28	0.19	0.42



Stellar Parameters For KIC 011769929

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7266^{+79}_{-87}	$4.056^{+0.182}_{-0.098}$	$-0.480^{+0.200}_{-0.150}$	$1.757^{+0.293}_{-0.358}$	$1.282^{+0.147}_{-0.079}$	$0.333^{+0.276}_{-0.110}$
	+1%/-1%	+4%/-2%	+42%/-31%	+17%/-20%	+11%/-6%	+83%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011769929-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-136 ± 27	$3.78^{+1.02}_{-0.82}$	4029^{+184}_{-225}	5290^{+786}_{-608}	$2.374^{+1.669}_{-0.993}$
Alt.	-300 ± 194	$3.22^{+0.86}_{-0.90}$	4041^{+196}_{-226}	7133^{+2179}_{-1726}	$6.935^{+9.657}_{-4.525}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

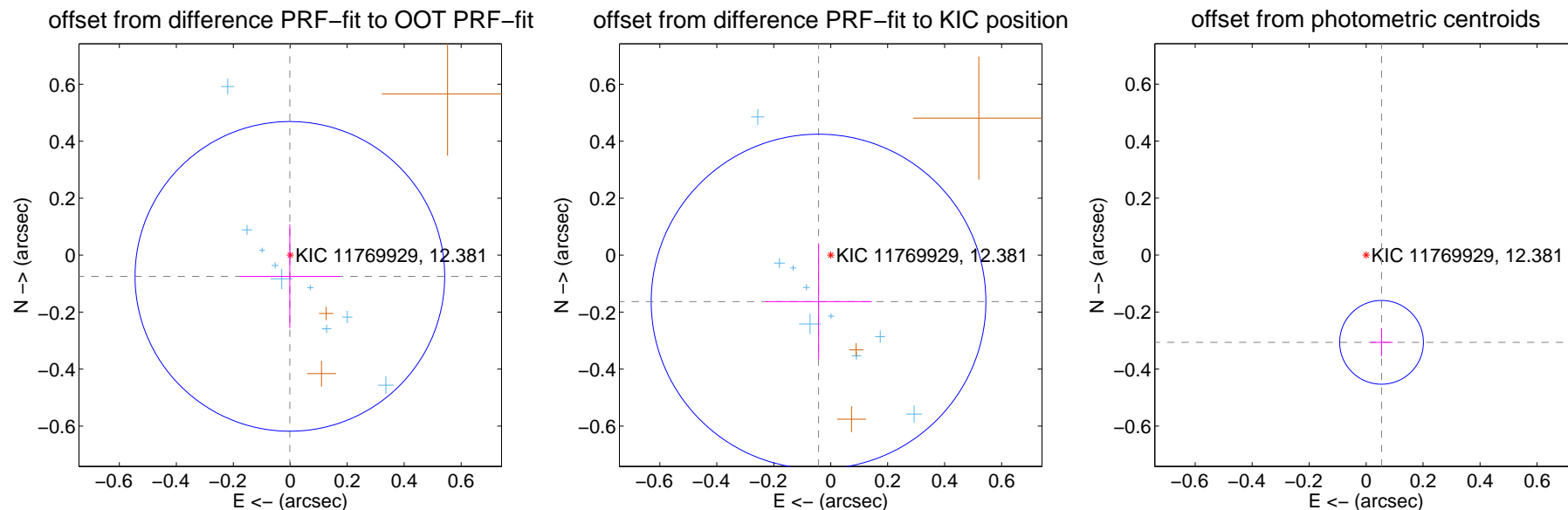
DV Centroid Data

Supplemental centroid analysis for 011769929-01. Kepler magnitude: 12.38. Transit SNR 9.78

There are 12 quarters with good PRF difference image offsets

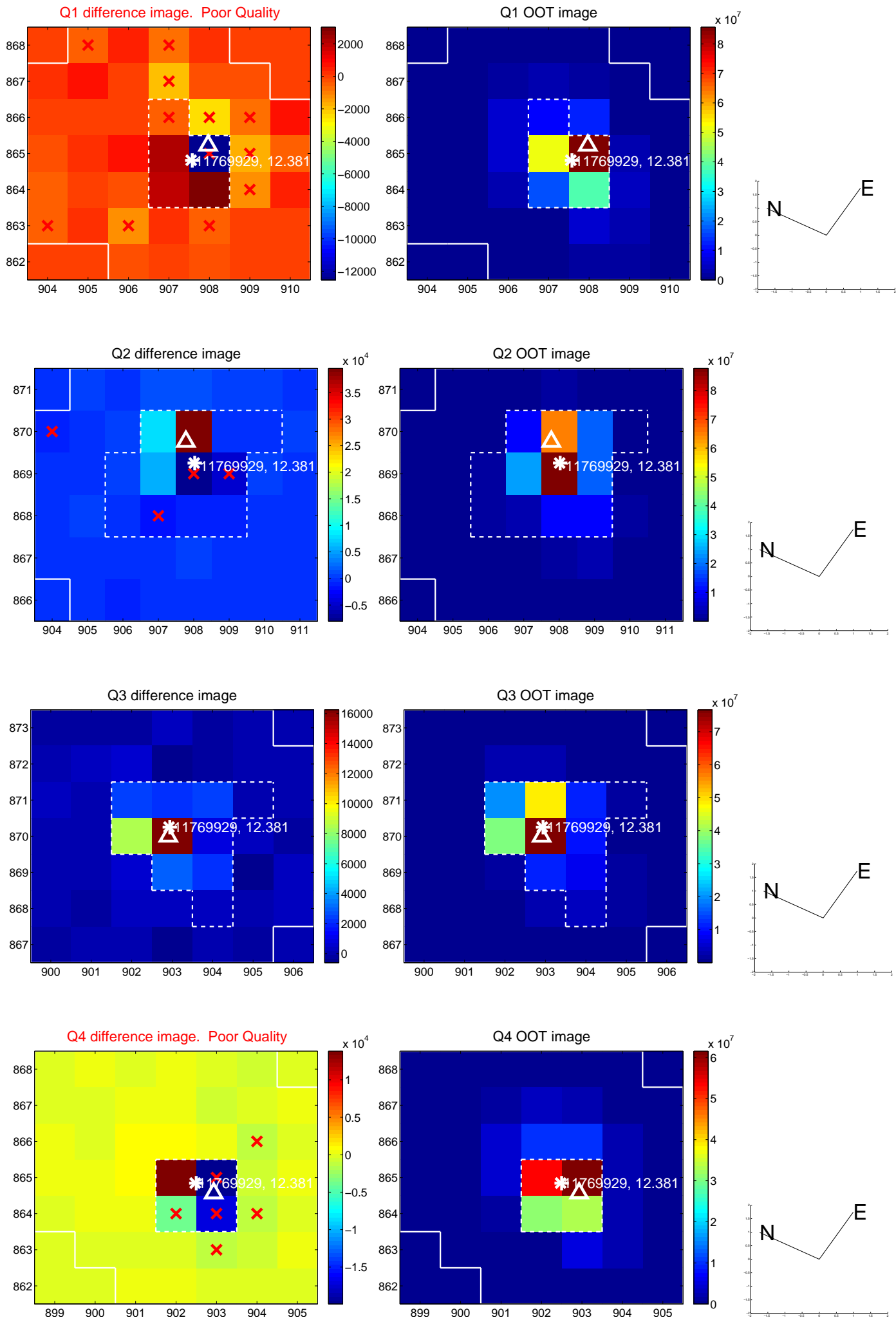
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.075 ± 0.181	0.41	0.001 ± 0.175	-0.075 ± 0.182
PRF-fit source offset from KIC position	0.168 ± 0.196	0.86	0.043 ± 0.187	-0.163 ± 0.203
photometric centroid source offset	0.31 ± 0.05	6.35	-0.05 ± 0.04	-0.31 ± 0.05

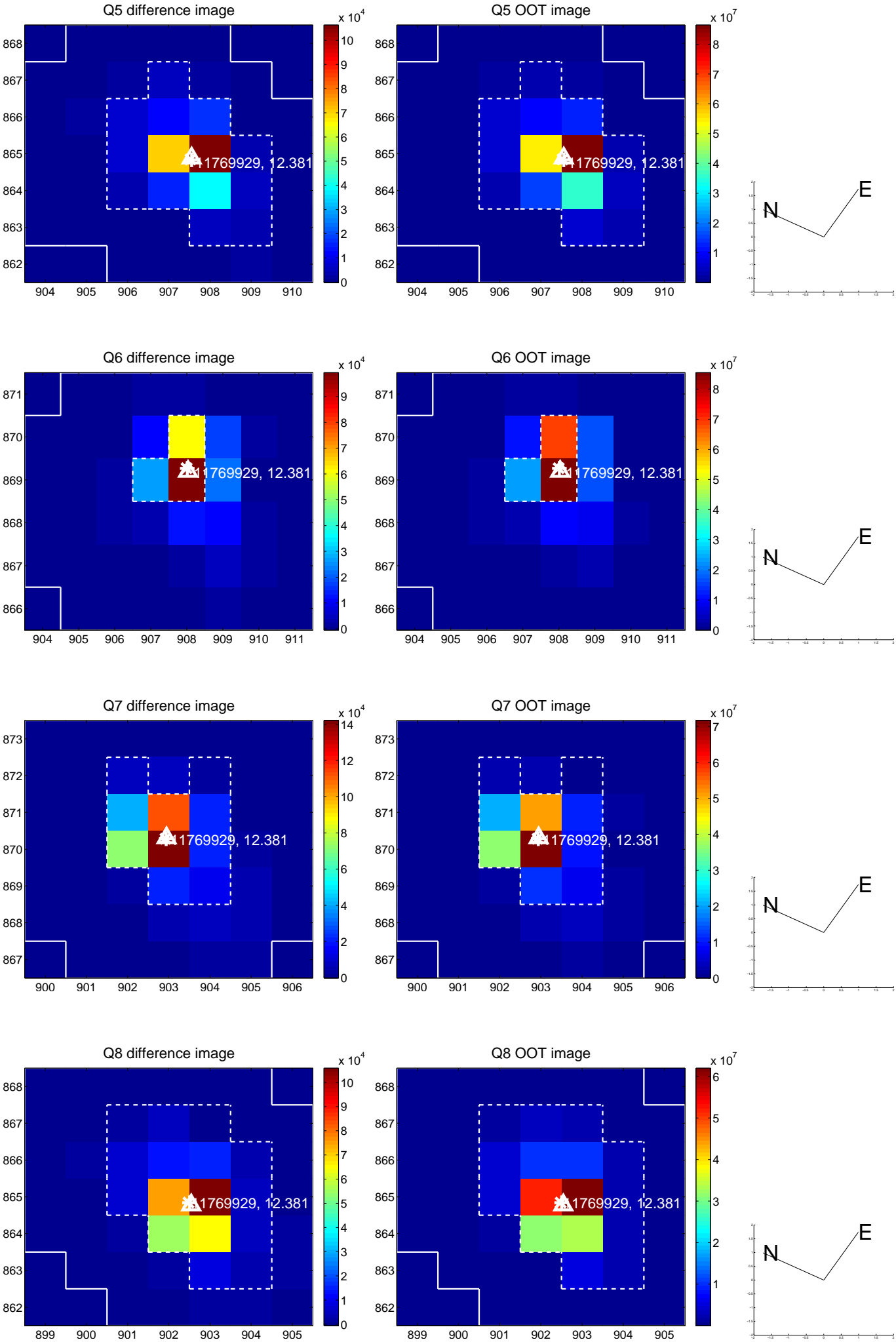


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

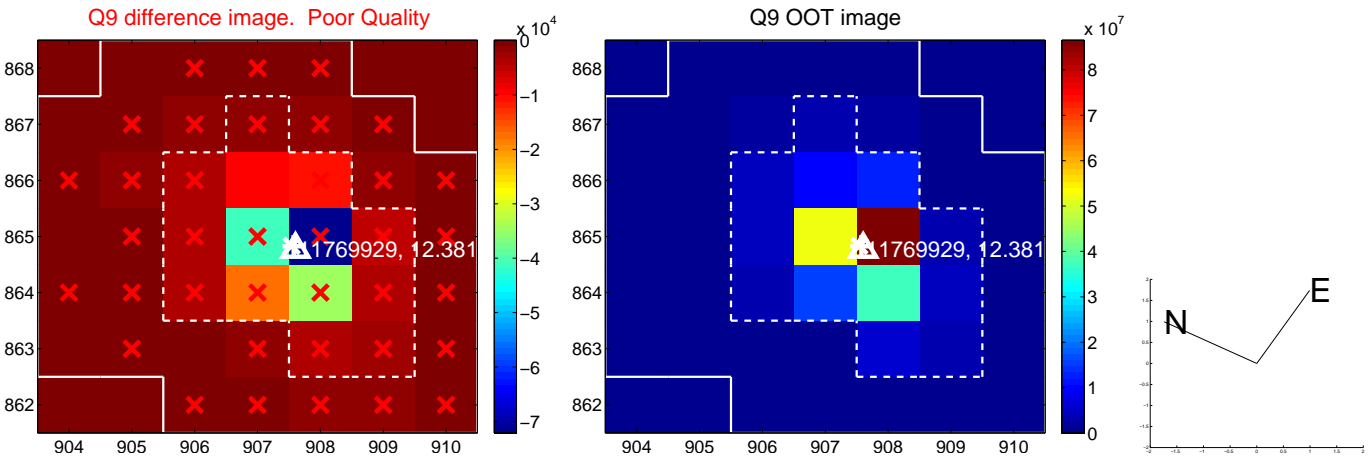
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



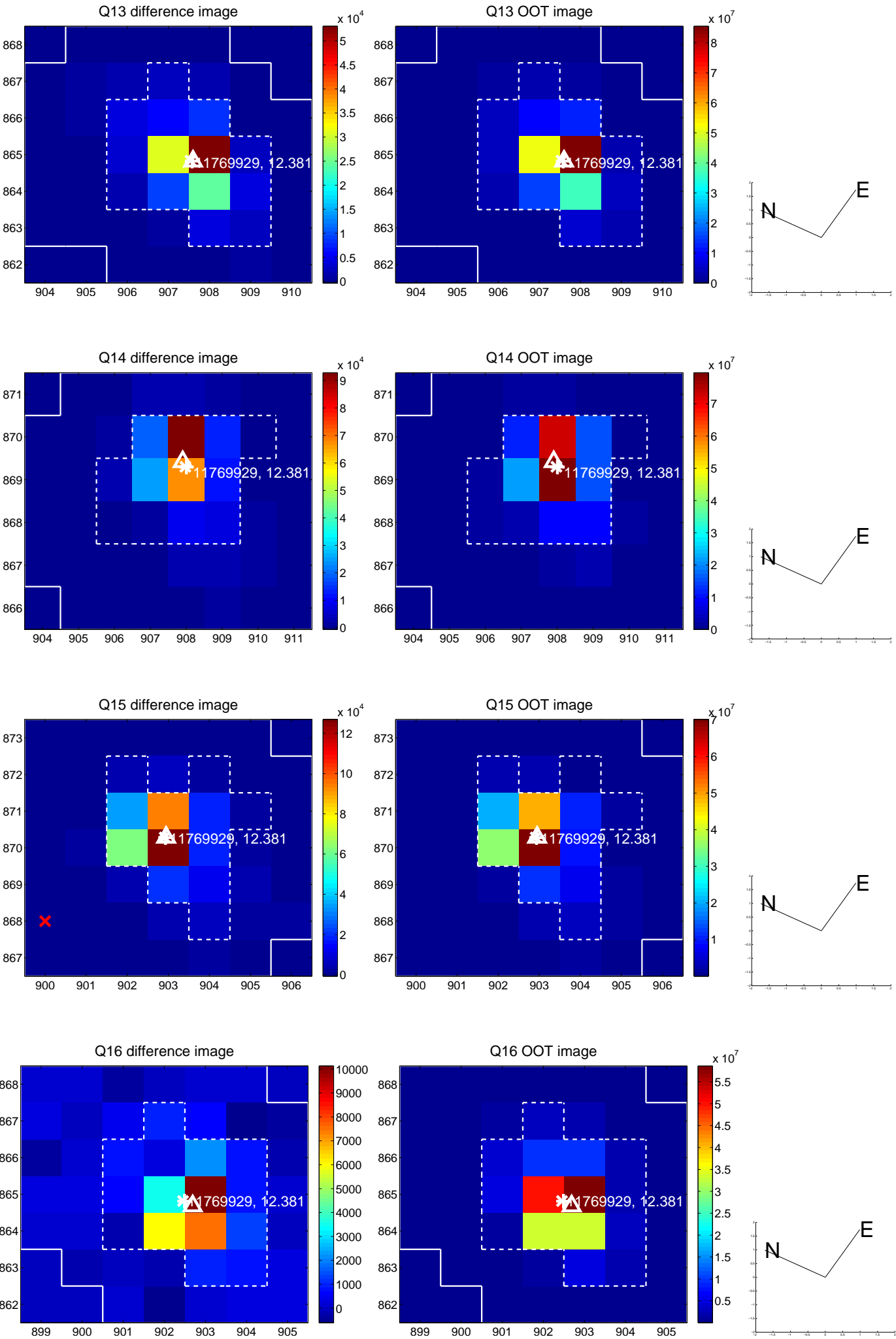
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



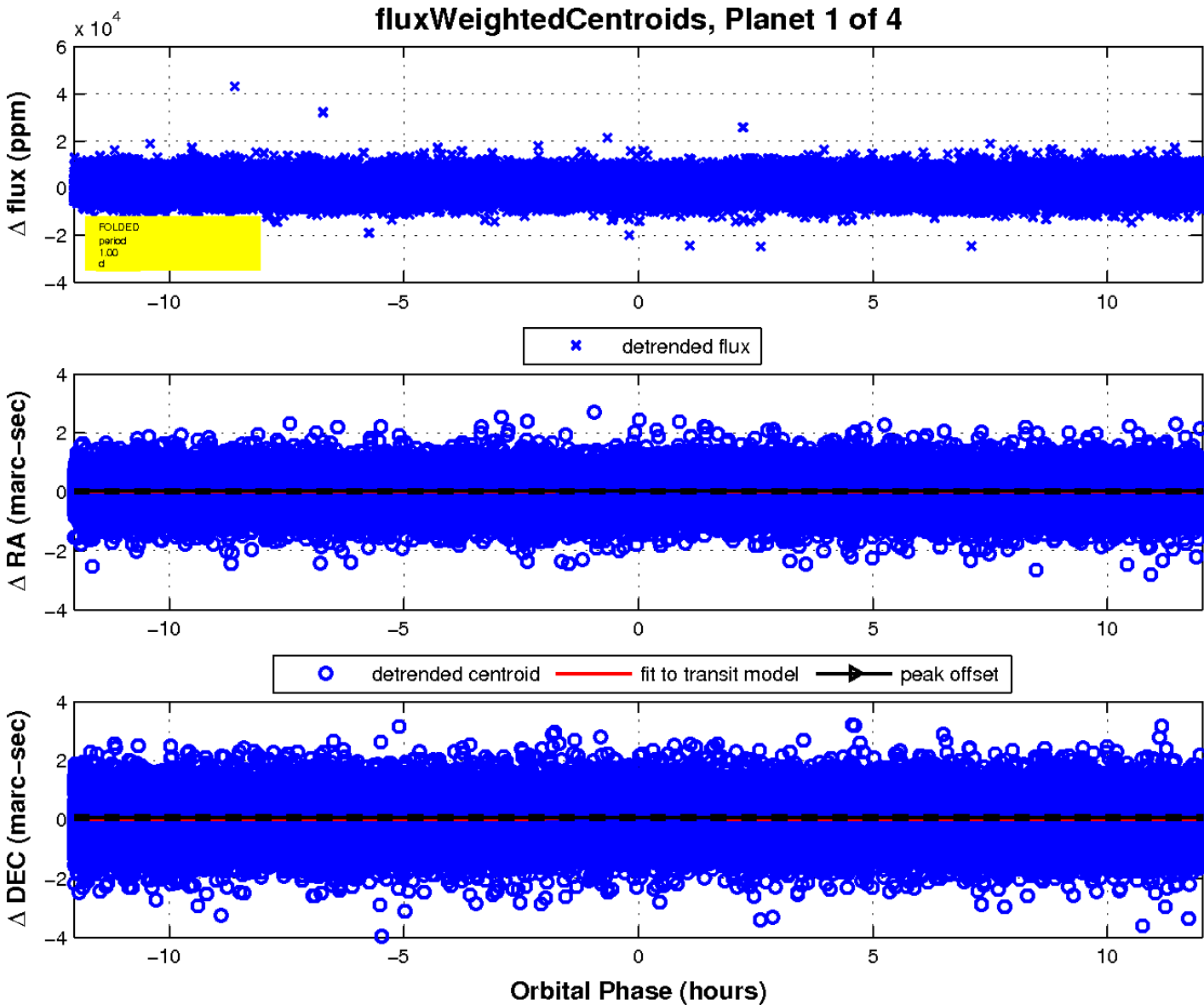
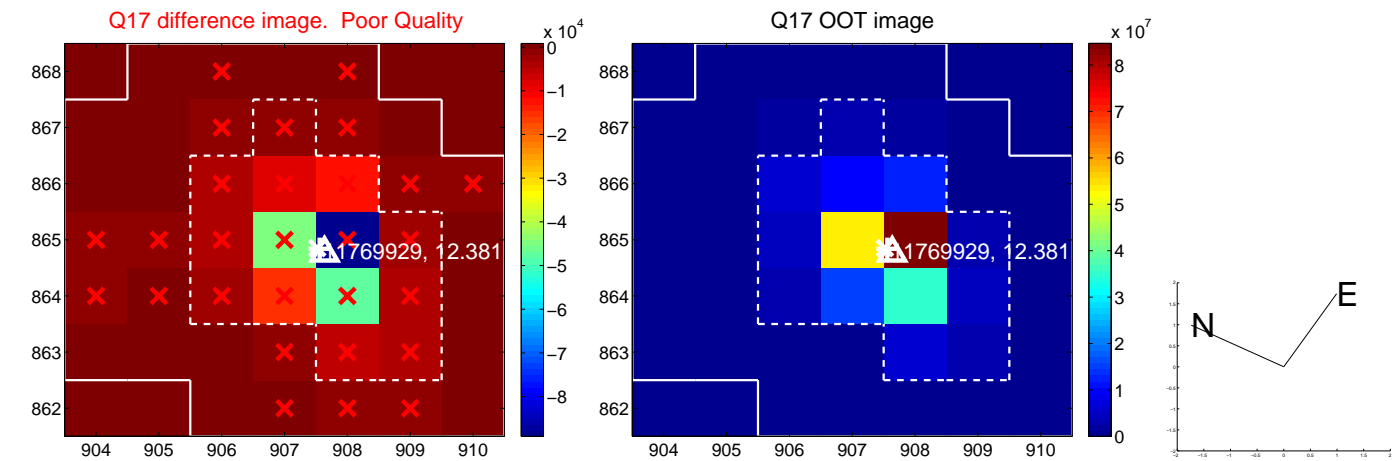
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

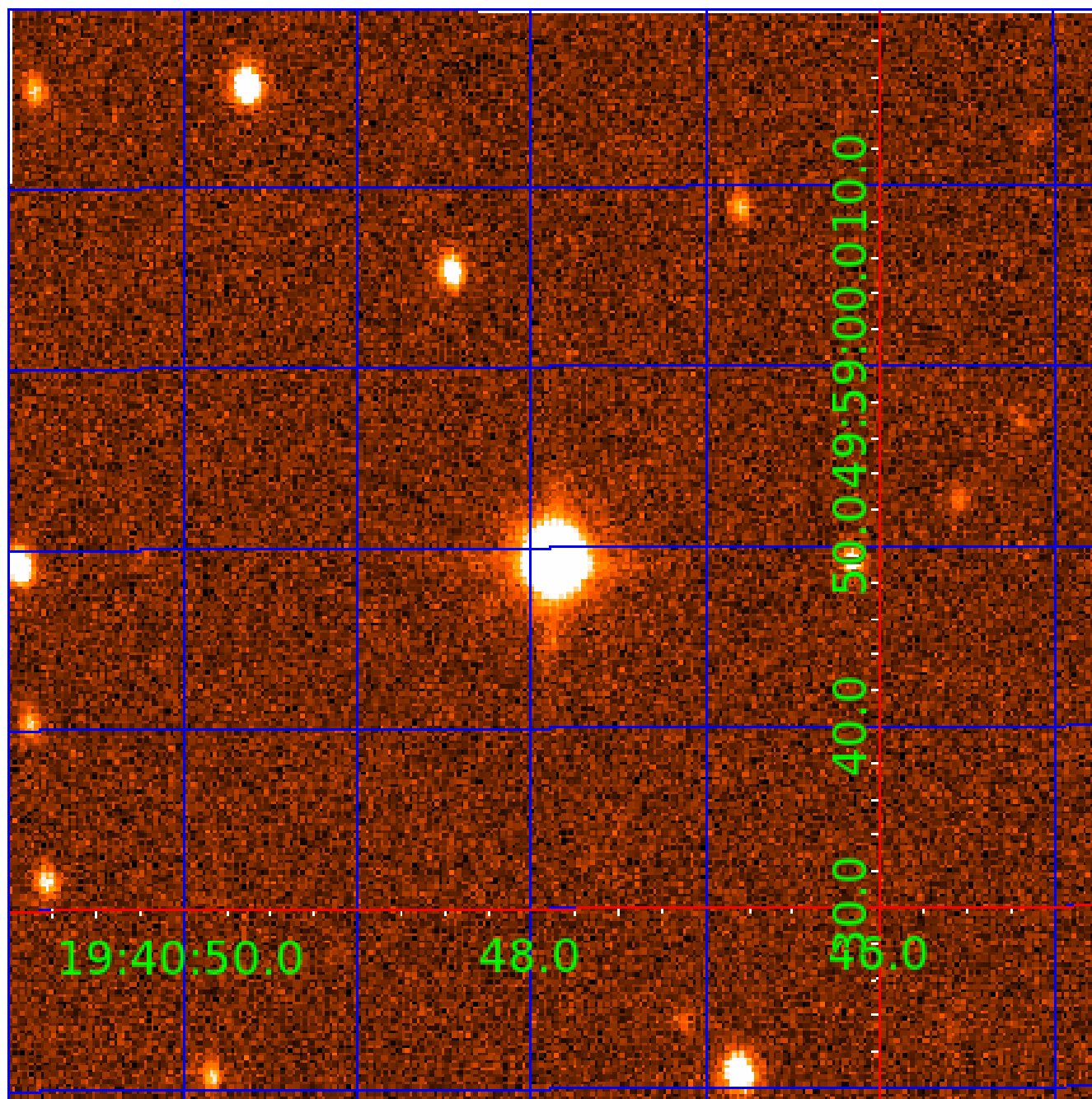


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011769929

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})
011769929-01	OBS	No	1.002947	131.672977	369.3	4.194	14.0	9.8	1.76	7266	3.87	16991.03
011769929-02	OBS	No	3.799893	132.916189	1566.2	12.482	10.0	13.2	1.76	7266	8.18	2876.70
011769929-03	OBS	No	3.800188	133.653865	549.5	6.801	12.0	3.9	1.76	7266	4.66	2876.41
011769929-04	OBS	No	1.900059	132.420287	109.9	6.000	9.9	-1.0	1.76	7266	1.87	7248.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011769929-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
011769929-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011769929-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
011769929-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

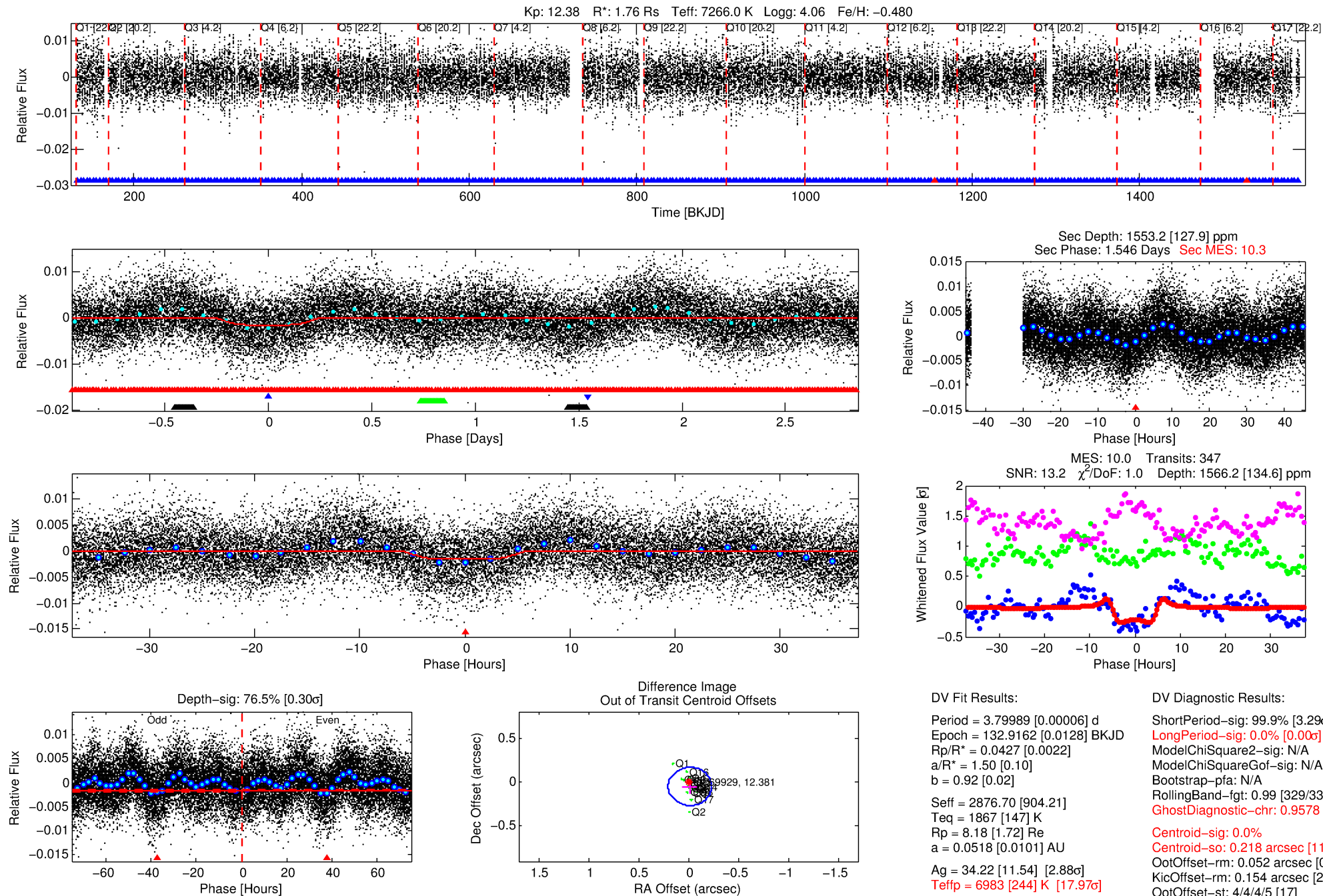
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011769929-02

No Significant Match Found

DV One-Page Summary

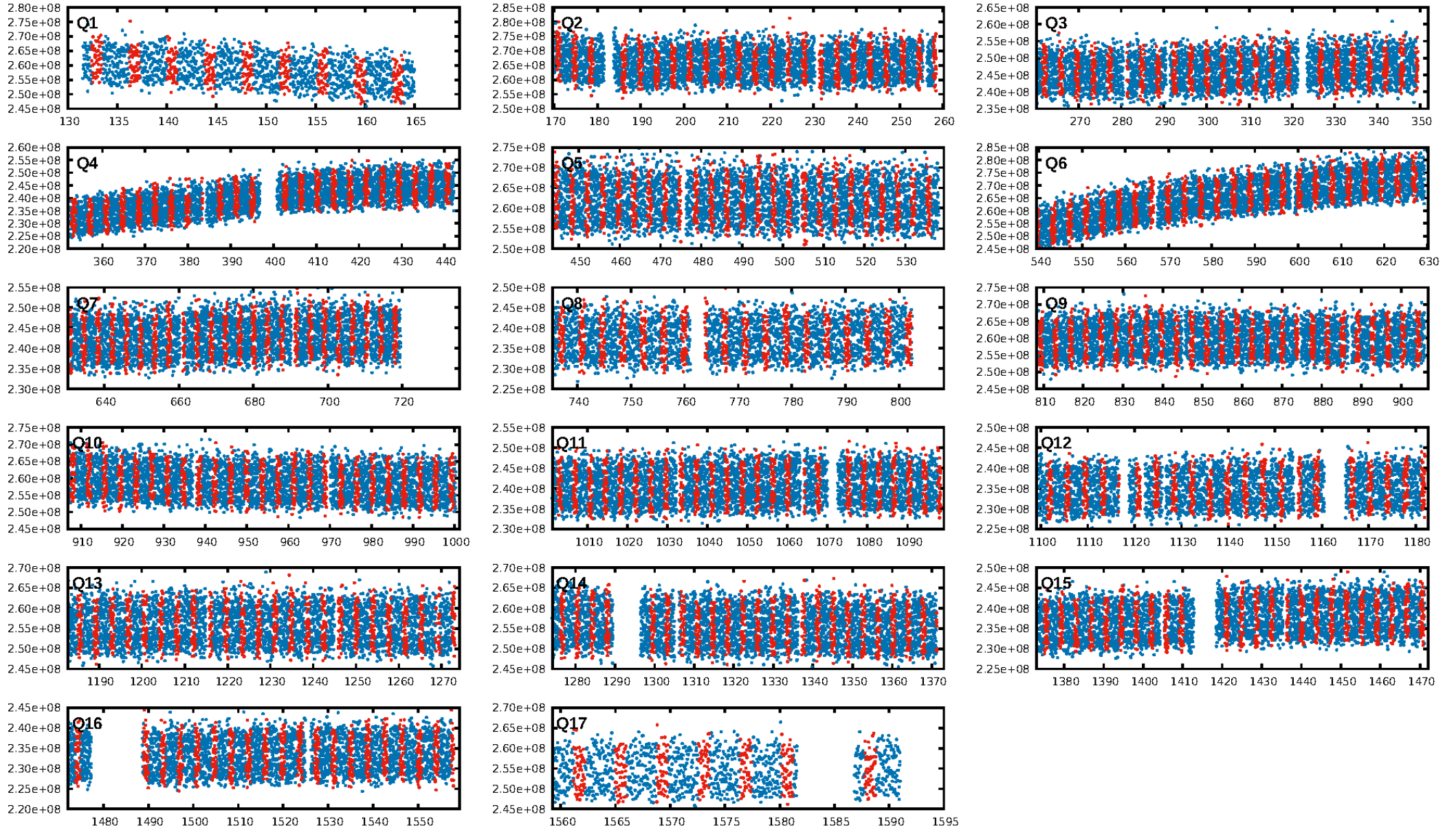
KIC: 11769929 Candidate: 2 of 4 Period: 3.800 d



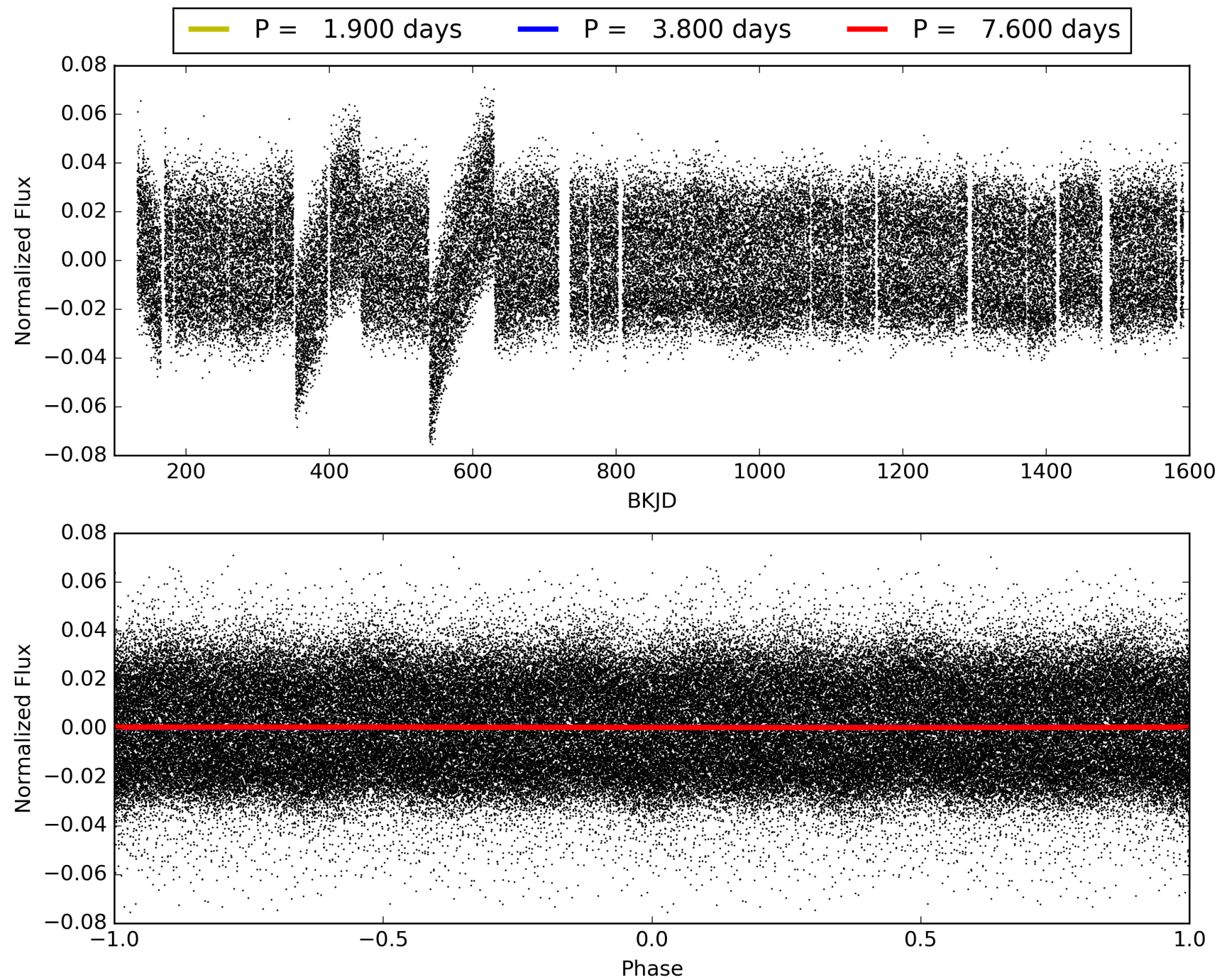
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:43:48 Z

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

TCE 011769929-02, PDC Light Curves

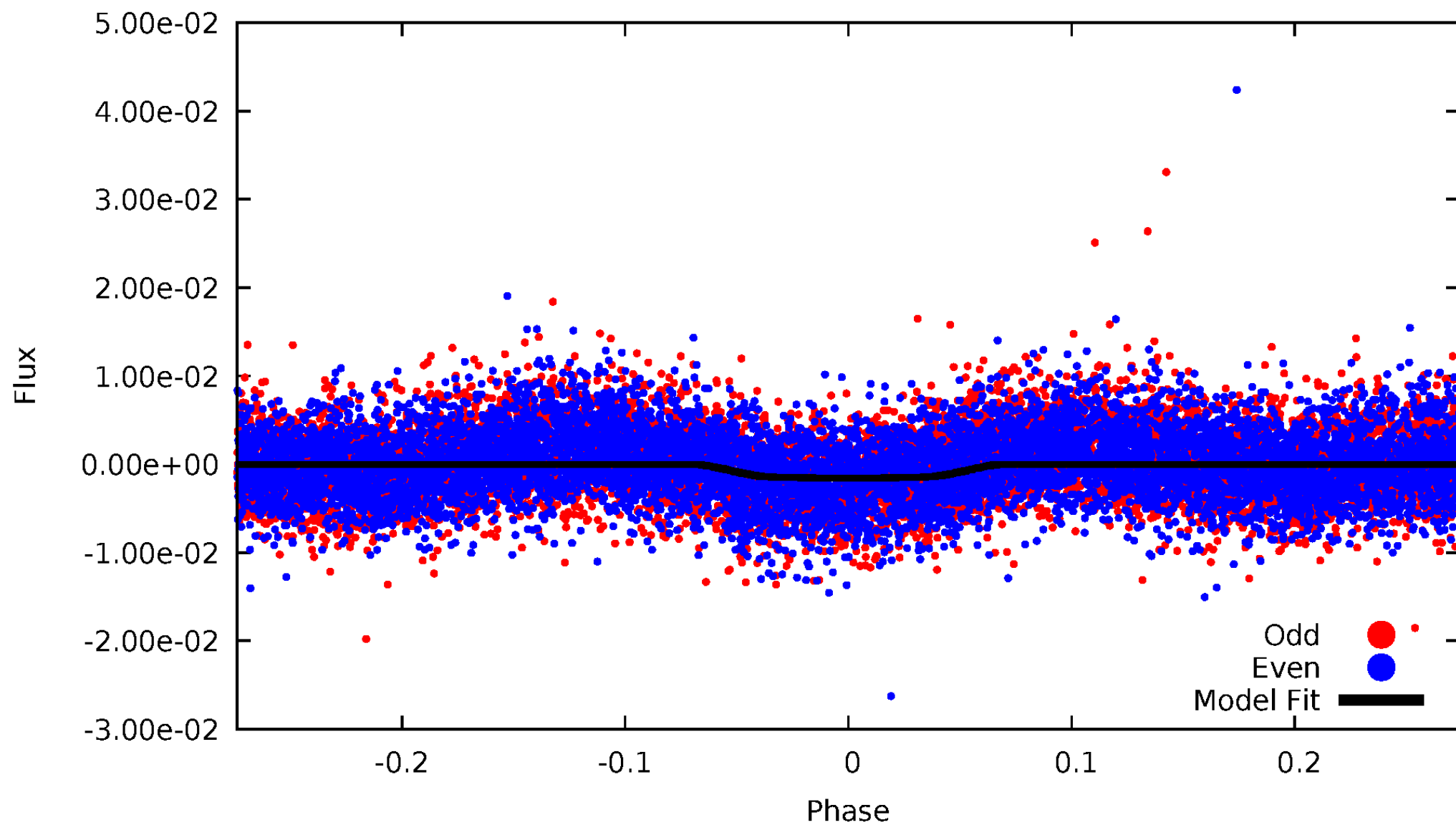


TCE 011769929-02



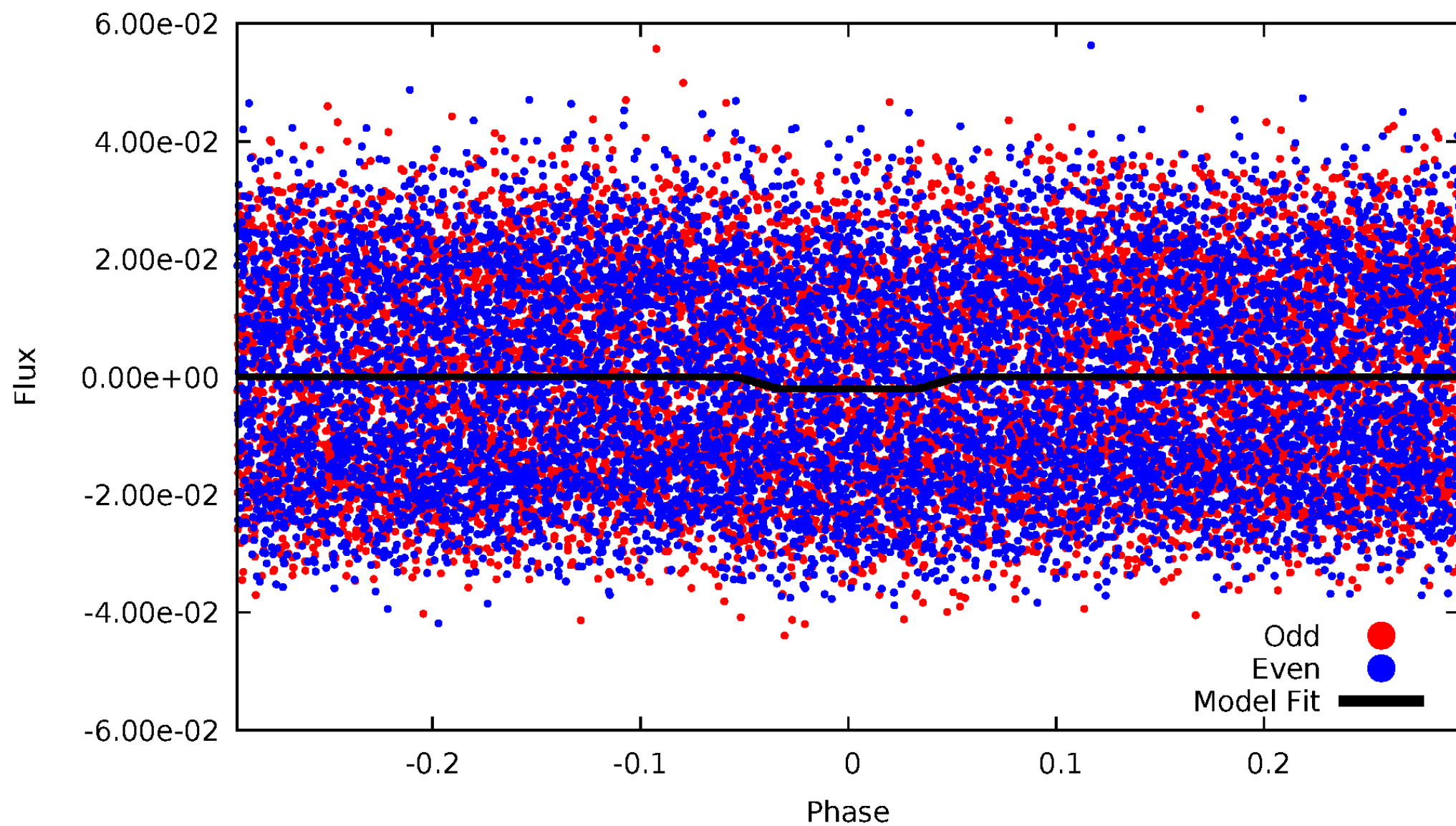
DV Odd/Even

TCE 011769929-02



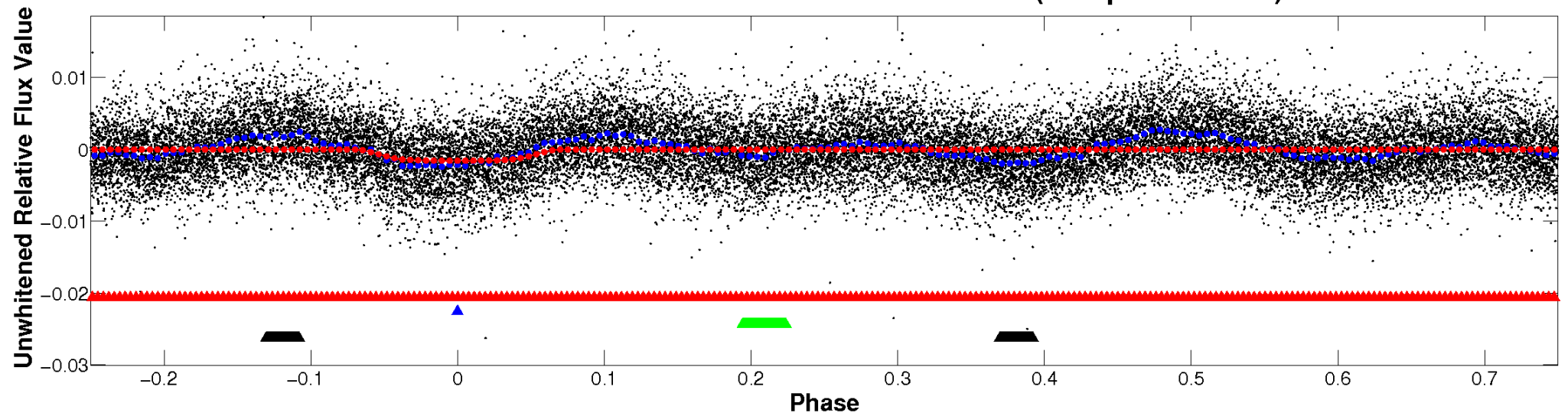
ALT Odd/Even

TCE 011769929-02

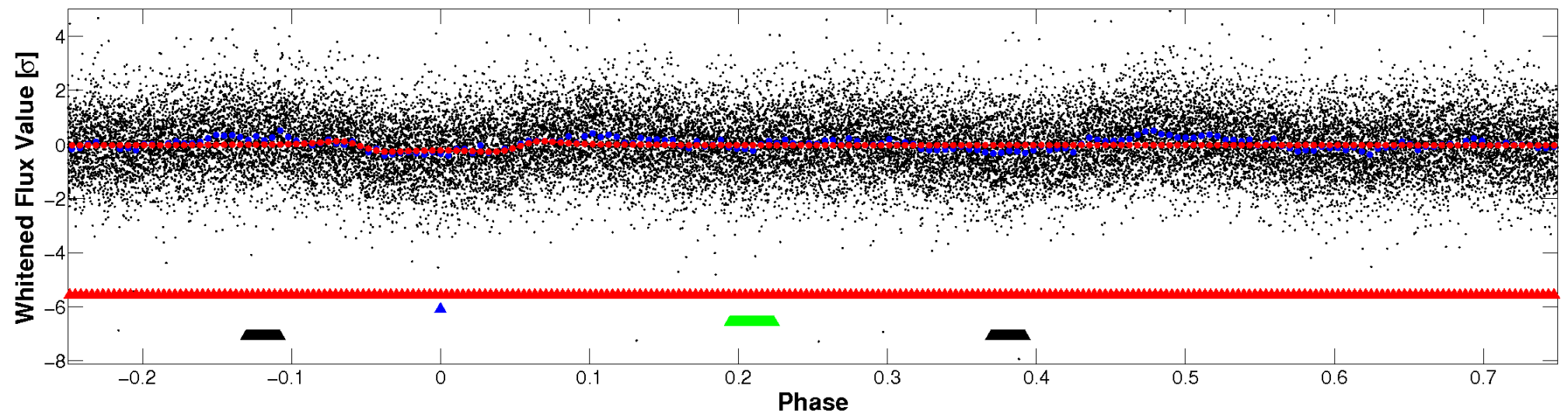


Non-Whitened Vs. Whitened Light Curve

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

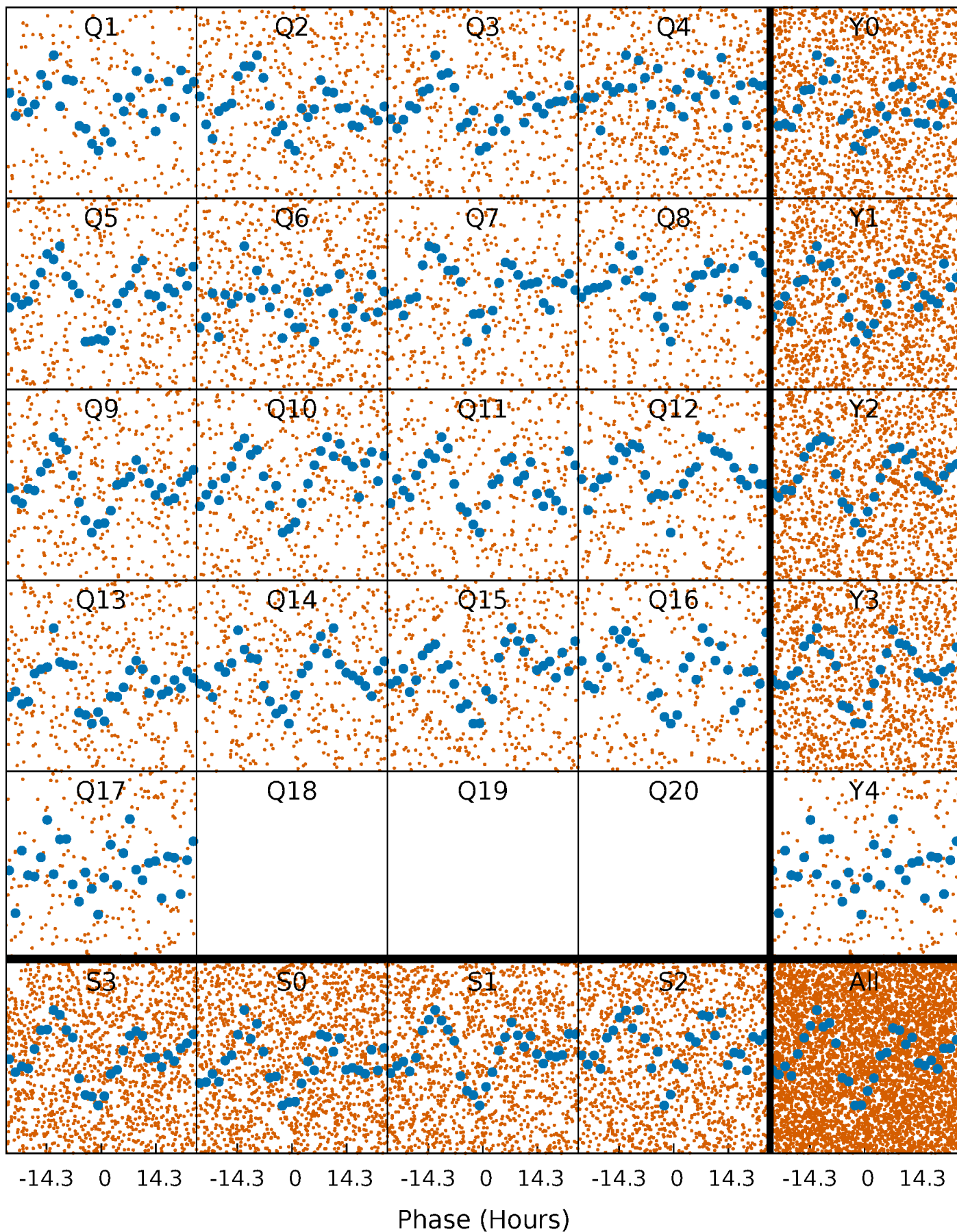


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



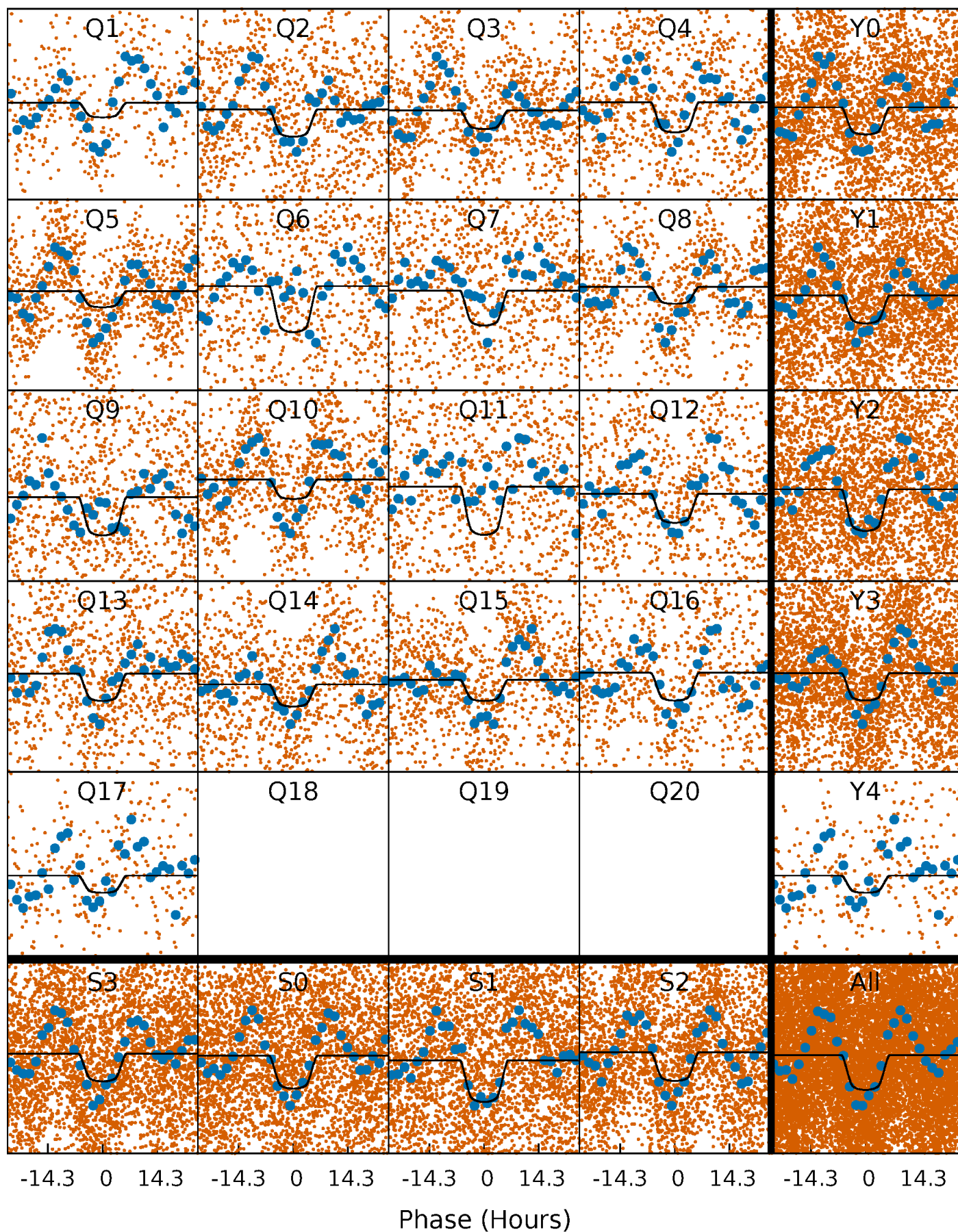
PDC Quarter-Phased Transit Curves

TCE 011769929-02 P= 3.799893 Days $T_0=132.916189$ (BKJD)



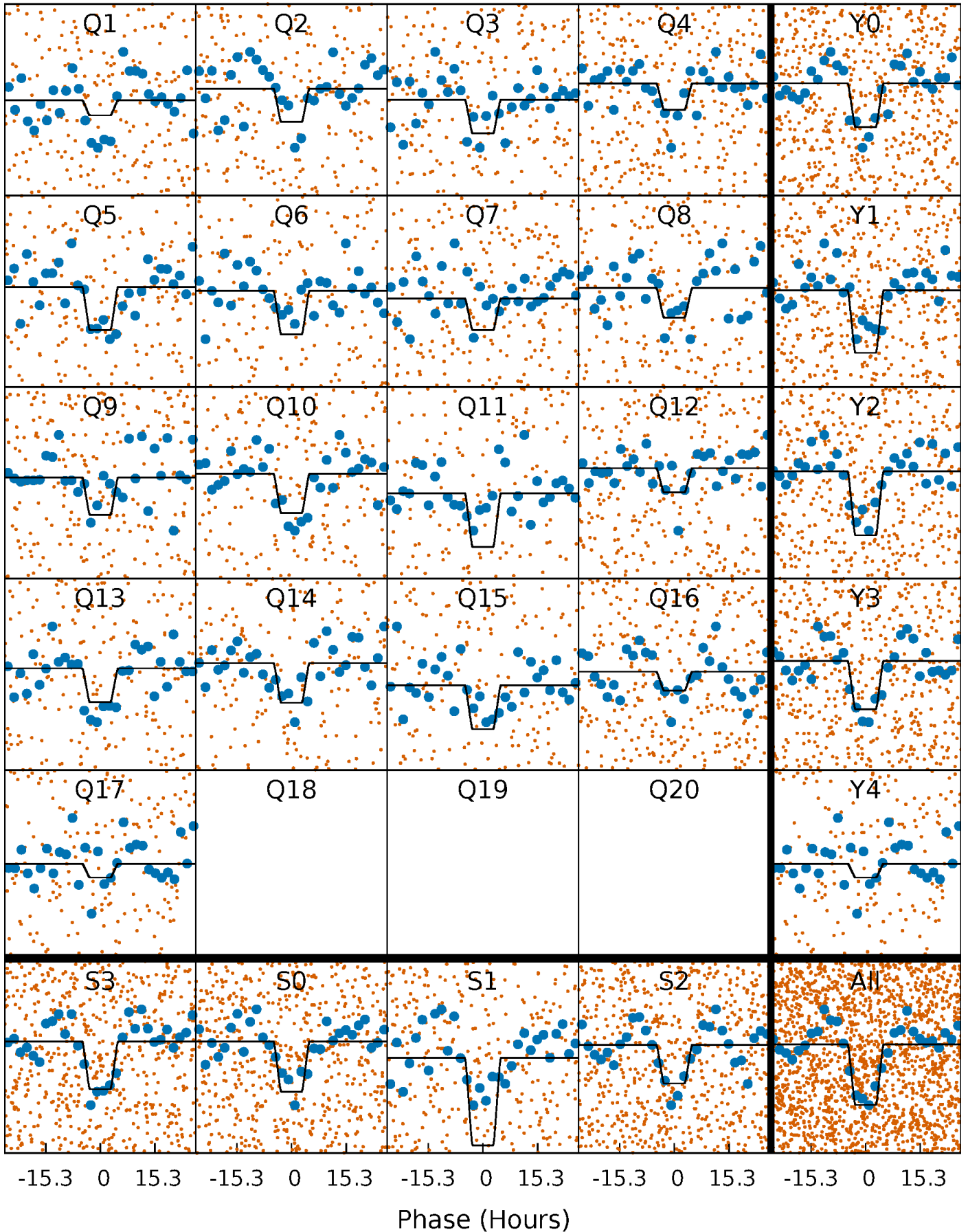
DV Quarter-Phased Transit Curves

TCE 011769929-02 P= 3.799893 Days $T_0=132.916189$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

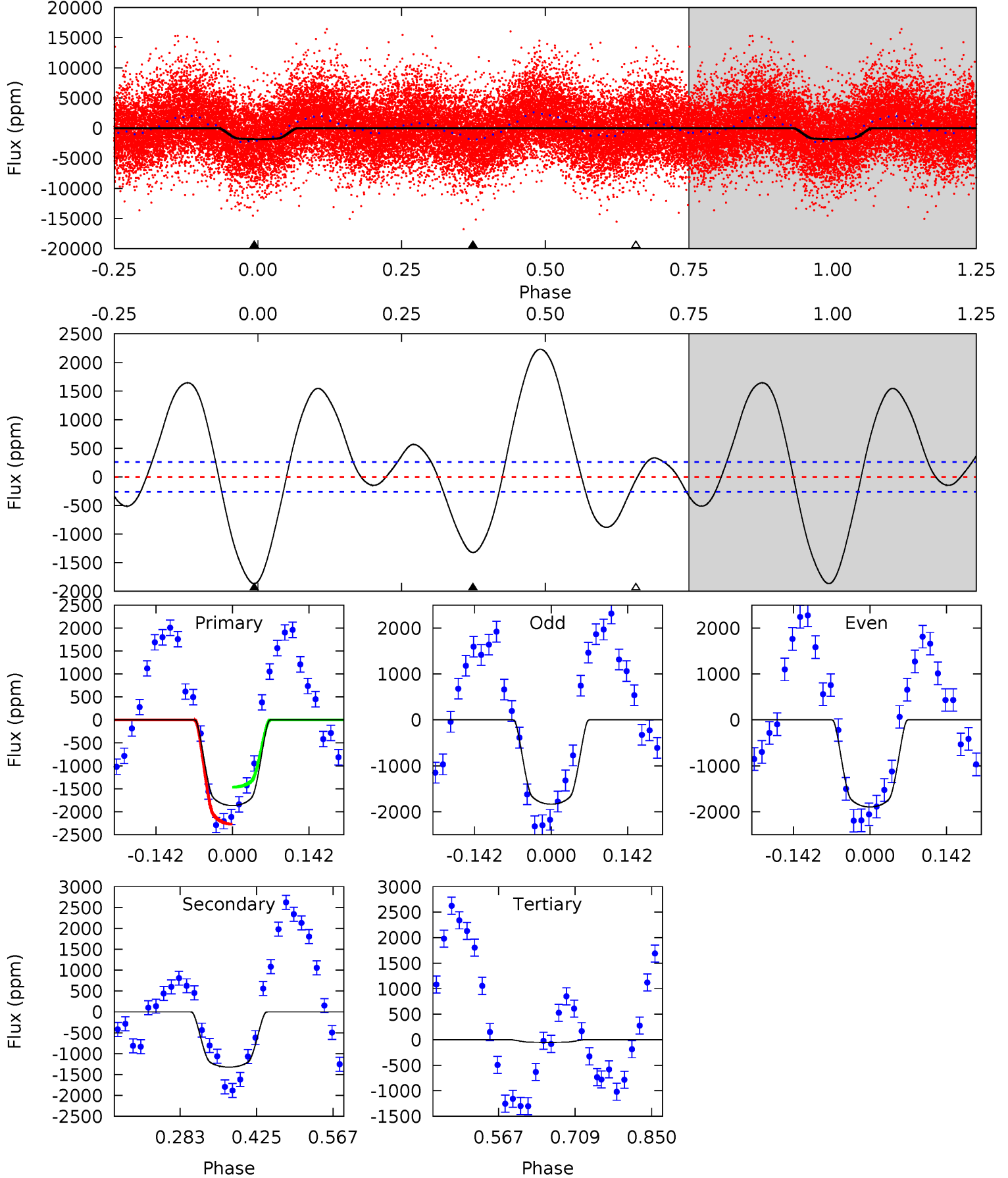
TCE 011769929-02 P= 3.799932 Days $T_0=132.844391$ (BKJD)



DV Model-Shift Uniqueness Test

011769929-02, P = 3.799893 Days, E = 129.116296 Days

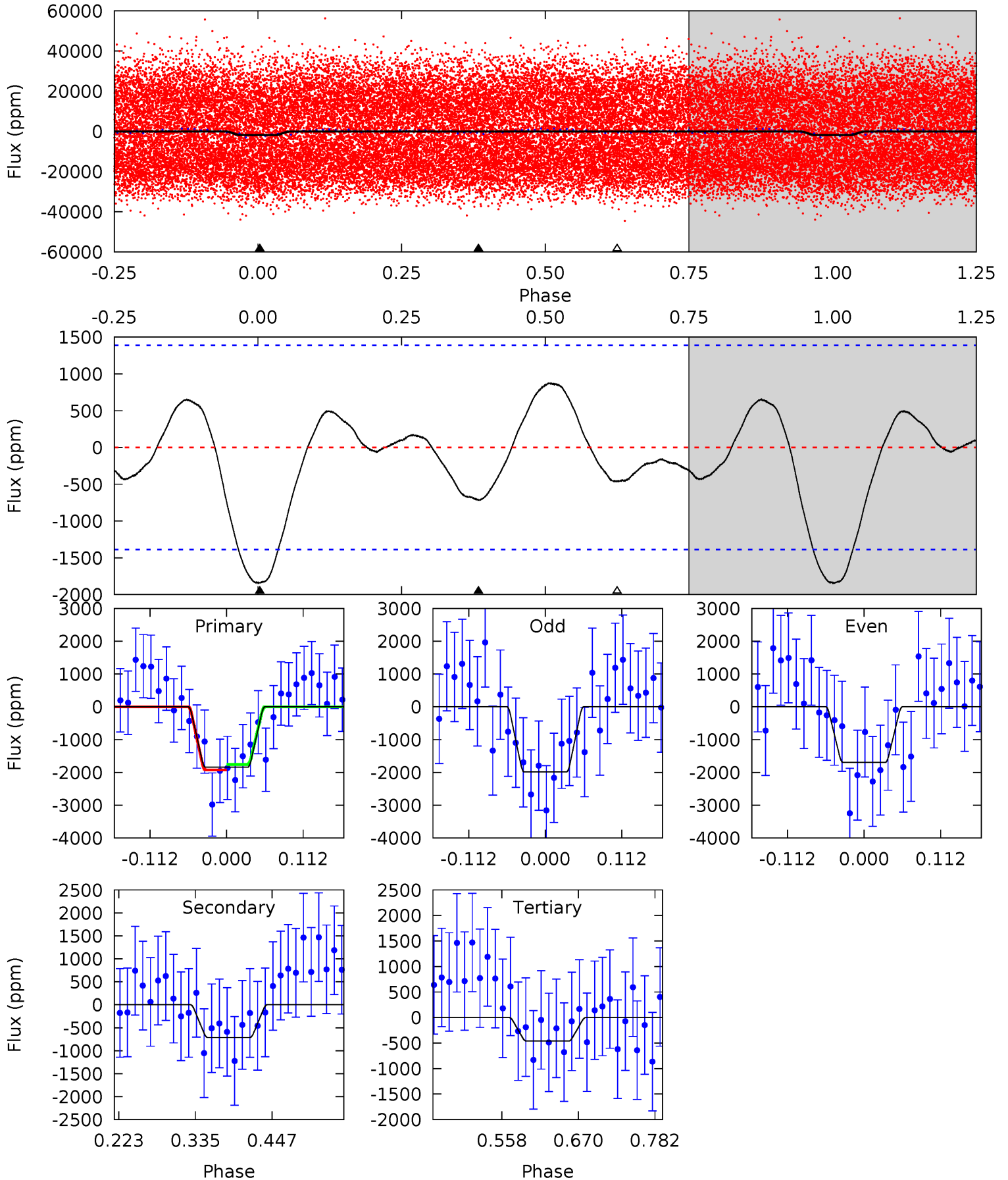
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.2	22.8	0.89	0	4.49	1.47	10.3	31.3	32.2	21.9	22.8	0.52	0.81	0.54	7.02



Alt Model-Shift Uniqueness Test

011769929-02, P = 3.799932 Days, E = 129.044459 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.02	2.33	1.51	0	4.54	1.59	1.27	4.51	6.02	0.82	2.33	0.48	0.40	0.32	0.27



Stellar Parameters For KIC 011769929

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7266^{+79}_{-87}	$4.056^{+0.182}_{-0.098}$	$-0.480^{+0.200}_{-0.150}$	$1.757^{+0.293}_{-0.358}$	$1.282^{+0.147}_{-0.079}$	$0.333^{+0.276}_{-0.110}$
	+1%/-1%	+4%/-2%	+42%/-31%	+17%/-20%	+11%/-6%	+83%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011769929-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1322 ± 58	$8.13^{+0.89}_{-1.02}$	2590^{+112}_{-141}	6643^{+231}_{-221}	30^{+9}_{-6}
Alt.	-713 ± 305	$8.72^{+0.97}_{-1.05}$	2594^{+121}_{-139}	5460^{+516}_{-677}	14^{+7}_{-6}

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

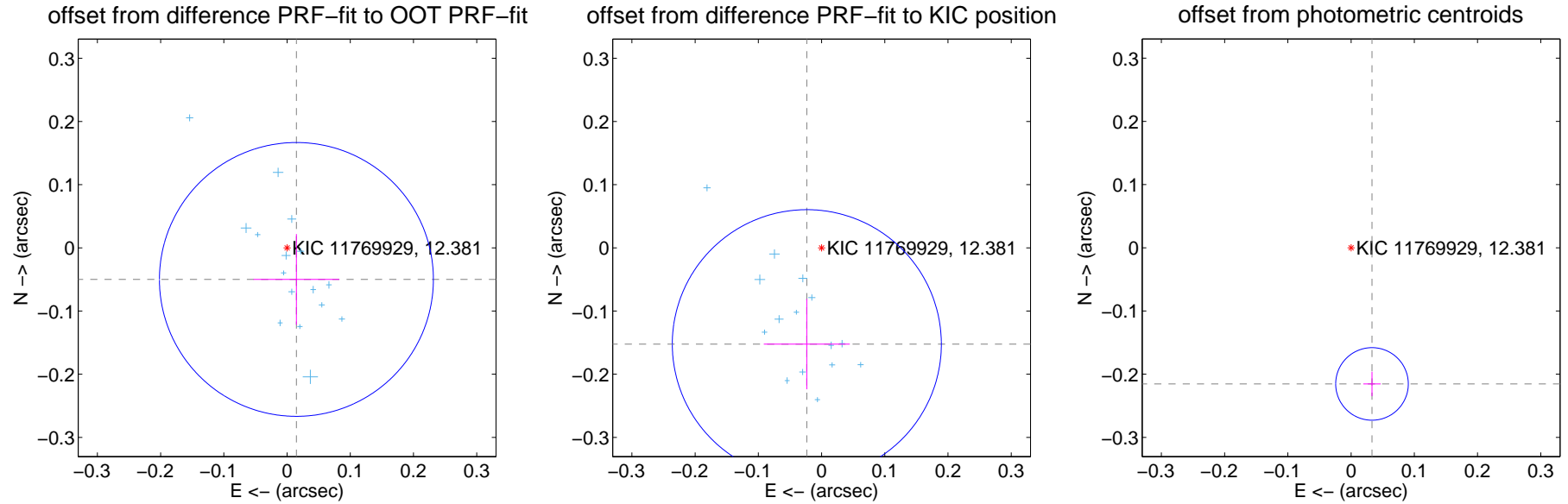
DV Centroid Data

Supplemental centroid analysis for 011769929-02. Kepler magnitude: 12.38. Transit SNR 13.20

There are 17 quarters with good PRF difference image offsets

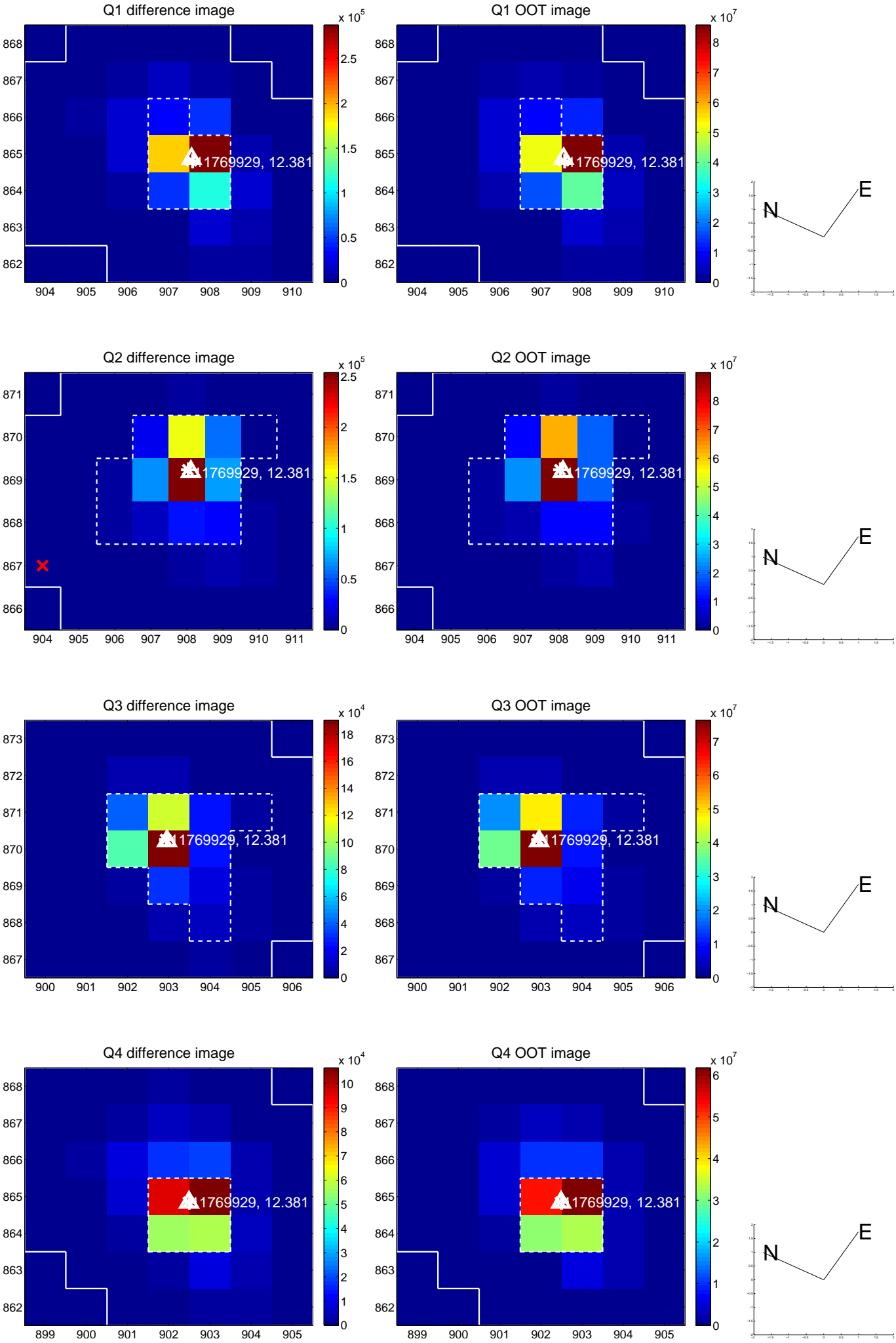
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.052 ± 0.072	0.72	-0.015 ± 0.068	-0.050 ± 0.072
PRF-fit source offset from KIC position	0.154 ± 0.071	2.17	0.023 ± 0.068	-0.152 ± 0.071
photometric centroid source offset	0.22 ± 0.02	11.39	-0.03 ± 0.01	-0.22 ± 0.02

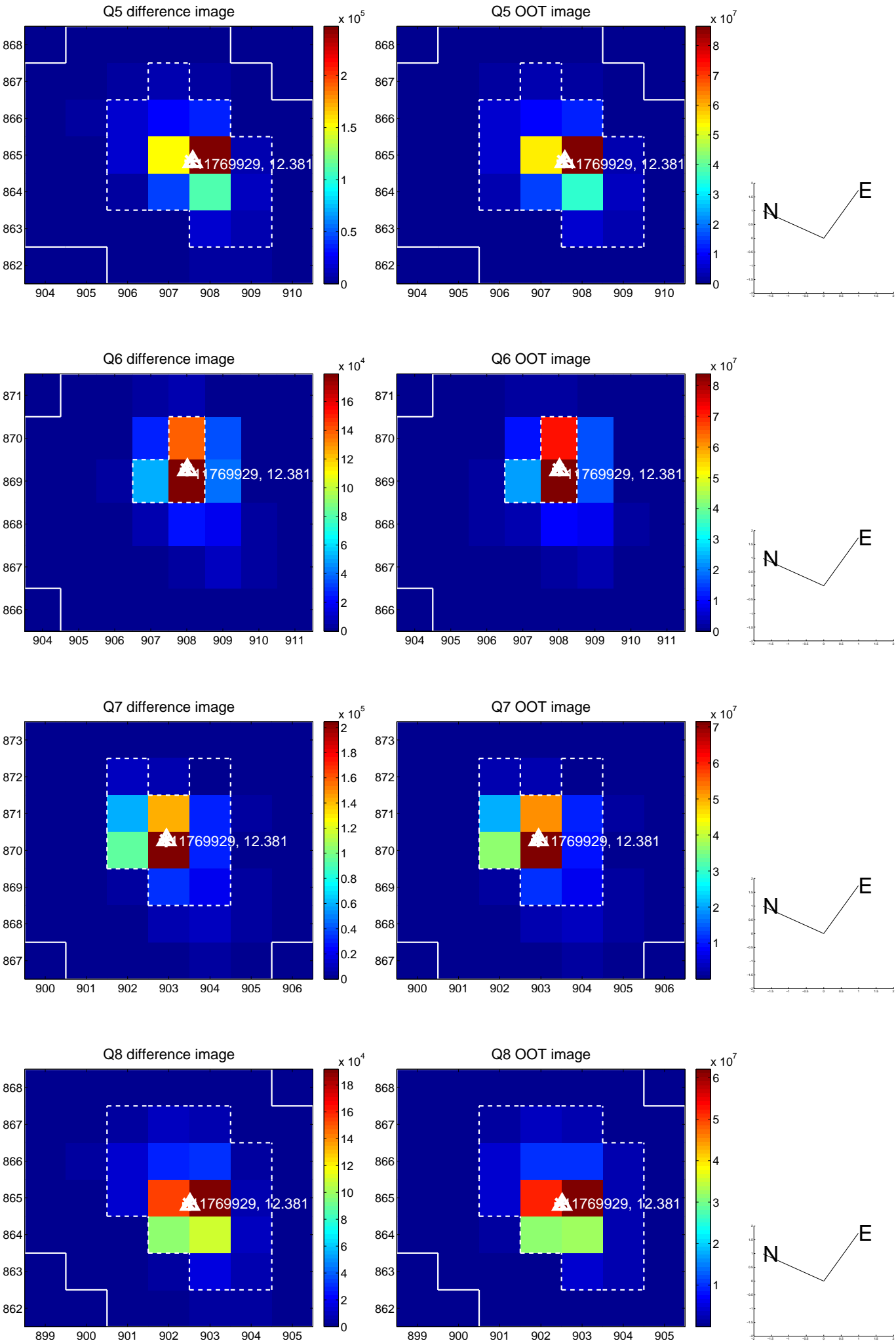


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

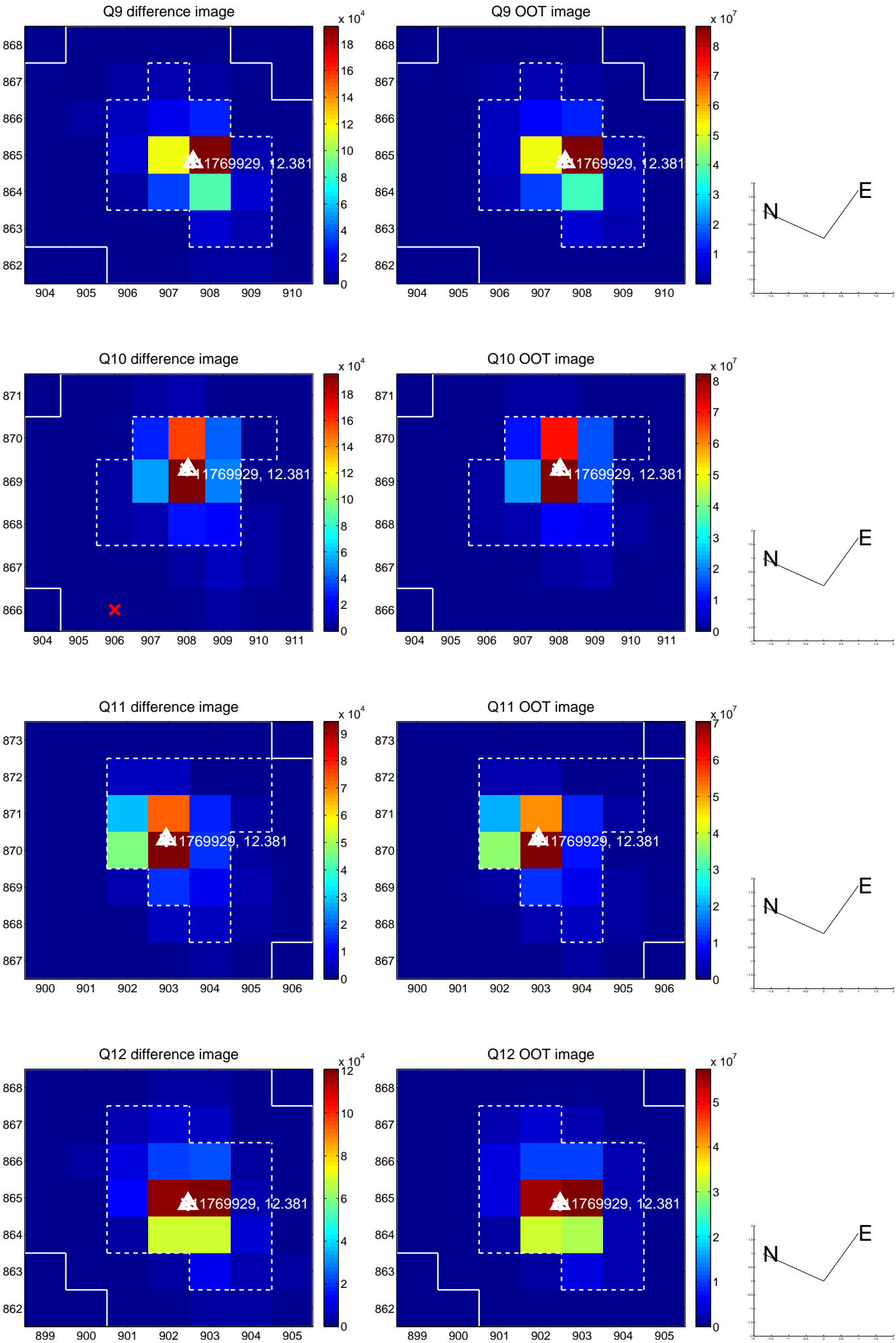
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



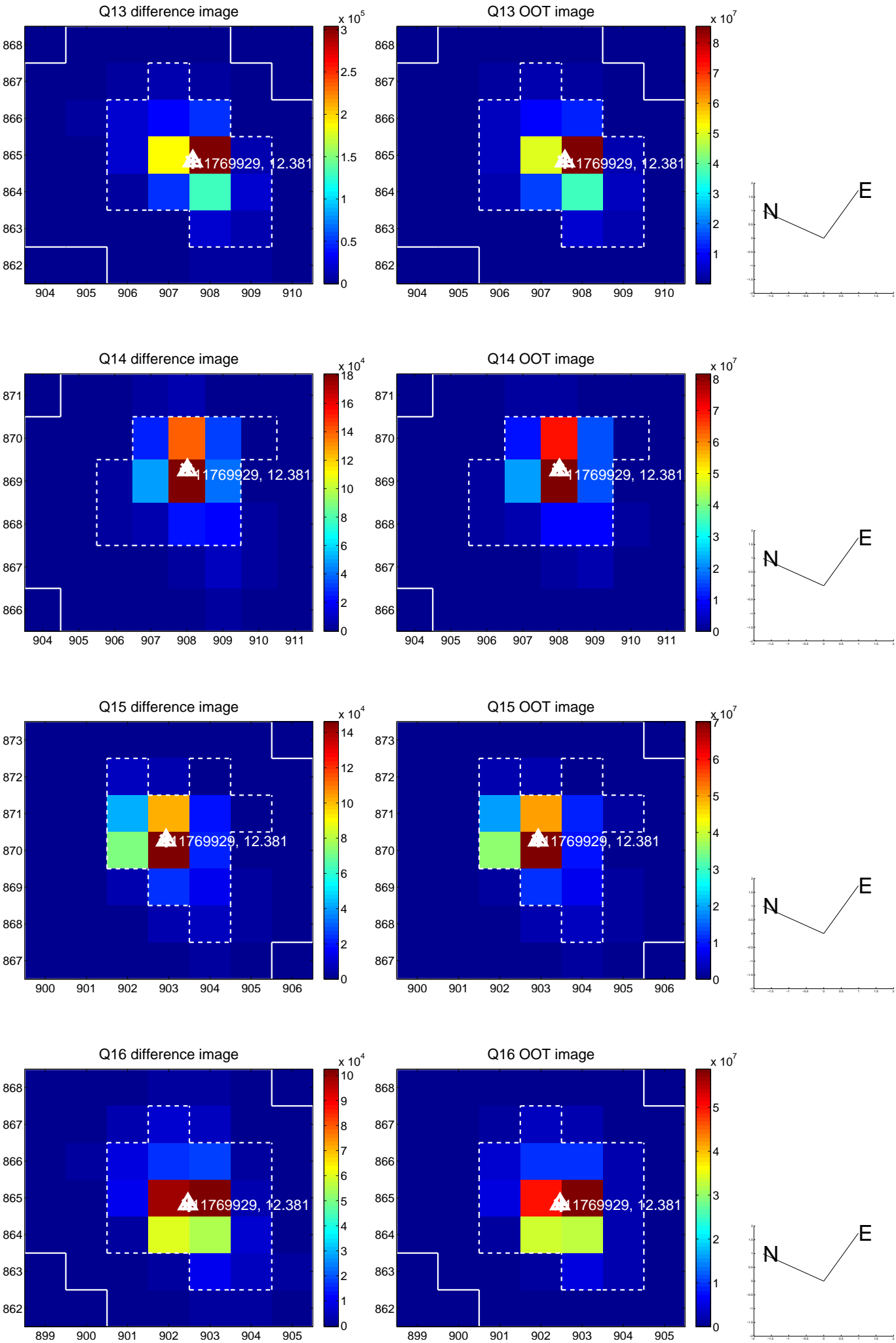
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



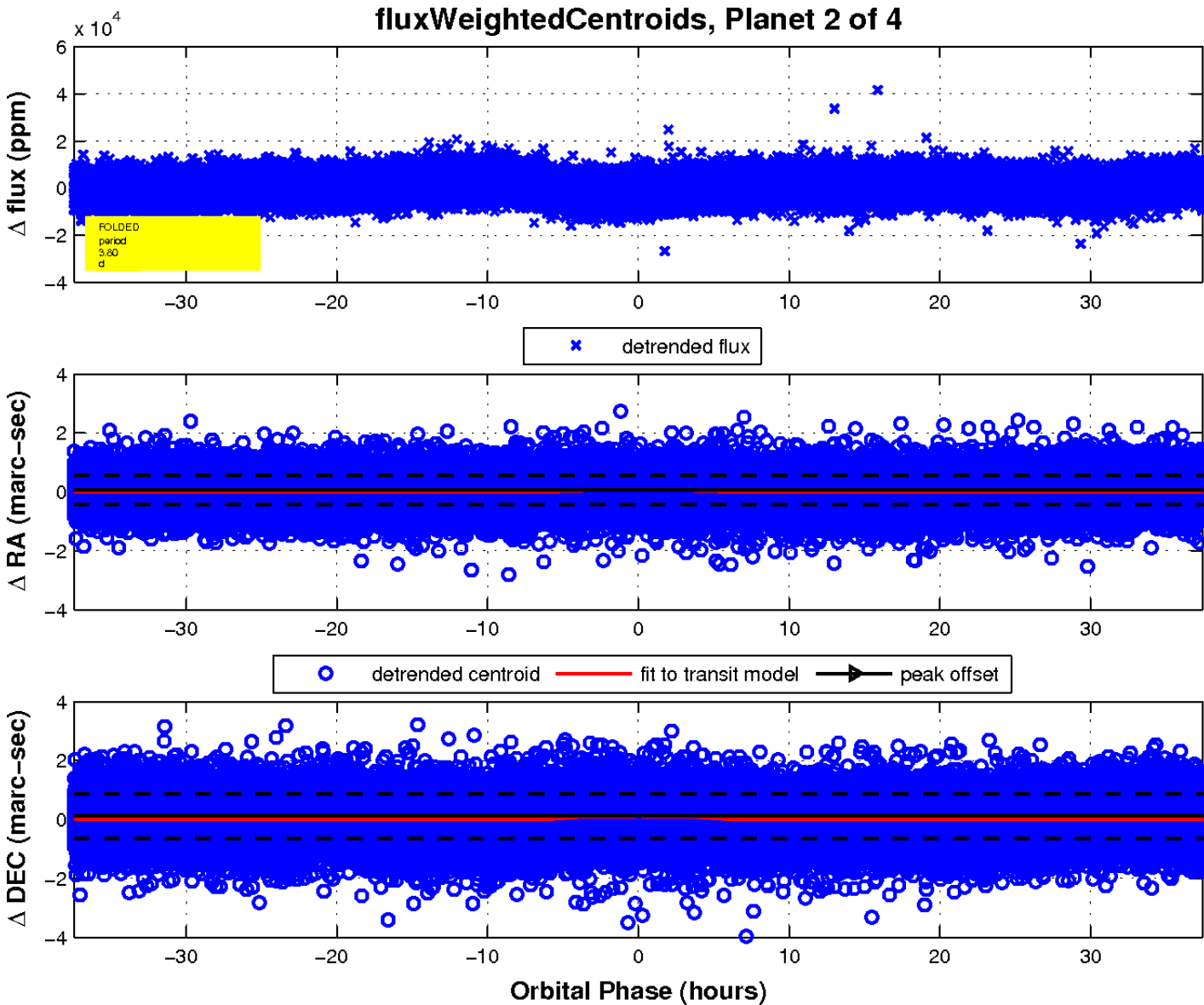
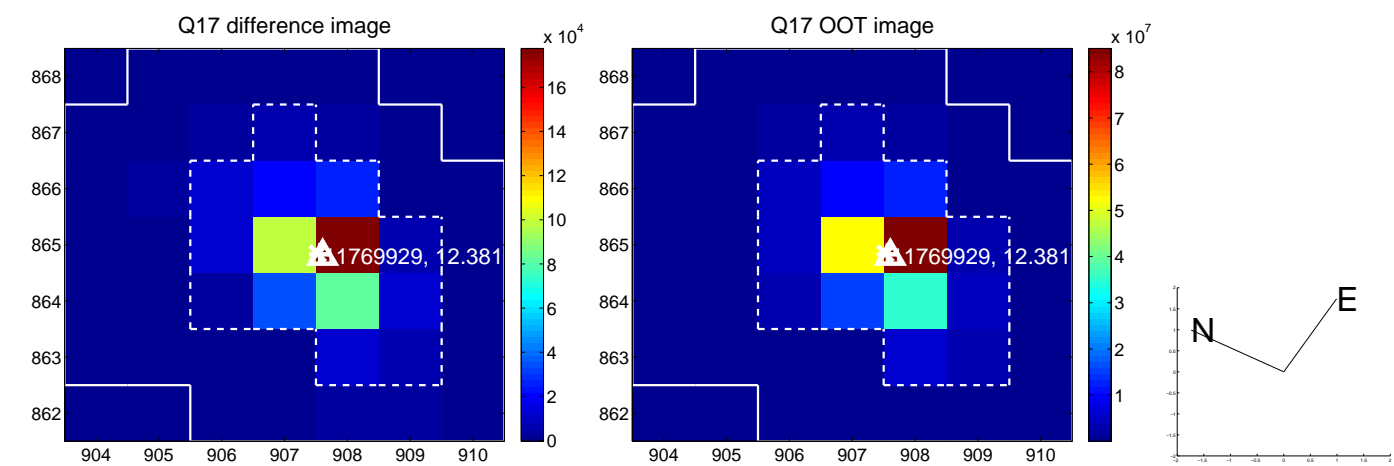
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

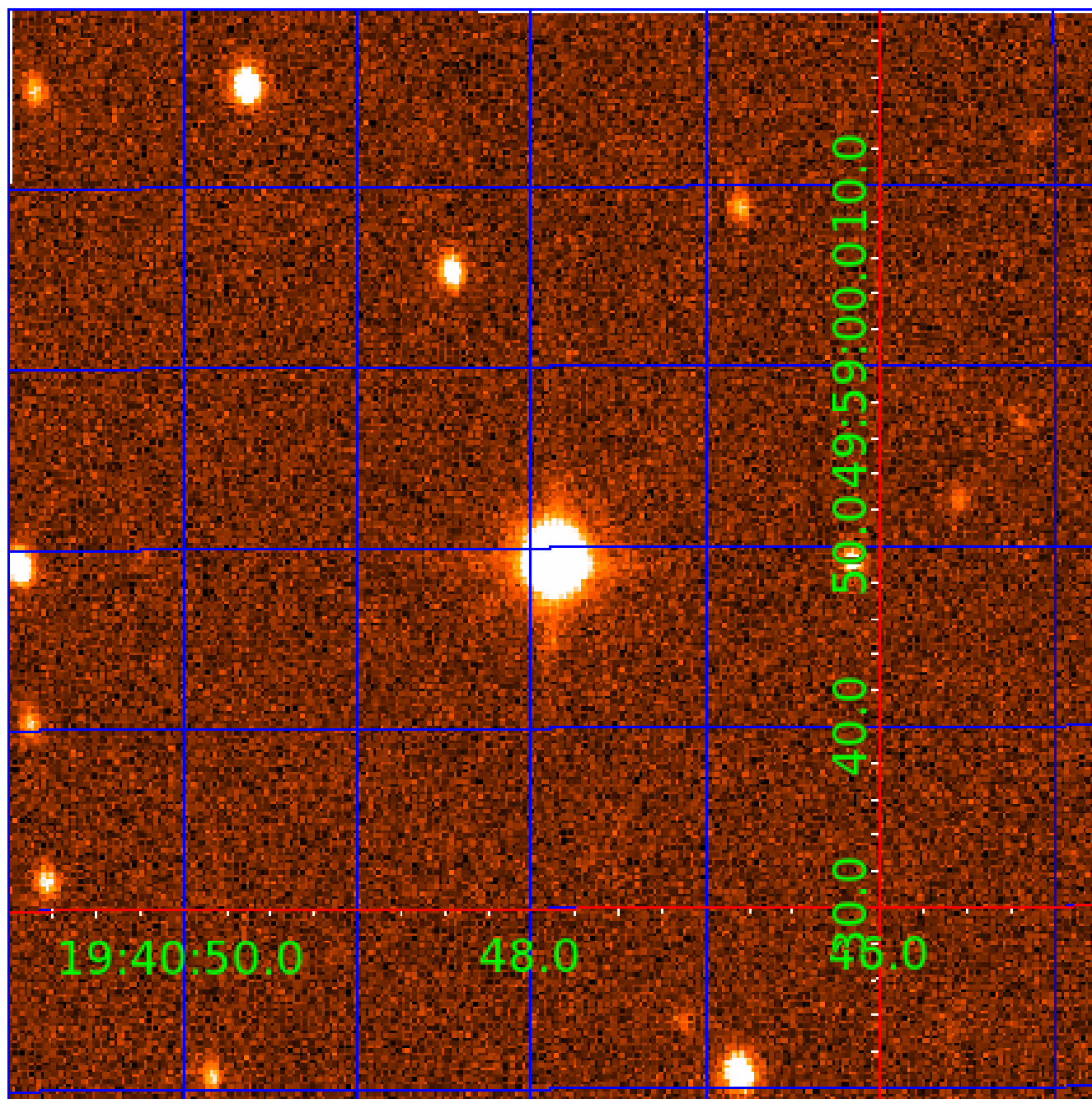


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011769929

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})
011769929-01	OBS	No	1.002947	131.672977	369.3	4.194	14.0	9.8	1.76	7266	3.87	16991.03
011769929-02	OBS	No	3.799893	132.916189	1566.2	12.482	10.0	13.2	1.76	7266	8.18	2876.70
011769929-03	OBS	No	3.800188	133.653865	549.5	6.801	12.0	3.9	1.76	7266	4.66	2876.41
011769929-04	OBS	No	1.900059	132.420287	109.9	6.000	9.9	-1.0	1.76	7266	1.87	7248.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011769929-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
011769929-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011769929-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
011769929-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

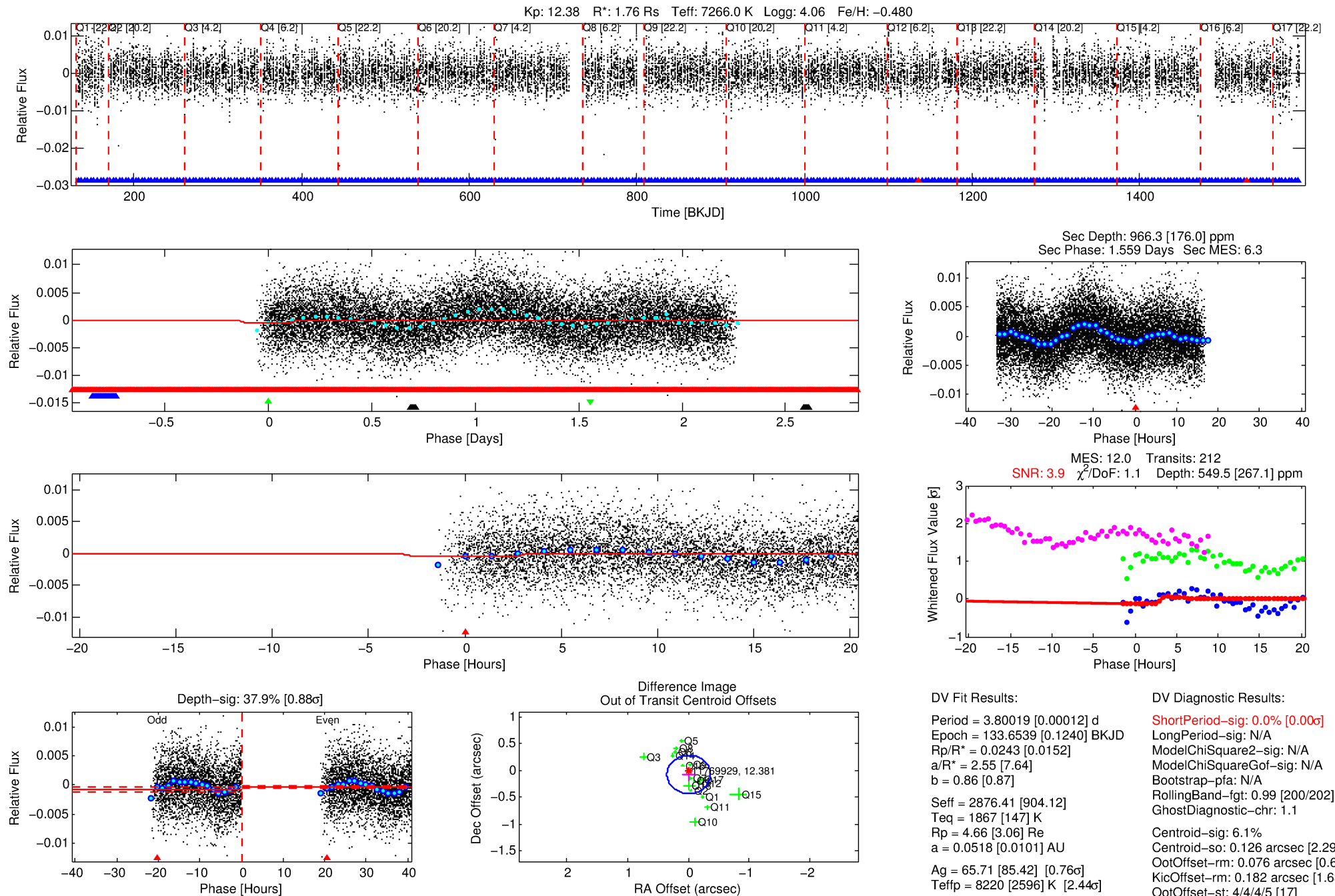
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011769929-03

No Significant Match Found

DV One-Page Summary

KIC: 11769929 Candidate: 3 of 4 Period: 3.800 d



DV Fit Results:

Period = 3.80019 [0.00012] d
Epoch = 133.6539 [0.1240] BKJD
Rp/R* = 0.0243 [0.0152]
a/R* = 2.55 [7.64]
b = 0.86 [0.87]
Seff = 2876.41 [904.12]
Teq = 1867 [147] K
Rp = 4.66 [3.06] Re
a = 0.0518 [0.0101] AU
Ag = 65.71 [85.42] [0.76σ]
Teff = 8220 [2596] K [2.44σ]

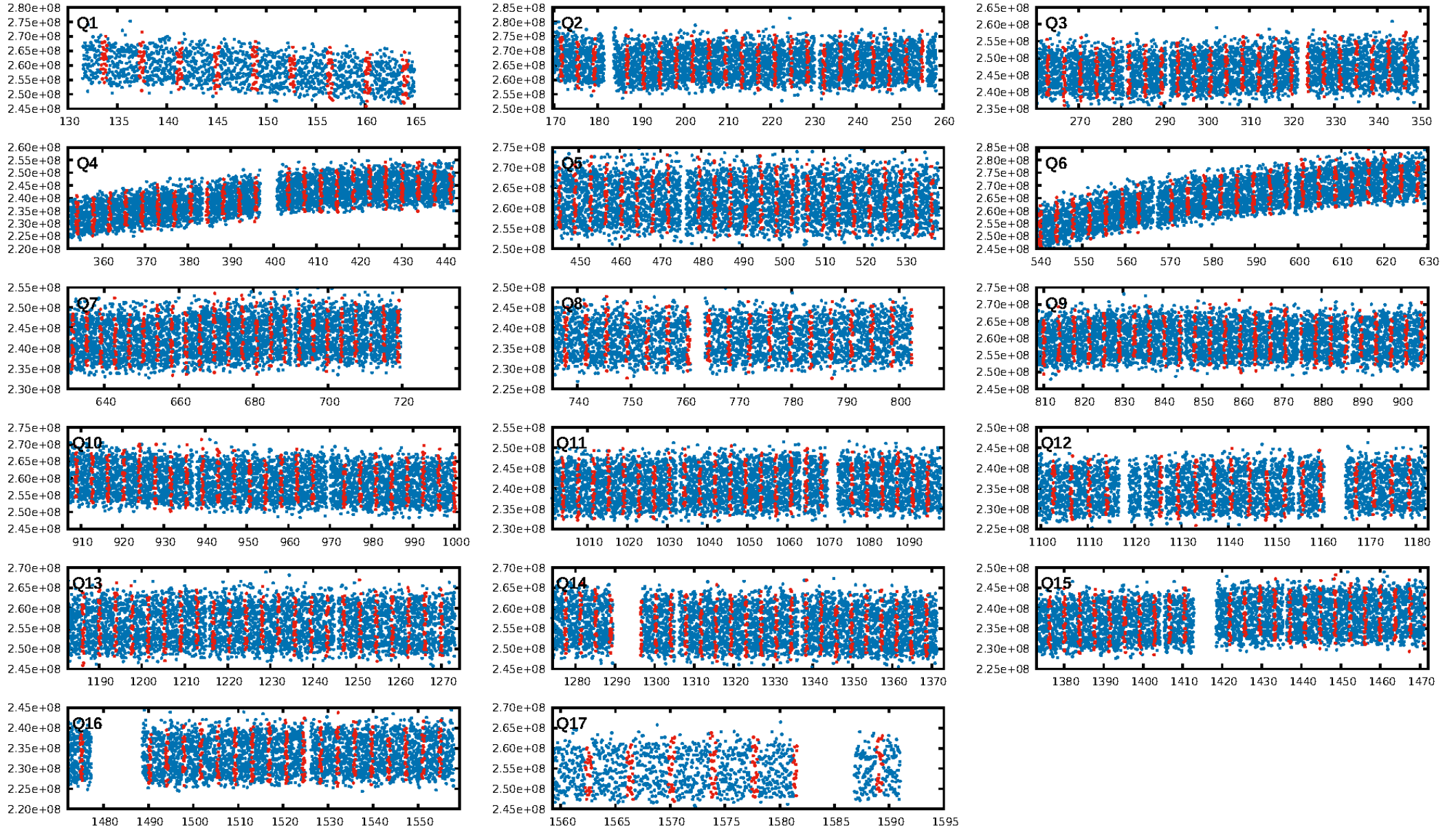
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [200/202]
GhostDiagnostic-chr: 1.1
Centroid-sig: 6.1%
Centroid-so: 0.126 arcsec [2.29σ]
OotOffset-rm: 0.076 arcsec [0.64σ]
KicOffset-rm: 0.182 arcsec [1.63σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 0.00 [0/17]

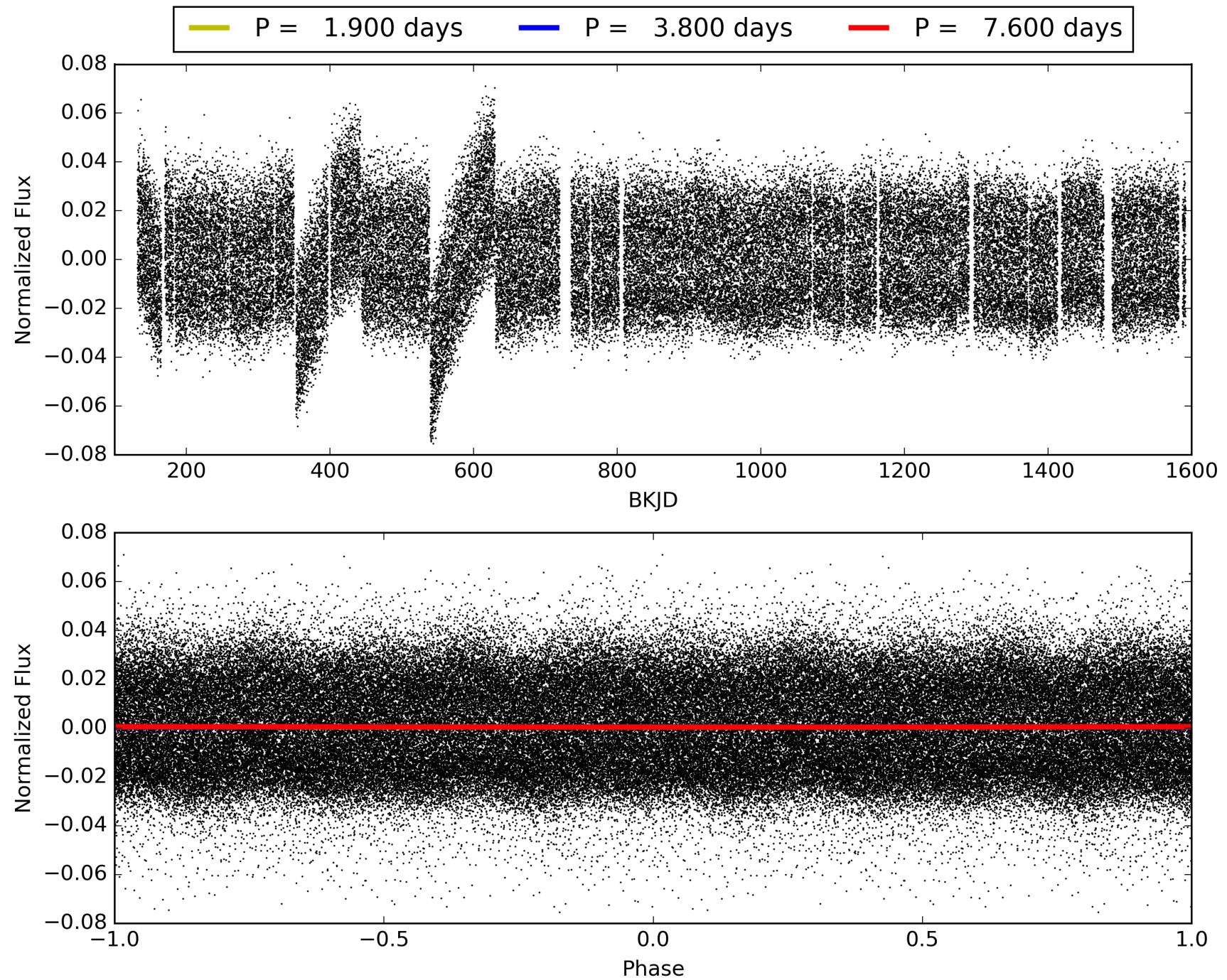
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:43:56 Z

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

TCE 011769929-03, PDC Light Curves

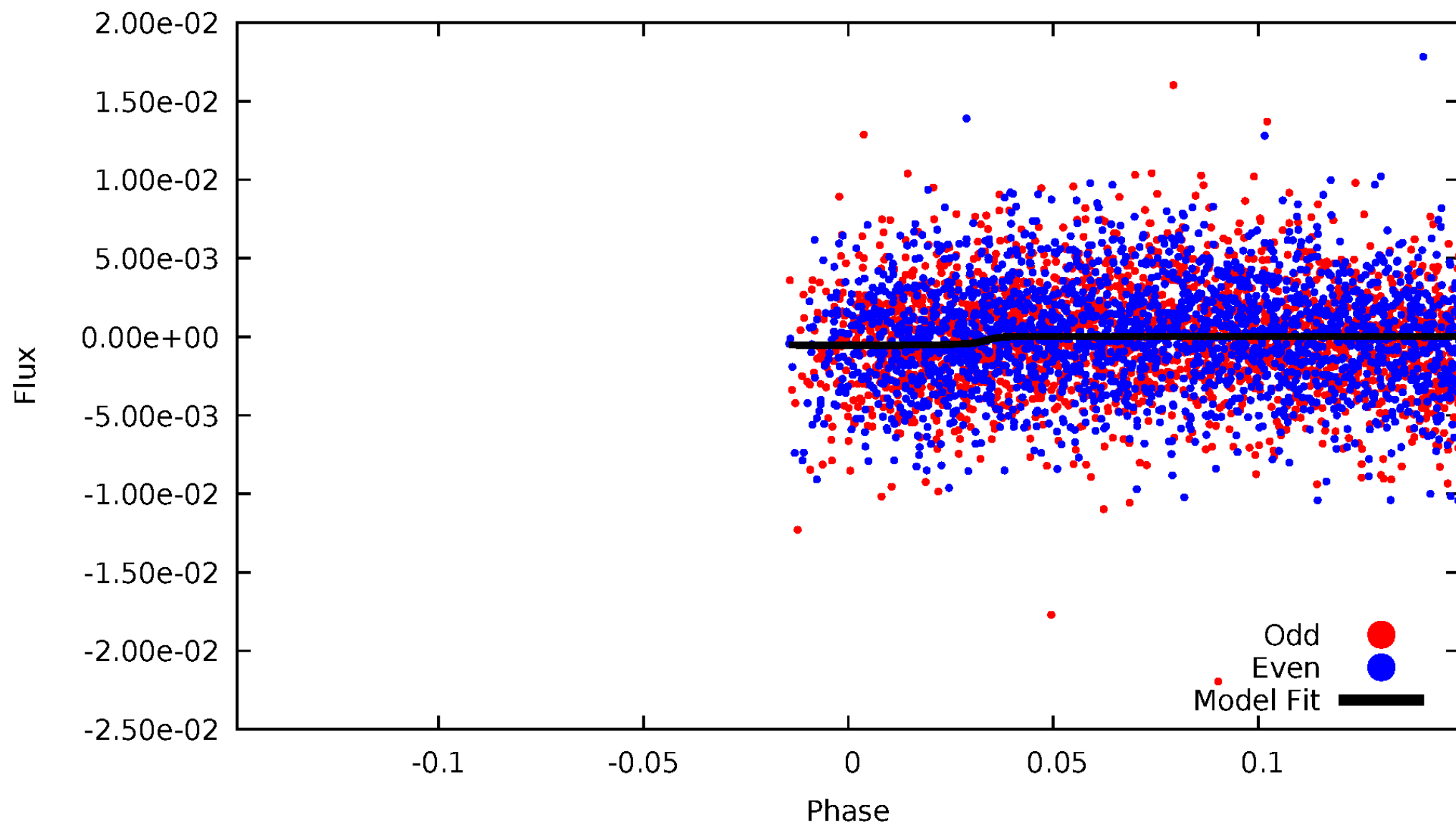


TCE 011769929-03



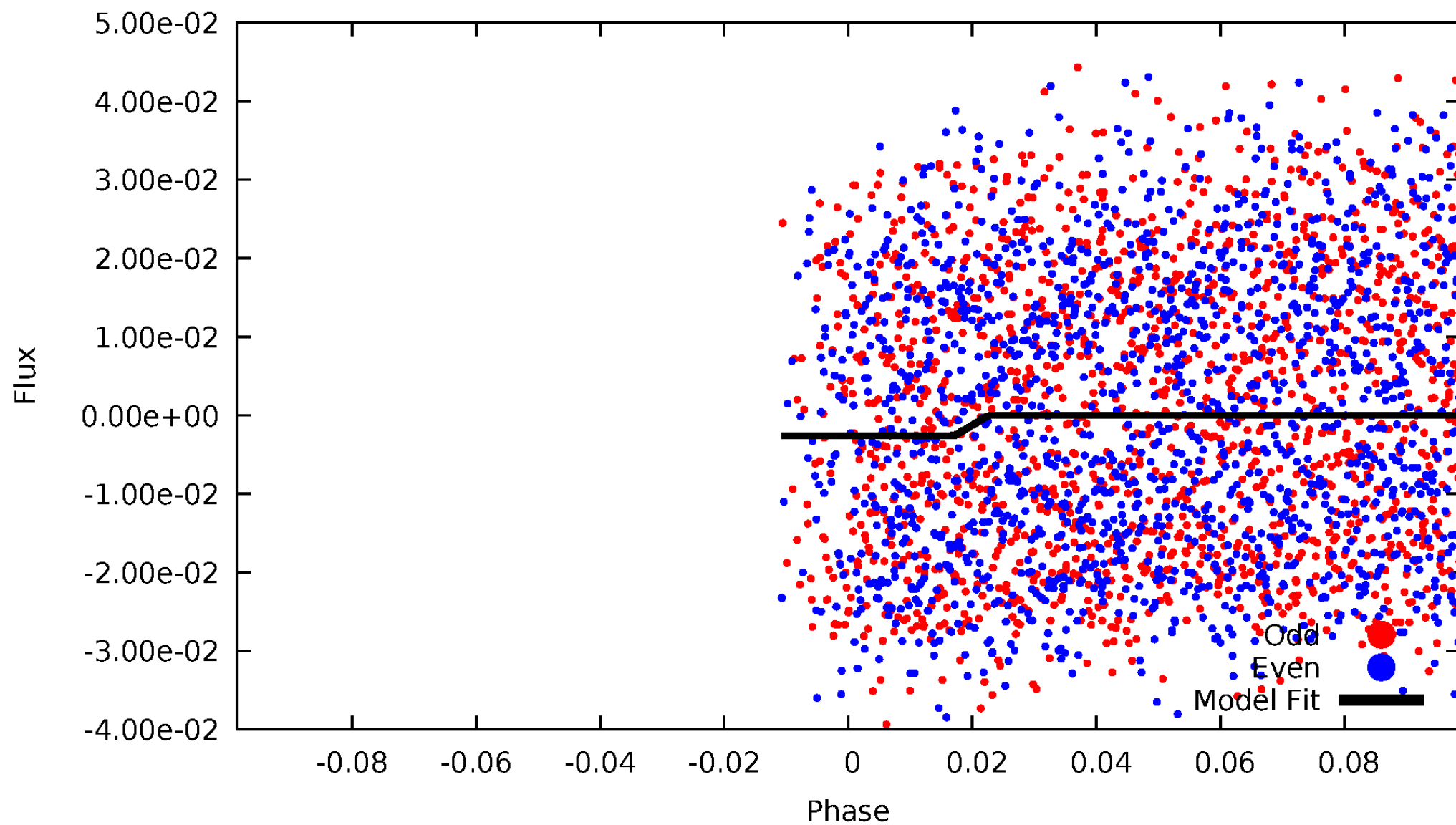
DV Odd/Even

TCE 011769929-03



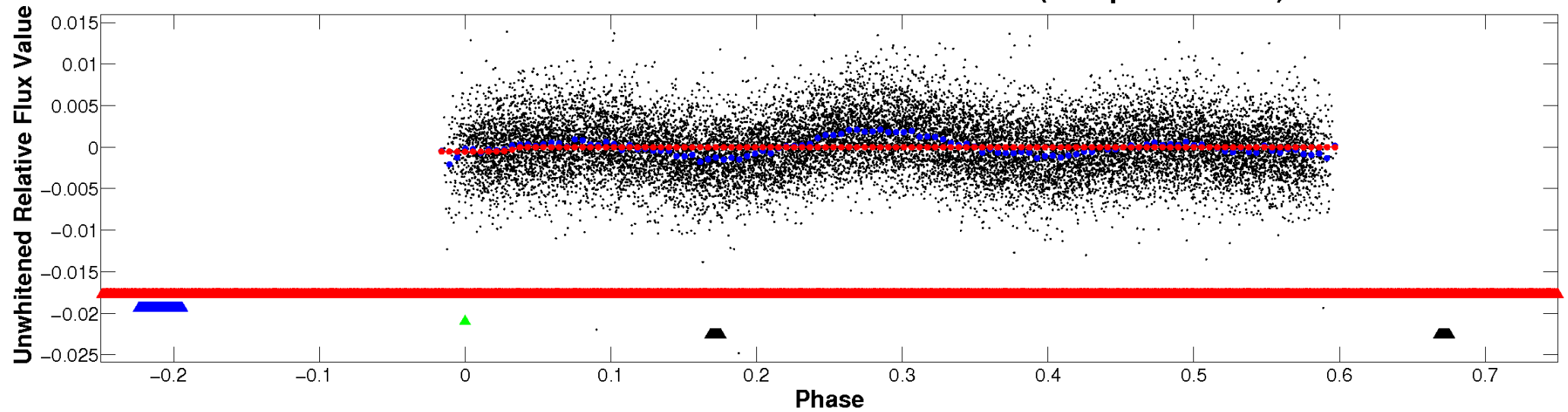
ALT Odd/Even

TCE 011769929-03

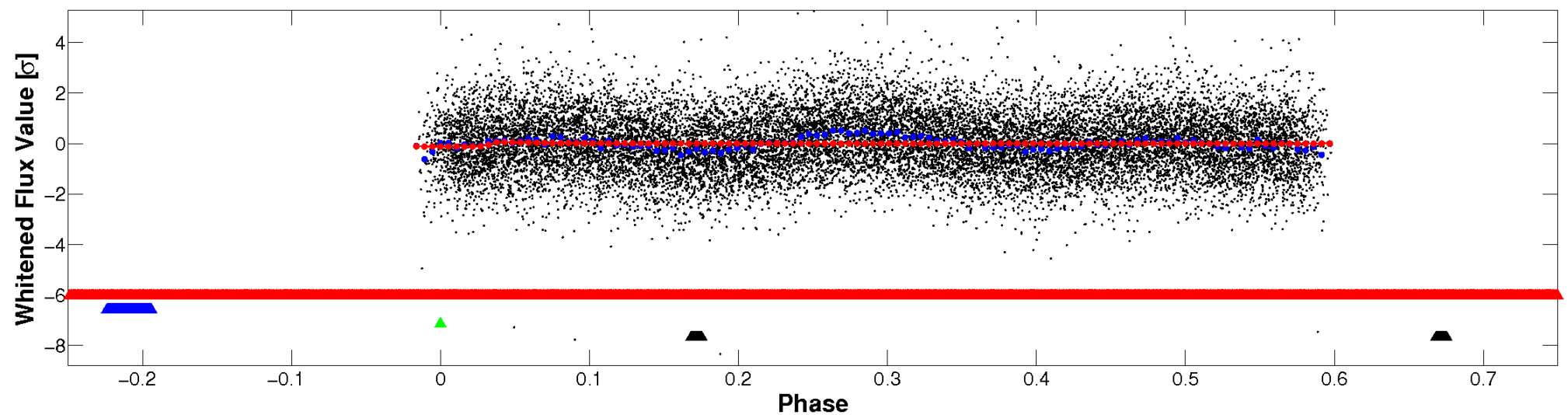


Non-Whitened Vs. Whitened Light Curve

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

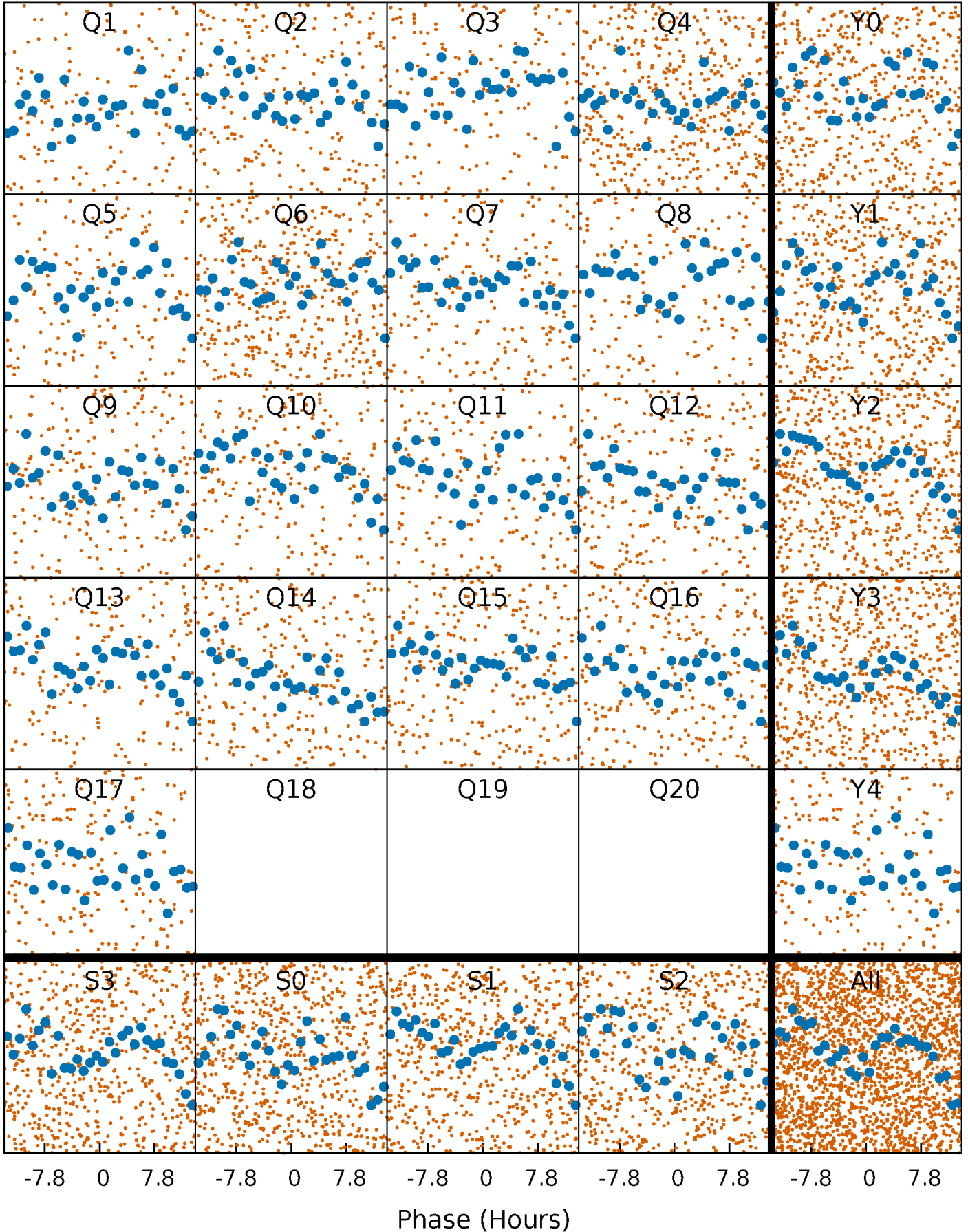


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



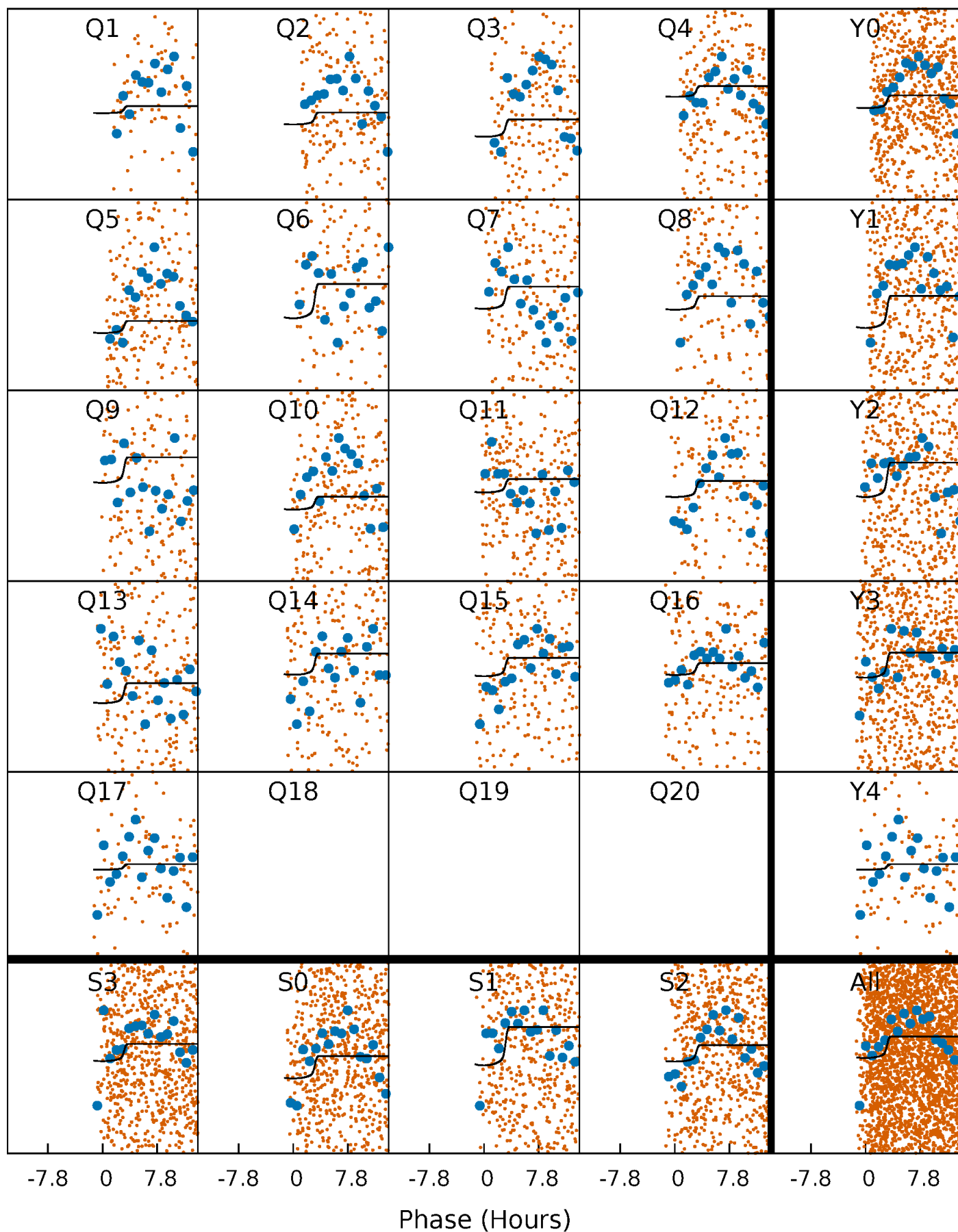
PDC Quarter-Phased Transit Curves

TCE 011769929-03 P= 3.800188 Days $T_0=133.653865$ (BKJD)



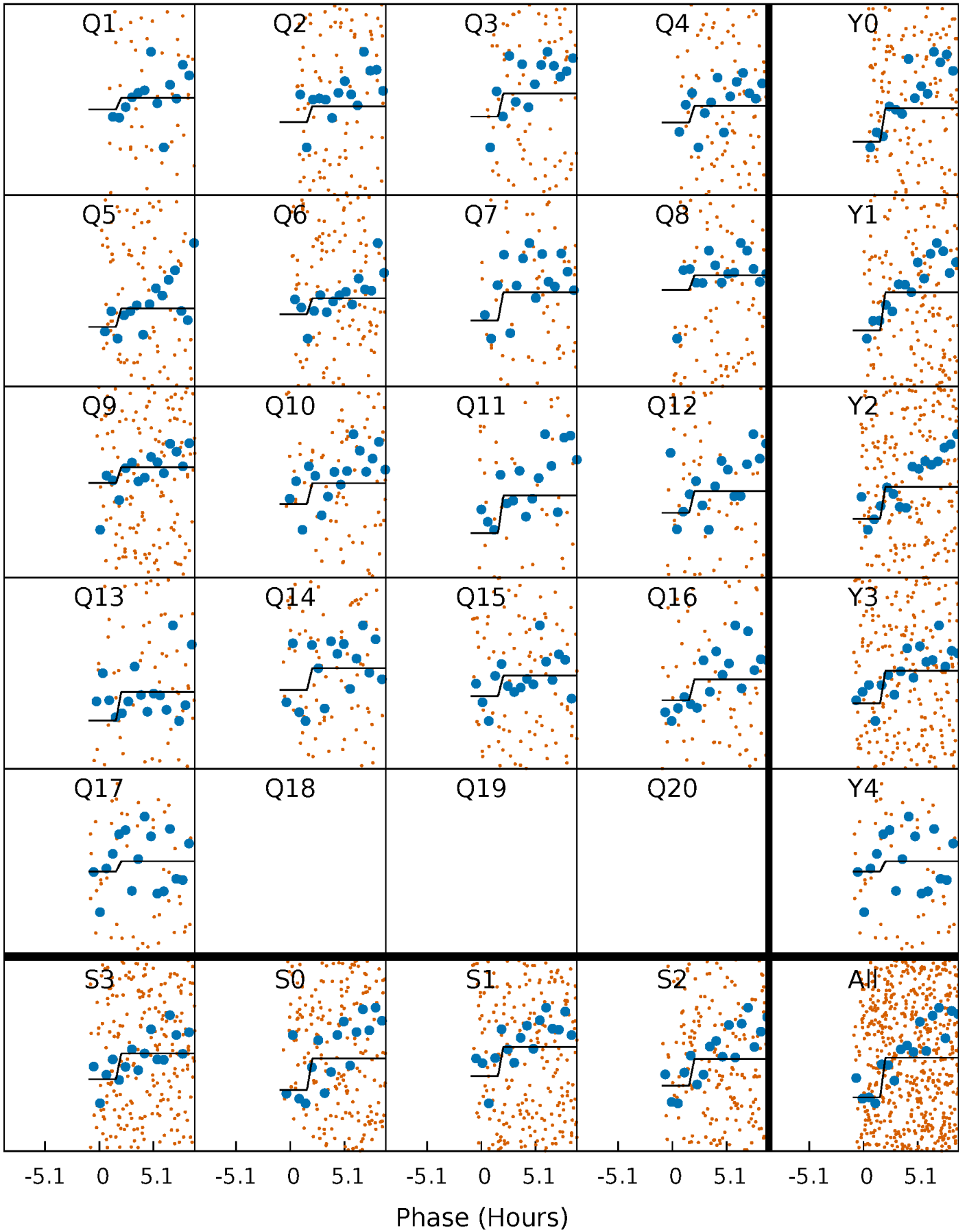
DV Quarter-Phased Transit Curves

TCE 011769929-03 P= 3.800188 Days $T_0=133.653865$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

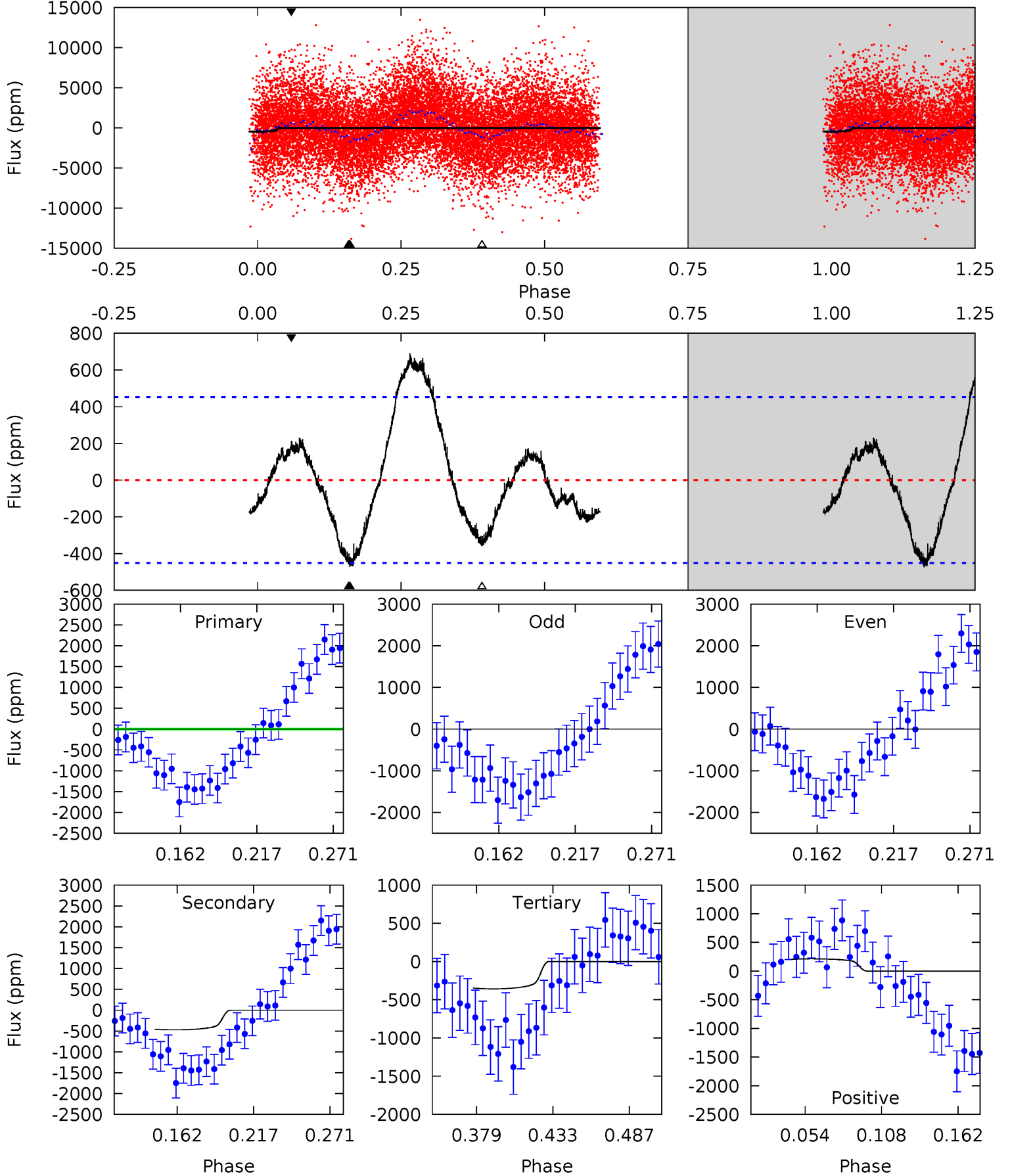
TCE 011769929-03 P= 3.800080 Days $T_0=133.679428$ (BKJD)



DV Model-Shift Uniqueness Test

011769929-03, P = 3.800188 Days, E = 129.853677 Days

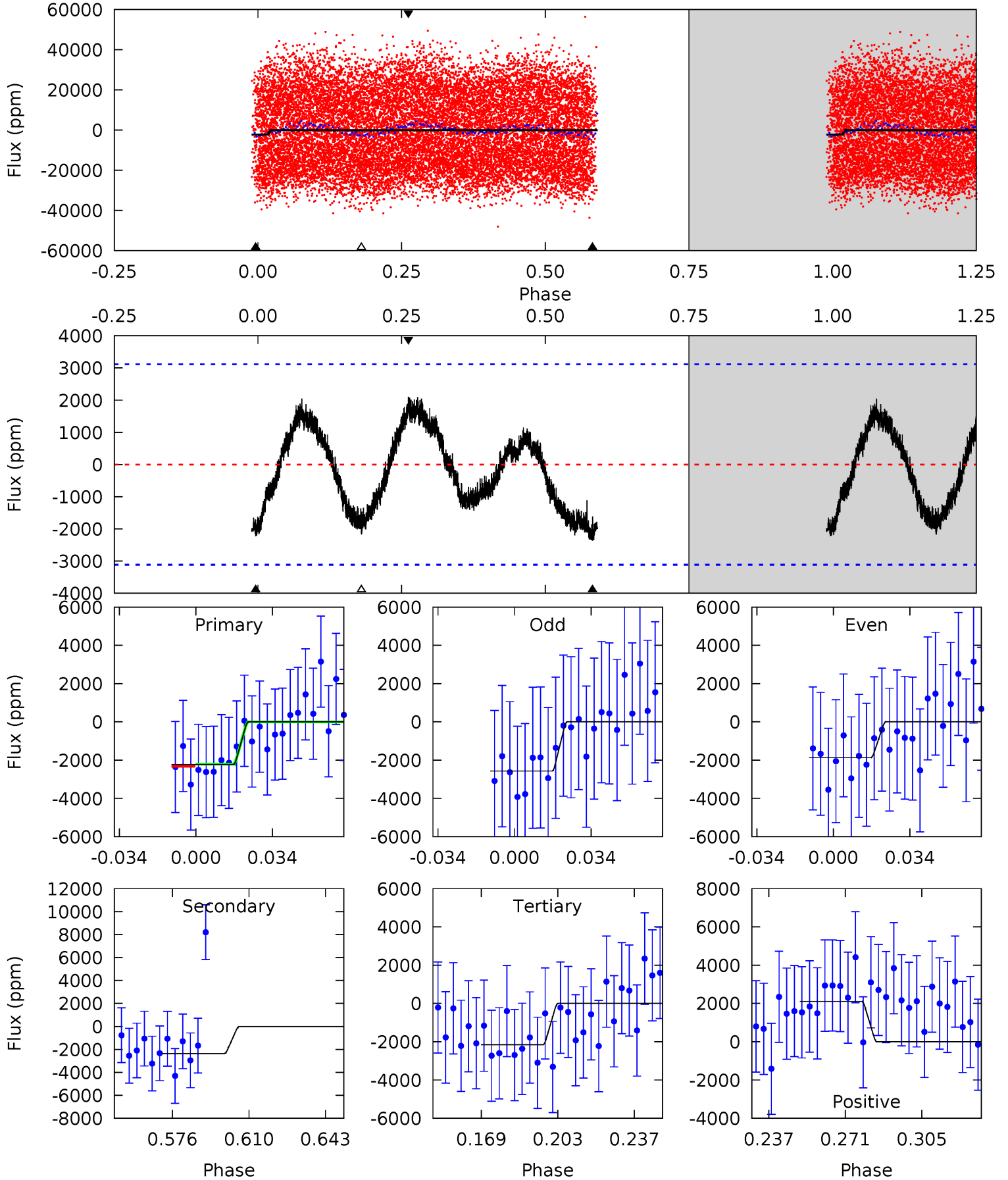
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.75	4.90	3.72	2.22	4.69	1.93	2.69	1.04	2.53	1.18	2.68	0.45	0.34	0.59	0.87



Alt Model-Shift Uniqueness Test

011769929-03, P = 3.80080 Days, E = 129.879348 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.42	3.63	3.32	3.24	4.79	2.12	1.66	0.11	0.18	0.32	0.40	0.54	1.30	0.47	0.06



Stellar Parameters For KIC 011769929

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7266^{+79}_{-87}	$4.056^{+0.182}_{-0.098}$	$-0.480^{+0.200}_{-0.150}$	$1.757^{+0.293}_{-0.358}$	$1.282^{+0.147}_{-0.079}$	$0.333^{+0.276}_{-0.110}$
	+1%/-1%	+4%/-2%	+42%/-31%	+17%/-20%	+11%/-6%	+83%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011769929-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-472 ± 96	$4.78^{+2.81}_{-2.58}$	2587^{+124}_{-139}	6563^{+4259}_{-1279}	31^{+116}_{-19}
Alt.	-2364 ± 651	$9.64^{+2.62}_{-2.89}$	2595^{+108}_{-154}	7063^{+1672}_{-1004}	39^{+39}_{-18}

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 $A_{obs} \gg 1.0$

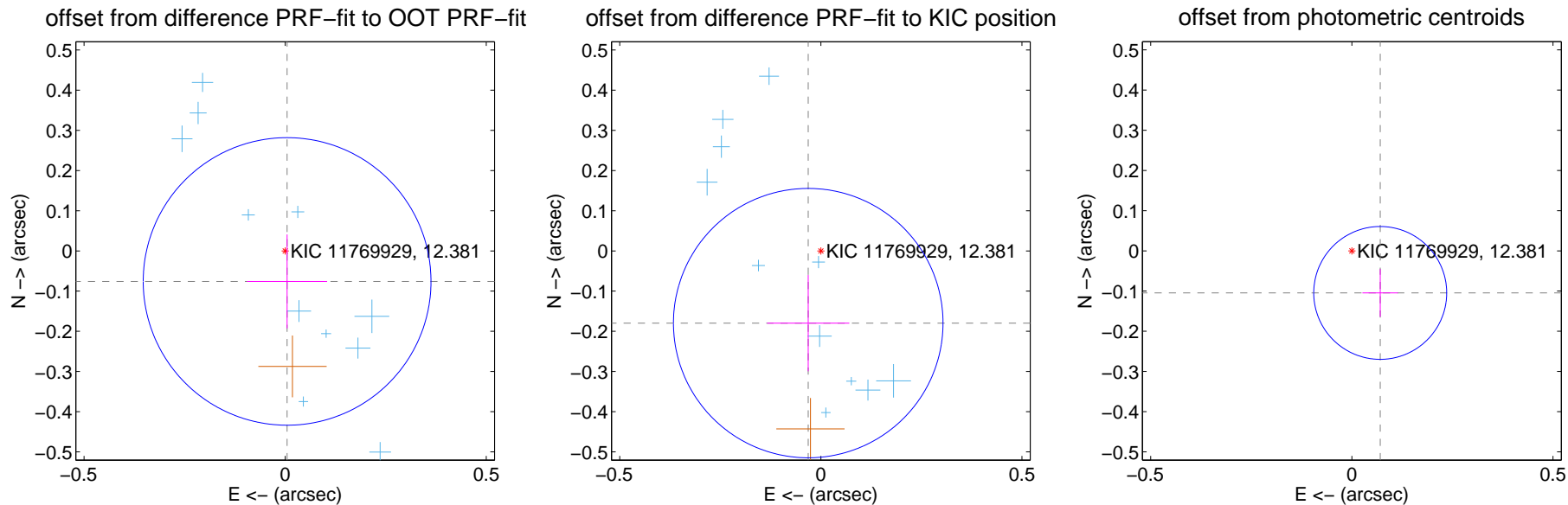
DV Centroid Data

Supplemental centroid analysis for 011769929-03. Kepler magnitude: 12.38. Transit SNR 3.86

There are 16 quarters with good PRF difference image offsets

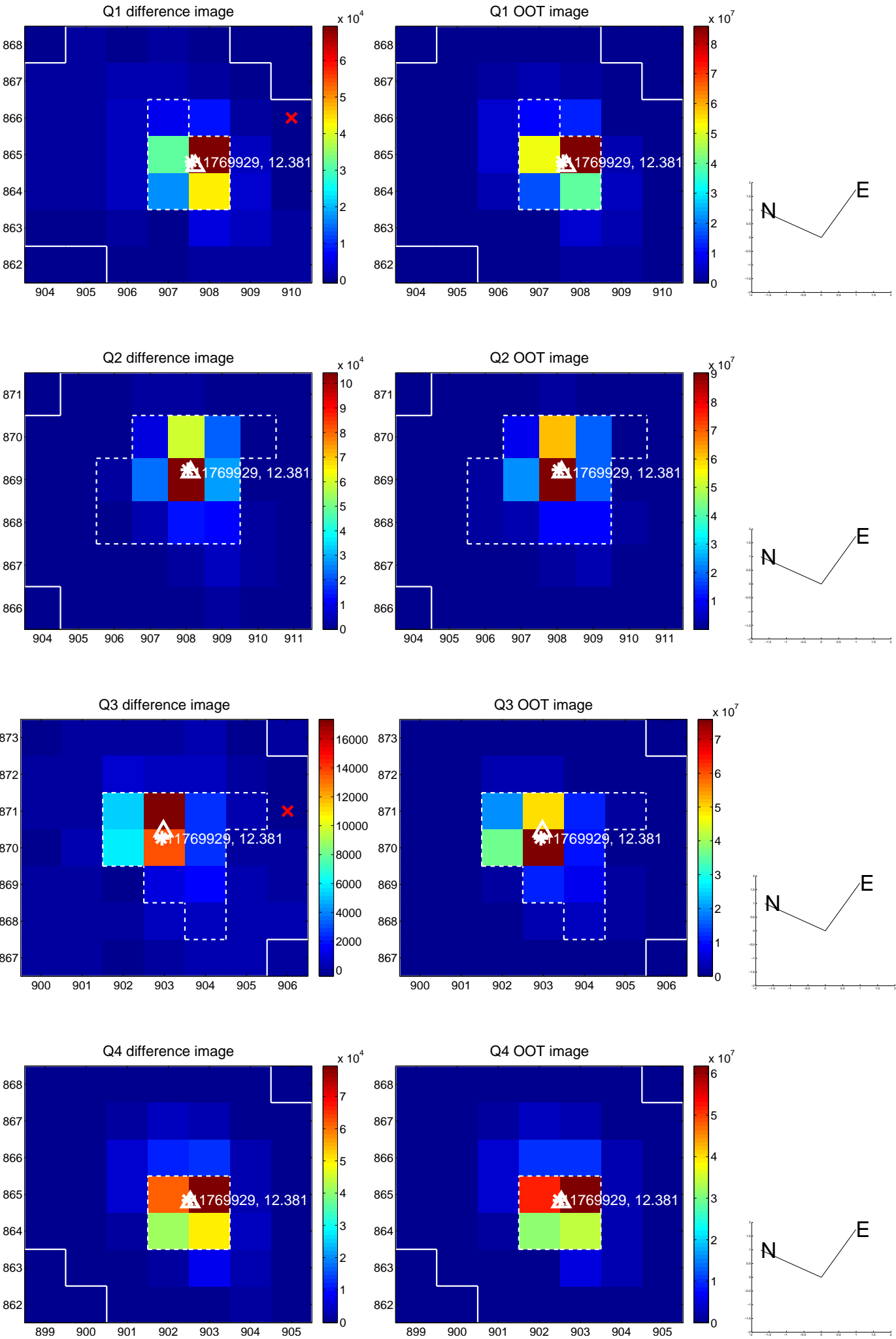
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.076 ± 0.119	0.64	-0.005 ± 0.100	-0.076 ± 0.117
PRF-fit source offset from KIC position	0.182 ± 0.112	1.63	0.031 ± 0.102	-0.180 ± 0.120
photometric centroid source offset	0.13 ± 0.06	2.29	-0.07 ± 0.04	-0.10 ± 0.06

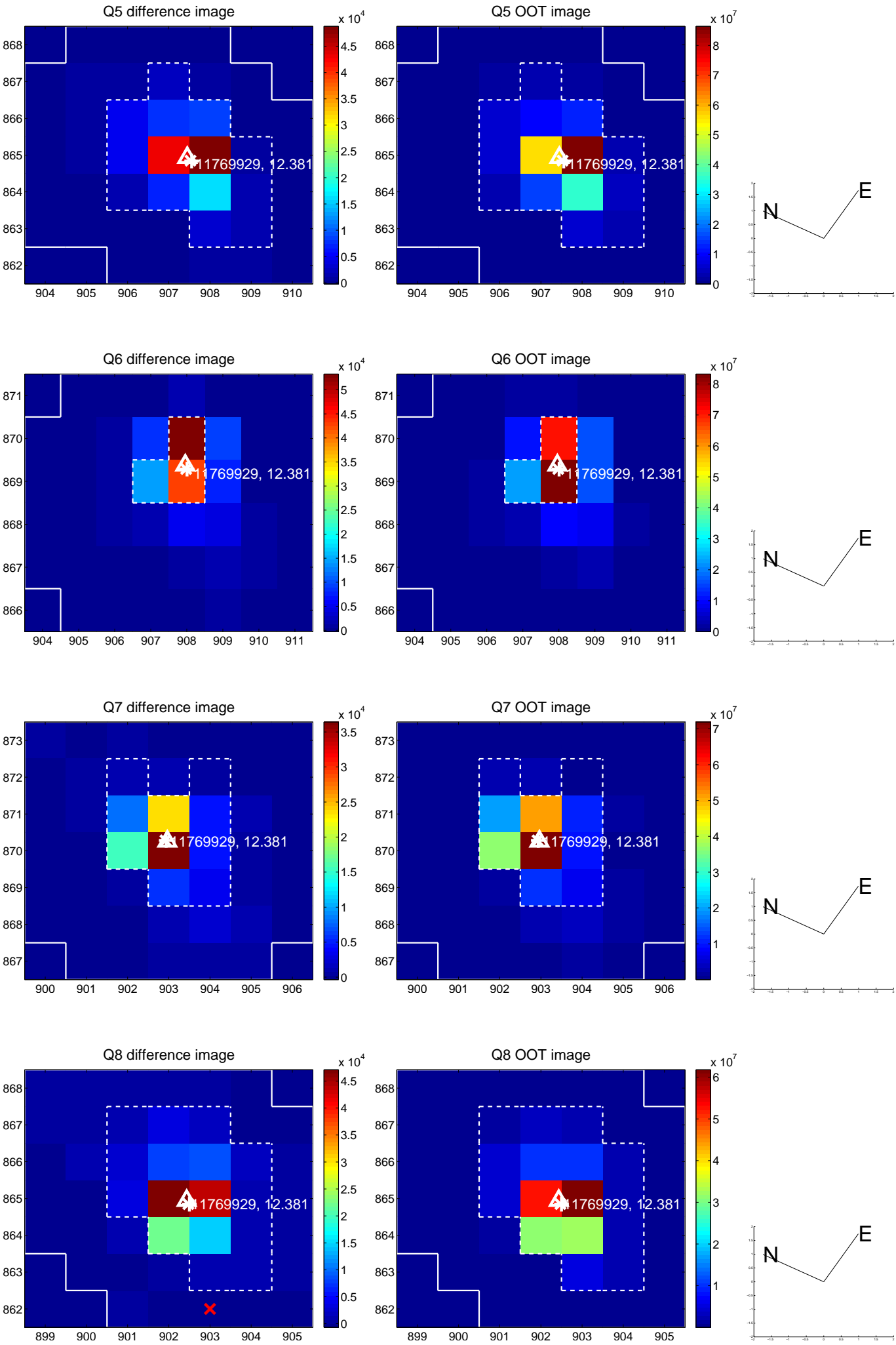


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

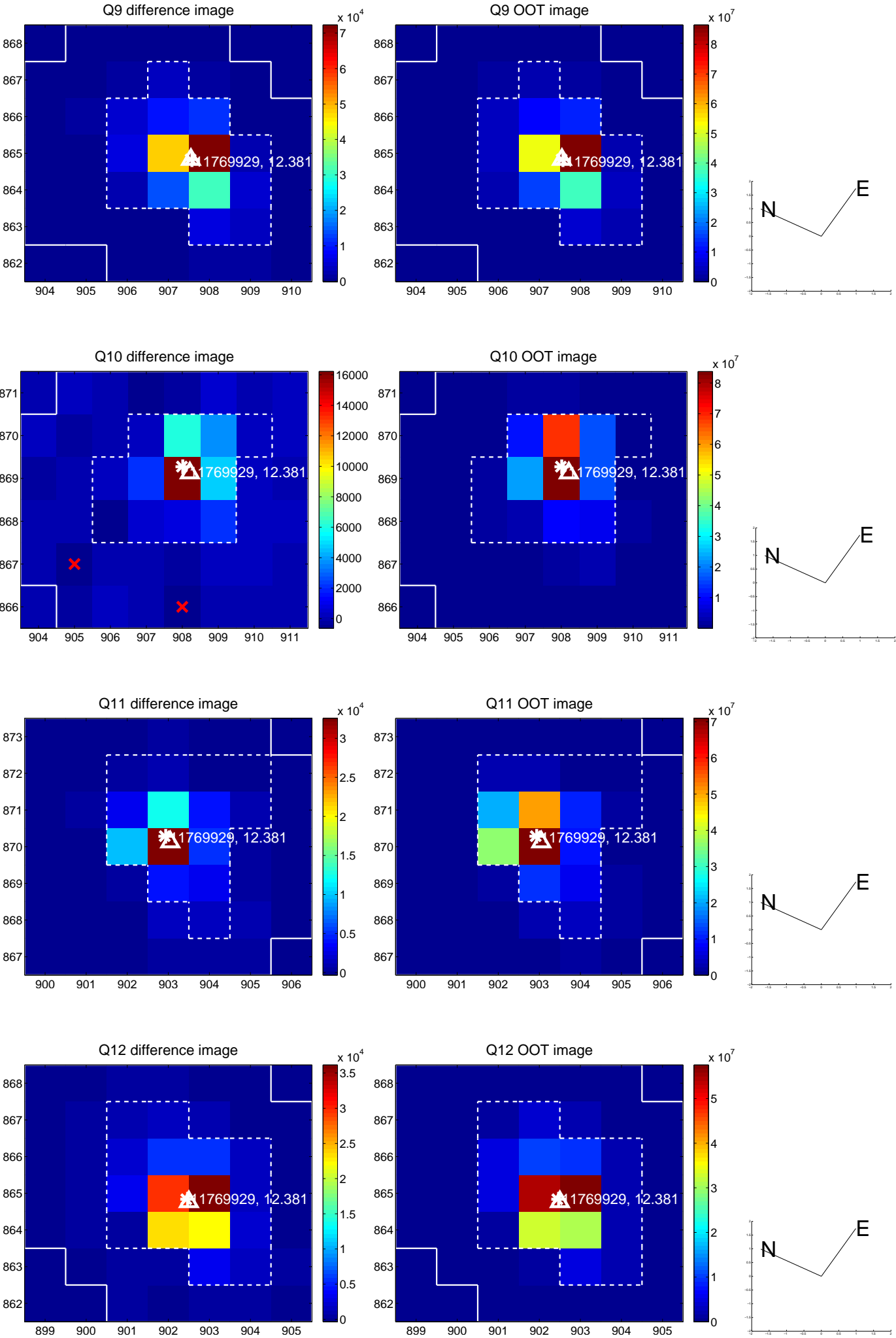
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



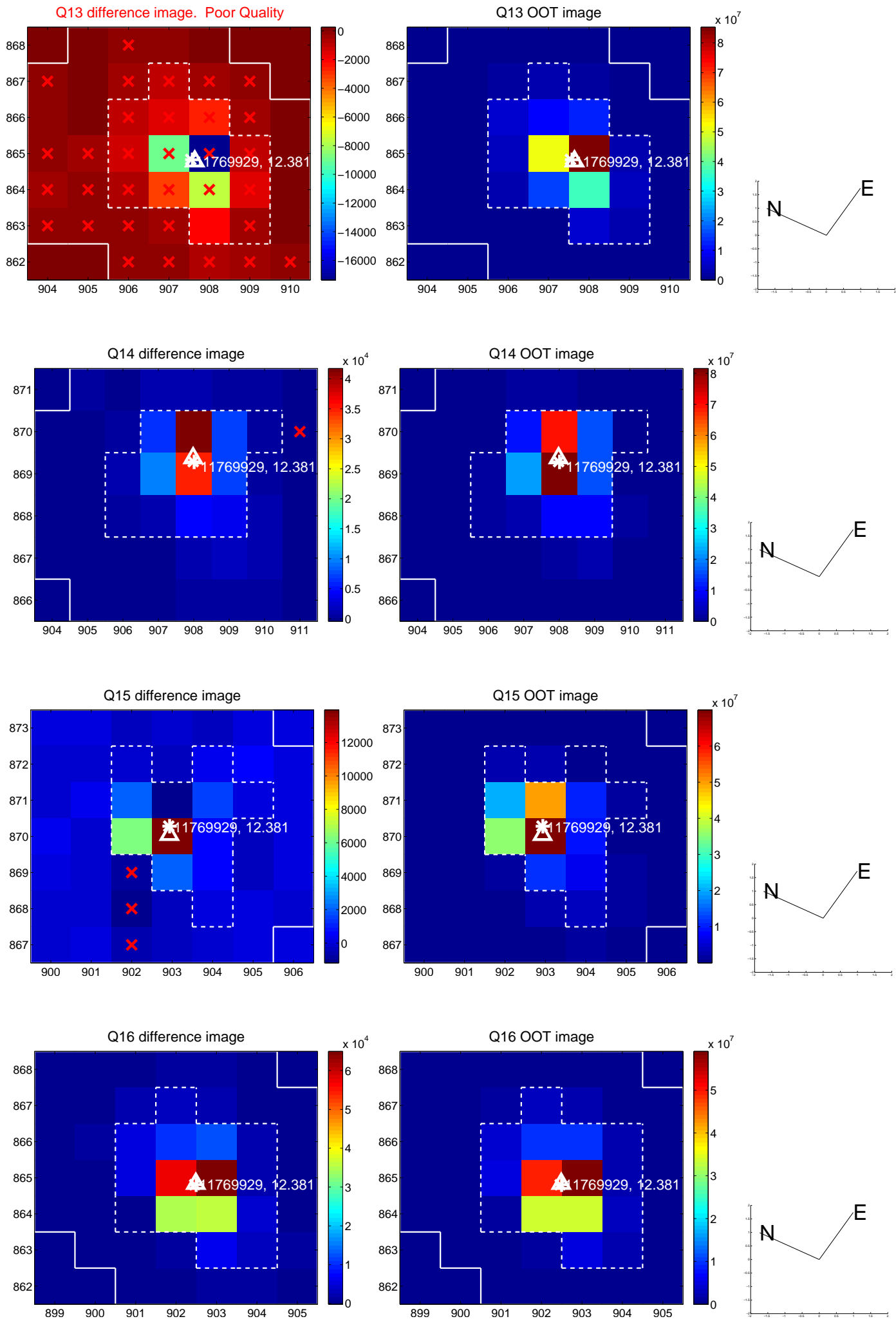
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



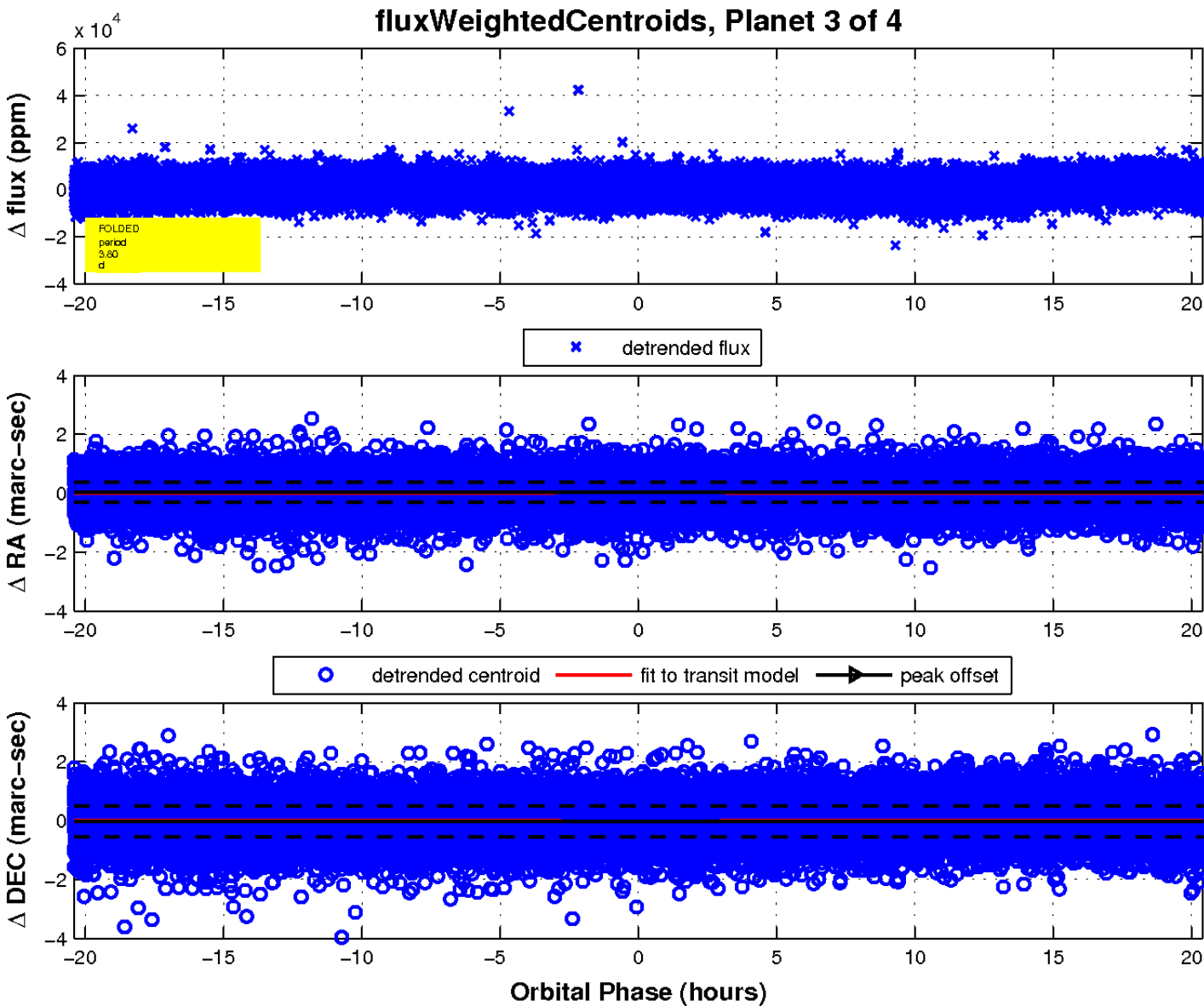
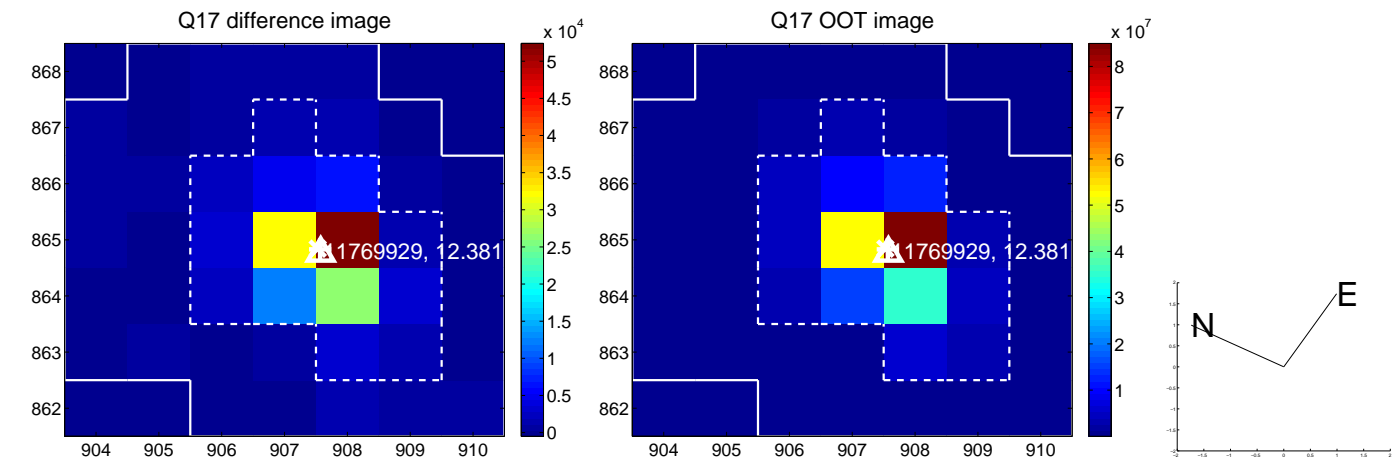
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

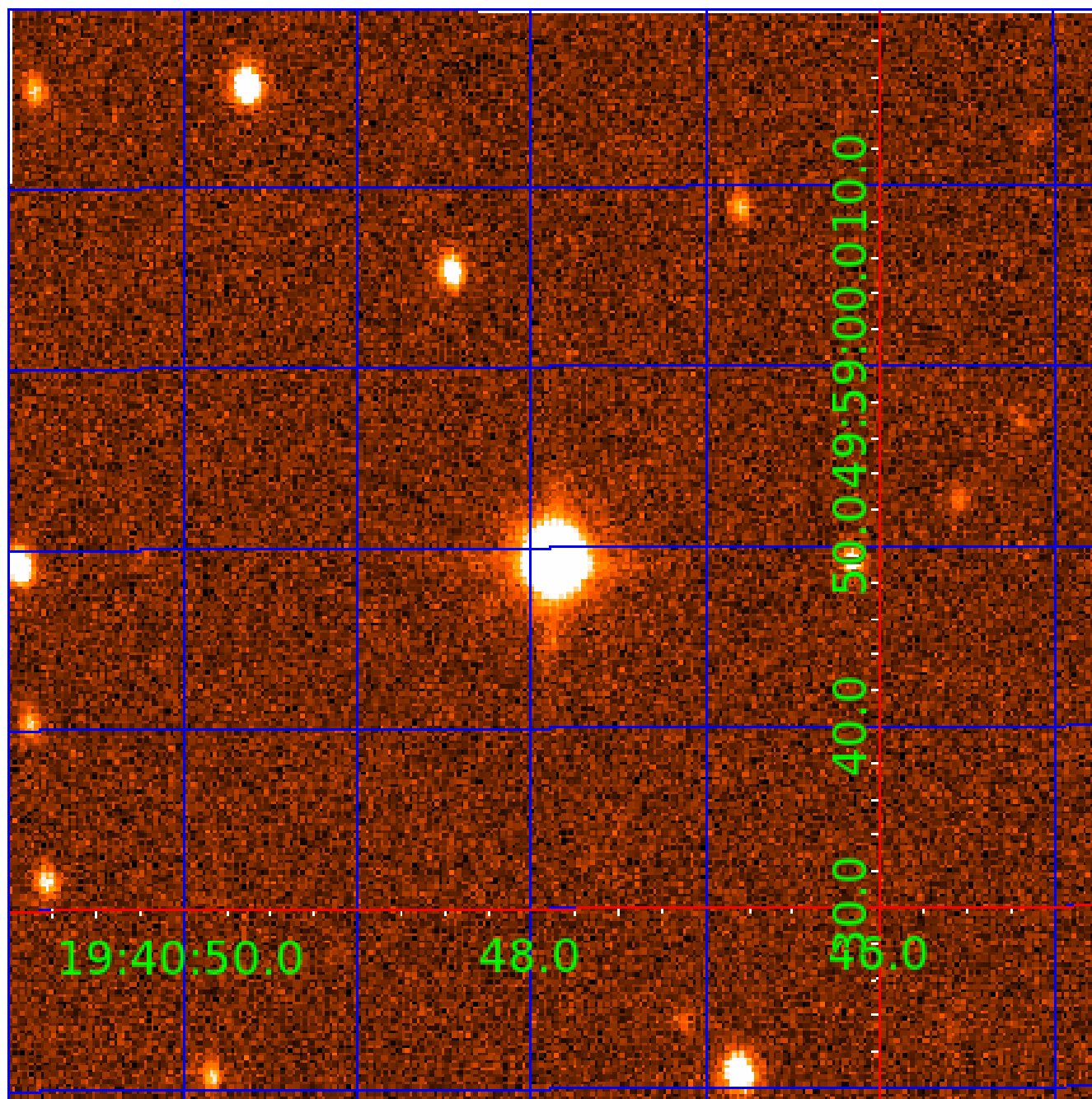


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011769929

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})
011769929-01	OBS	No	1.002947	131.672977	369.3	4.194	14.0	9.8	1.76	7266	3.87	16991.03
011769929-02	OBS	No	3.799893	132.916189	1566.2	12.482	10.0	13.2	1.76	7266	8.18	2876.70
011769929-03	OBS	No	3.800188	133.653865	549.5	6.801	12.0	3.9	1.76	7266	4.66	2876.41
011769929-04	OBS	No	1.900059	132.420287	109.9	6.000	9.9	-1.0	1.76	7266	1.87	7248.27

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011769929-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
011769929-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011769929-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
011769929-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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

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

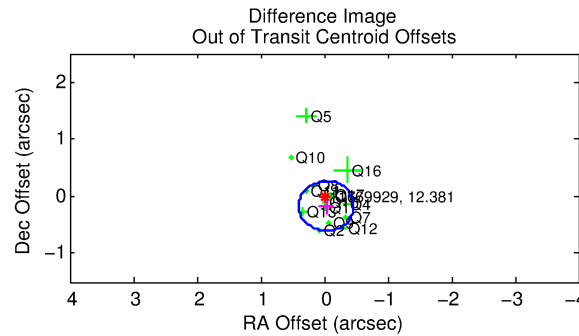
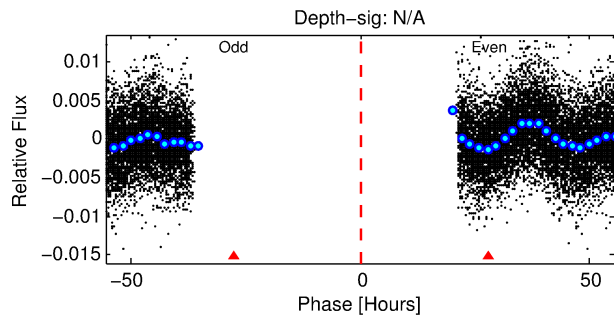
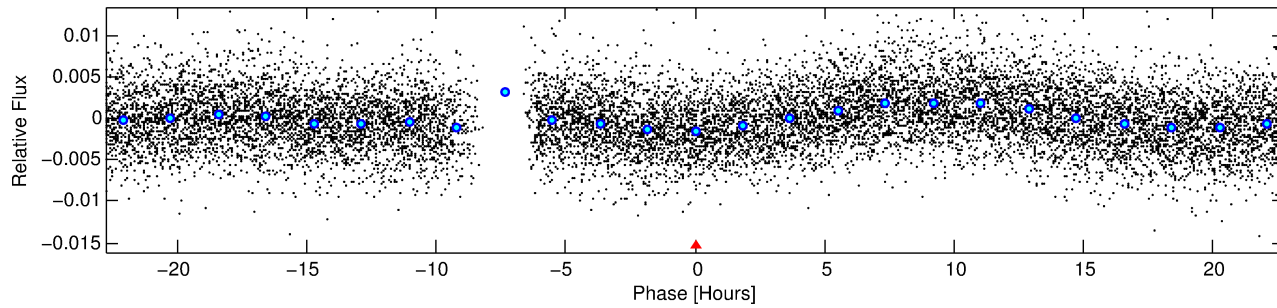
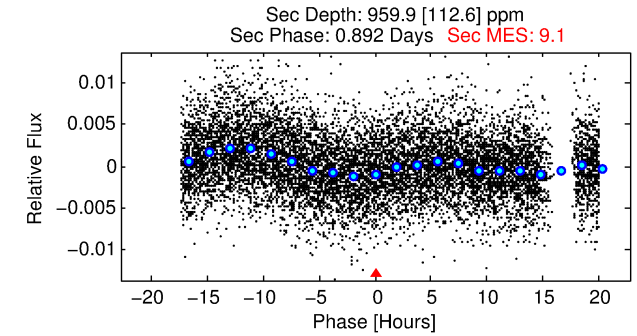
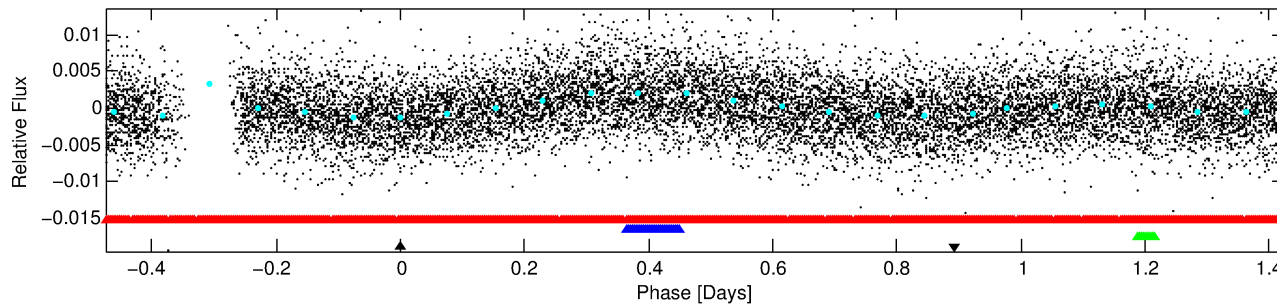
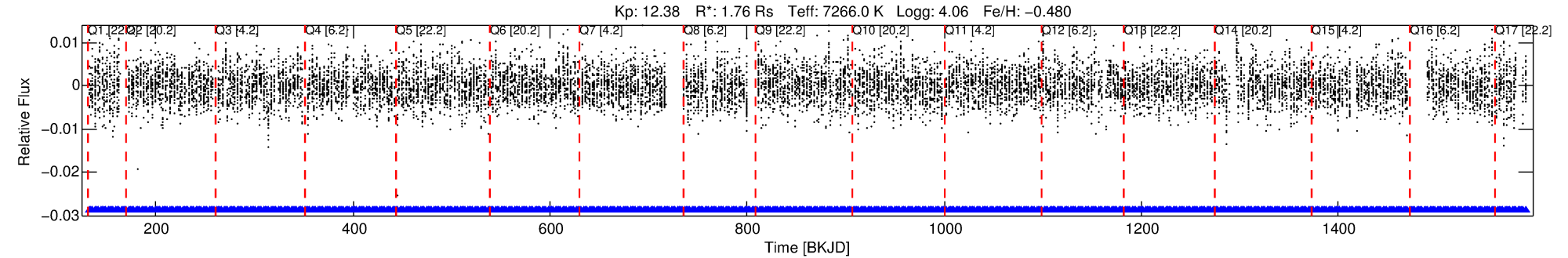
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011769929-04

No Significant Match Found

DV One-Page Summary

KIC: 11769929 Candidate: 4 of 4 Period: 1.900 d



TPS TCE Results:

Period = 1.90006 d
Epoch = 132.4203 BKJD

DV fit results are unavailable

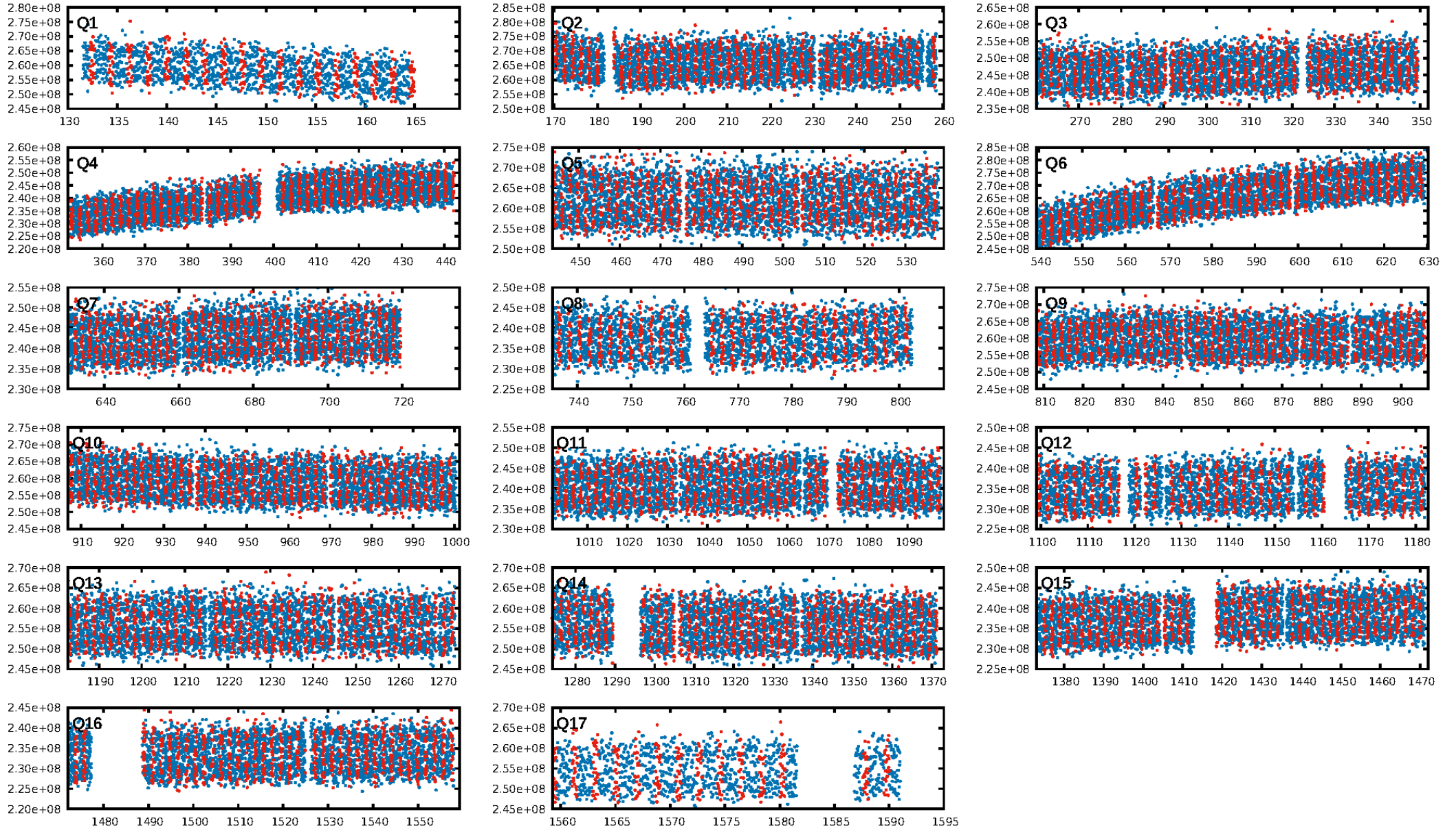
DV Diagnostic Results:

ShortPeriod-sig: 99.7% [2.94 σ]
LongPeriod-sig: 99.9% [3.29 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [284/284]
GhostDiagnostic-chr: 1.356
Centroid-sig: 23.9%
Centroid-so: 0.151 arcsec [17.90 σ]
OotOffset-rm: 0.173 arcsec [1.20 σ]
KicOffset-rm: 0.281 arcsec [2.00 σ]
OotOffset-st: 3/3/4/5 [15]
KicOffset-st: 3/3/4/5 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 0.00 [0/17]

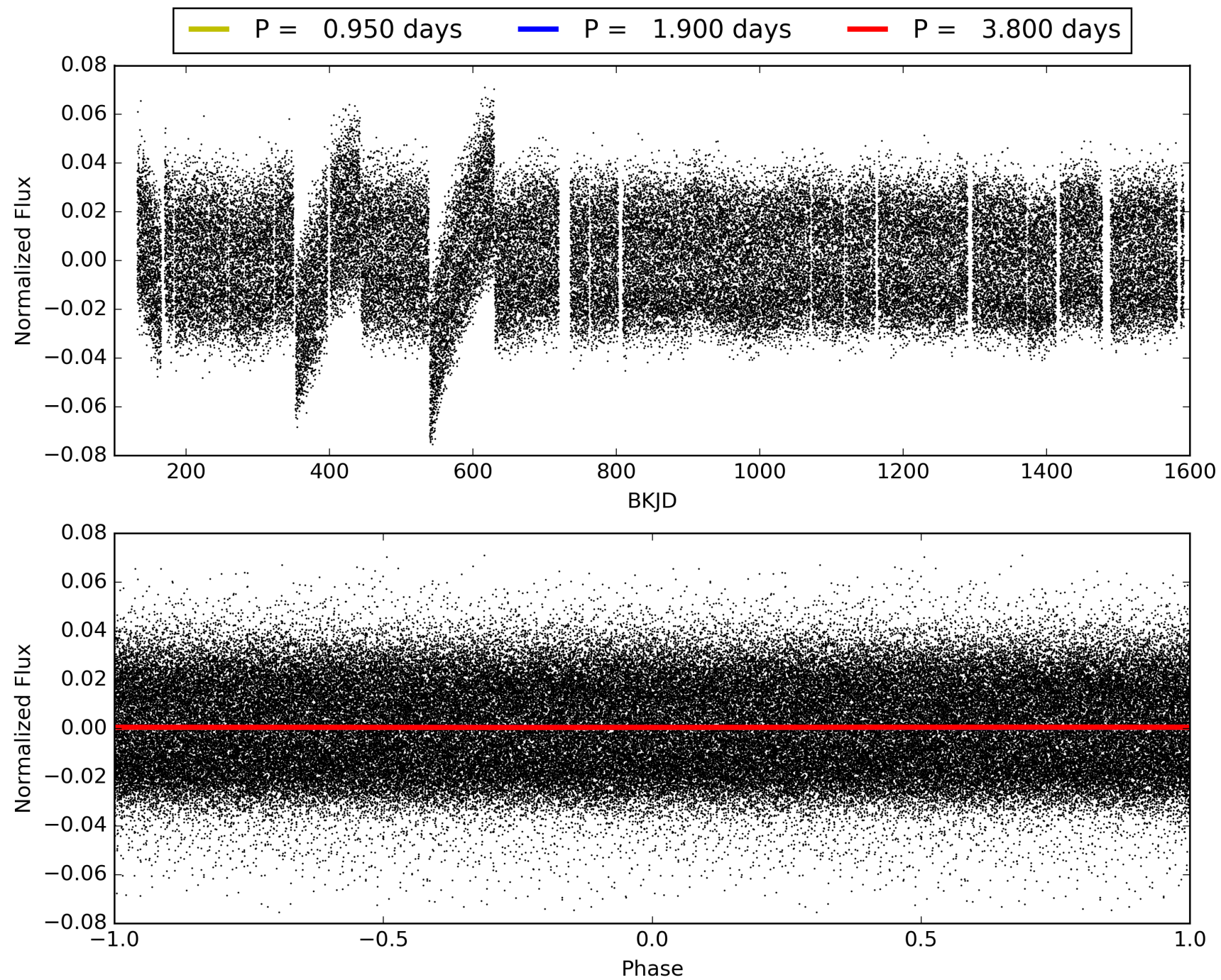
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:44:03 Z

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

TCE 011769929-04, PDC Light Curves

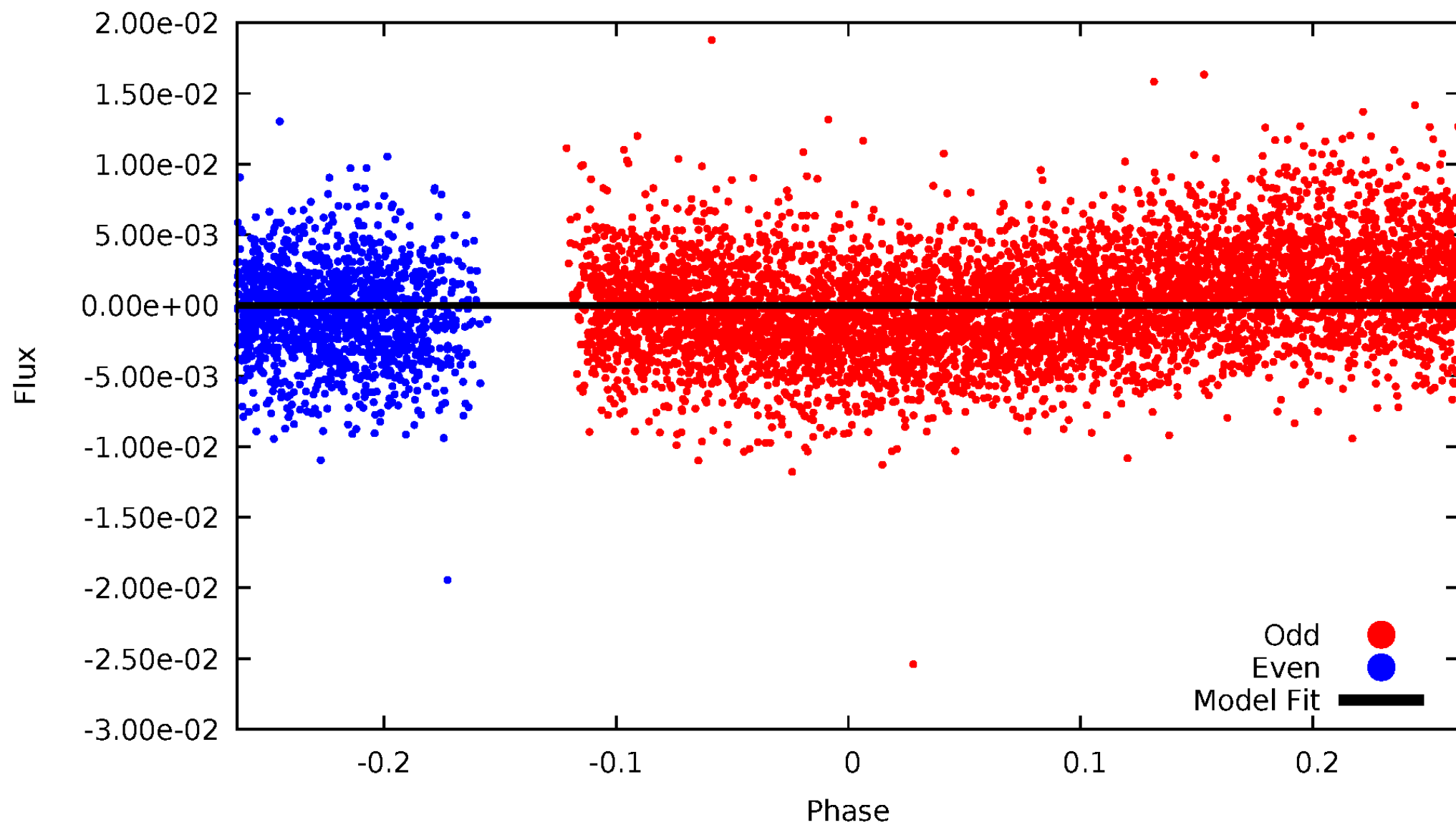


TCE 011769929-04



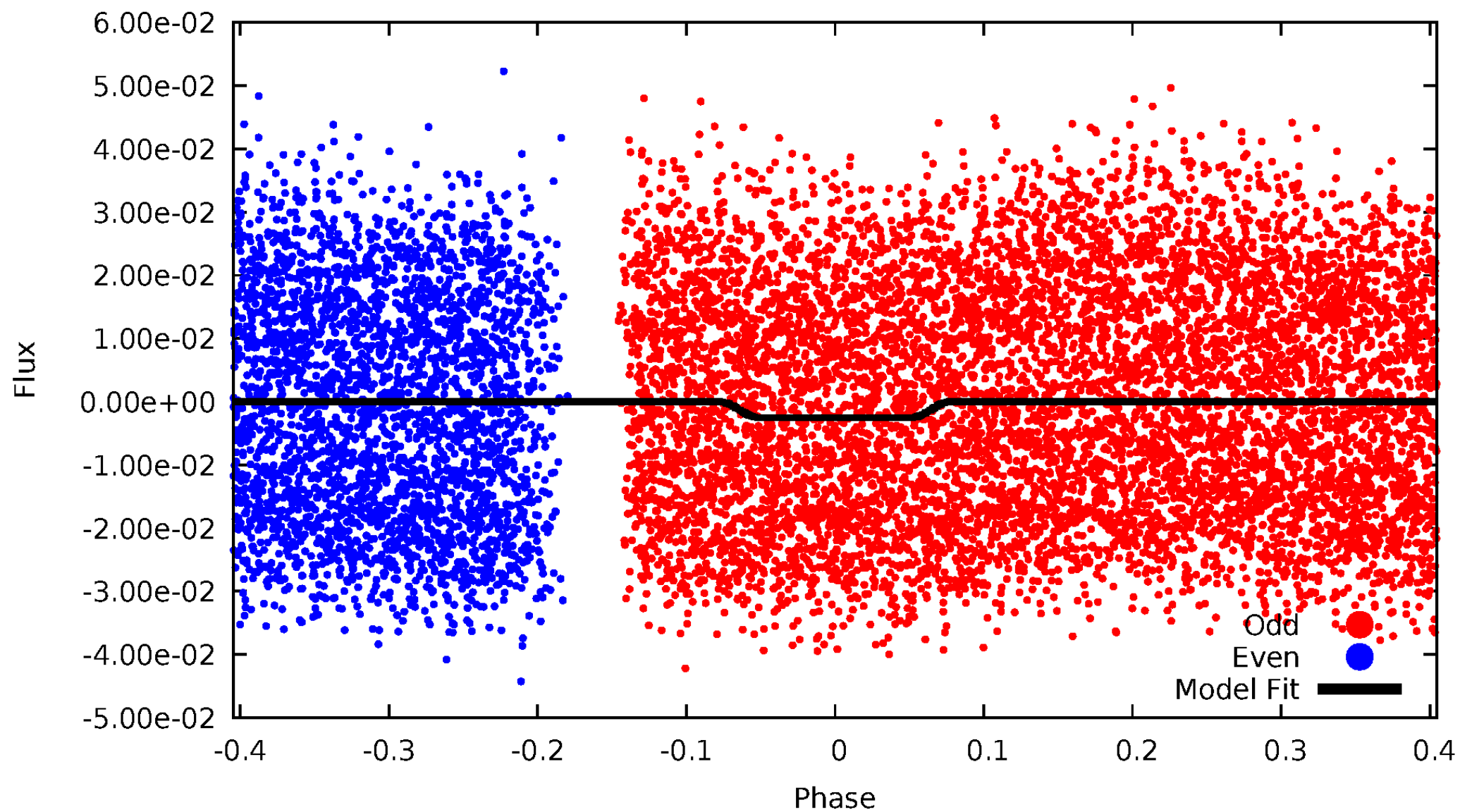
DV Odd/Even

TCE 011769929-04



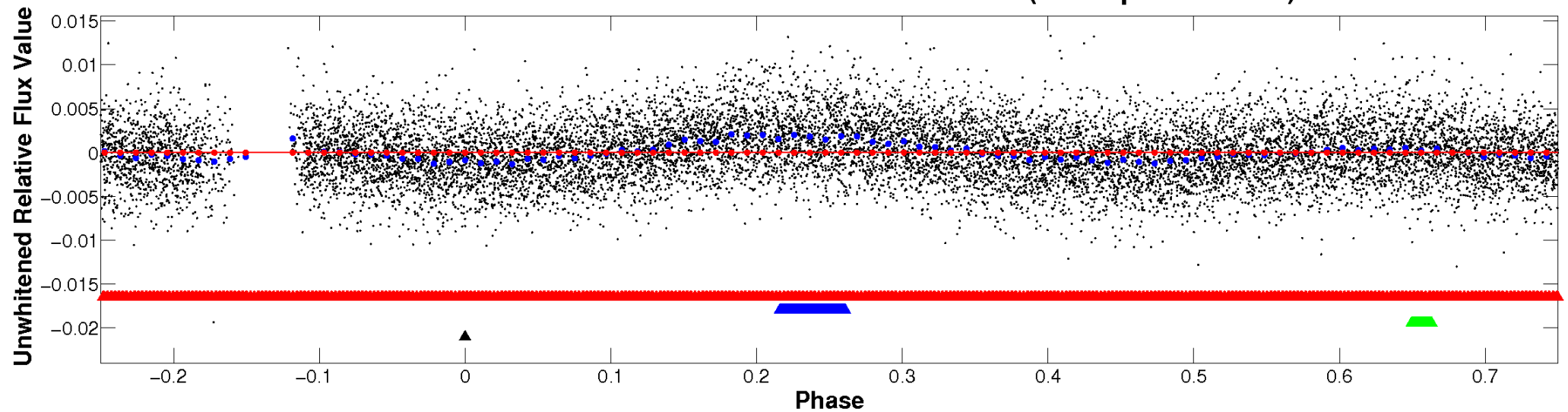
ALT Odd/Even

TCE 011769929-04

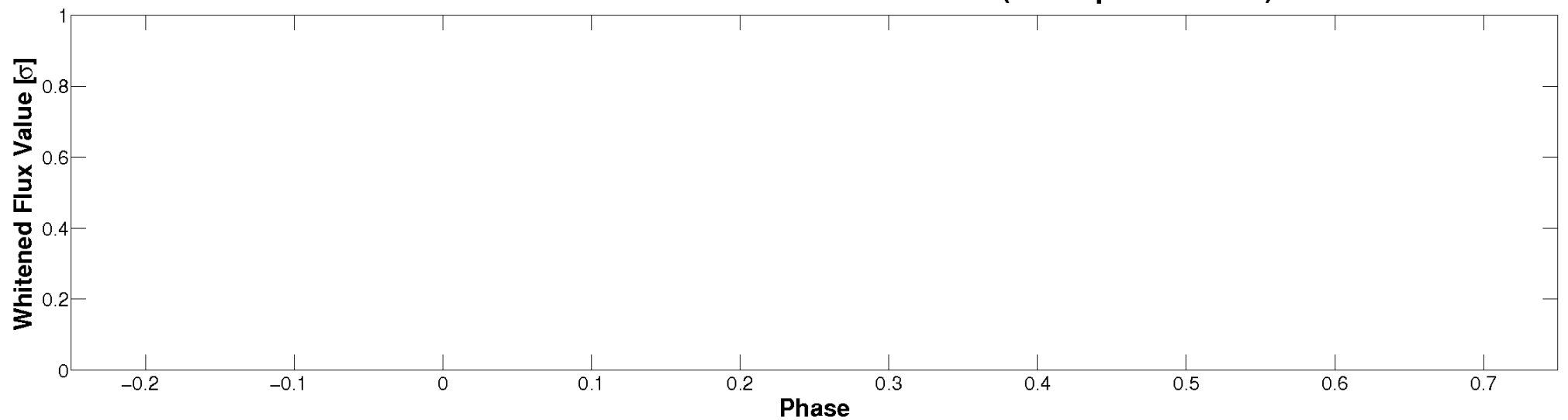


Non-Whitened Vs. Whitened Light Curve

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

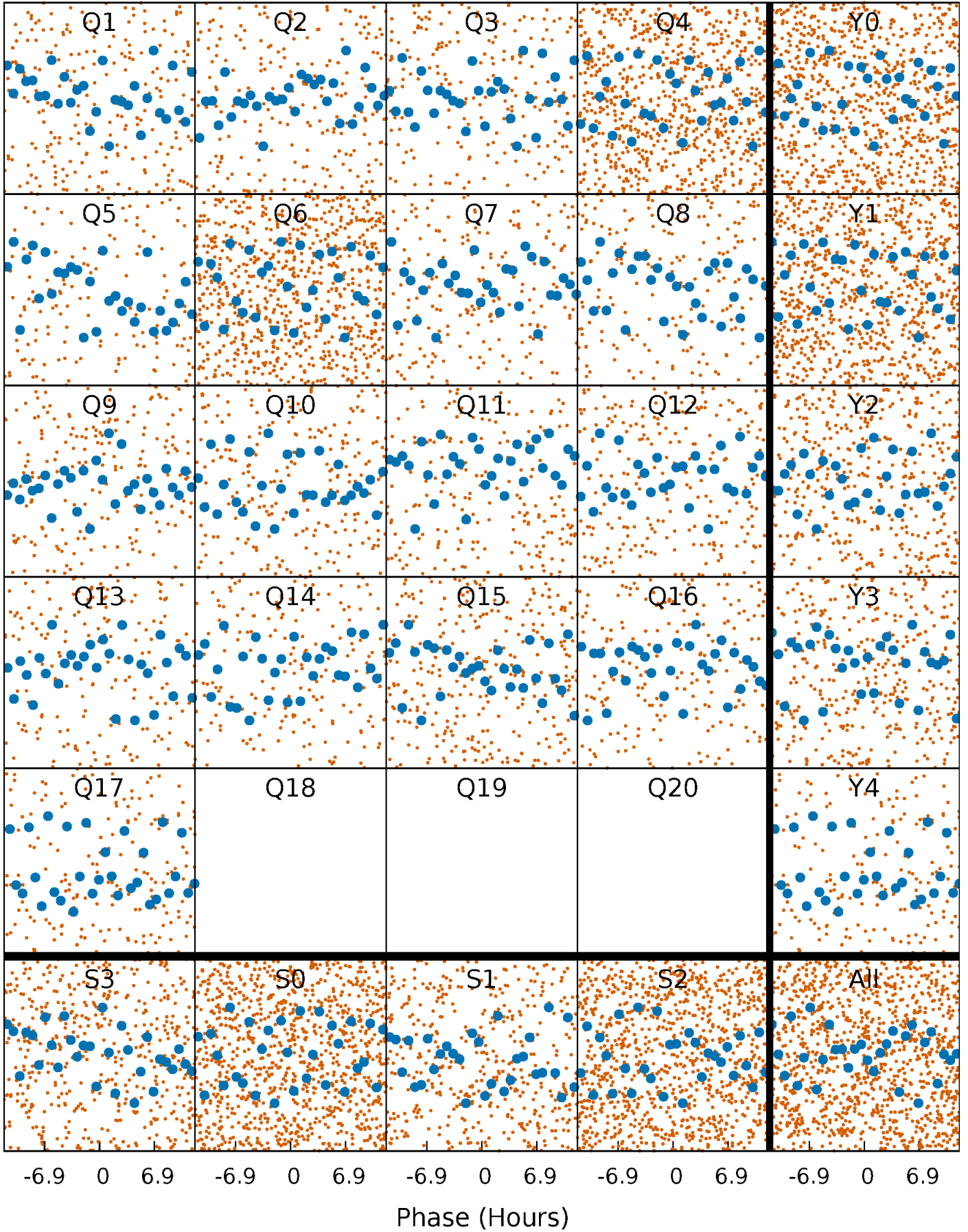


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



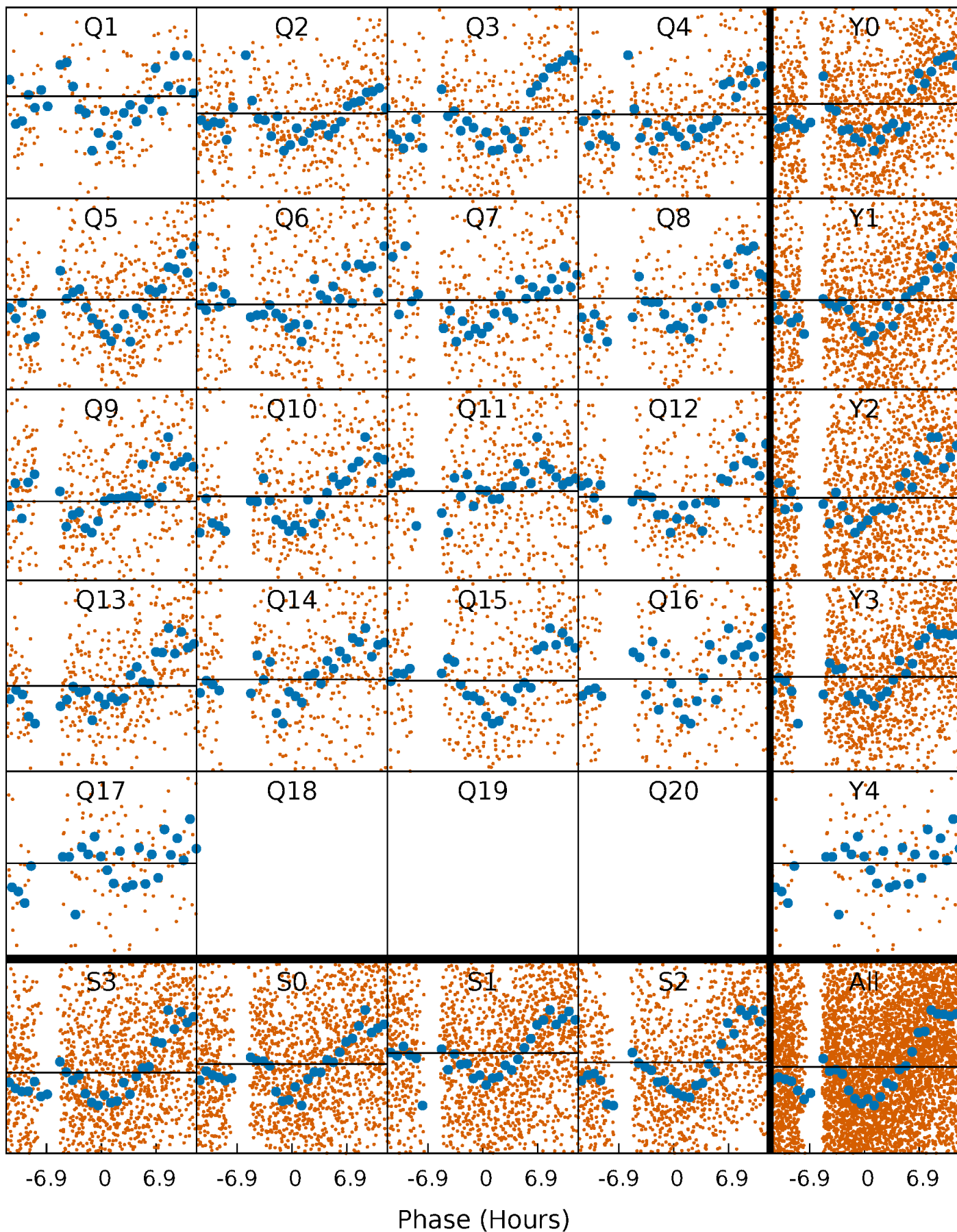
PDC Quarter-Phased Transit Curves

TCE 011769929-04 P= 1.900059 Days $T_0=132.420287$ (BKJD)



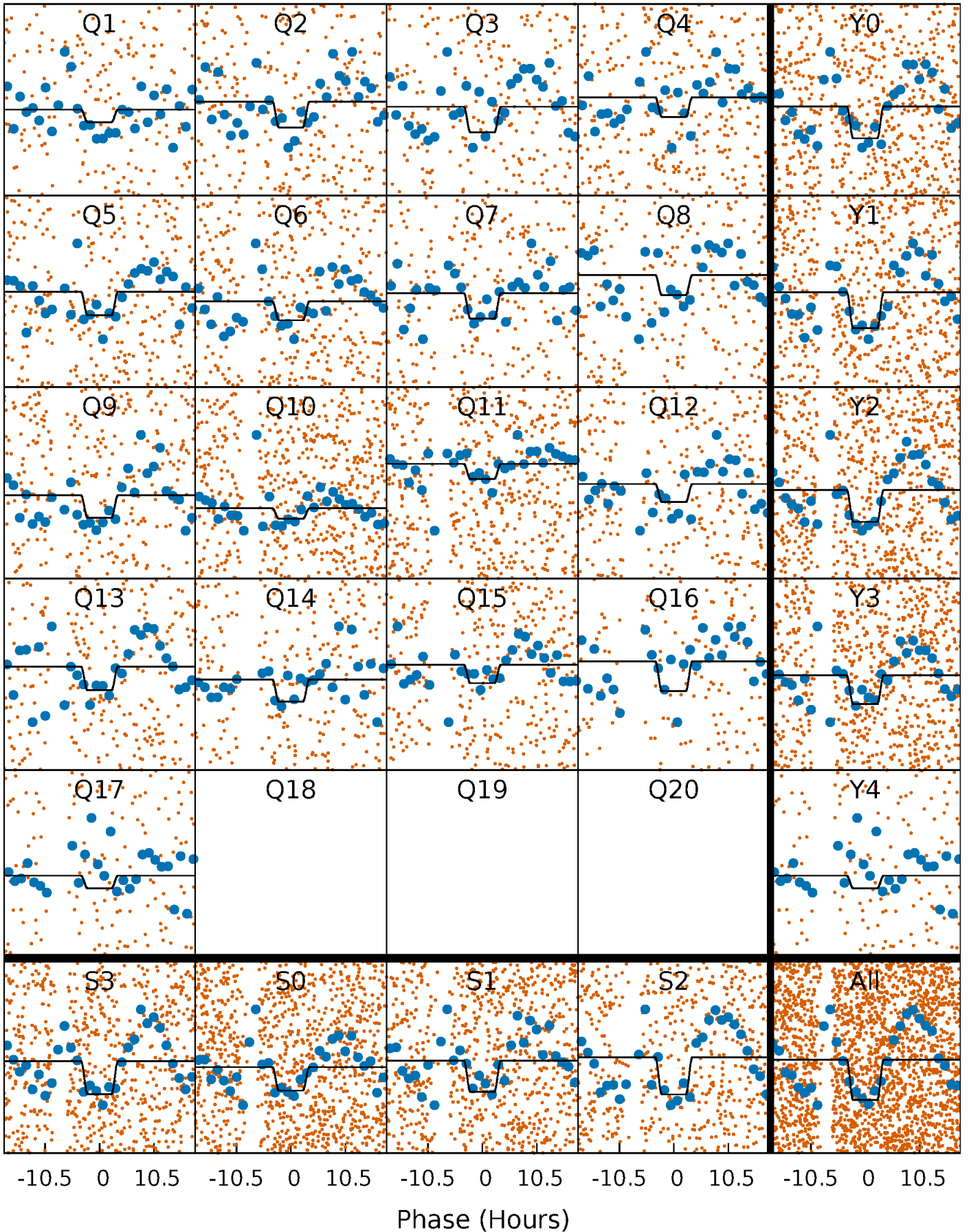
DV Quarter-Phased Transit Curves

TCE 011769929-04 P= 1.900059 Days $T_0=132.420287$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

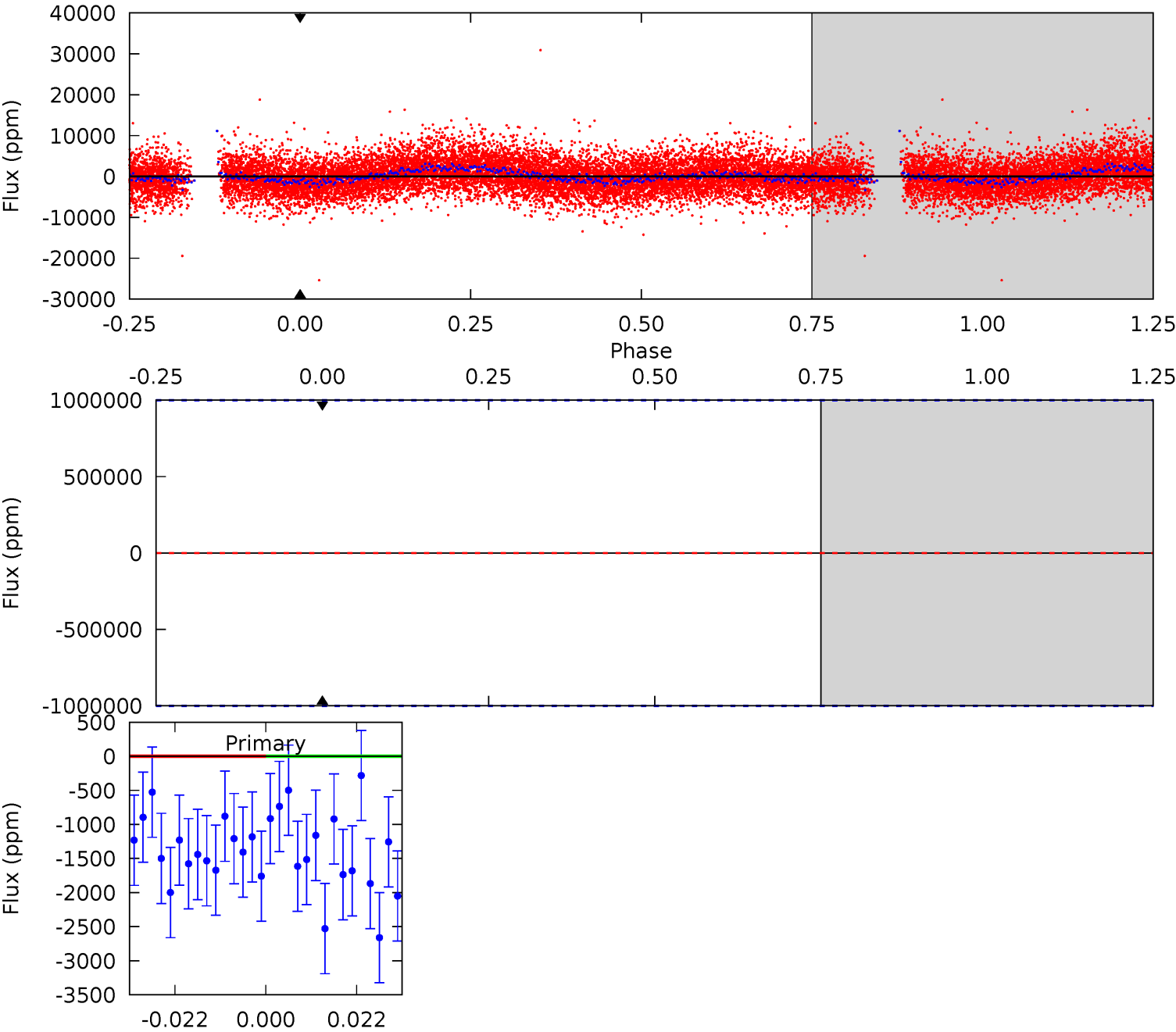
TCE 011769929-04 P= 1.900059 Days $T_0=132.466393$ (BKJD)



DV Model-Shift Uniqueness Test

011769929-04, P = 1.900059 Days, E = 130.520228 Days

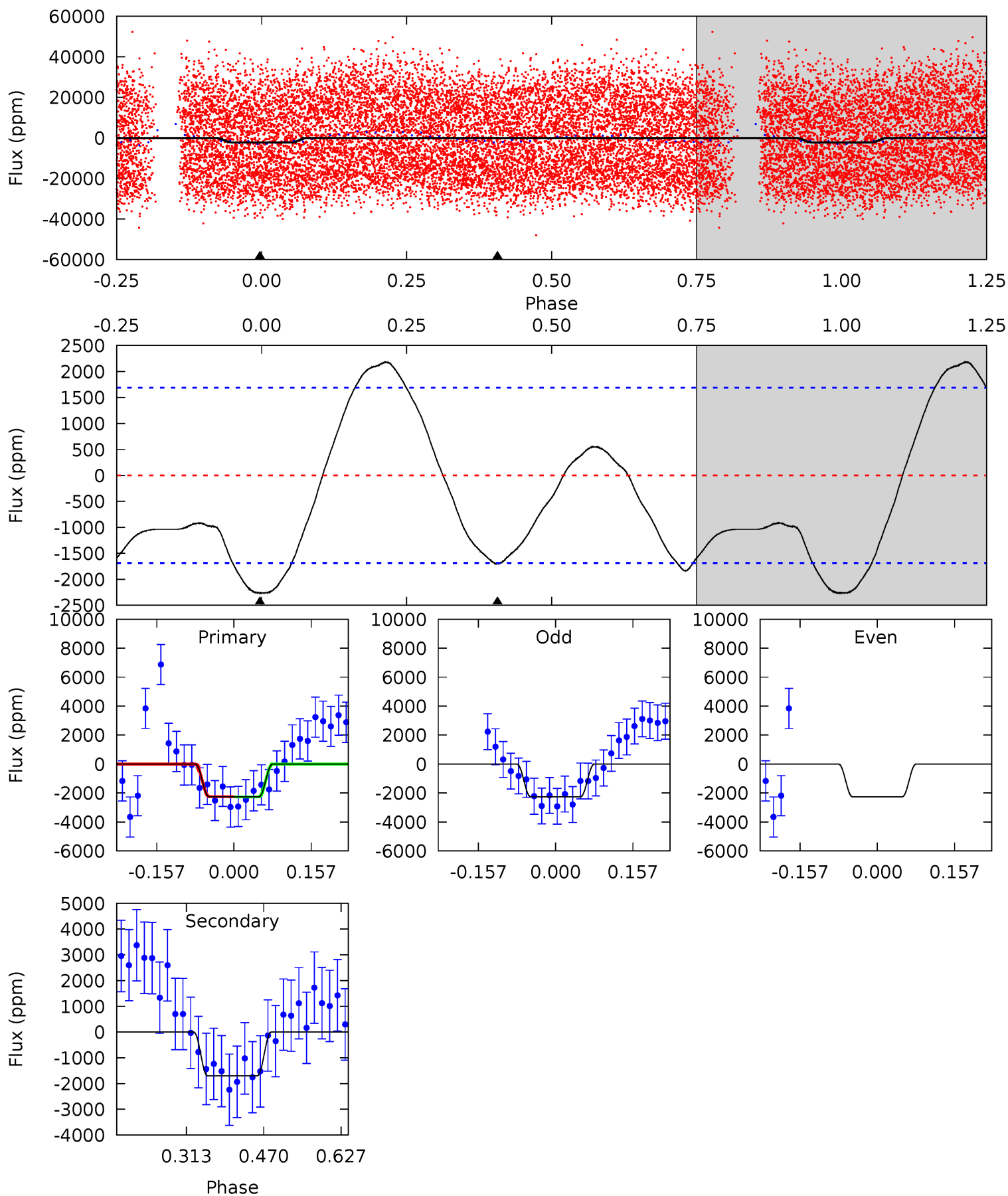
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011769929-04, P = 1.900059 Days, E = 130.566334 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.01	4.52	0	0	4.47	1.42	3.75	6.01	6.01	4.52	4.52	0	0.36	0.49	0.02



Stellar Parameters For KIC 011769929

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7266^{+79}_{-87}	$4.056^{+0.182}_{-0.098}$	$-0.480^{+0.200}_{-0.150}$	$1.757^{+0.293}_{-0.358}$	$1.282^{+0.147}_{-0.079}$	$0.333^{+0.276}_{-0.110}$
	+1%/-1%	+4%/-2%	+42%/-31%	+17%/-20%	+11%/-6%	+83%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011769929-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$14.30^{+14.65}_{-10.54}$	3266^{+144}_{-197}	-4470^{+46837}_{-32145}	$-0.963^{+634.898}_{-499.238}$
Alt.	-1704 ± 377	$17.07^{+16.73}_{-11.49}$	3264^{+142}_{-188}	4886^{+3986}_{-1326}	$3.589^{+28.091}_{-2.745}$

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

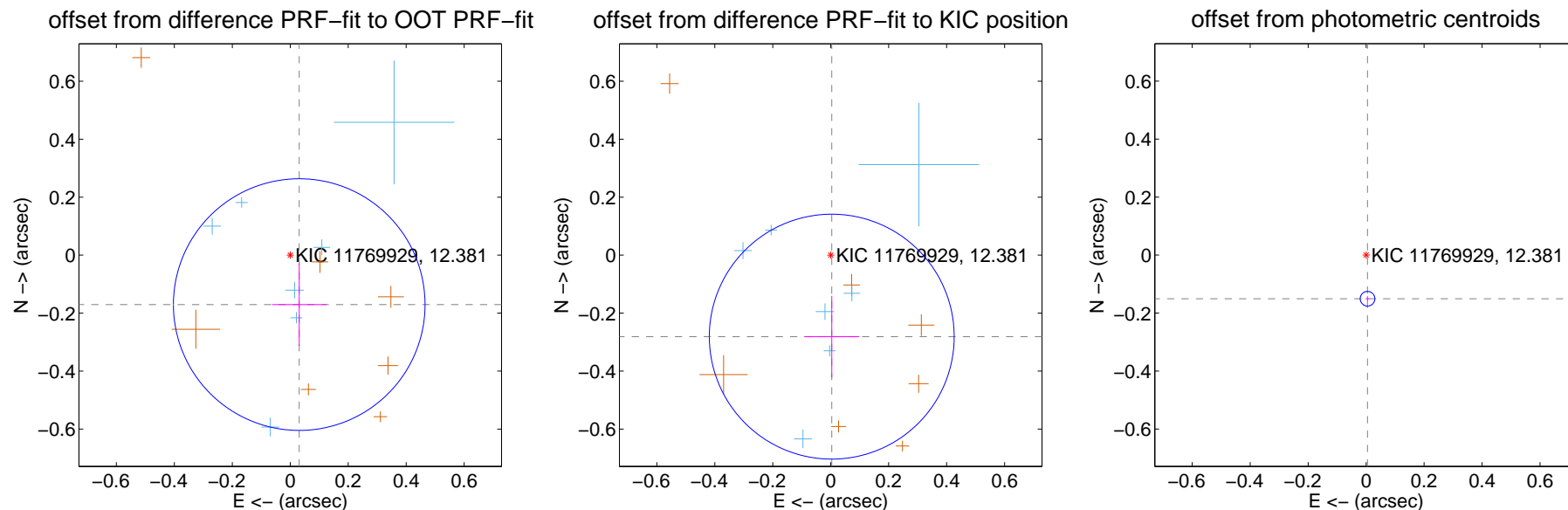
DV Centroid Data

Supplemental centroid analysis for 011769929-04. Kepler magnitude: 12.38. Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

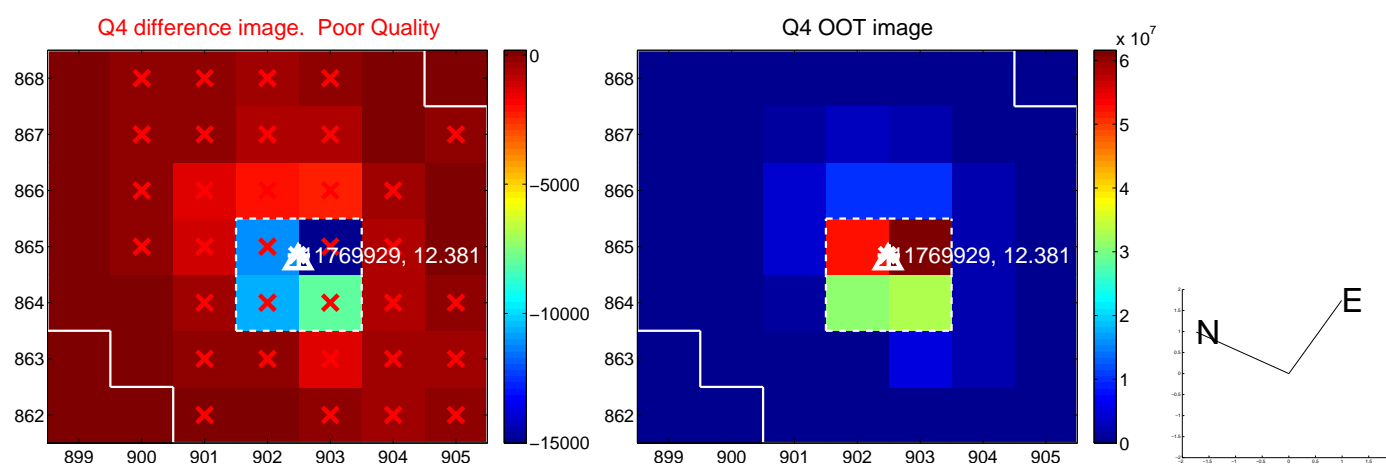
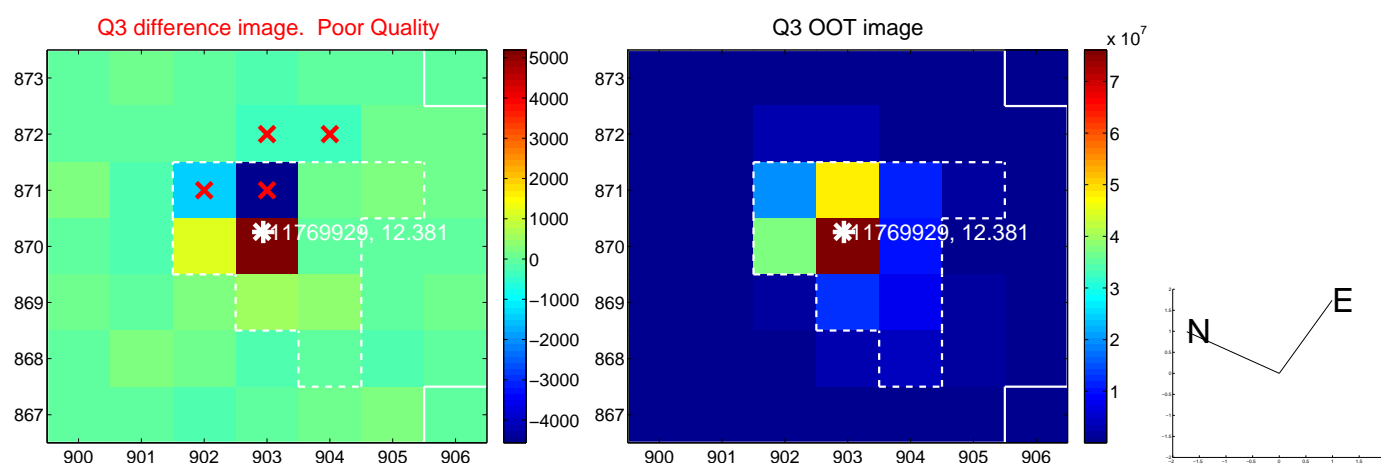
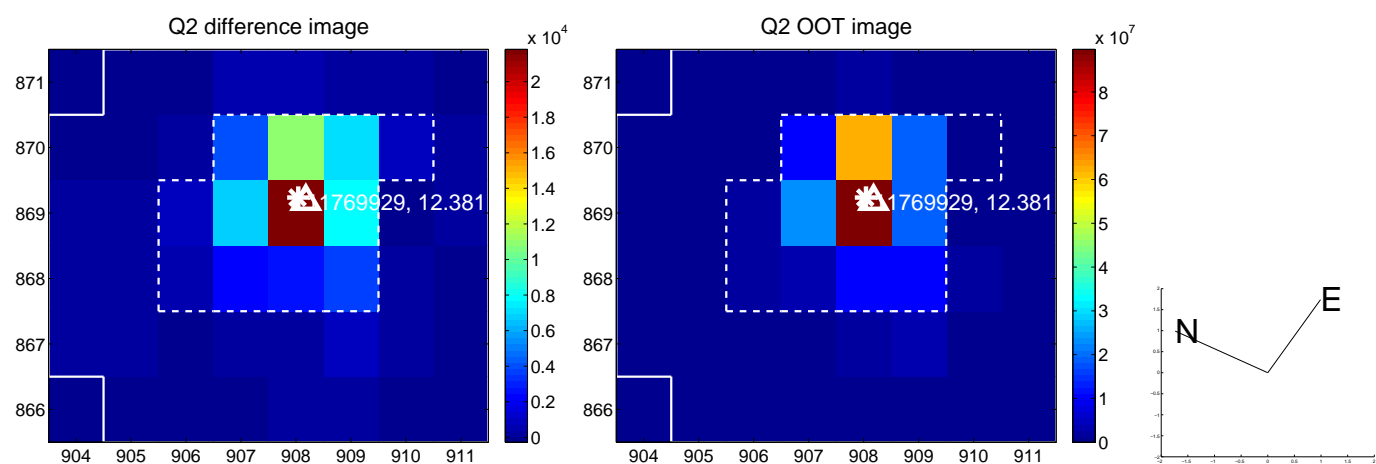
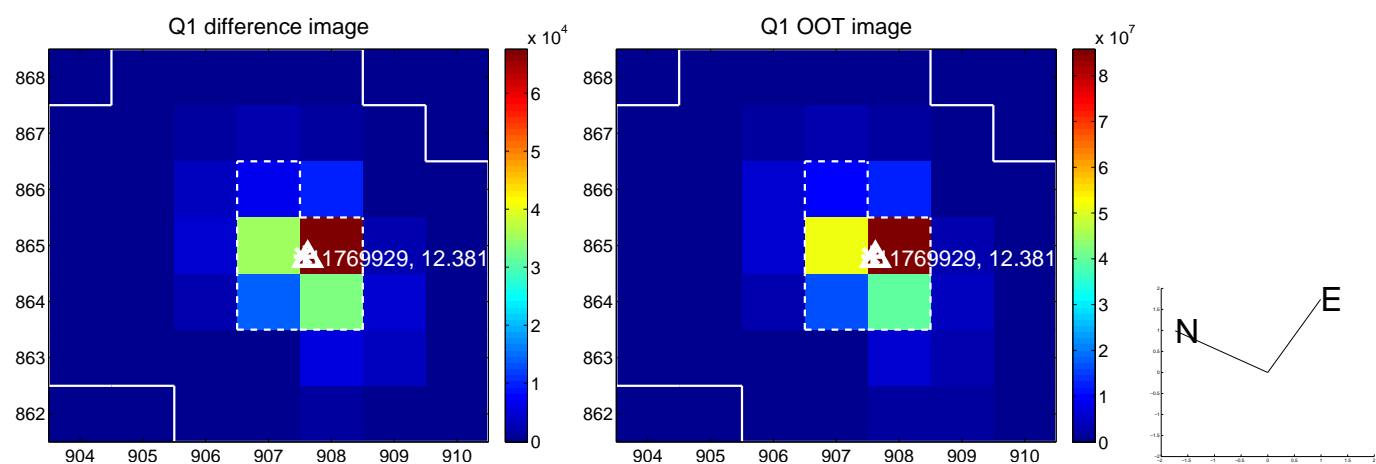
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.173 ± 0.145	1.20	-0.031 ± 0.094	-0.171 ± 0.142
PRF-fit source offset from KIC position	0.281 ± 0.141	2.00	-0.004 ± 0.095	-0.281 ± 0.141
photometric centroid source offset	0.15 ± 0.01	17.90	-0.00 ± 0.01	-0.15 ± 0.01

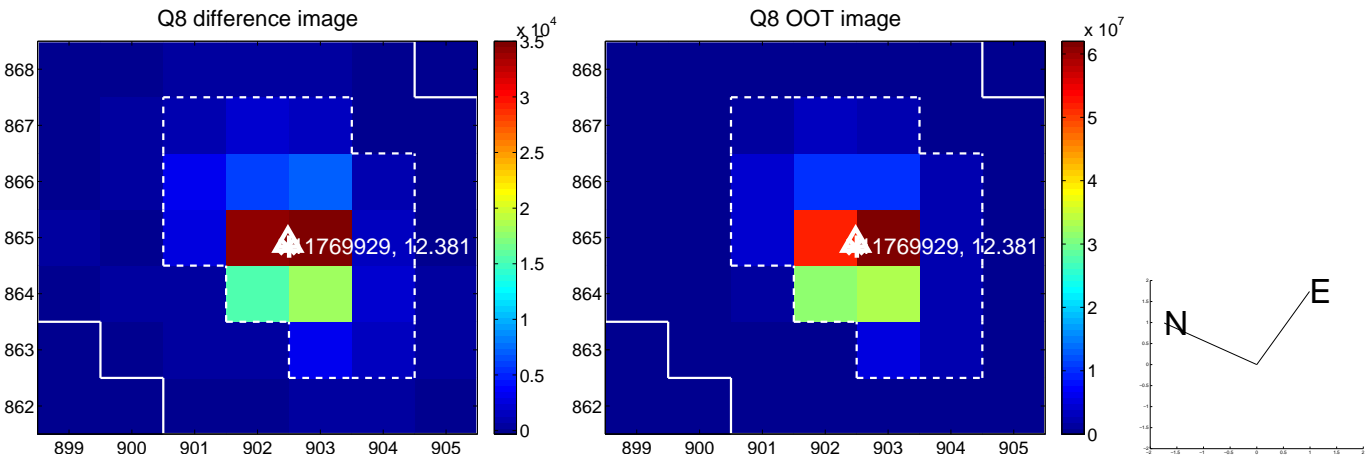
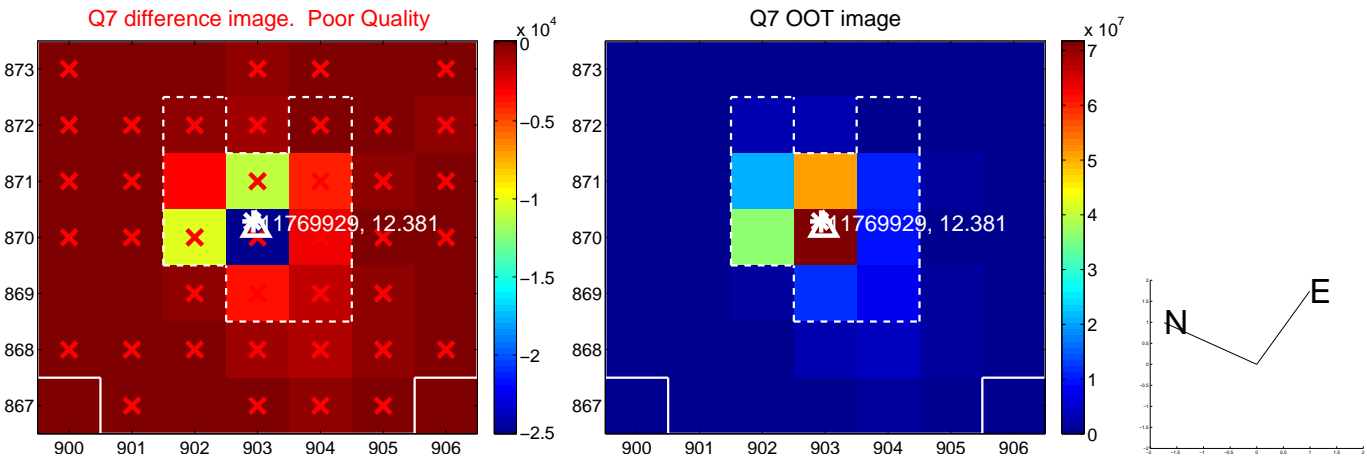
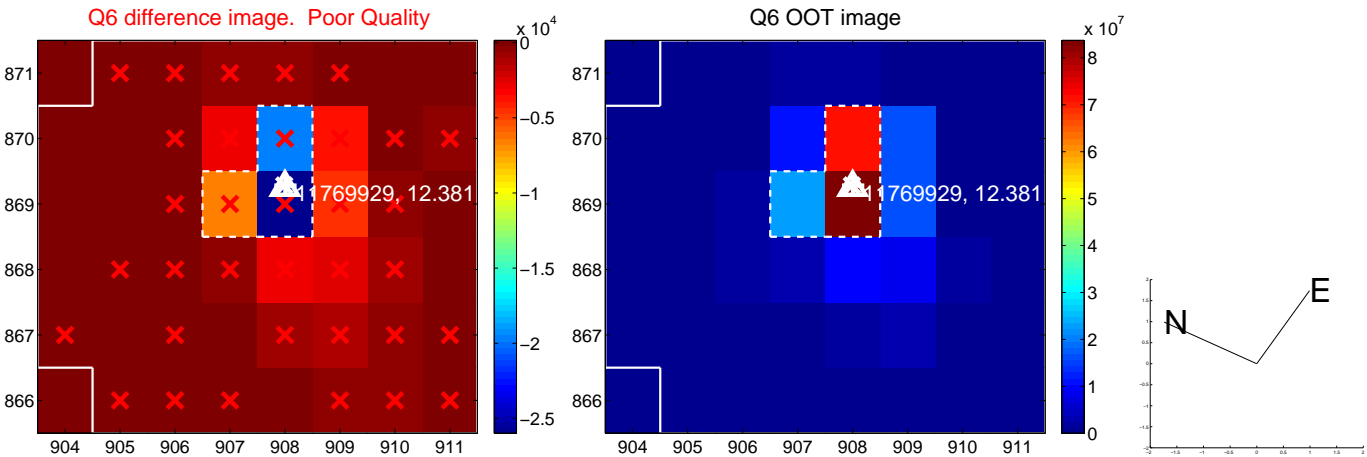
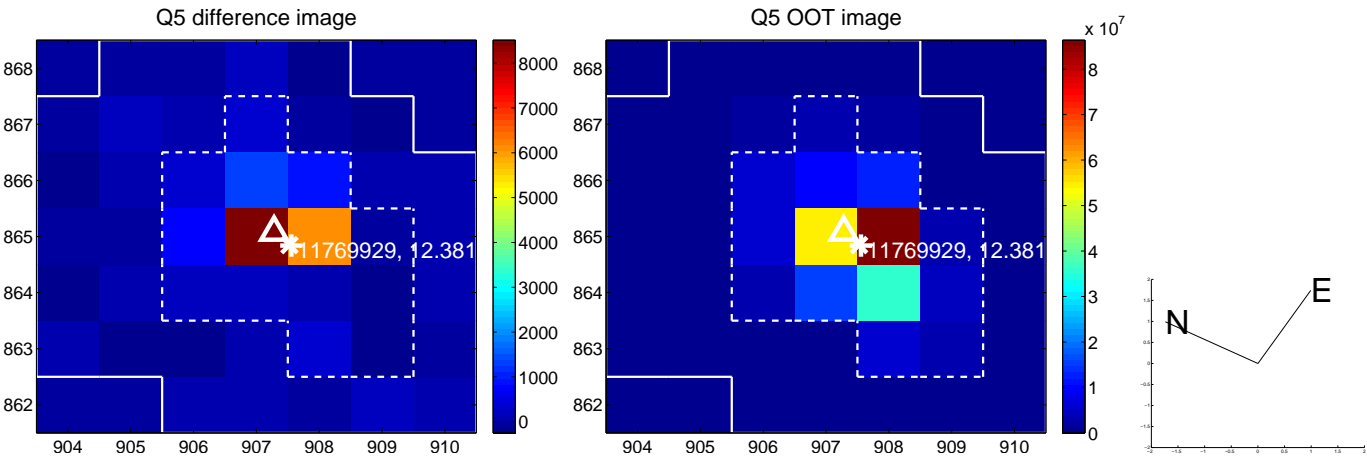


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

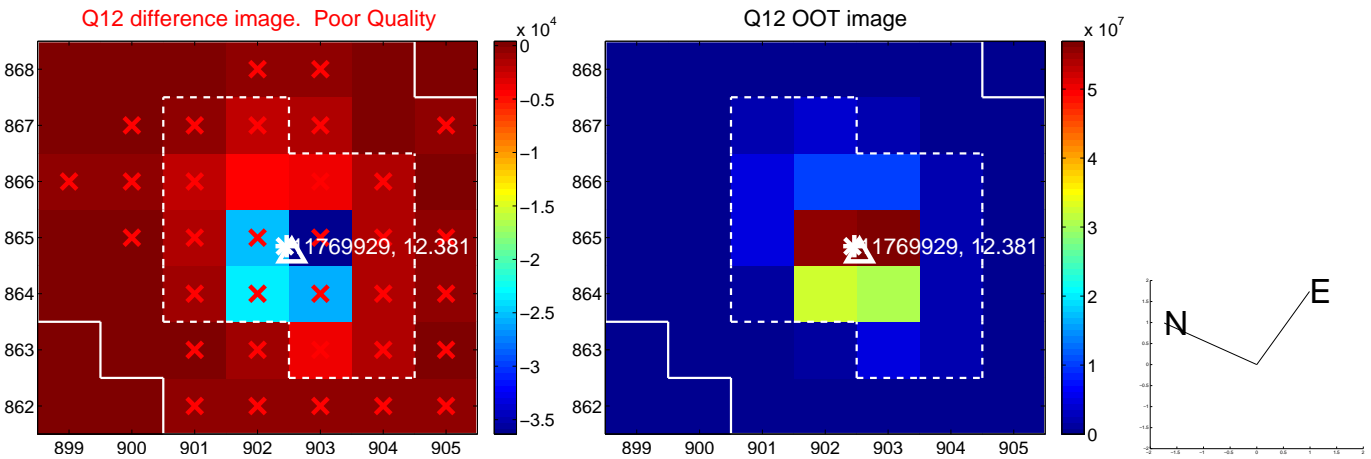
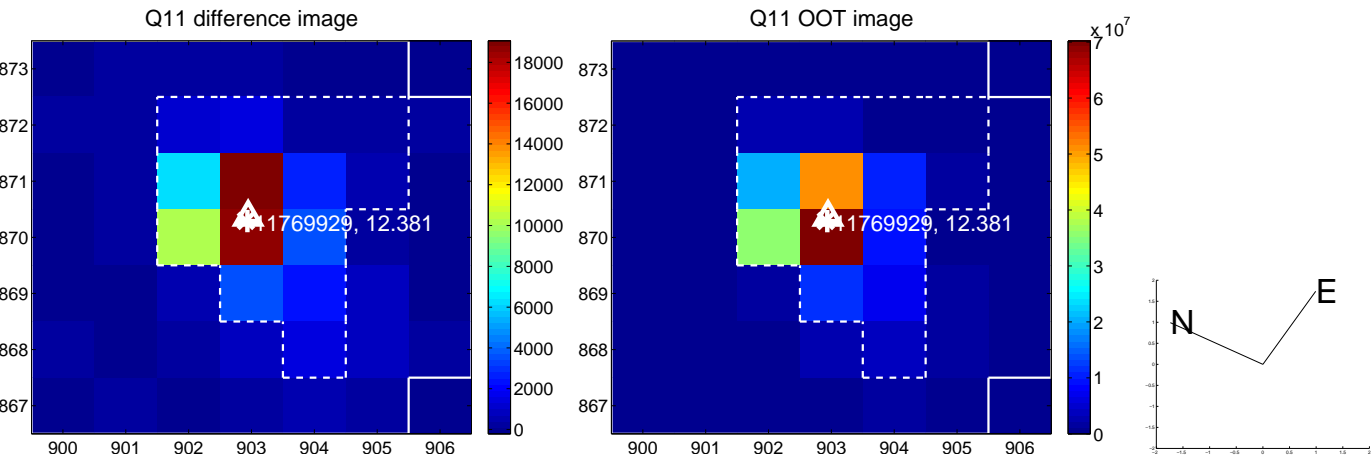
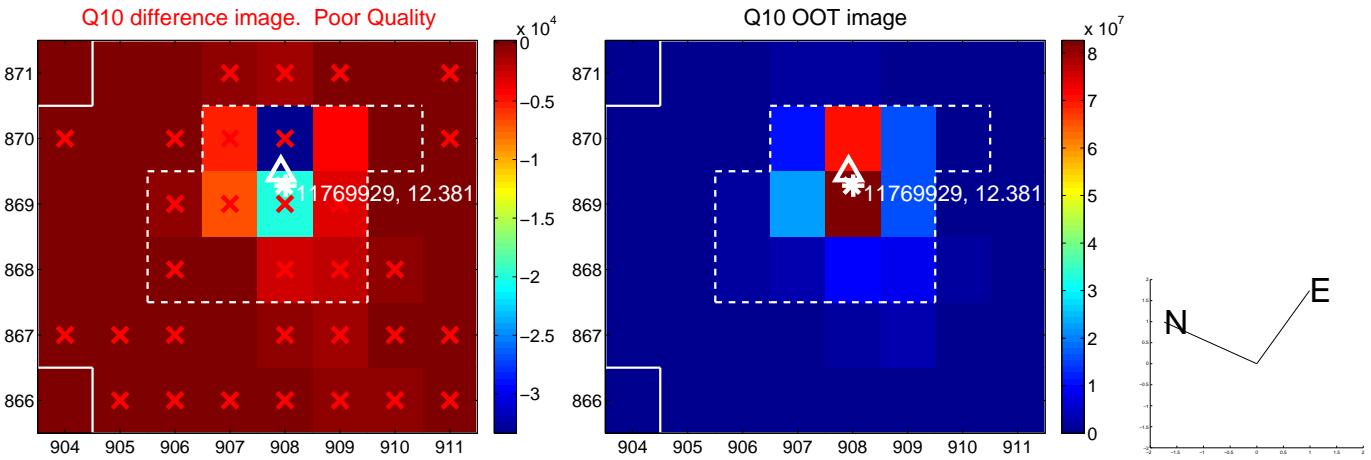
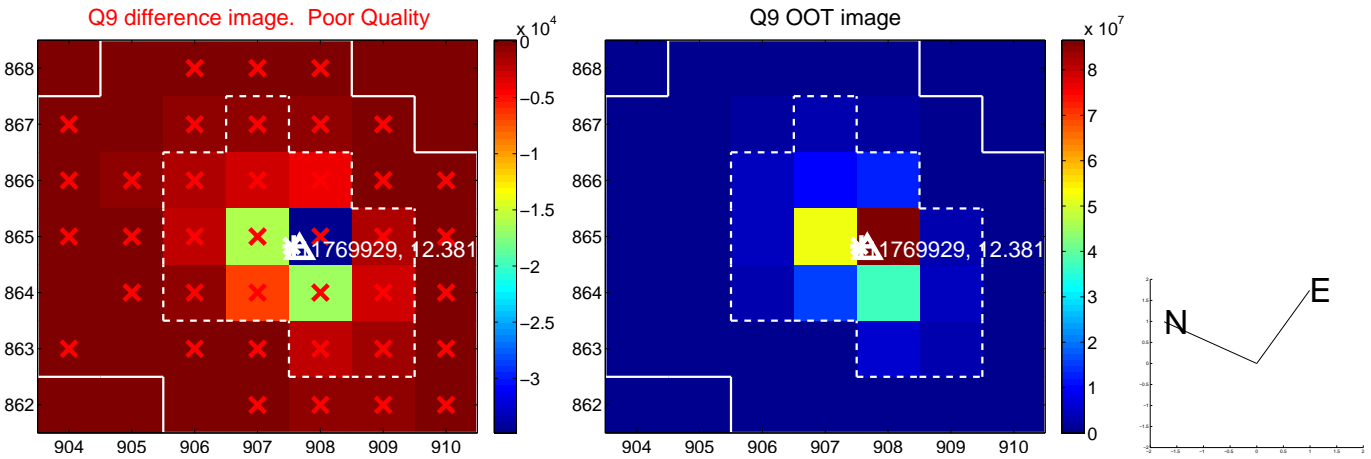
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



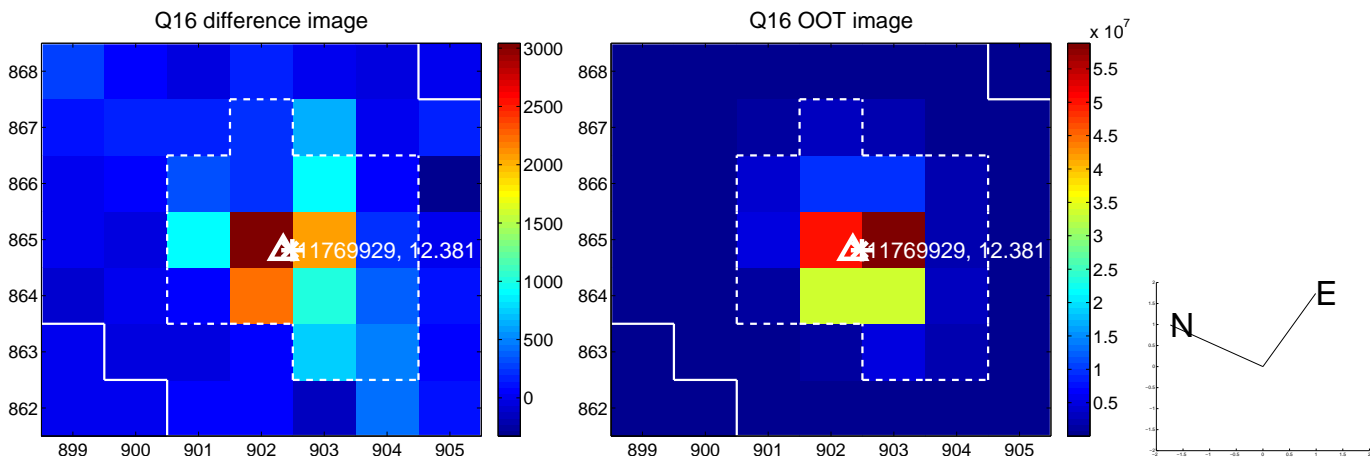
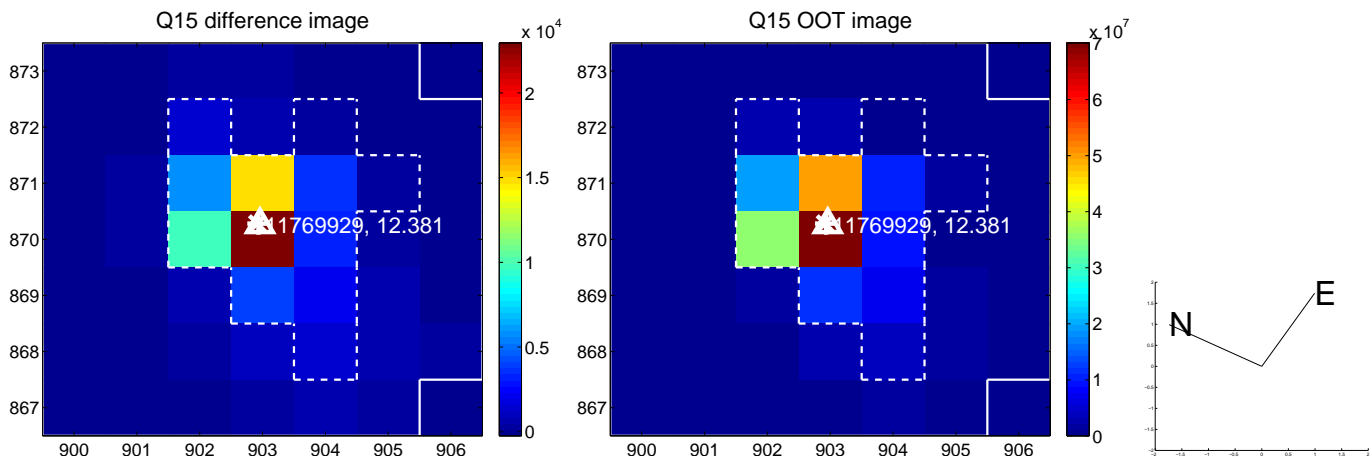
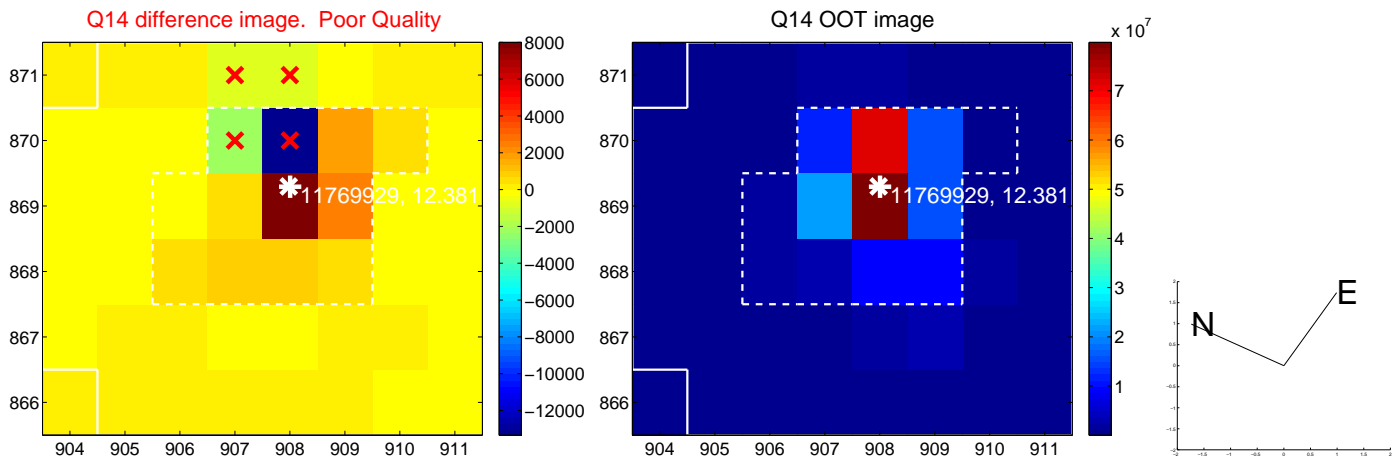
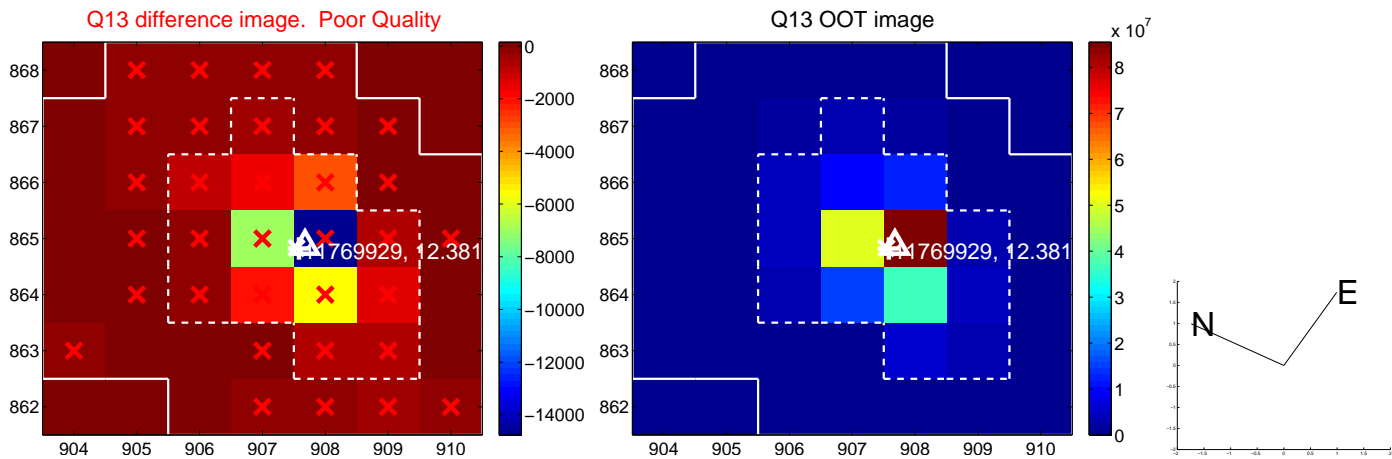
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



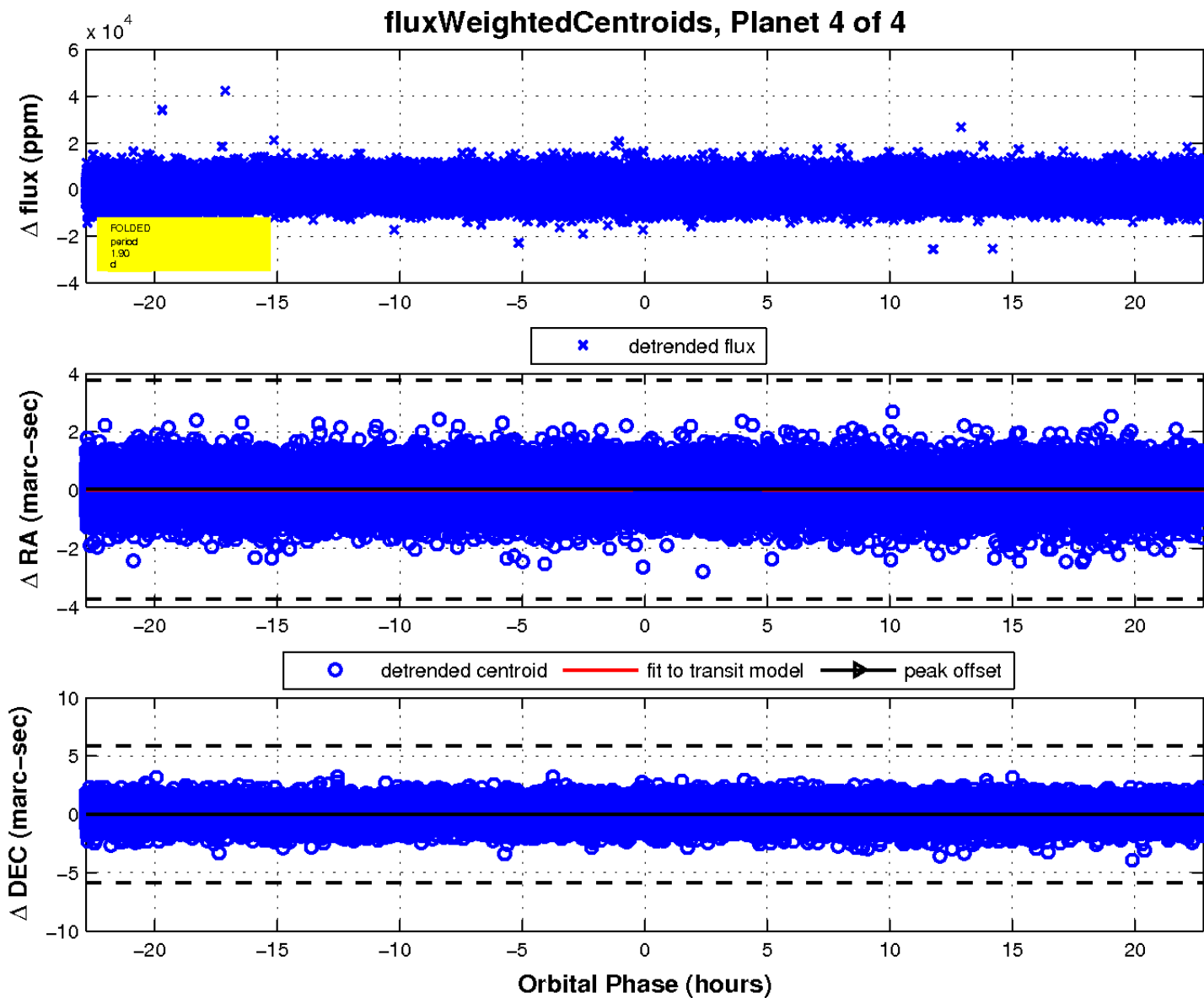
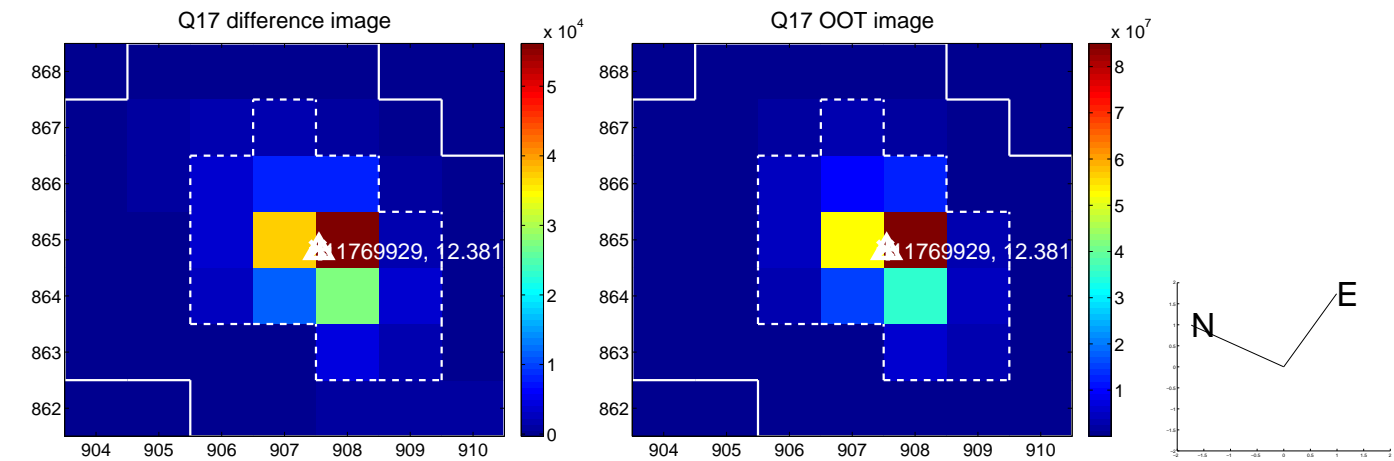
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

