

KIC 001872948

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})
001872948-01	OBS	No	1.386476	131.586393	7.5	5.680	10.0	9.9	3.57	7710	1.05	41888.75
001872948-02	OBS	No	405.273007	304.395918	133.0	13.626	9.5	8.1	3.57	7710	4.73	21.59
001872948-03	OBS	No	30.487944	134.075720	22.0	10.956	7.4	7.8	3.57	7710	1.94	679.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001872948-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
001872948-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
001872948-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

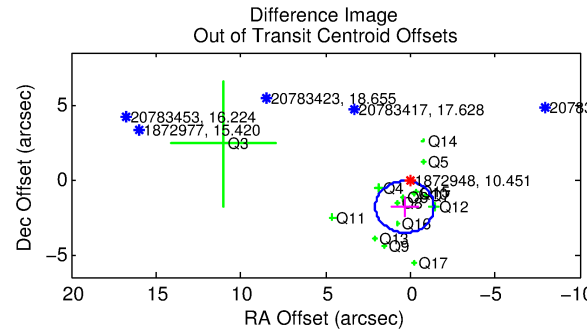
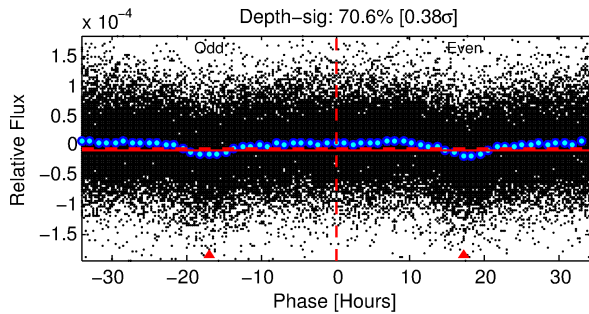
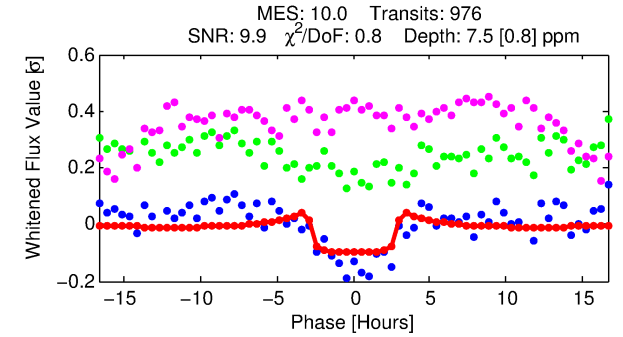
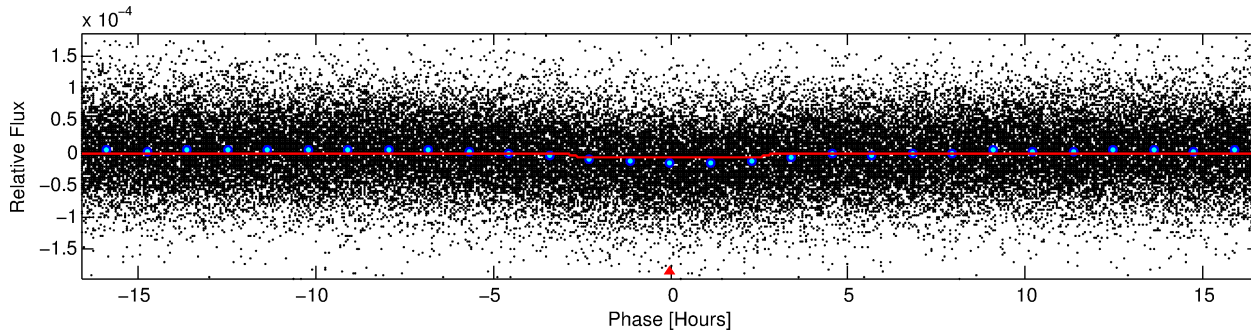
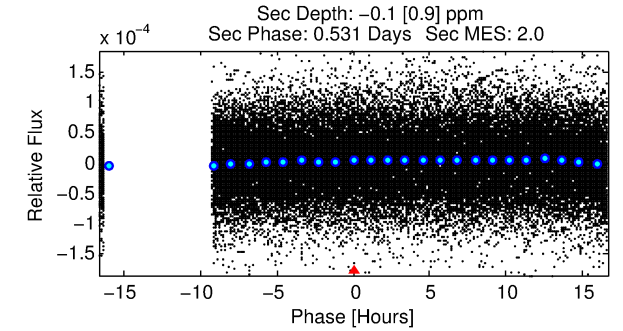
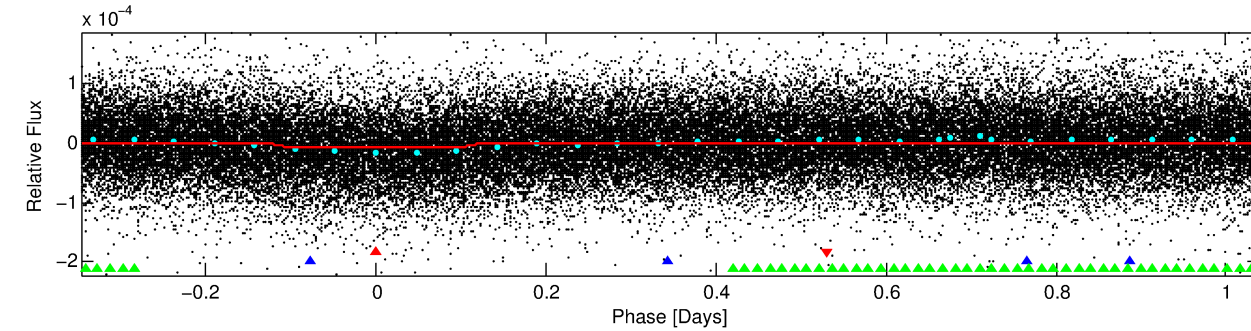
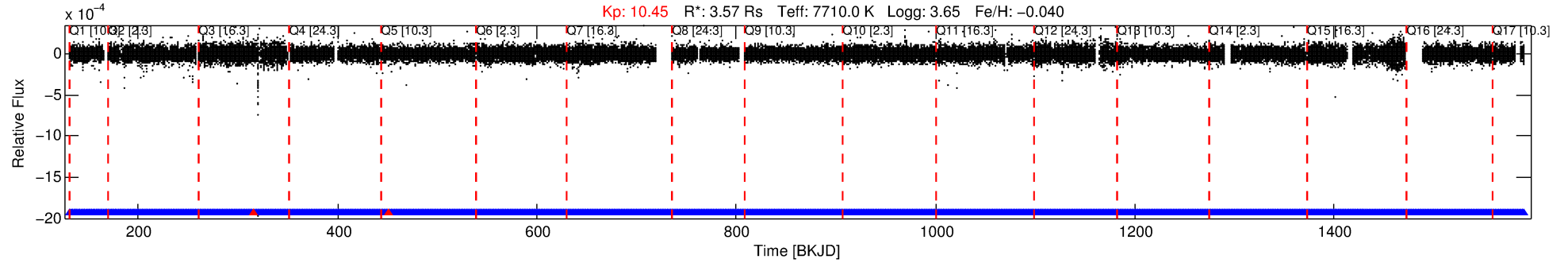
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001872948-01

No Significant Match Found

DV One-Page Summary

KIC: 1872948 Candidate: 1 of 3 Period: 1.386 d



DV Fit Results:

Period = 1.38648 [0.00001] d
Epoch = 131.5864 [0.0039] BKJD
Rp/R* = 0.0027 [0.0003]
a/R* = 1.56 [0.46]
b = 0.71 [0.36]
Seff = 41888.75 [33476.98]
Teff = 3648 [729] K
Rp = 1.05 [0.54] Re
a = 0.0310 [0.0152] AU
Ag = N/A
Teffp = N/A

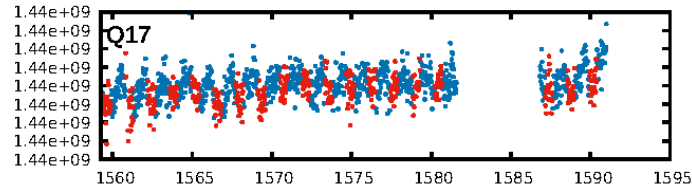
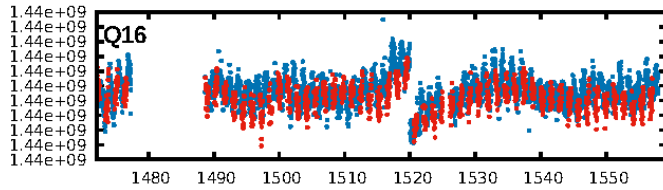
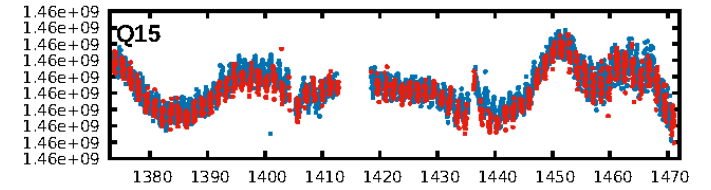
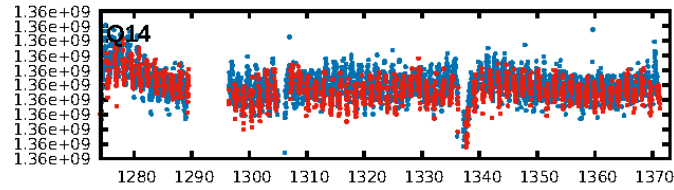
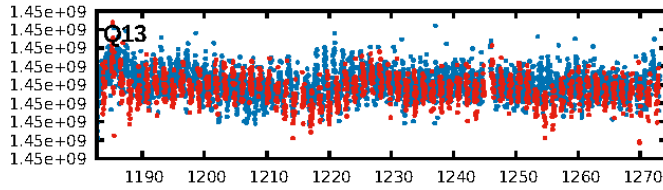
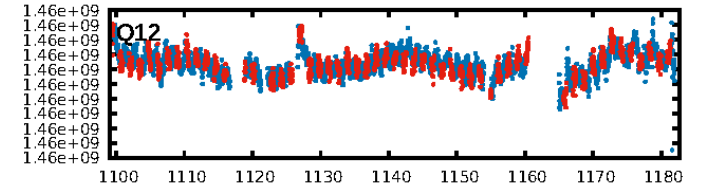
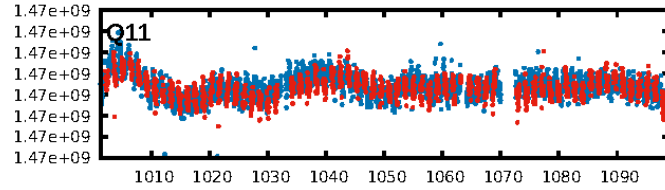
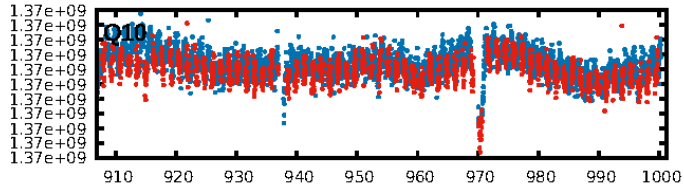
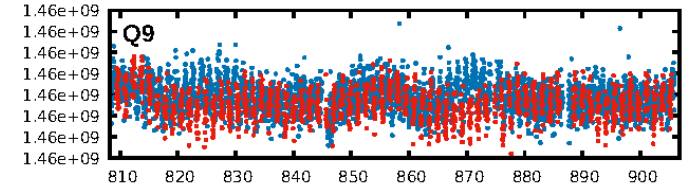
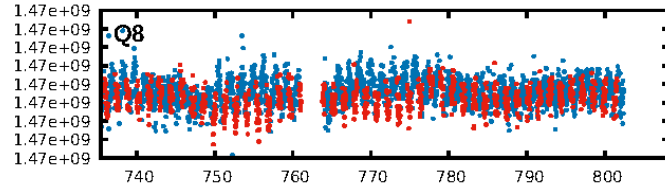
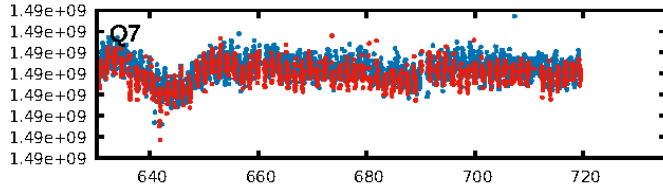
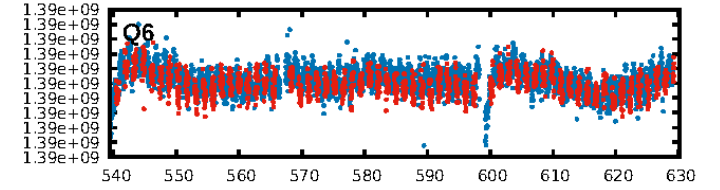
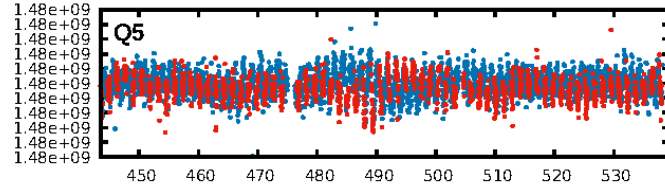
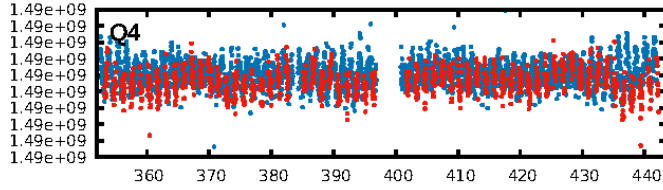
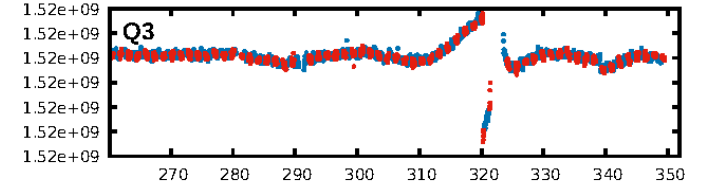
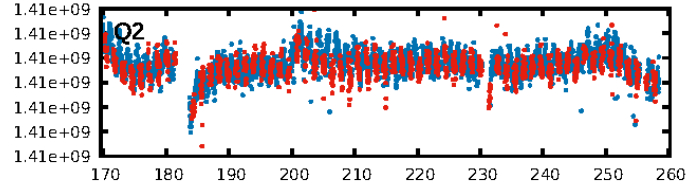
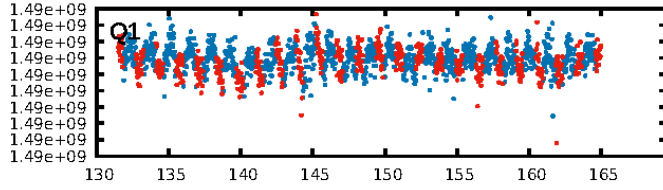
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [56.59σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.05e-17
RollingBand-fgt: 1.00 [930/932]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 6.349 arcsec [2.42σ]
OotOffset-rm: 1.846 arcsec [3.20σ]
KicOffset-rm: 2.262 arcsec [3.67σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.73 [11/15]
DiffImageOverlap-fno: 1.00 [17/17]

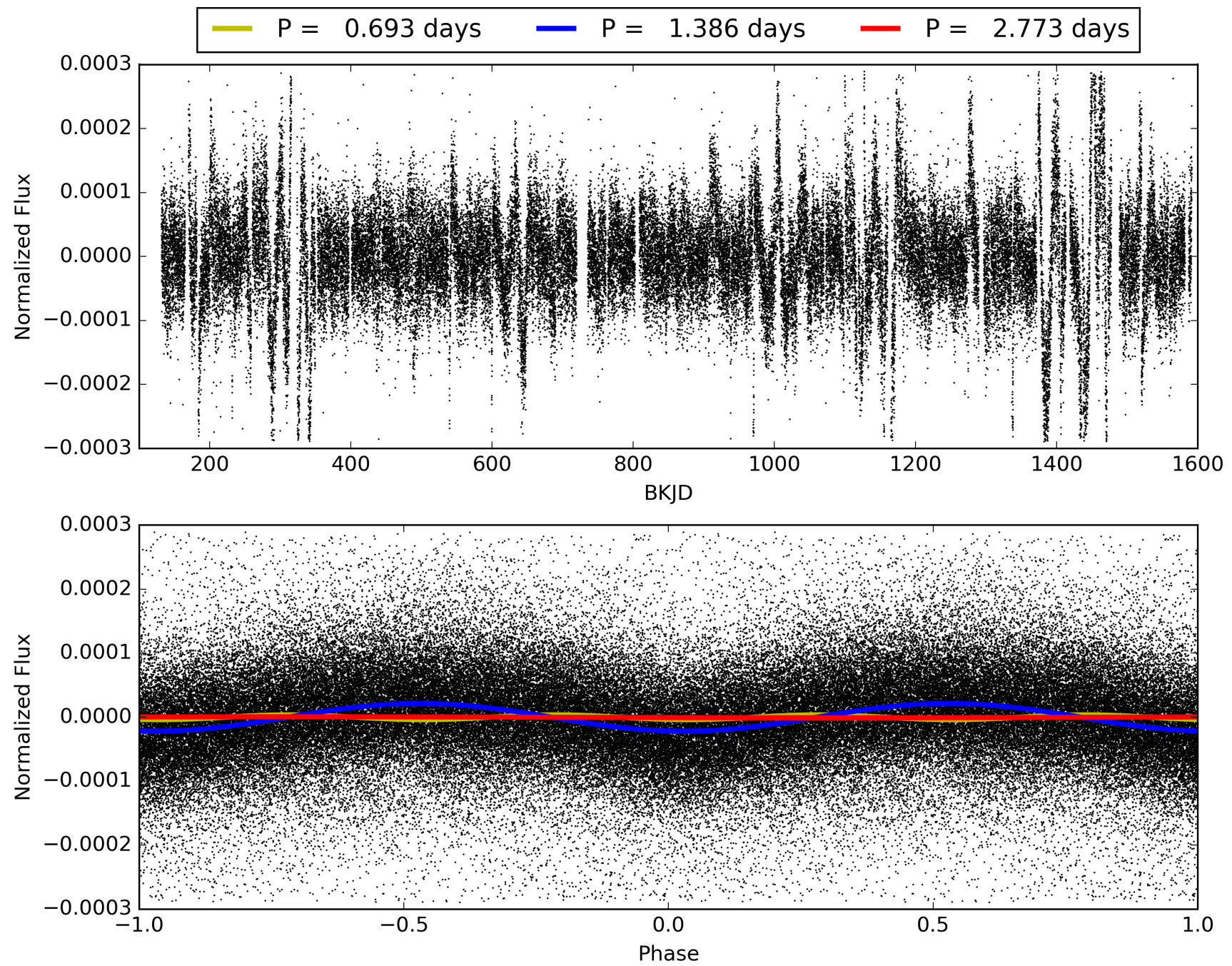
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:02:22 Z

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

TCE 001872948-01, PDC Light Curves

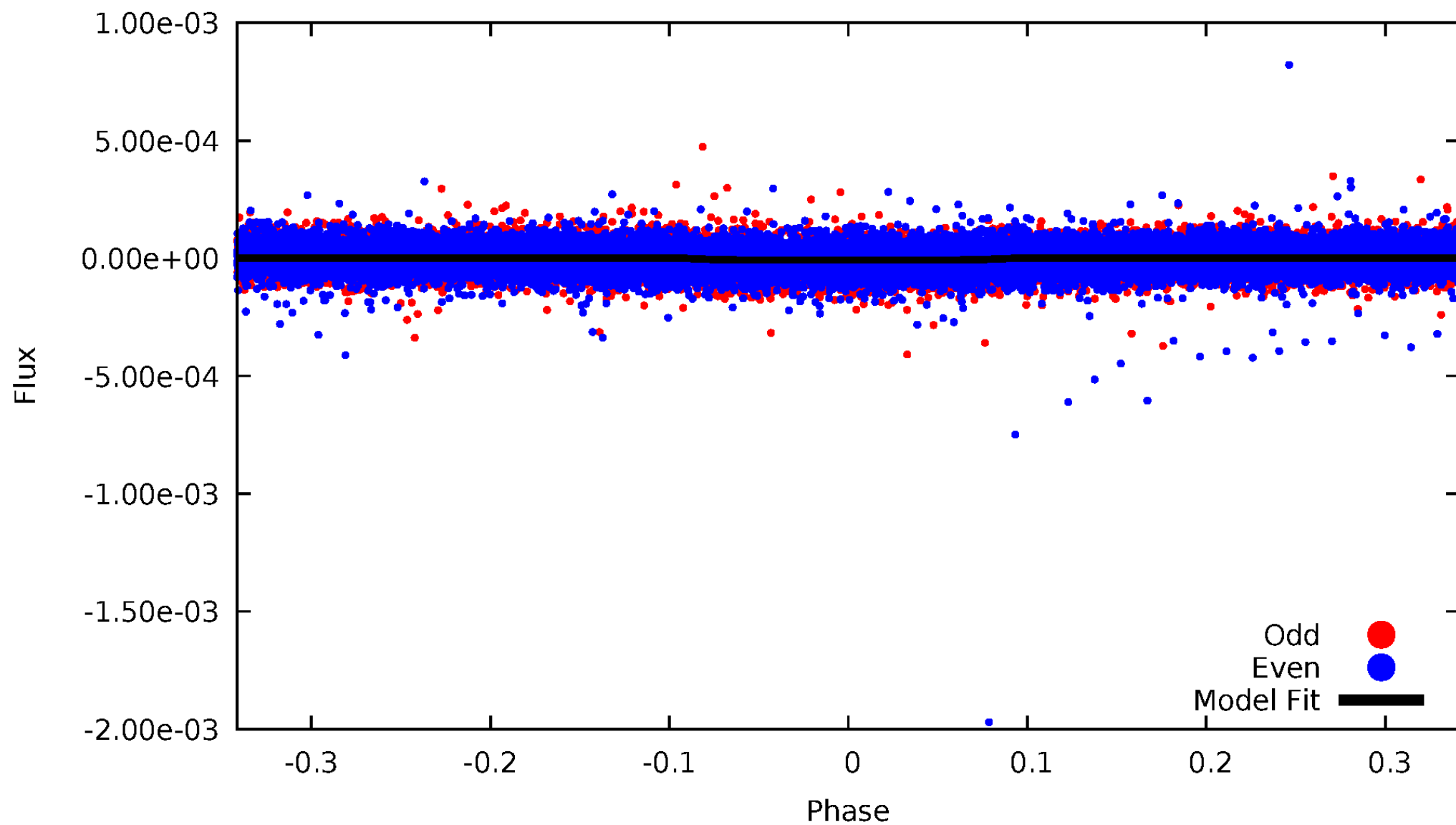


TCE 001872948-01



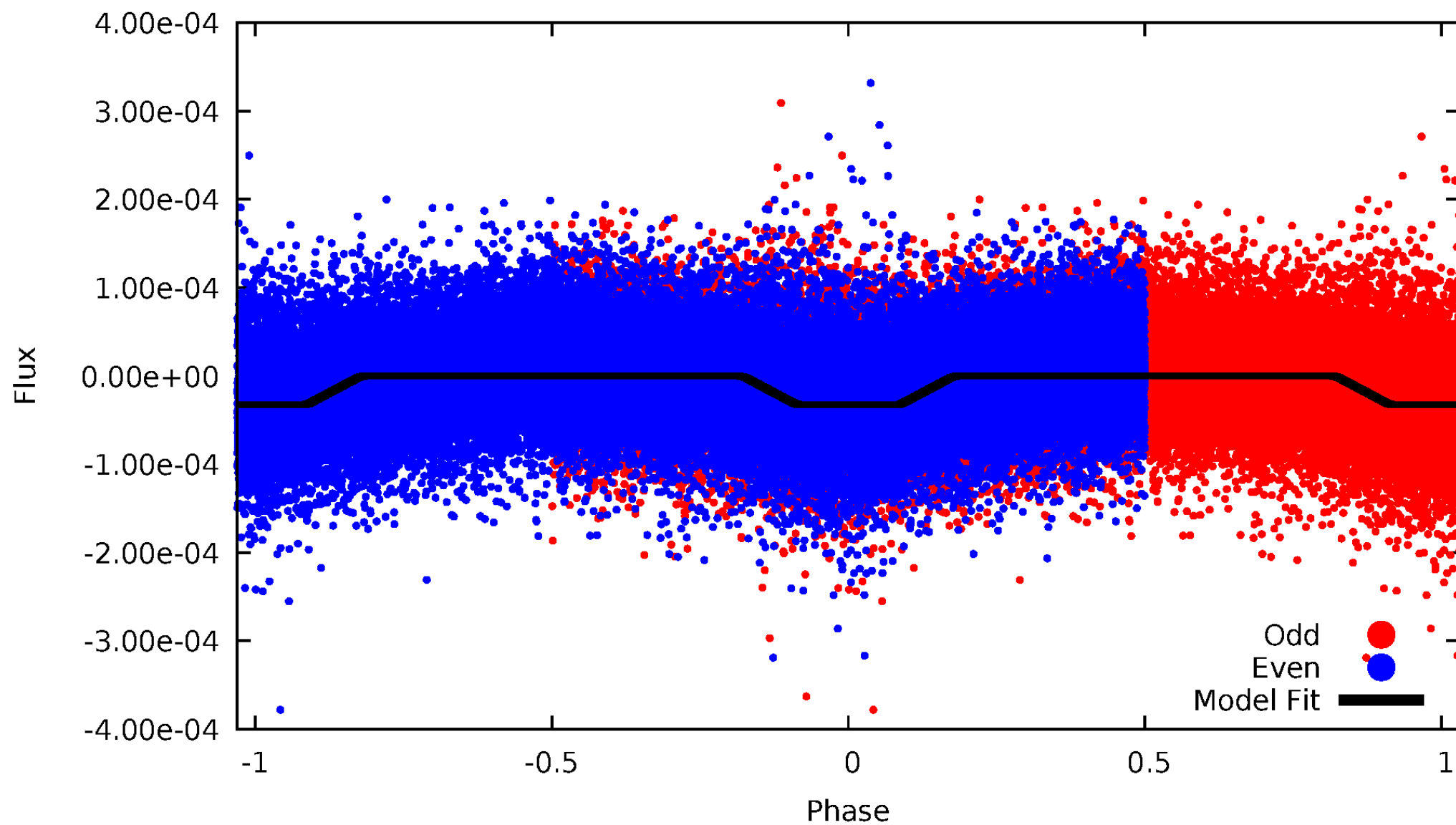
DV Odd/Even

TCE 001872948-01

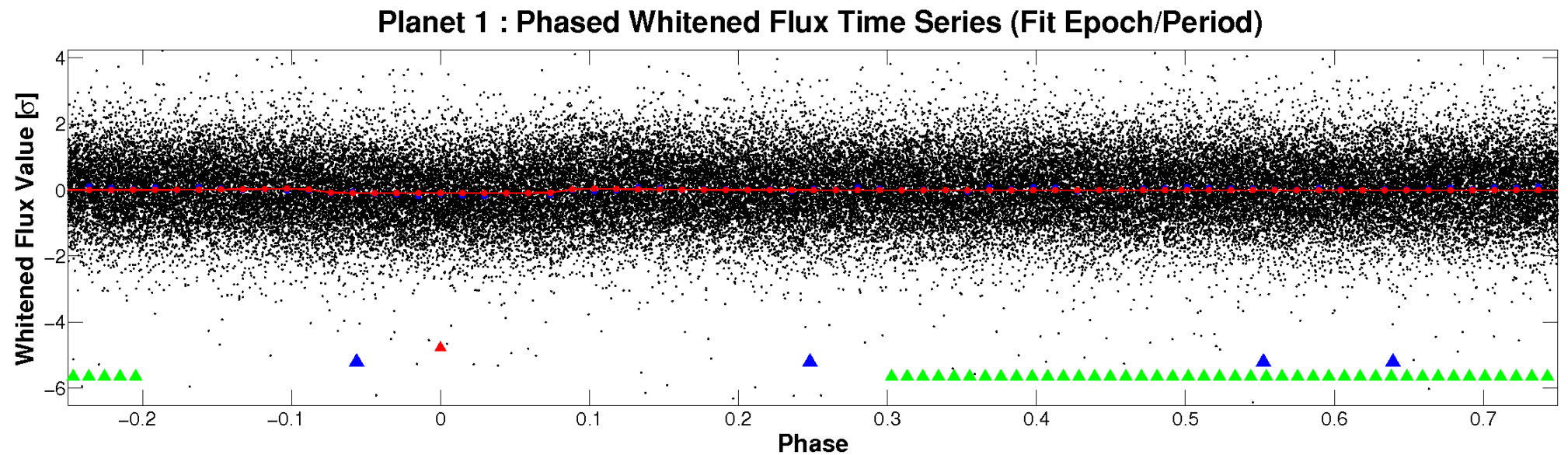
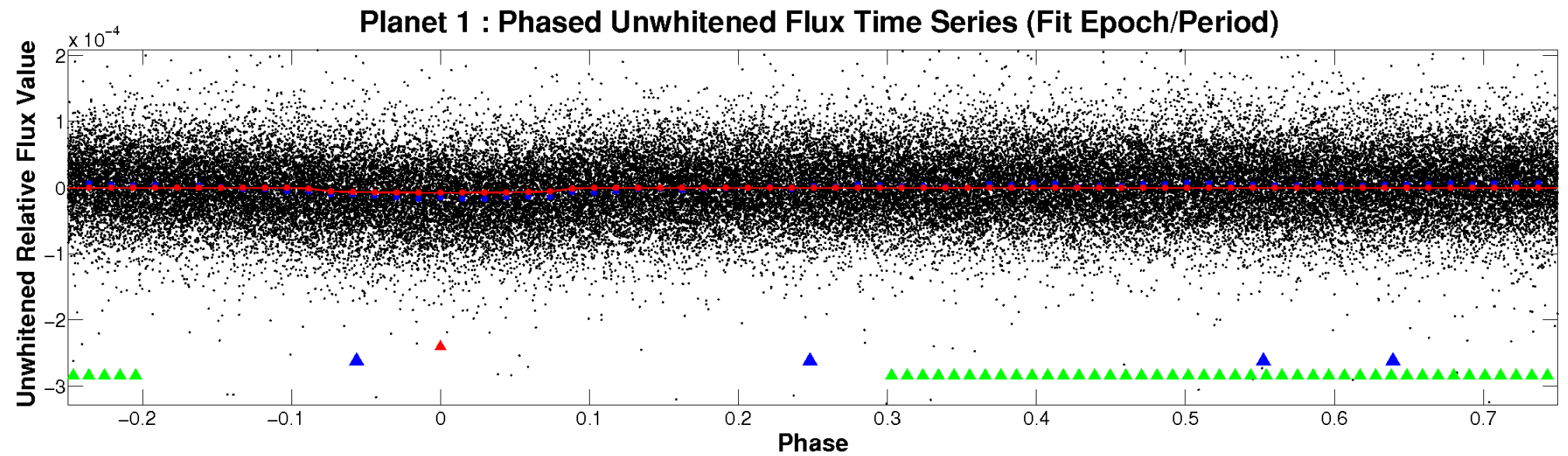


ALT Odd/Even

TCE 001872948-01

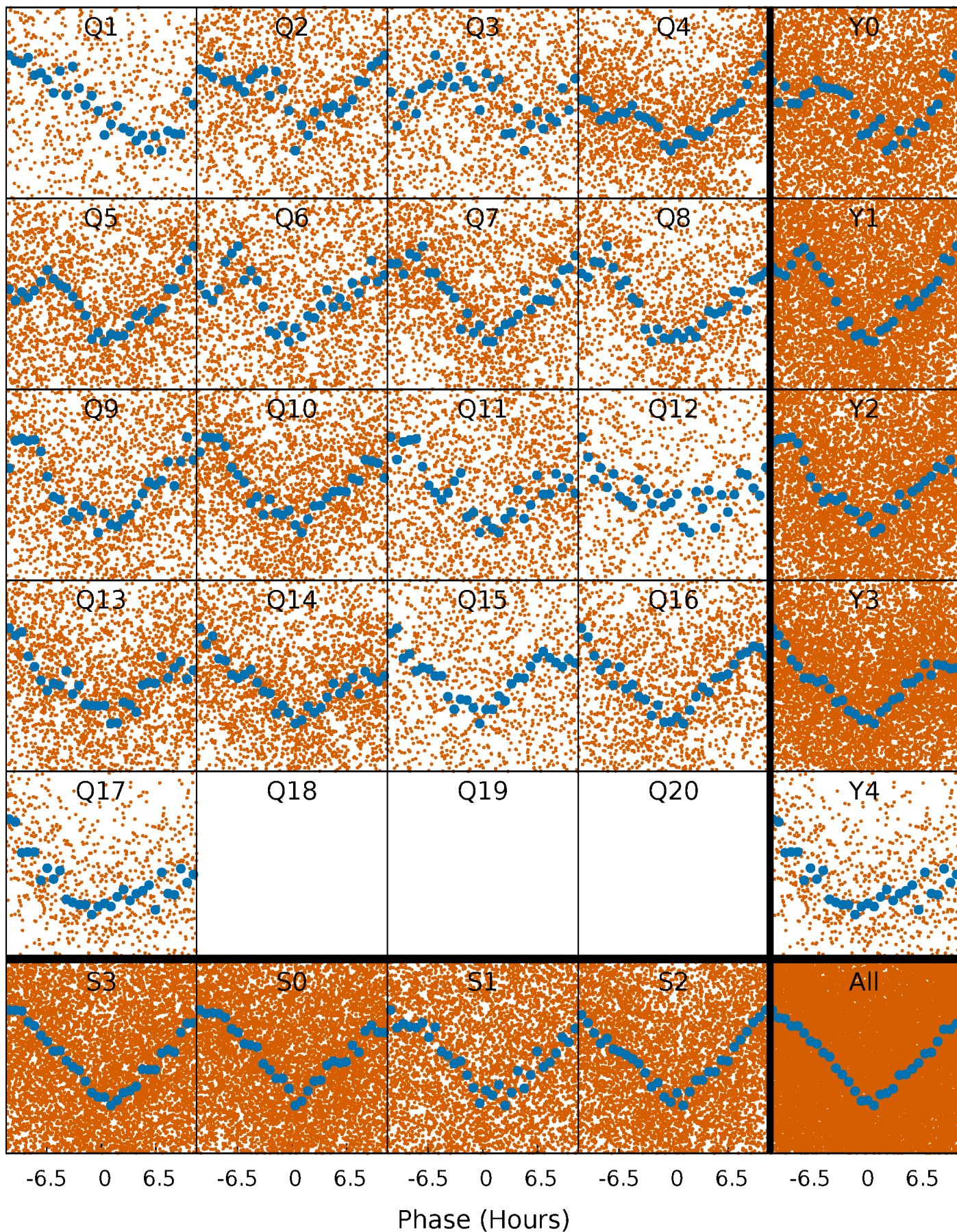


Non-Whitened Vs. Whitened Light Curve



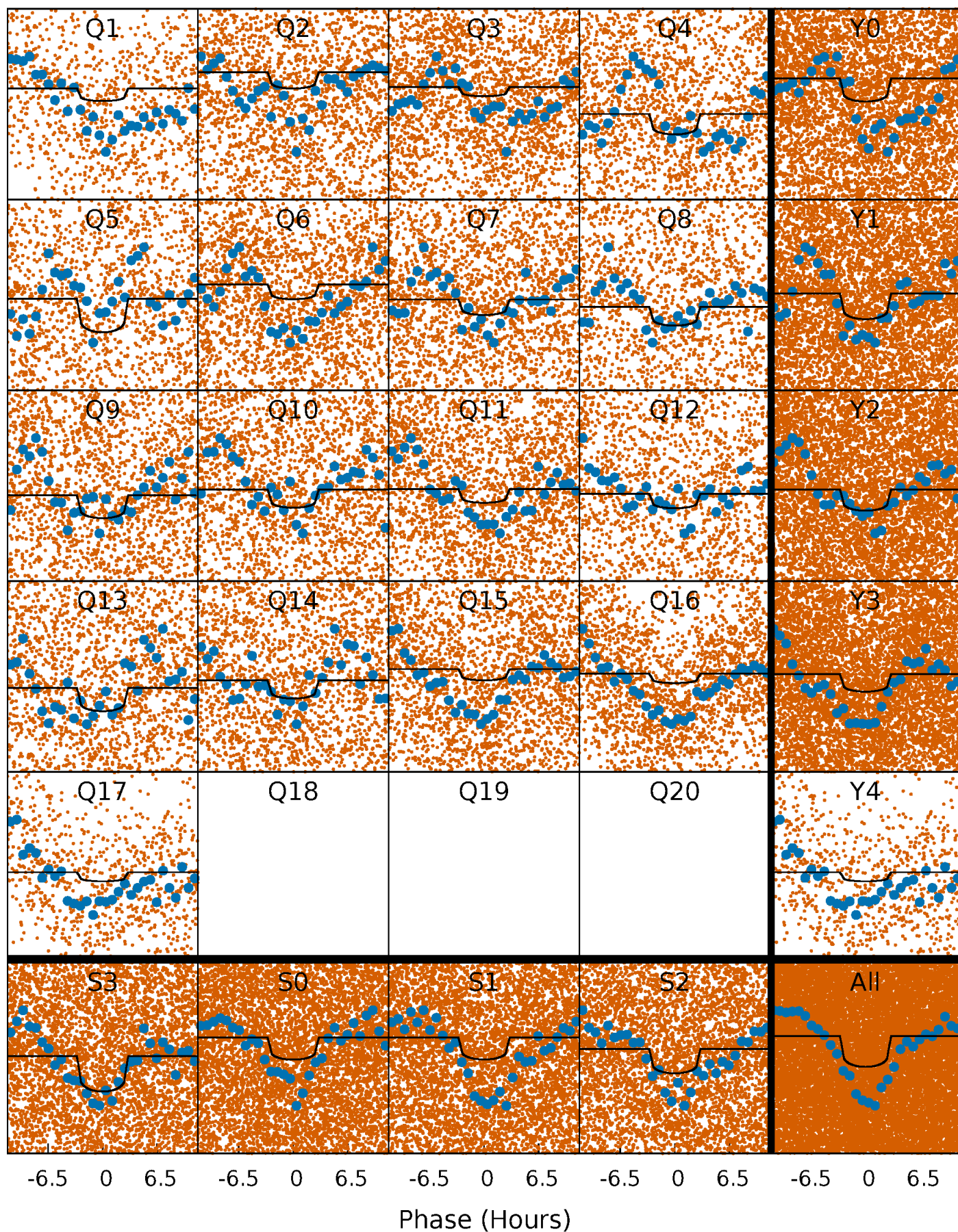
PDC Quarter-Phased Transit Curves

TCE 001872948-01 P= 1.386476 Days $T_0=131.586393$ (BKJD)



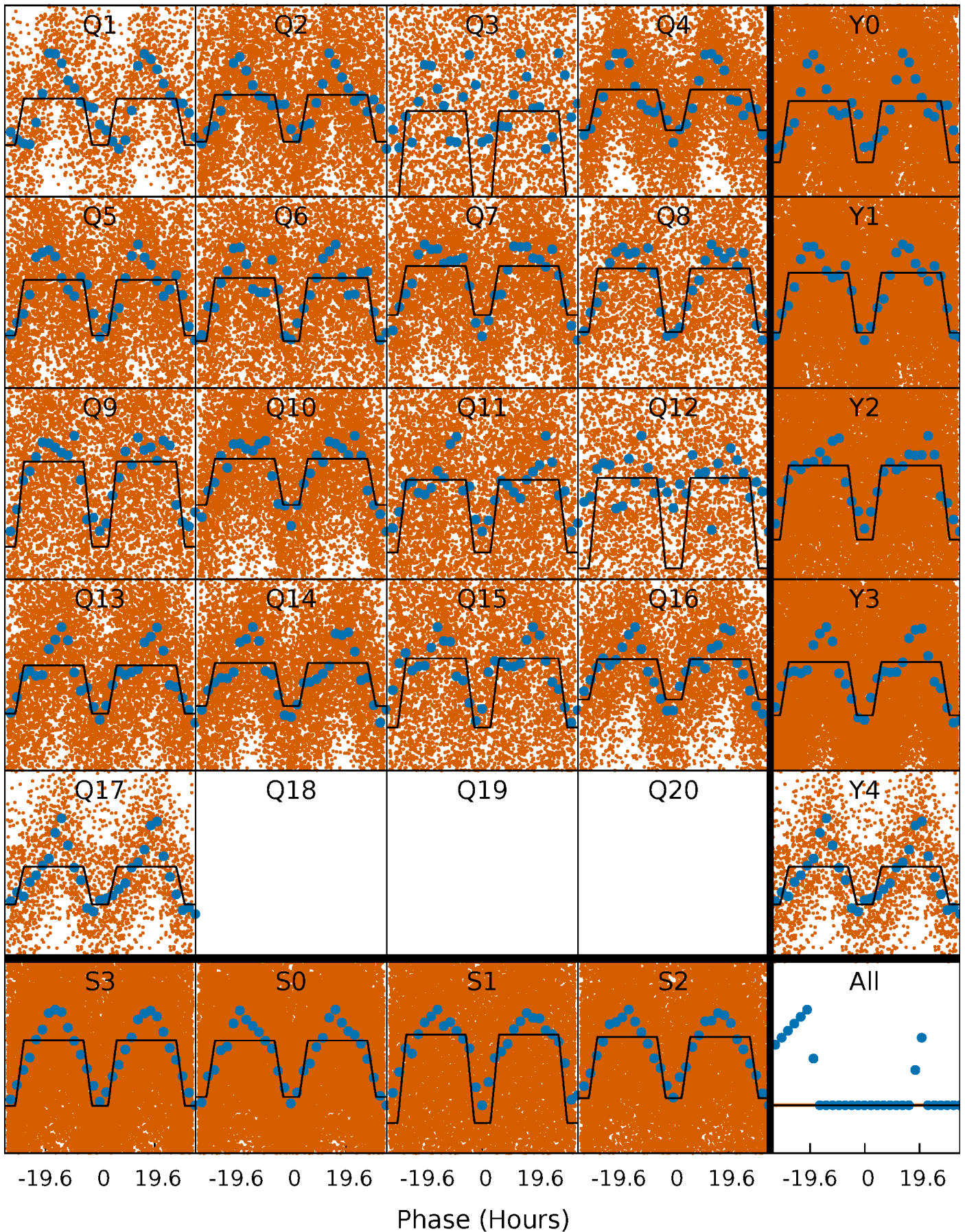
DV Quarter-Phased Transit Curves

TCE 001872948-01 P= 1.386476 Days $T_0=131.586393$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

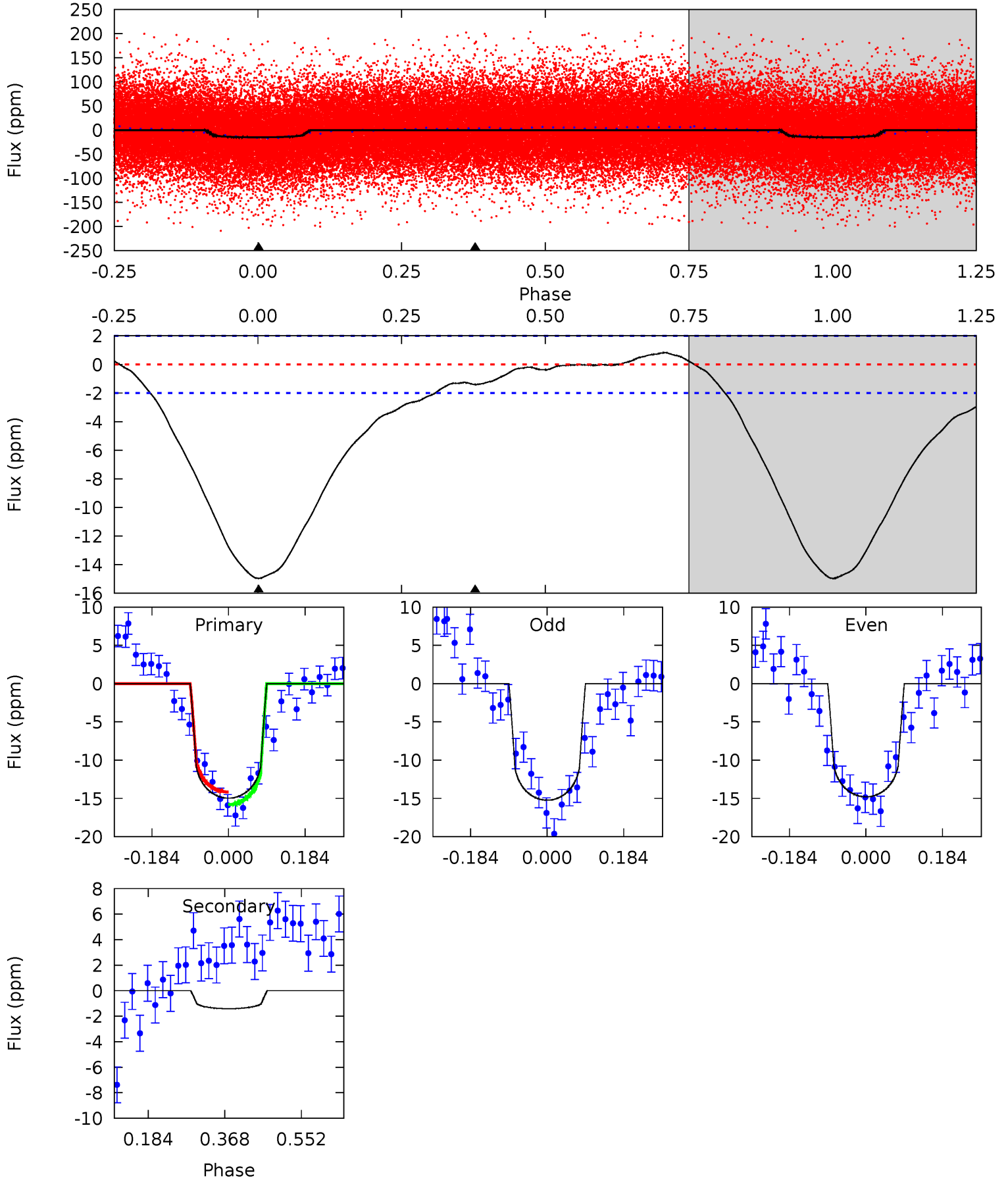
TCE 001872948-01 P= 1.386563 Days $T_0=131.569986$ (BKJD)



DV Model-Shift Uniqueness Test

001872948-01, P = 1.386476 Days, E = 130.199917 Days

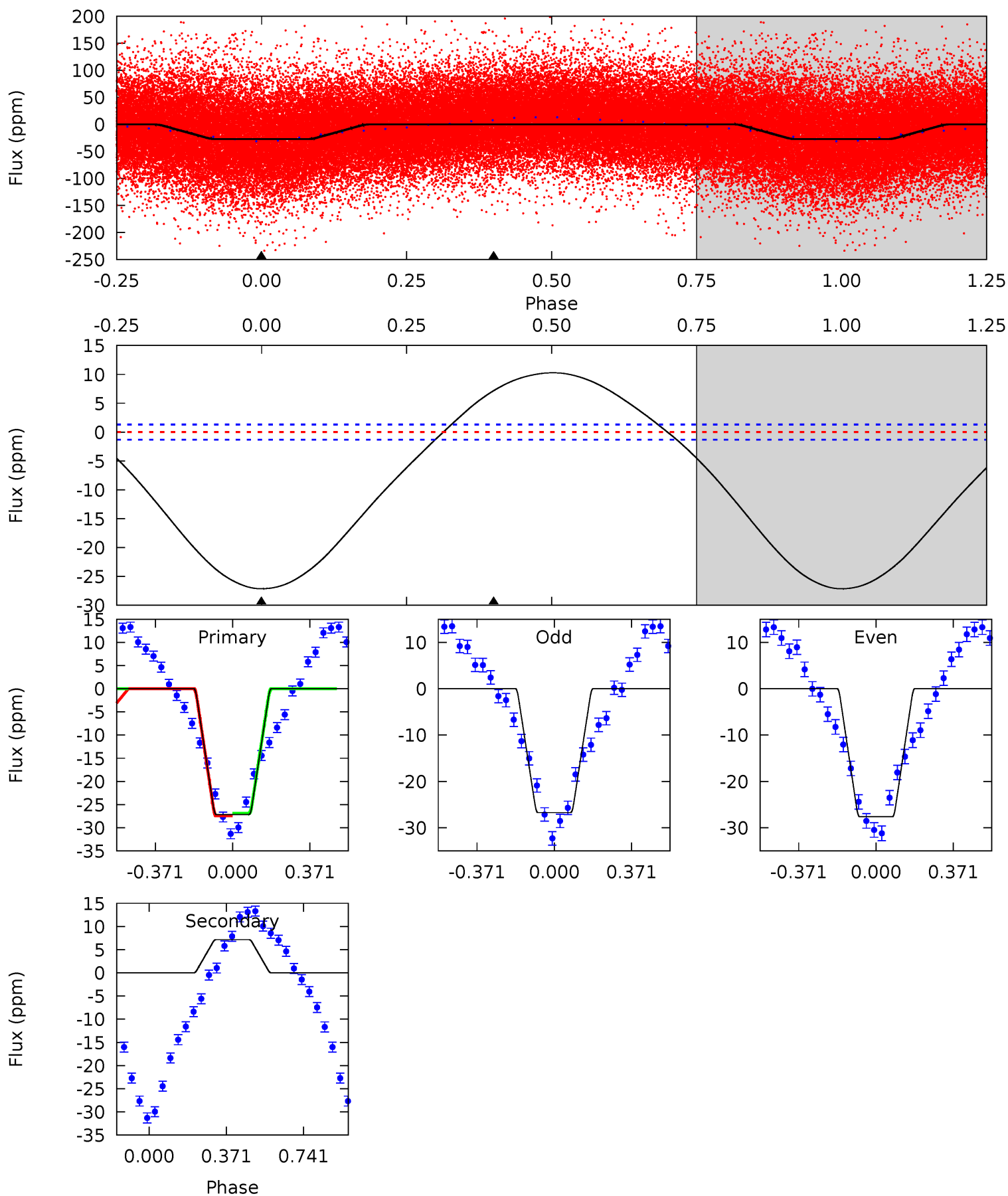
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.2	3.12	0	0	4.44	1.33	2.36	33.2	33.2	3.12	3.12	0.49	1.17	0.05	1.86



Alt Model-Shift Uniqueness Test

001872948-01, P = 1.386563 Days, E = 130.183423 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
88.5	-23.4	0	0	4.28	0.90	8.04	88.5	88.5	-23.4	-23.4	1.48	1.04	0.27	0.85



Stellar Parameters For KIC 001872948

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7710^{+213}_{-320}	$3.649^{+0.459}_{-0.081}$	$-0.040^{+0.200}_{-0.300}$	$3.567^{+0.725}_{-1.812}$	$2.068^{+0.332}_{-0.499}$	$0.064^{+0.269}_{-0.022}$
	+3%/-4%	+13%/-2%	+500%/-750%	+20%/-51%	+16%/-24%	+419%/-34%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 001872948-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 0	$0.96^{+0.20}_{-0.26}$	4864^{+378}_{-594}	4634^{+547}_{-681}	$0.822^{+0.630}_{-0.324}$
Alt.	7 ± 0	$2.10^{+0.33}_{-0.53}$	4883^{+387}_{-588}	-5559^{+209}_{-182}	$-0.884^{+0.219}_{-0.597}$

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

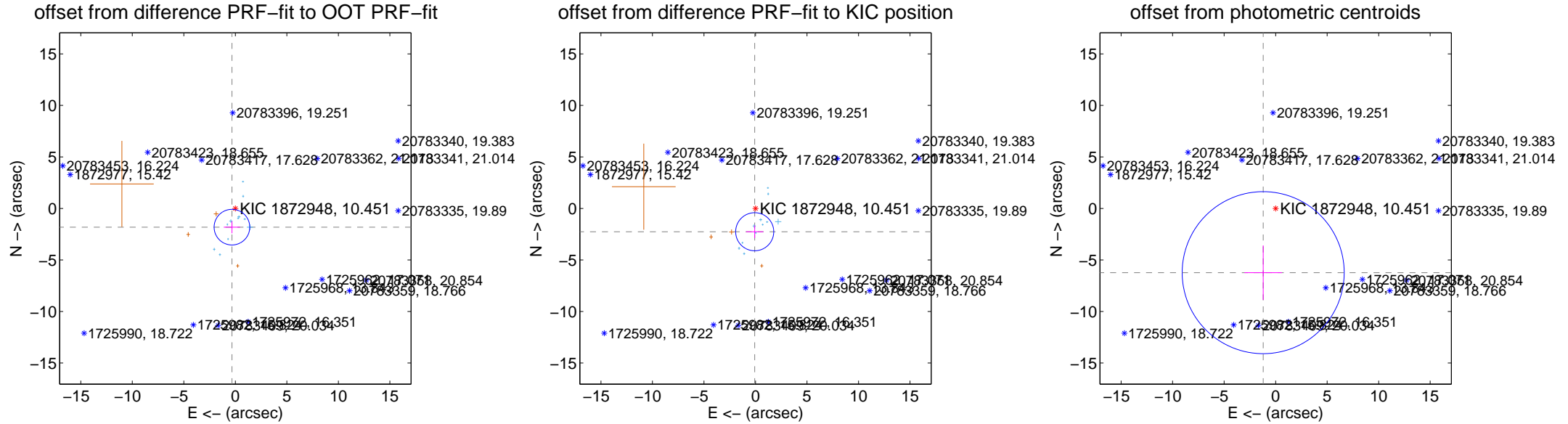
DV Centroid Data

Supplemental centroid analysis for 001872948-01. **Kepler magnitude: 10.45.** Transit SNR 9.88

There are 11 quarters with good PRF difference image offsets

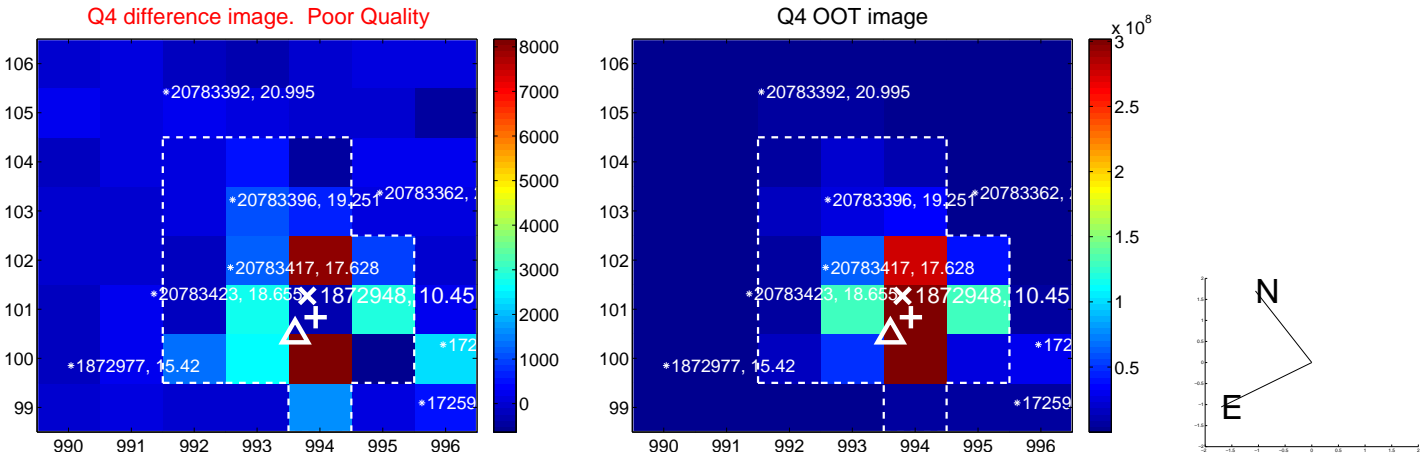
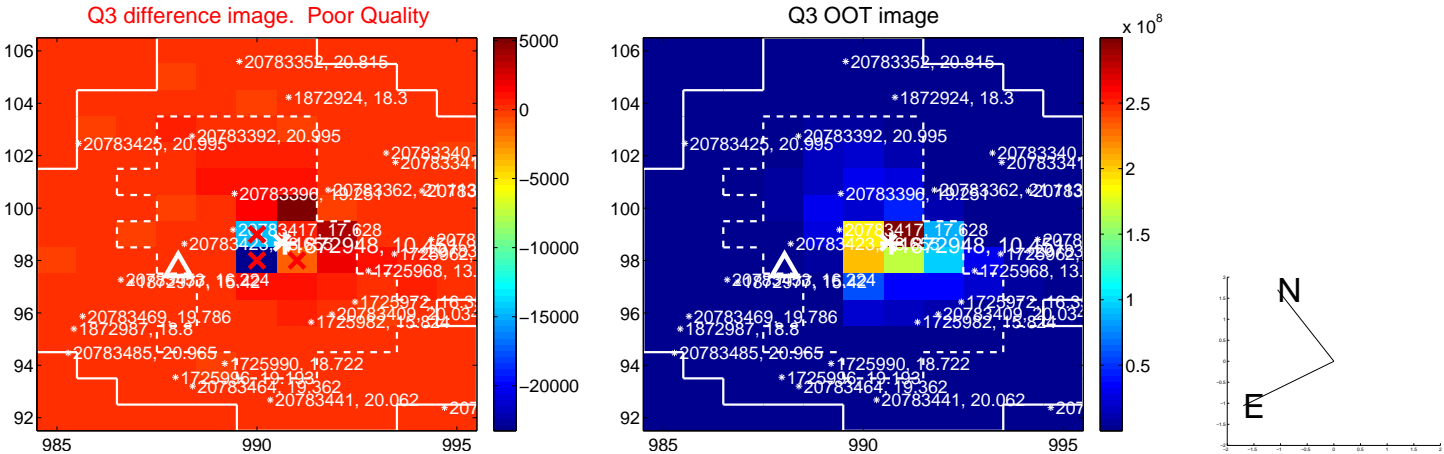
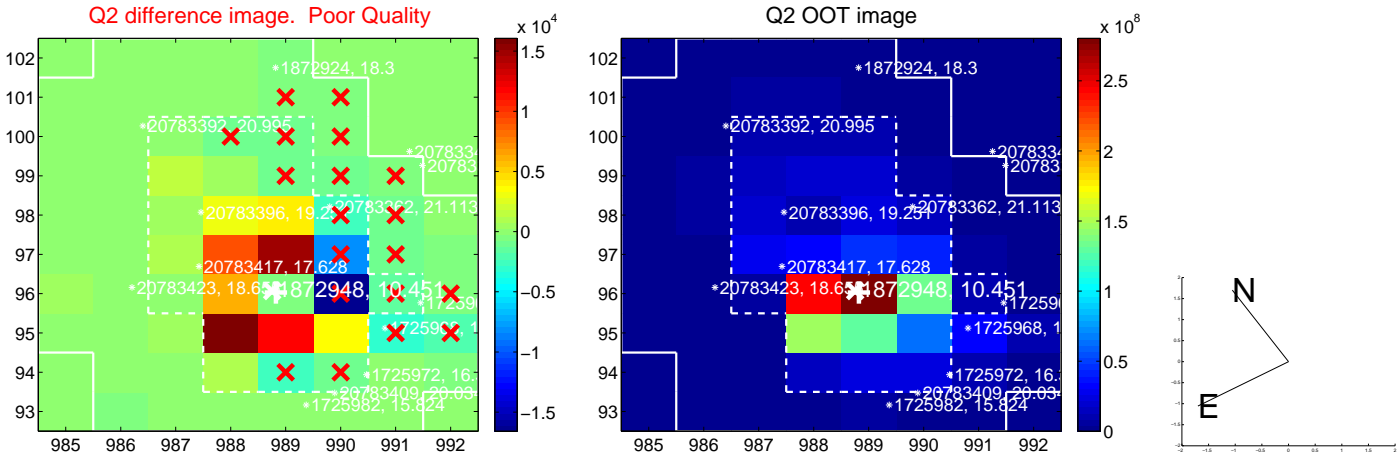
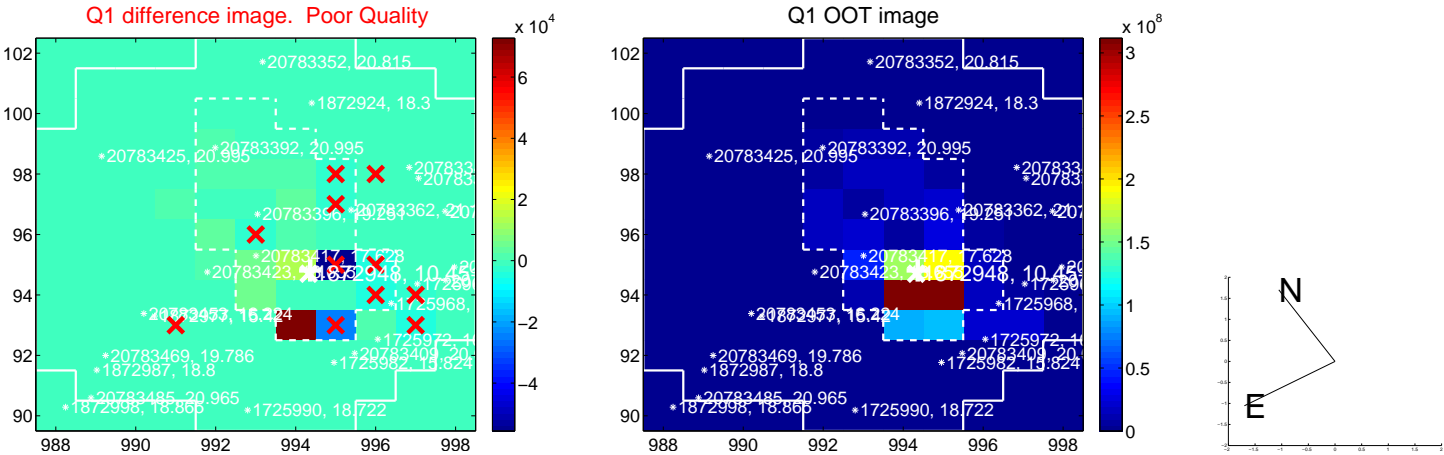
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.846 ± 0.576	3.20	0.331 ± 0.792	-1.816 ± 0.589
PRF-fit source offset from KIC position	2.262 ± 0.616	3.67	0.077 ± 0.840	-2.260 ± 0.619
photometric centroid source offset	6.35 ± 2.62	2.42	1.21 ± 1.82	-6.23 ± 2.65

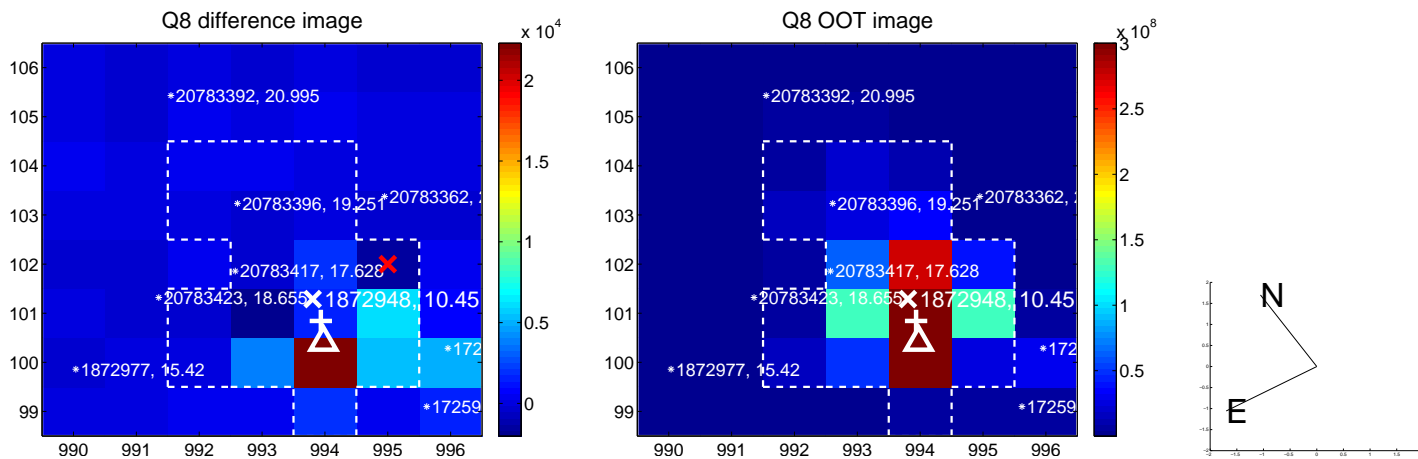
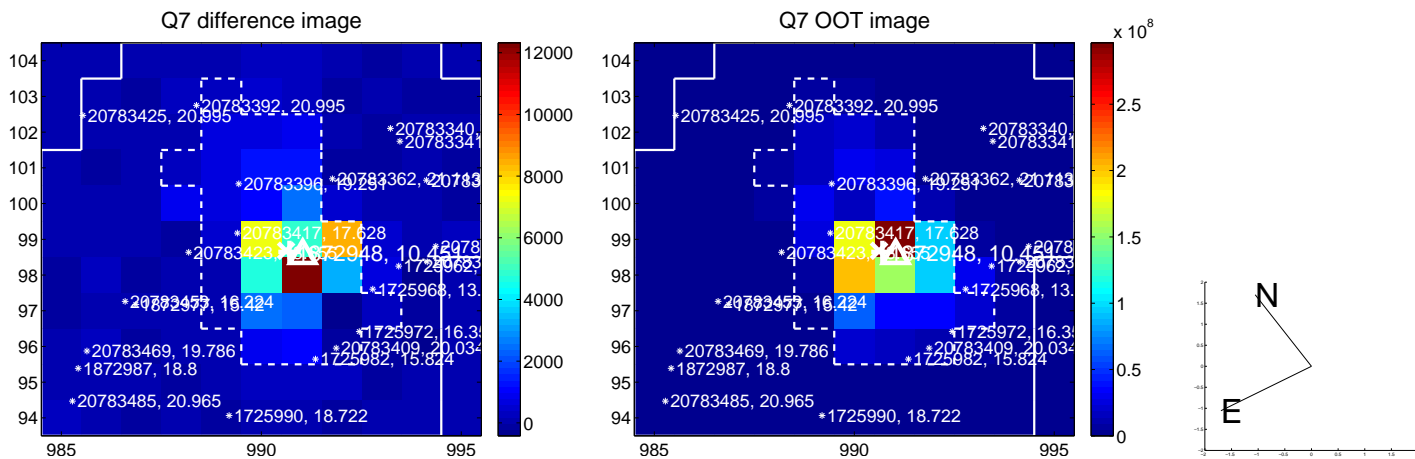
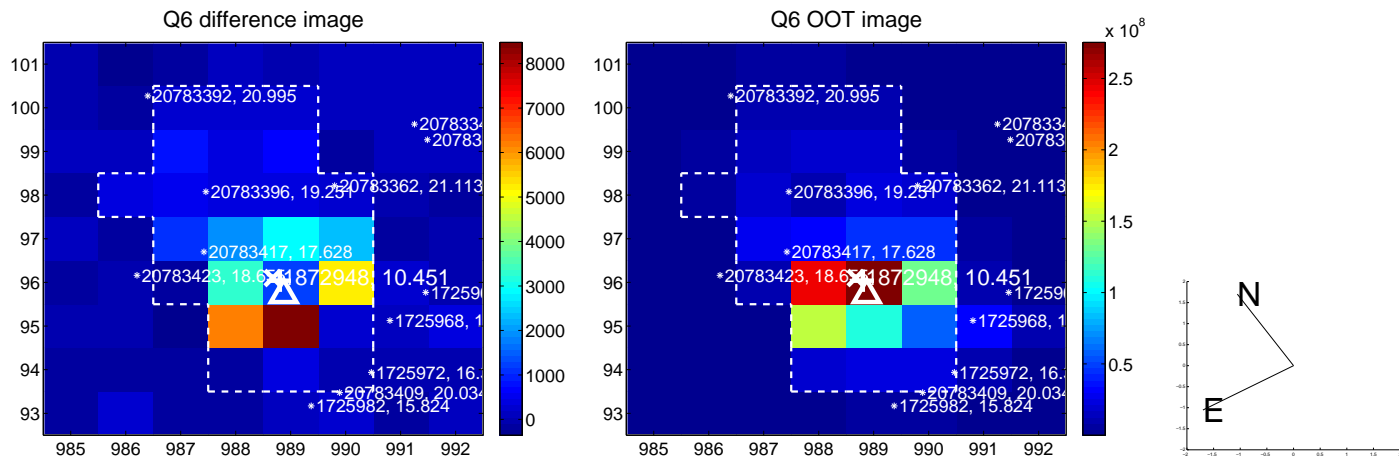
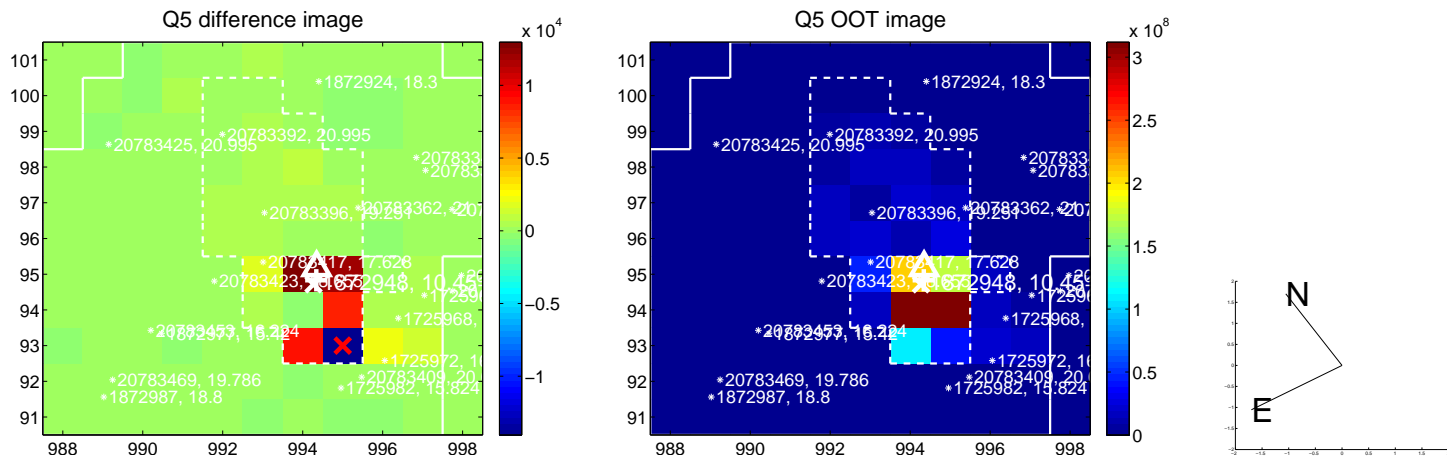


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

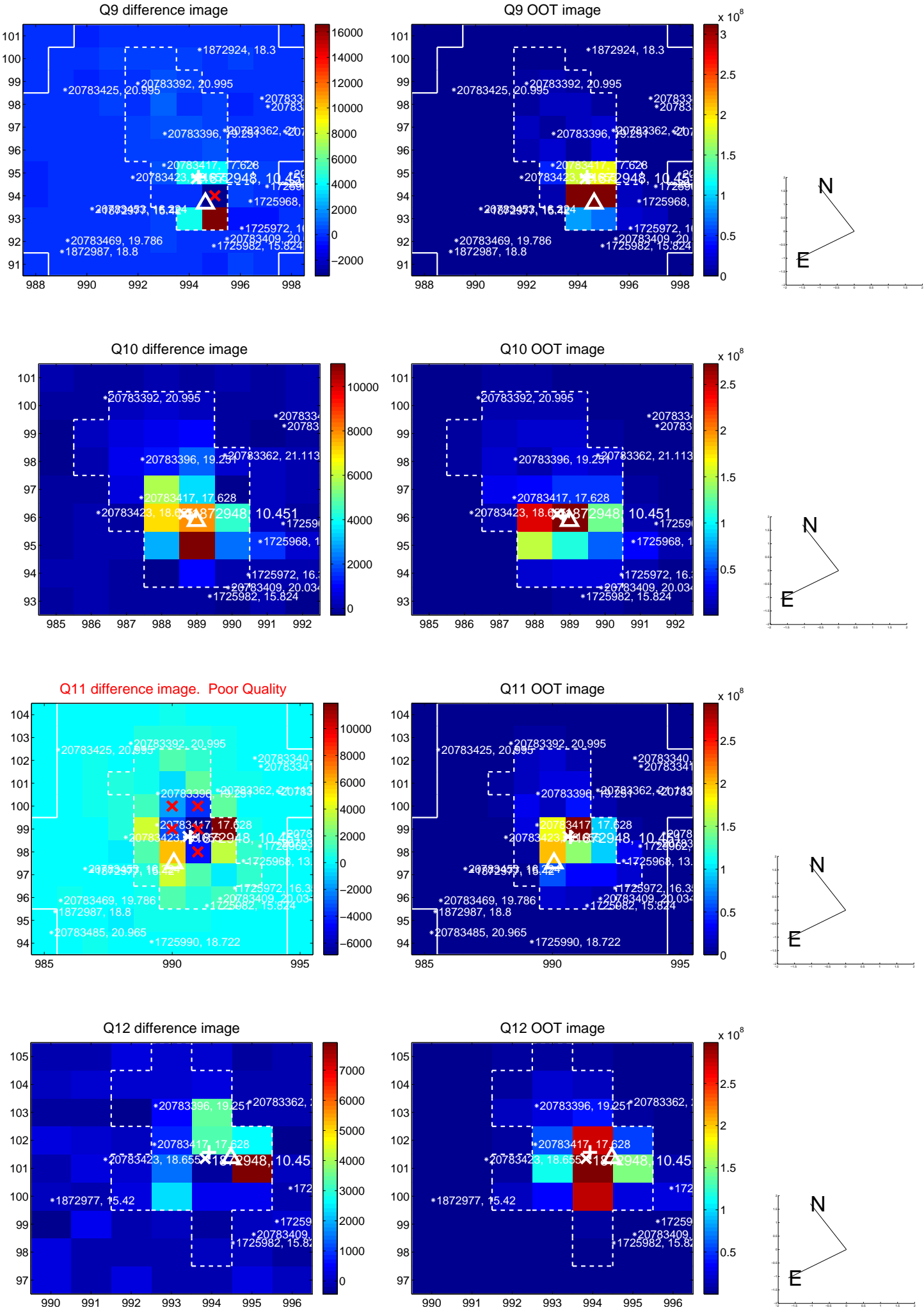
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



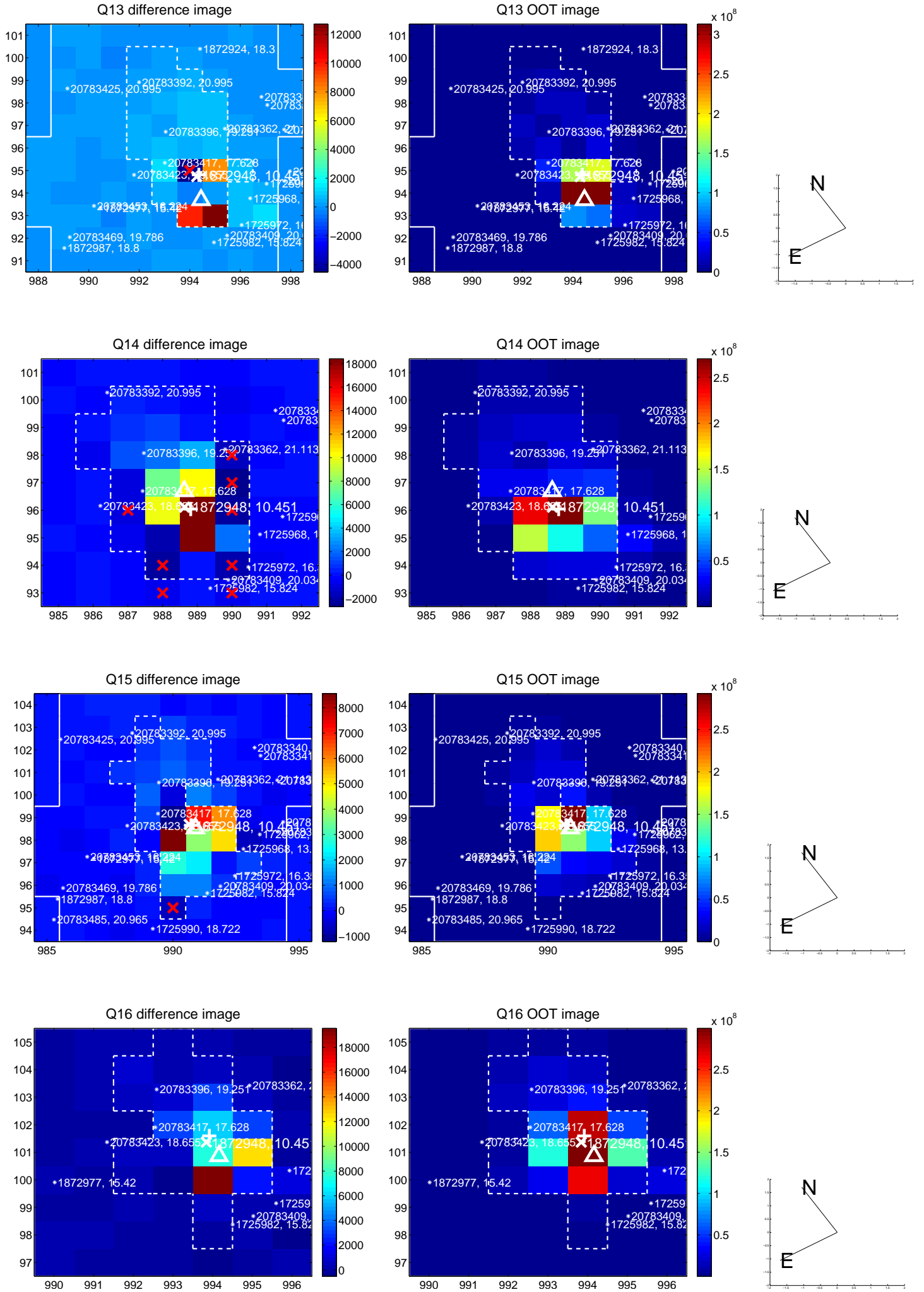
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



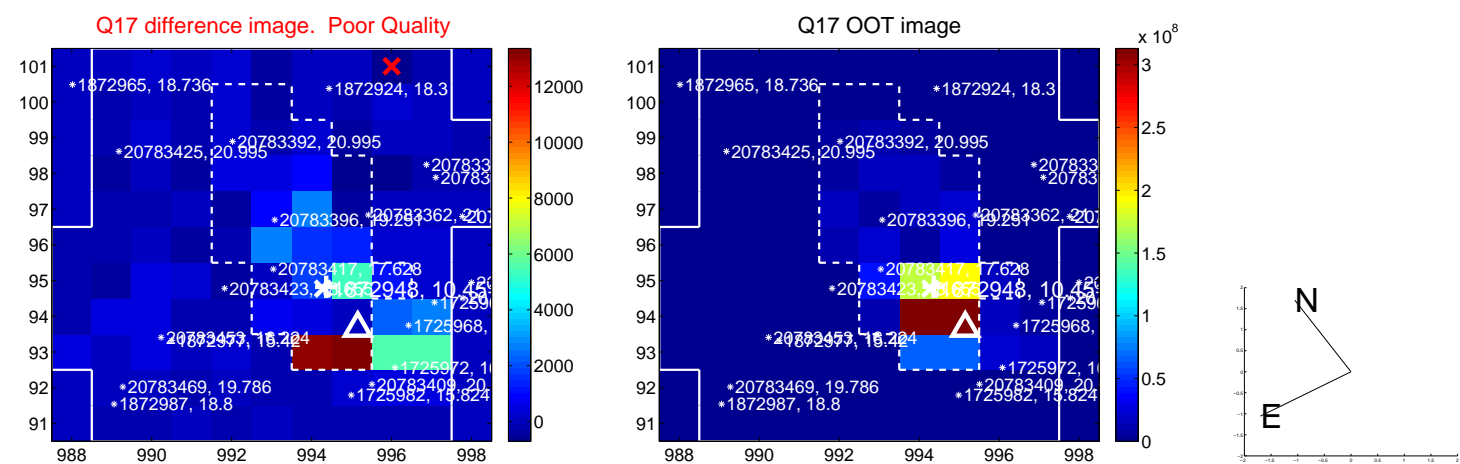
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



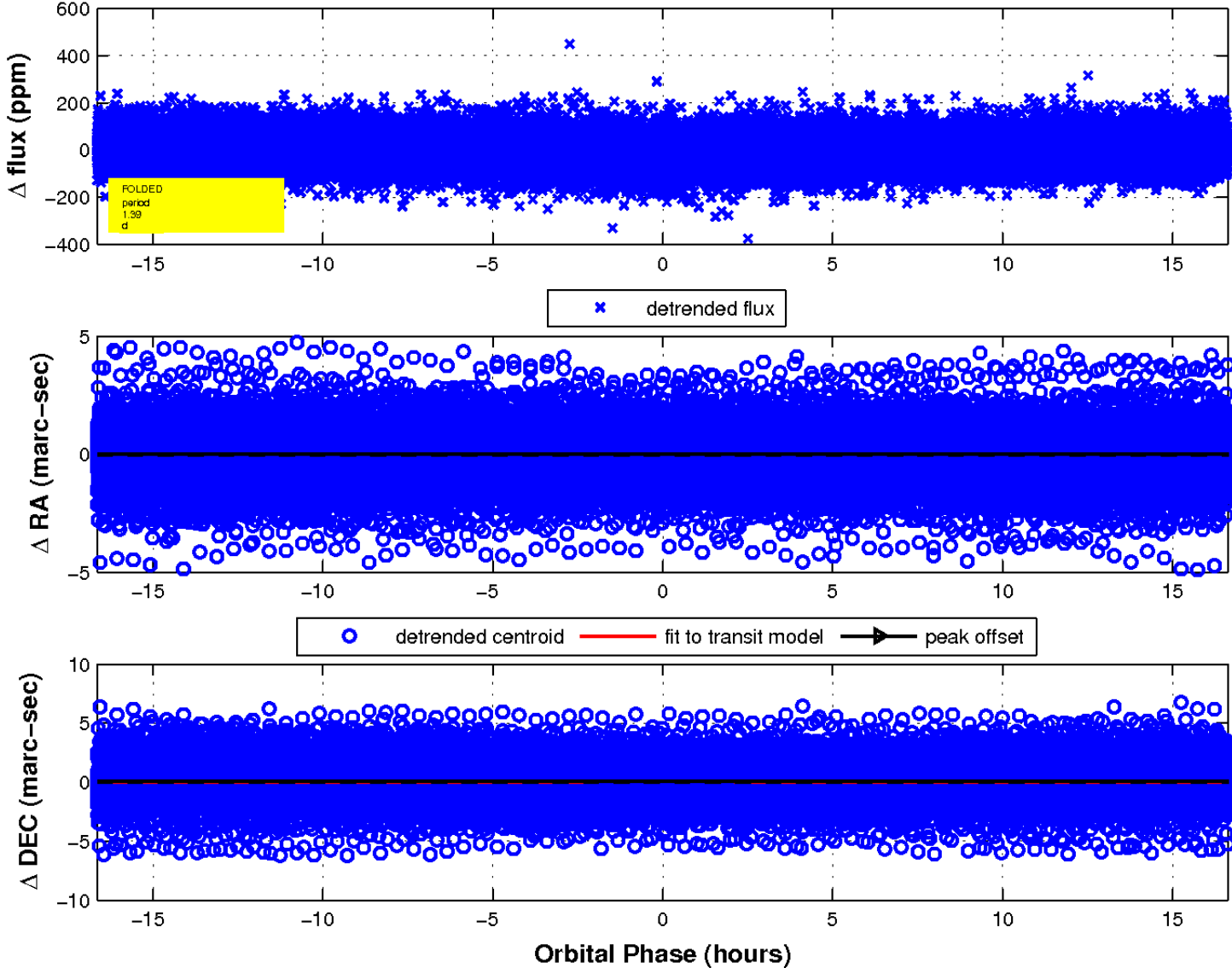
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

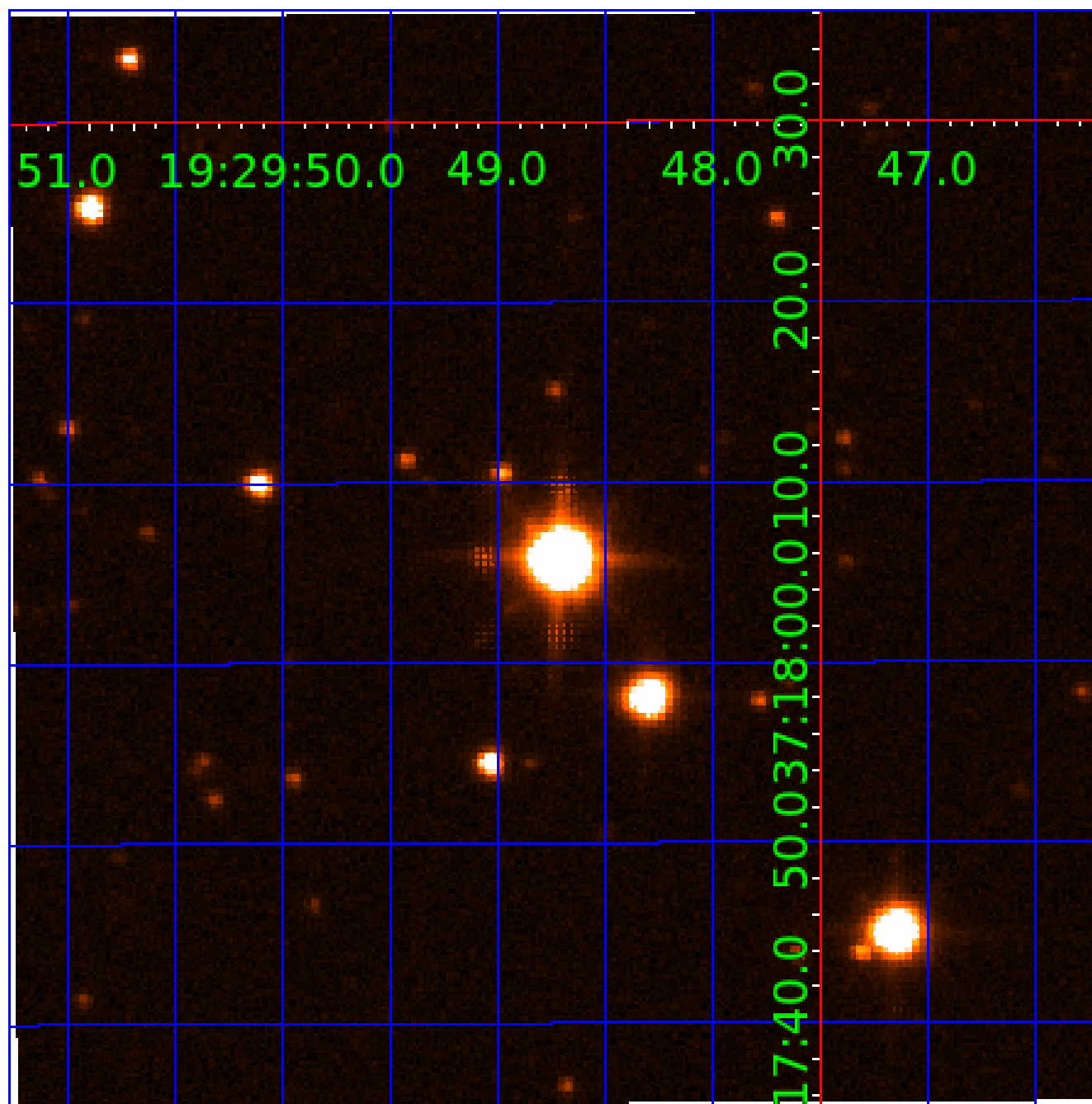


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 001872948

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001872948-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
001872948-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
001872948-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

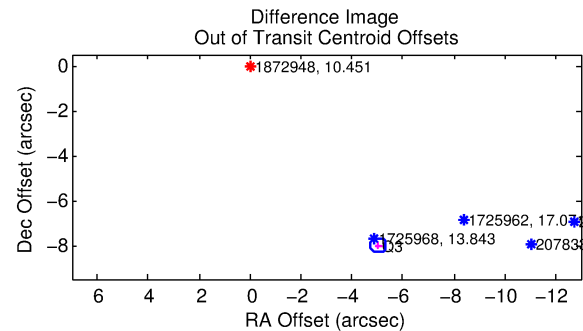
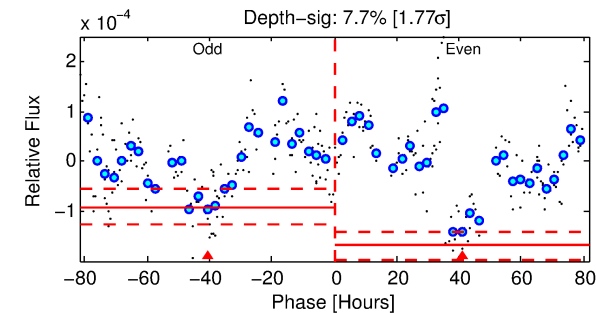
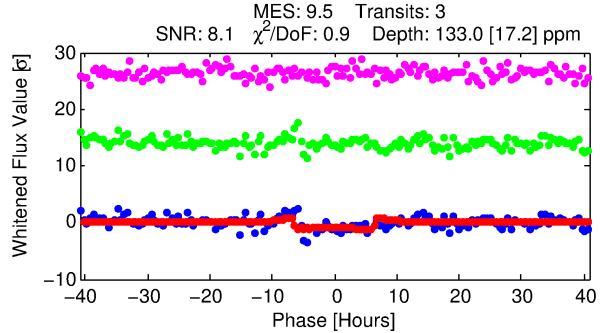
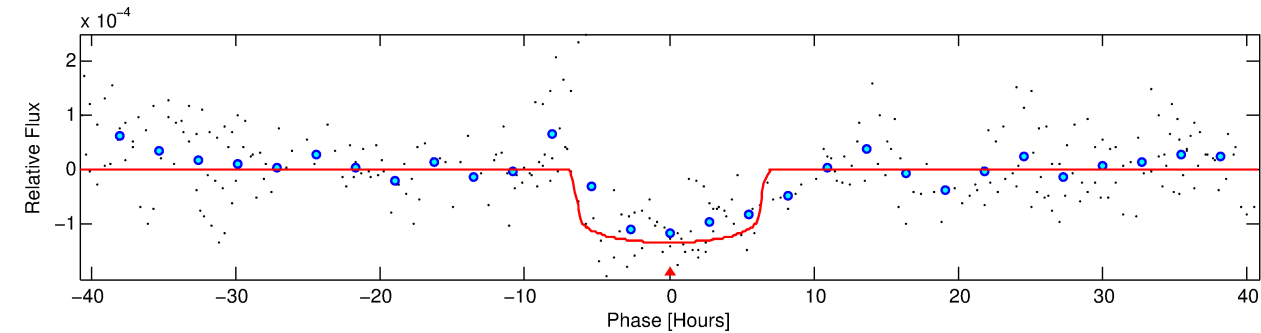
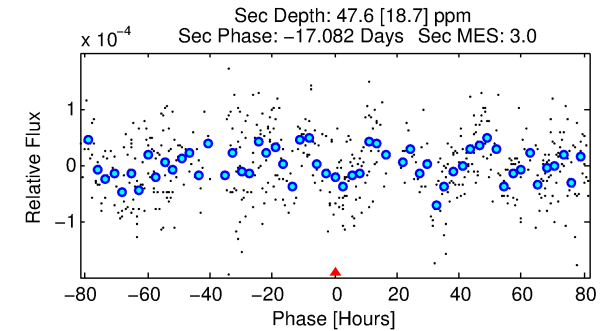
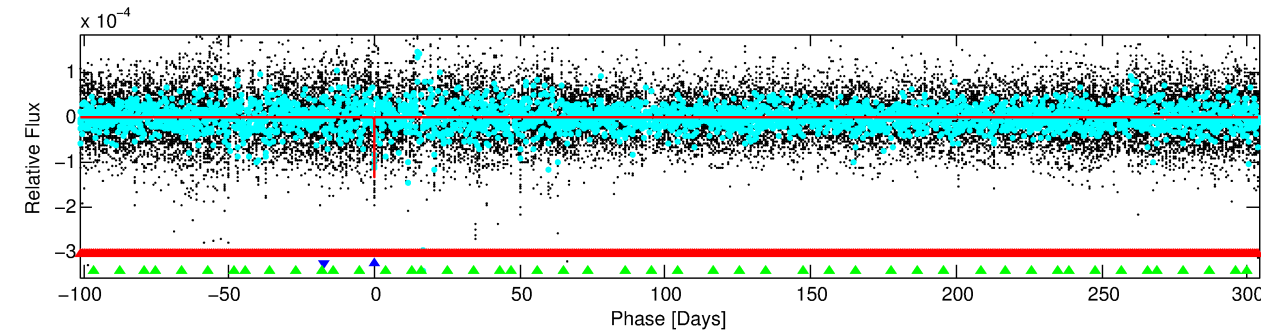
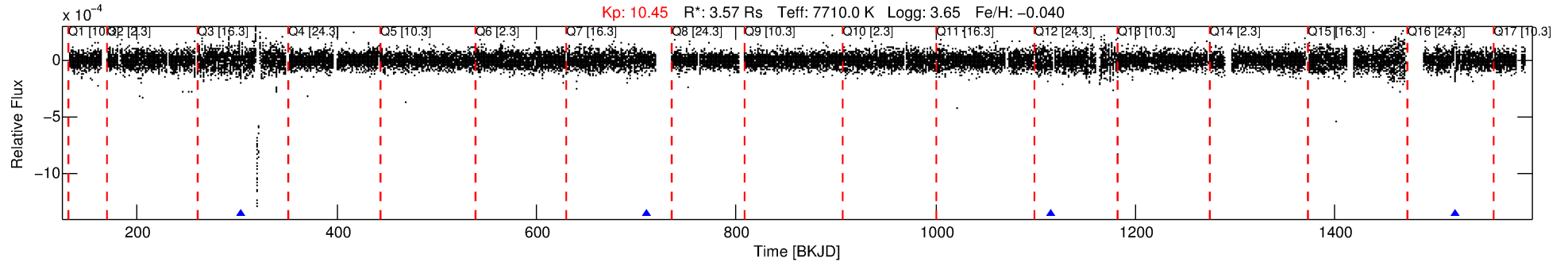
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001872948-02

No Significant Match Found

DV One-Page Summary

KIC: 1872948 Candidate: 2 of 3 Period: 405.273 d



DV Fit Results:

Period = 405.27301 [0.00614] d
Epoch = 304.3959 [0.0145] BKJD
Rp/R* = 0.0122 [0.0013]
a/R* = 111.96 [56.87]
b = 0.88 [0.12]
Seff = 21.59 [17.26]
Teff = 550 [110] K
Rp = 4.73 [2.46] Re
a = 1.3658 [0.6674] AU
Ag = 2183.21 [1968.94] [1.11] σ
Teffp = 5809 [696] K [7.46] σ

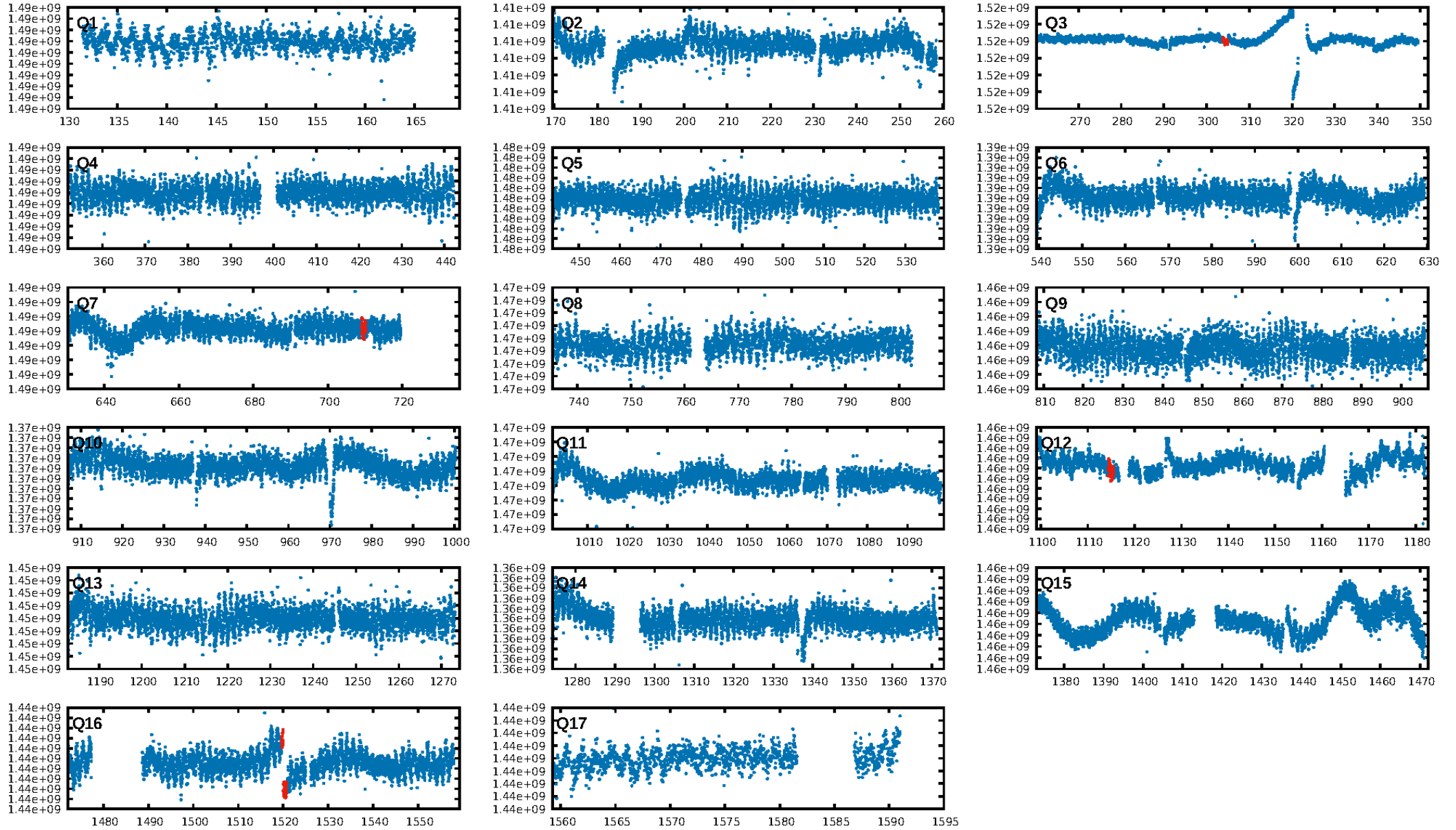
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [514.44 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.20e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: N/A
Centroid-sig: 50.7%
Centroid-so: 1.358 arcsec [0.96 σ]
OotOffset-rm: 9.457 arcsec [89.13 σ]
KicOffset-rm: 9.735 arcsec [91.75 σ]
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KicOffset-st: 0/1/0/0 [1]
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DiffImageOverlap-fno: 0.00 [0/4]

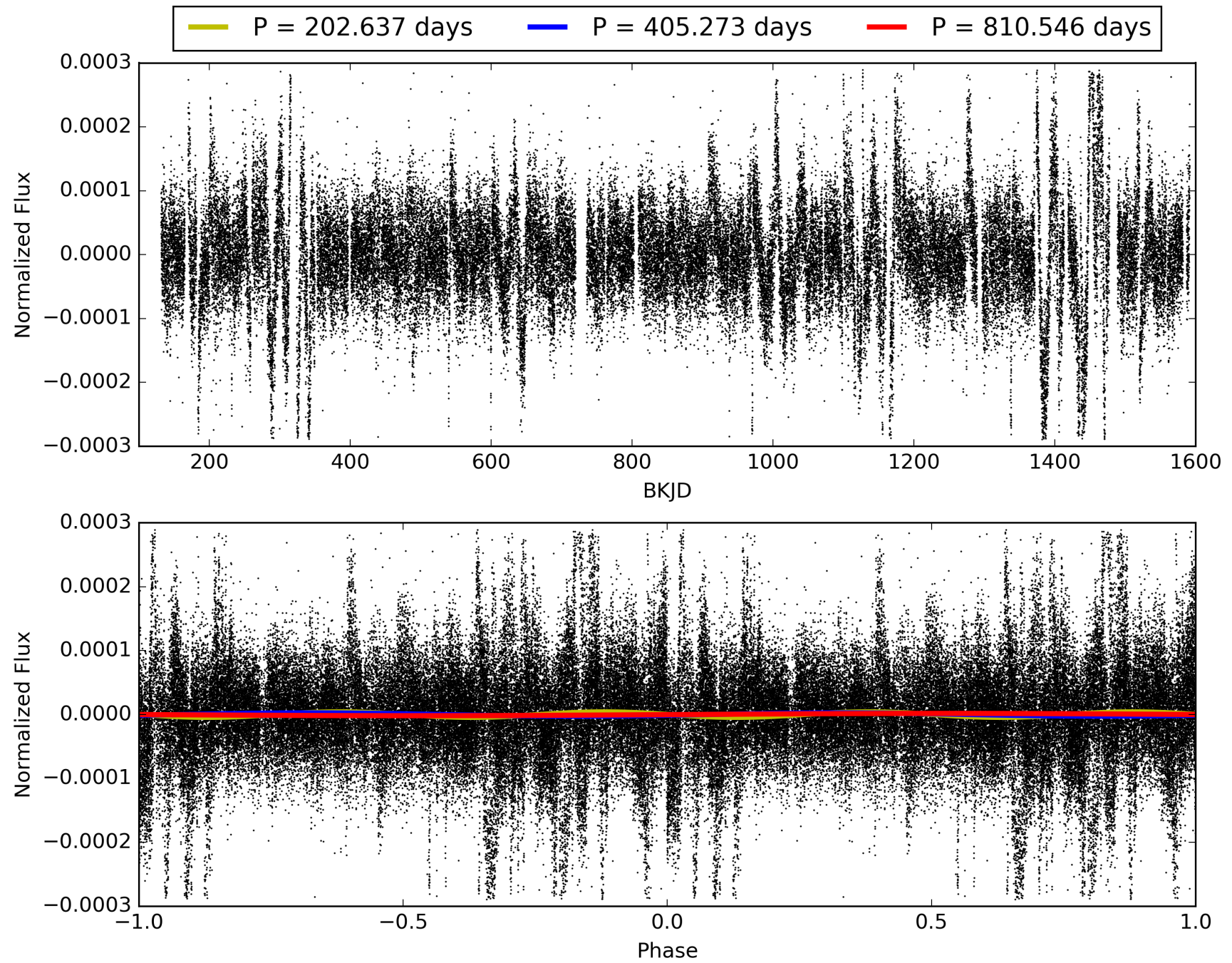
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:02:33 Z

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

TCE 001872948-02, PDC Light Curves

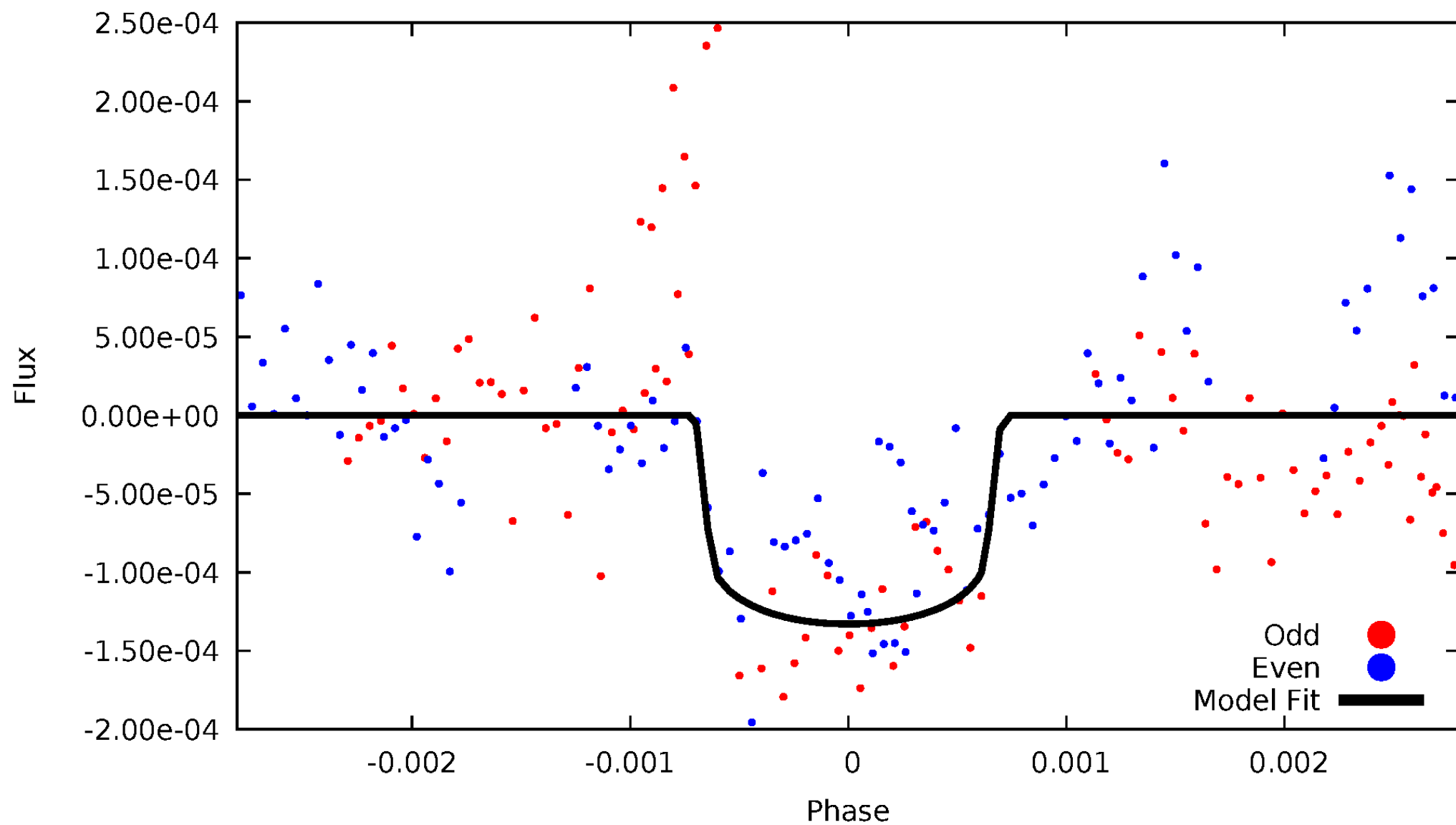


TCE 001872948-02



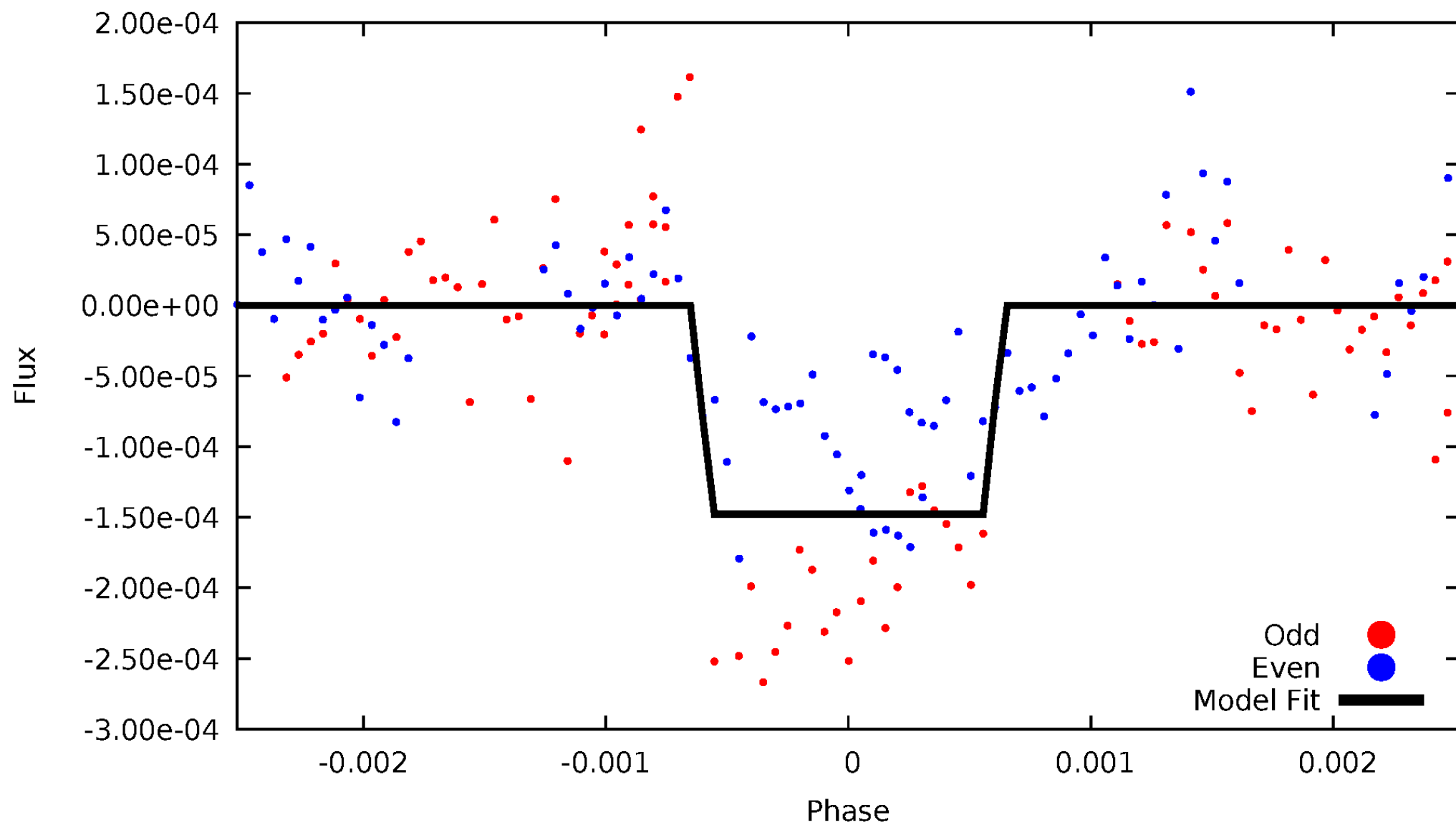
DV Odd/Even

TCE 001872948-02



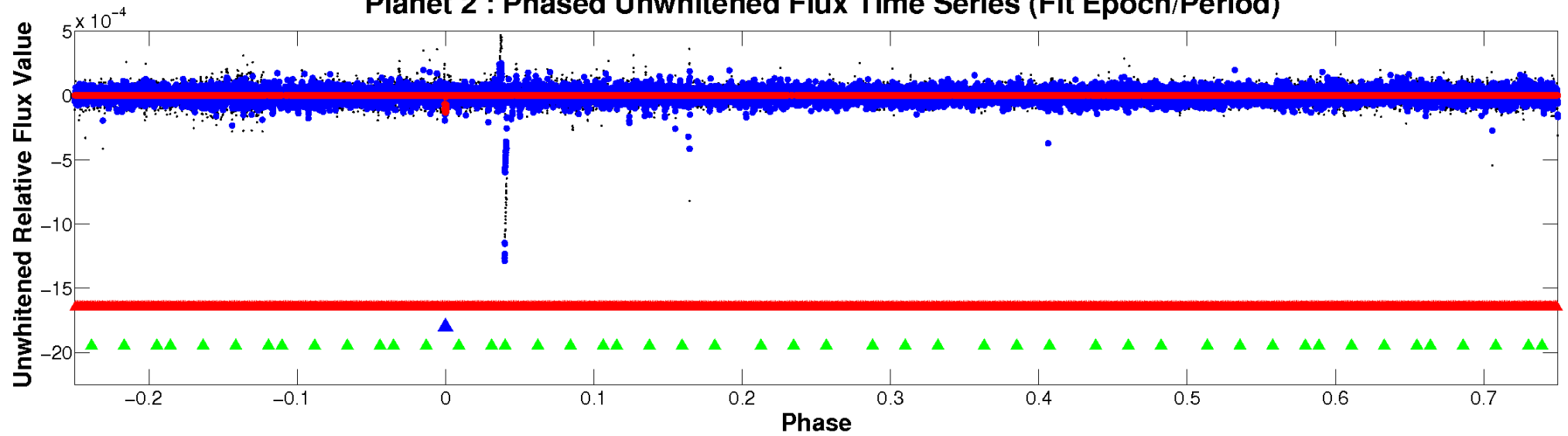
ALT Odd/Even

TCE 001872948-02

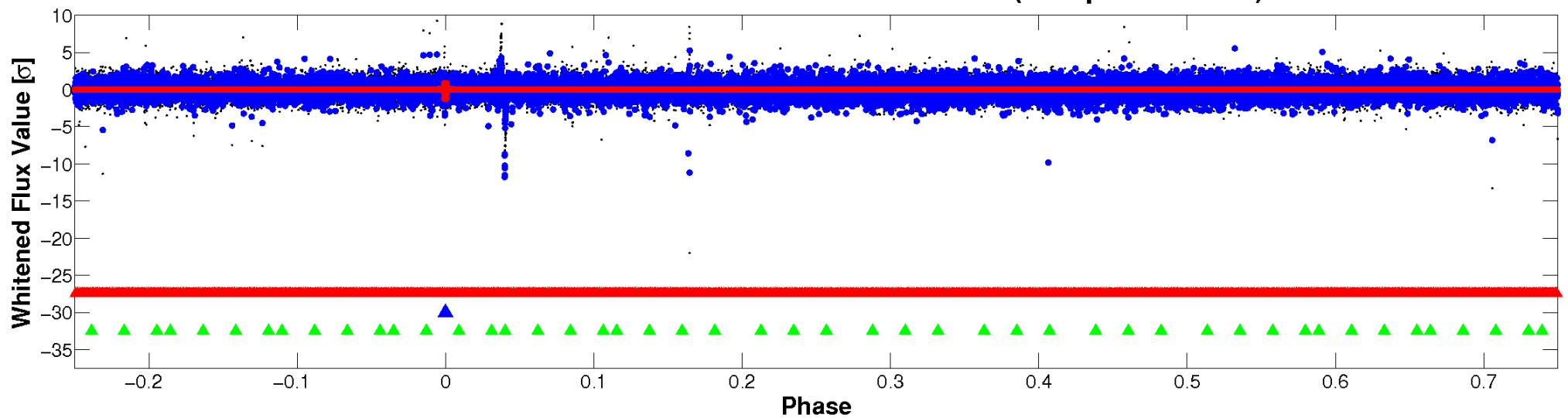


Non-Whitened Vs. Whitened Light Curve

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



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



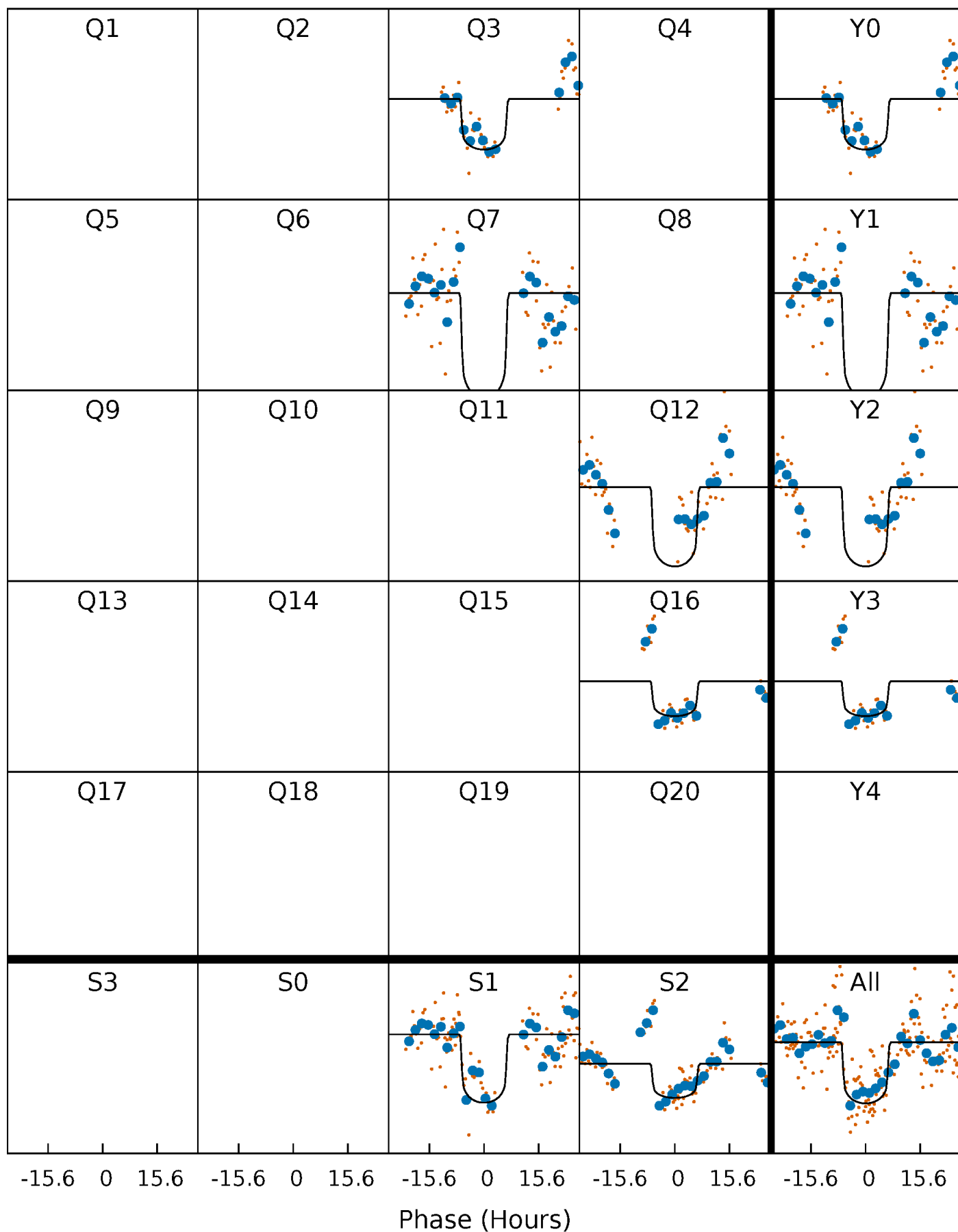
PDC Quarter-Phased Transit Curves

TCE 001872948-02 P=405.273007 Days $T_0=304.395918$ (BKJD)



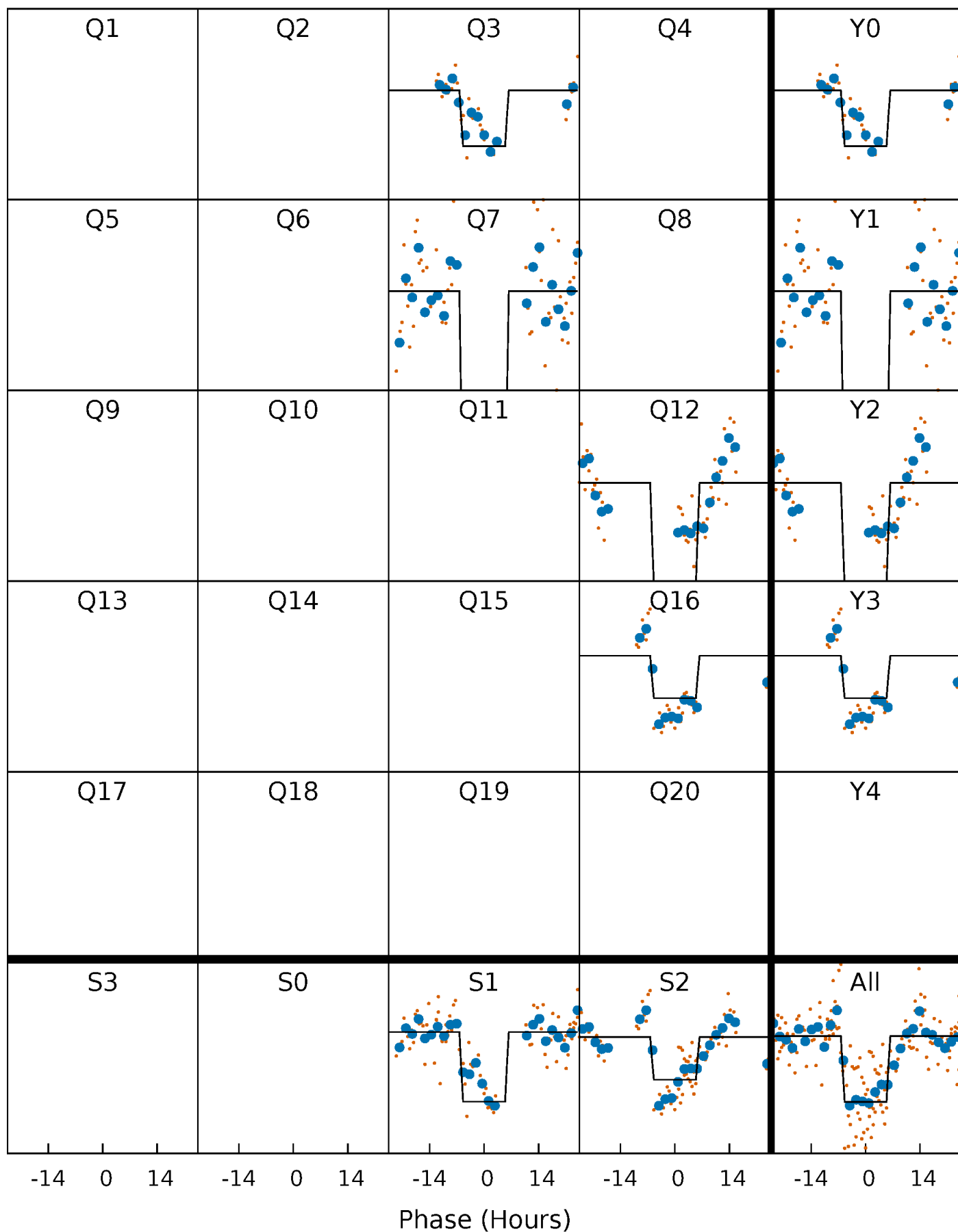
DV Quarter-Phased Transit Curves

TCE 001872948-02 $P=405.273007$ Days $T_0=304.395918$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

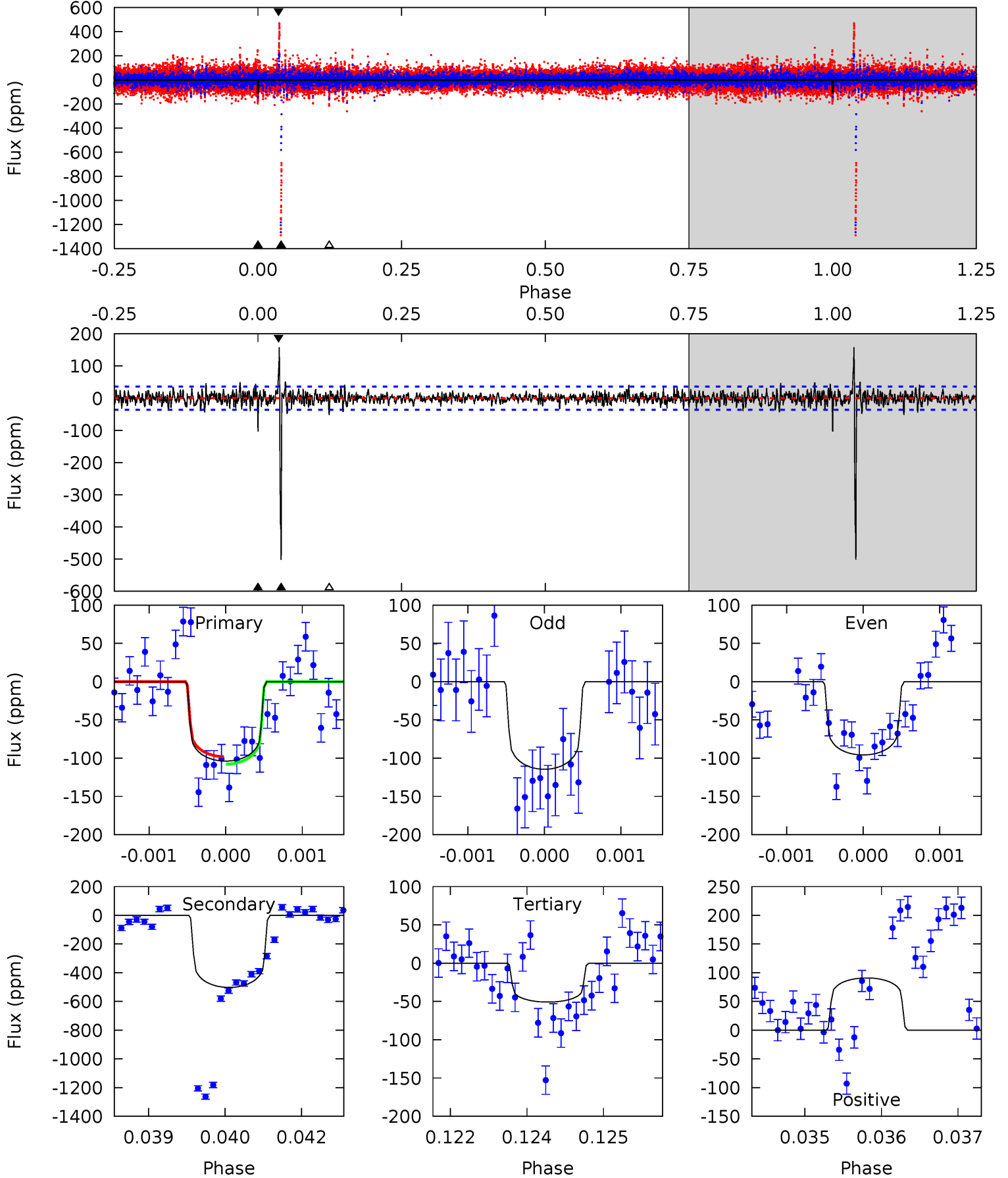
TCE 001872948-02 $P=405.279229$ Days $T_0=304.399017$ (BKJD)



DV Model-Shift Uniqueness Test

001872948-02, P = 405.273007 Days, E = 304.395918 Days

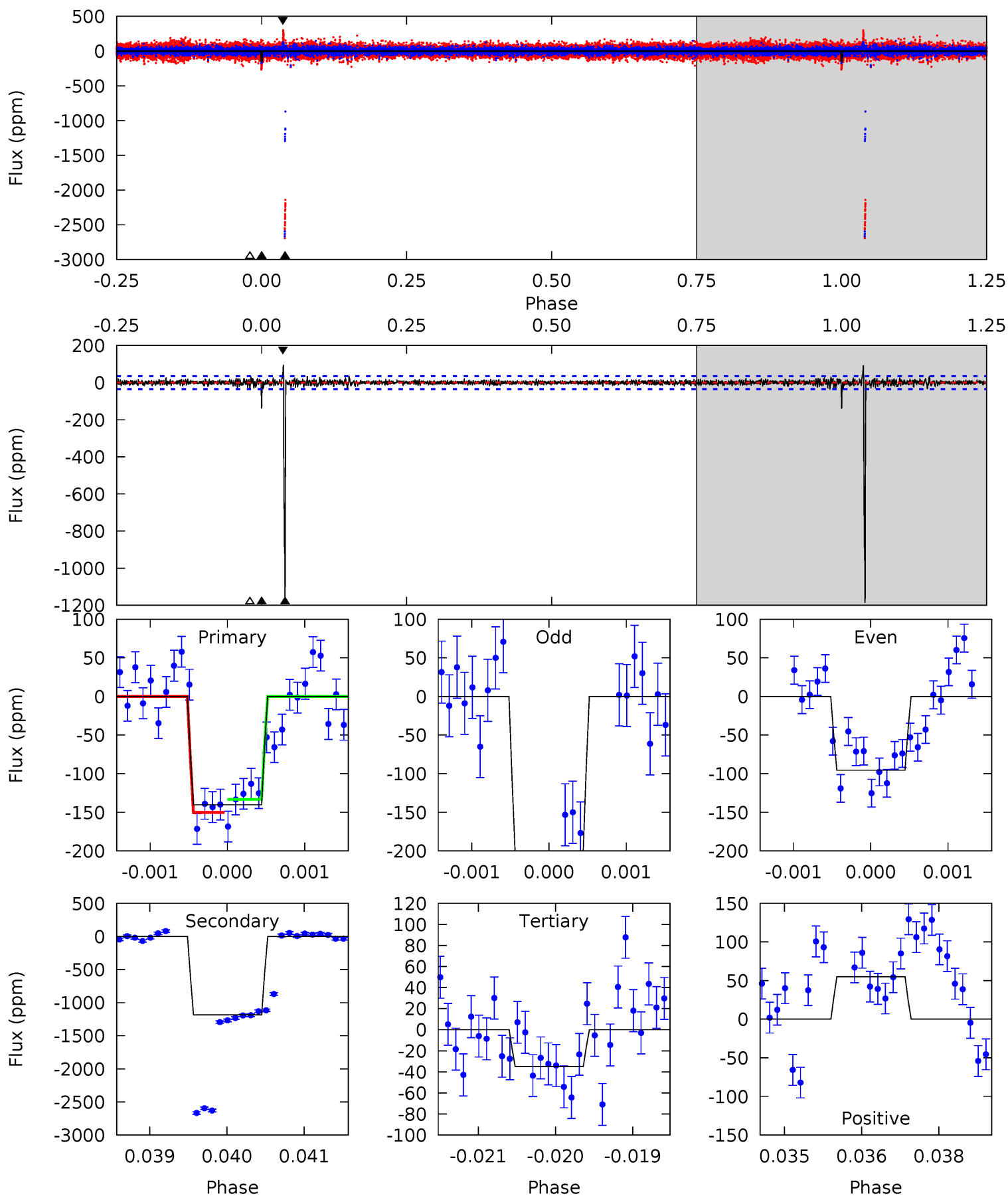
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	75.0	7.59	13.6	5.39	3.20	2.17	7.92	1.92	67.4	61.4	1.40	0.86	0.24	0.71



Alt Model-Shift Uniqueness Test

001872948-02, P = 405.279229 Days, E = 304.399017 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.0	185.8	5.47	8.64	5.41	3.23	2.66	16.5	13.3	180.3	177.1	8.16	1.17	0.07	1.30



Stellar Parameters For KIC 001872948

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7710^{+213}_{-320}	$3.649^{+0.459}_{-0.081}$	$-0.040^{+0.200}_{-0.300}$	$3.567^{+0.725}_{-1.812}$	$2.068^{+0.332}_{-0.499}$	$0.064^{+0.269}_{-0.022}$
	+3%/-4%	+13%/-2%	+500%/-750%	+20%/-51%	+16%/-24%	+419%/-34%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 001872948-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-502 ± 7	$4.35^{+0.94}_{-1.07}$	737^{+55}_{-94}	11746^{+1322}_{-1096}	26903^{+20357}_{-7563}
Alt.	-1185 ± 6	$4.37^{+0.95}_{-1.06}$	734^{+58}_{-94}	17381^{+2673}_{-1995}	64700^{+43893}_{-18748}

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

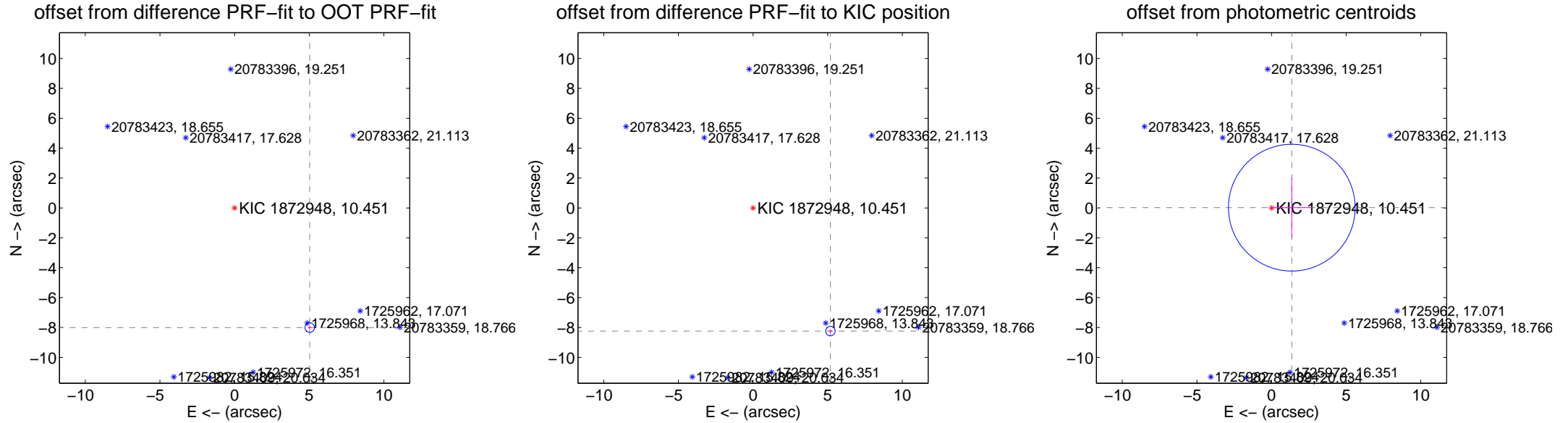
DV Centroid Data

Supplemental centroid analysis for 001872948-02. **Kepler magnitude: 10.45.** Transit SNR 8.12

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.457 \pm 0.106	89.13	-5.032 \pm 0.108	-8.007 \pm 0.105
PRF-fit source offset from KIC position	9.735 \pm 0.106	91.75	-5.181 \pm 0.108	-8.242 \pm 0.105
photometric centroid source offset	1.36 \pm 1.41	0.96	-1.36 \pm 1.41	0.02 \pm 2.02



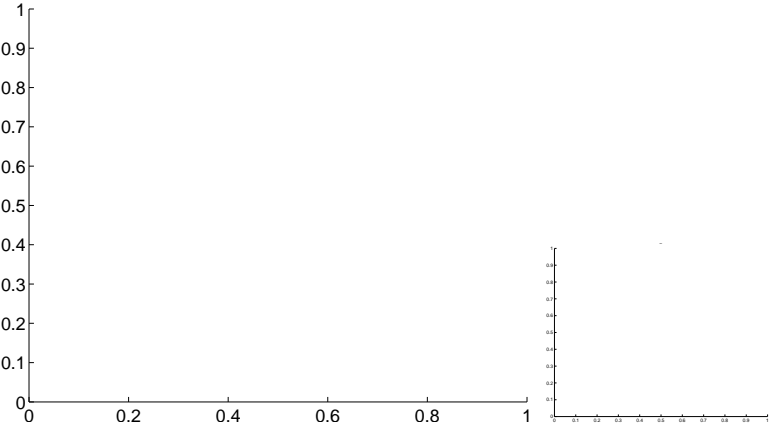
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

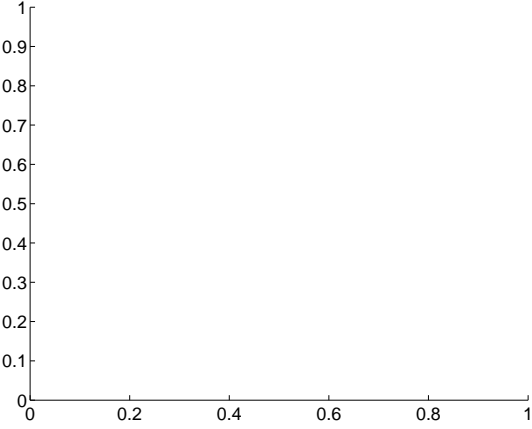
Q1 no difference image



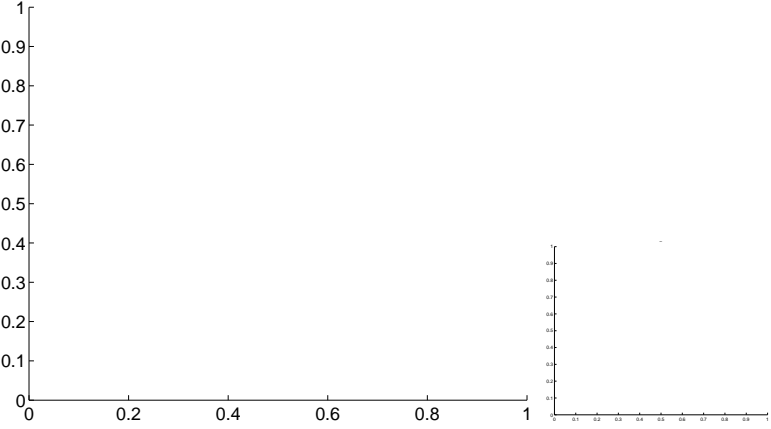
Q1 no OOT image



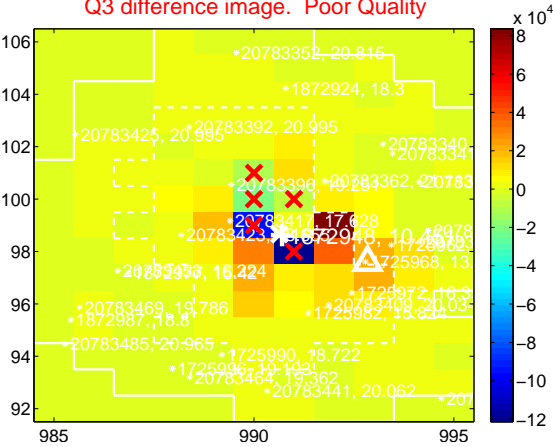
Q2 no difference image



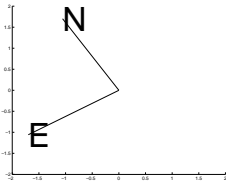
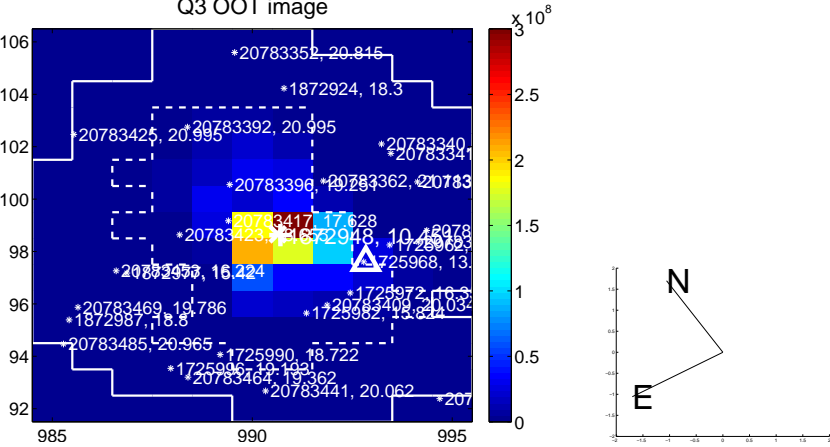
Q2 no OOT image



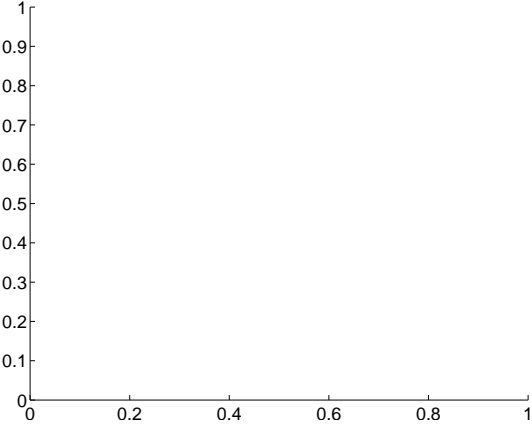
Q3 difference image. Poor Quality



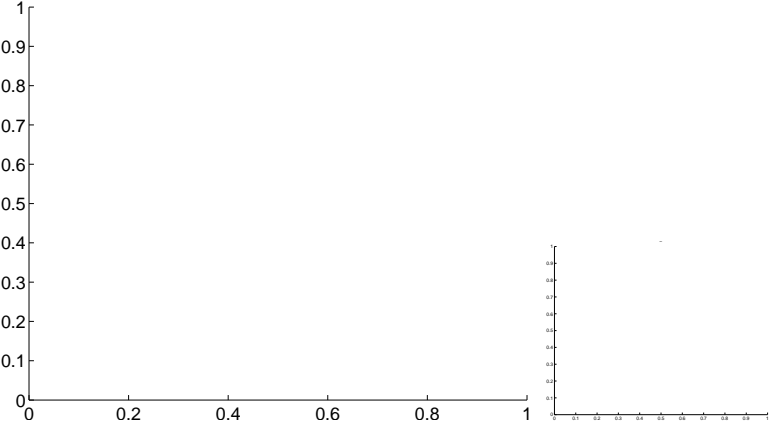
Q3 OOT image



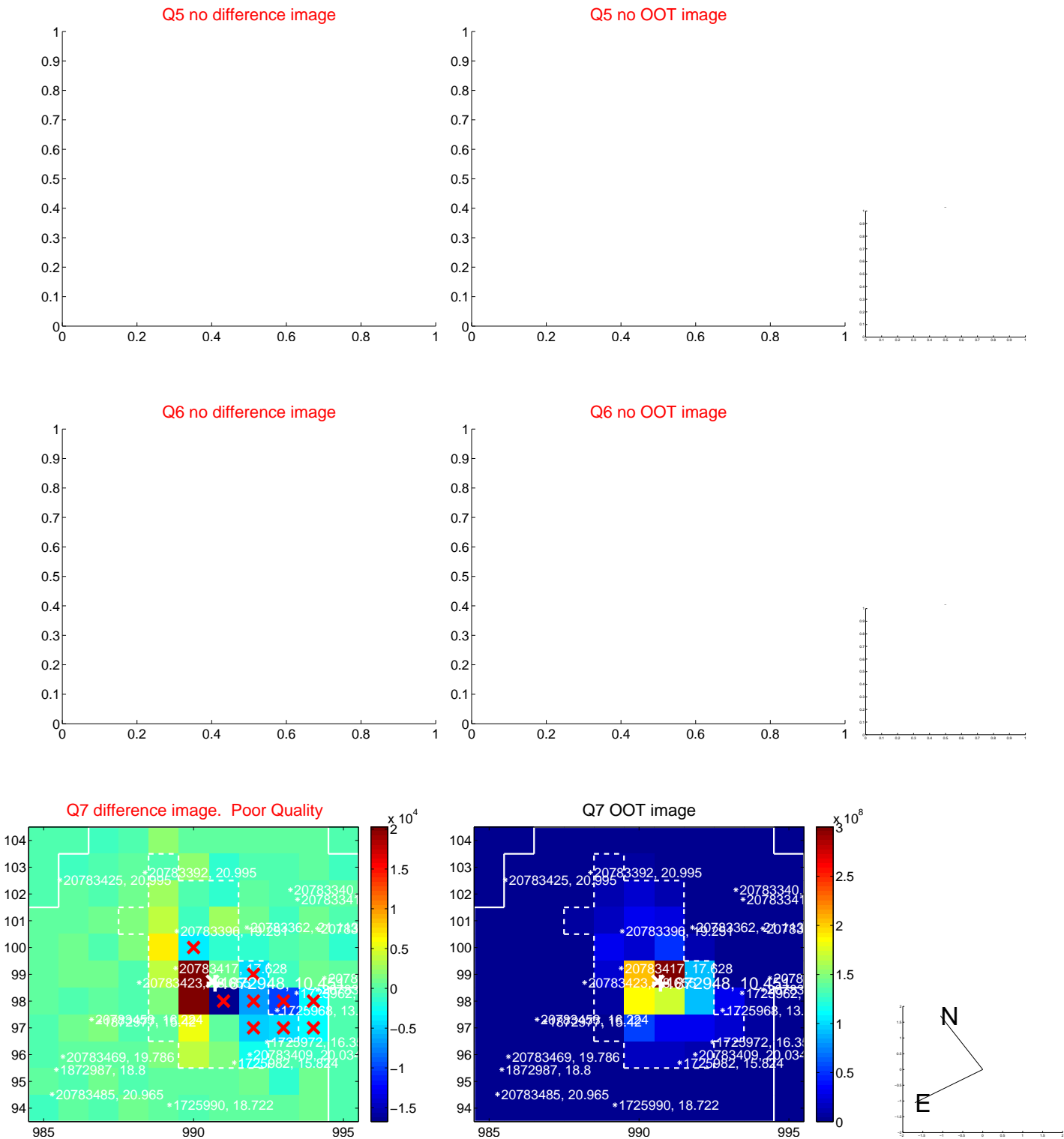
Q4 no difference image



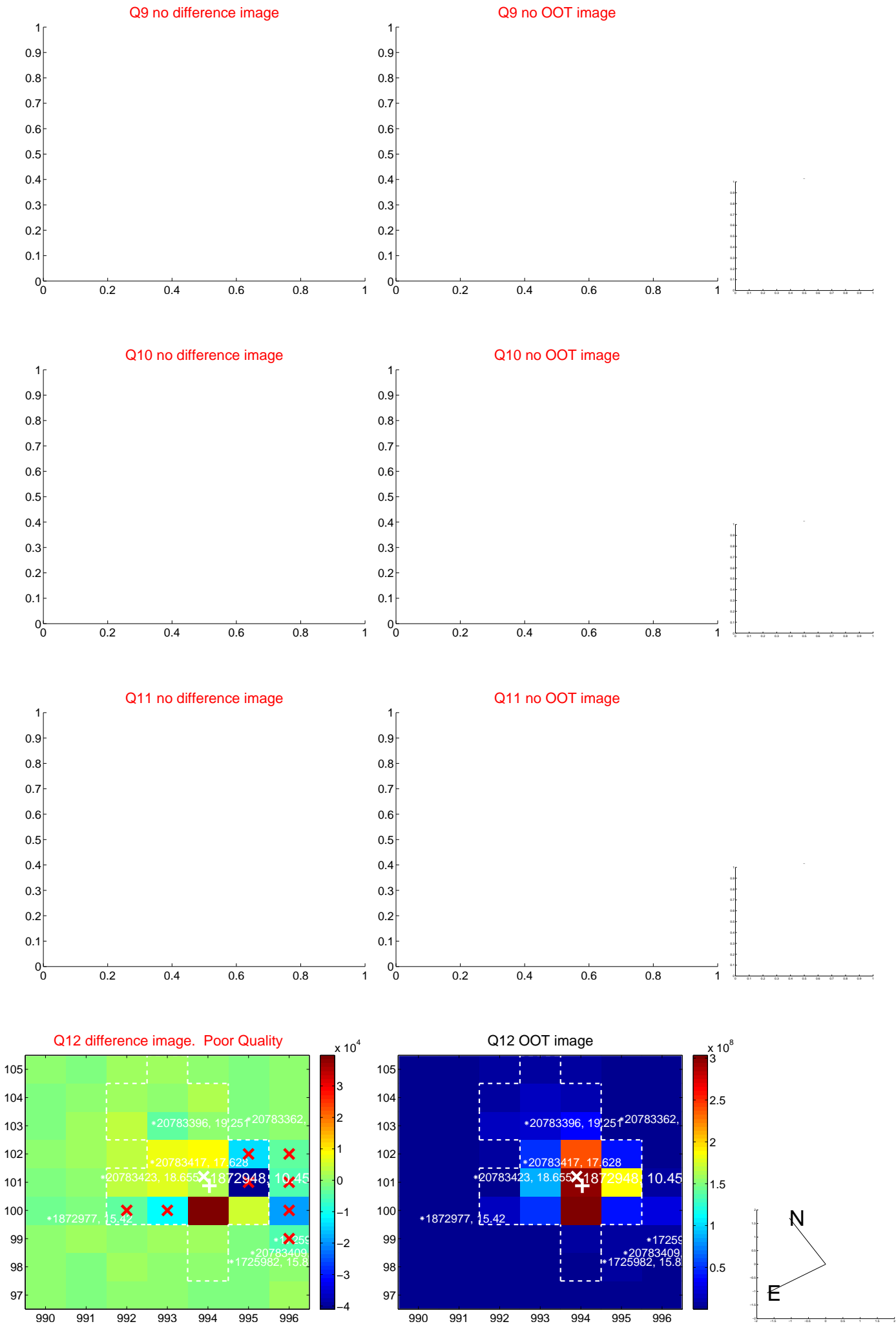
Q4 no OOT image



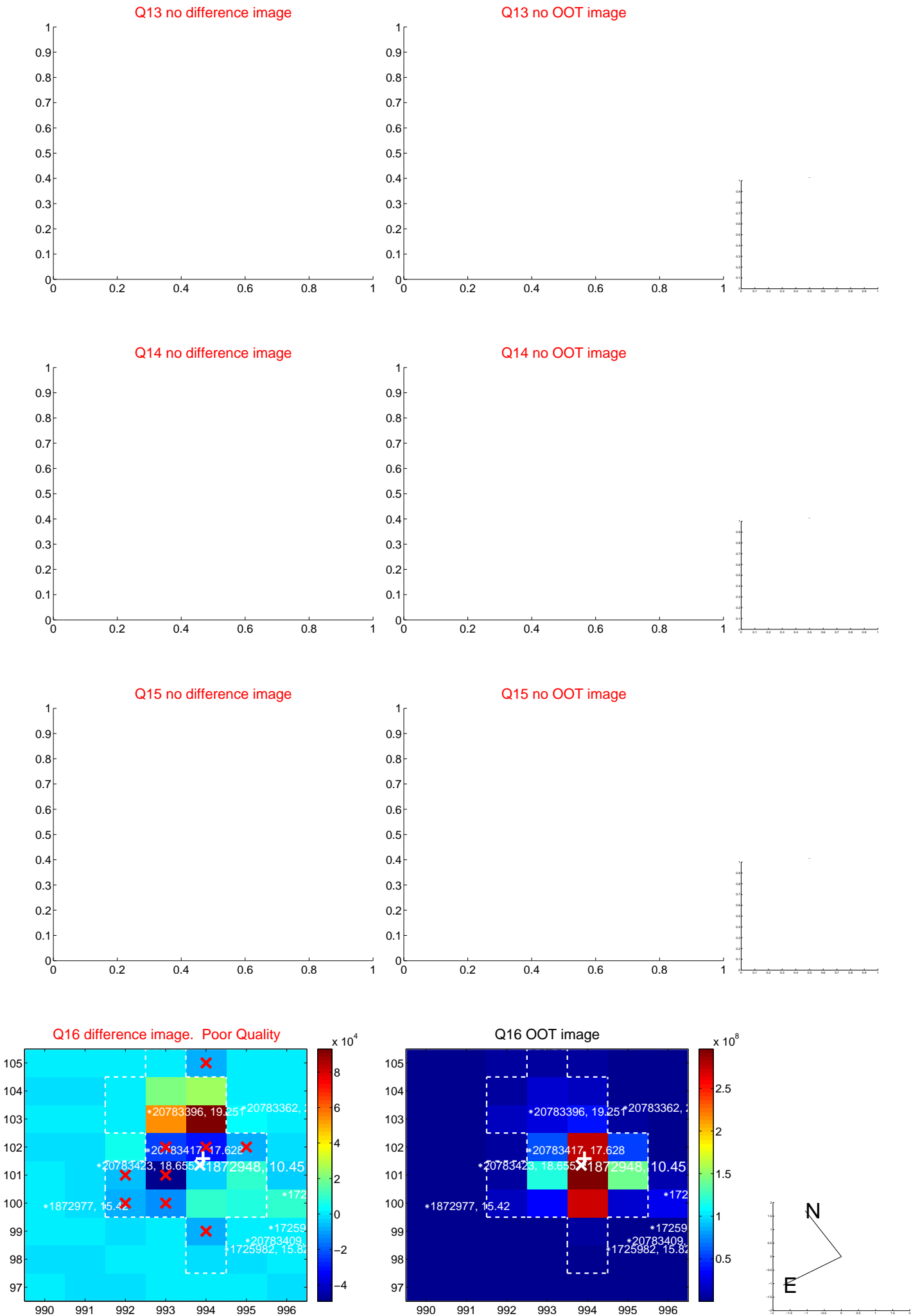
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



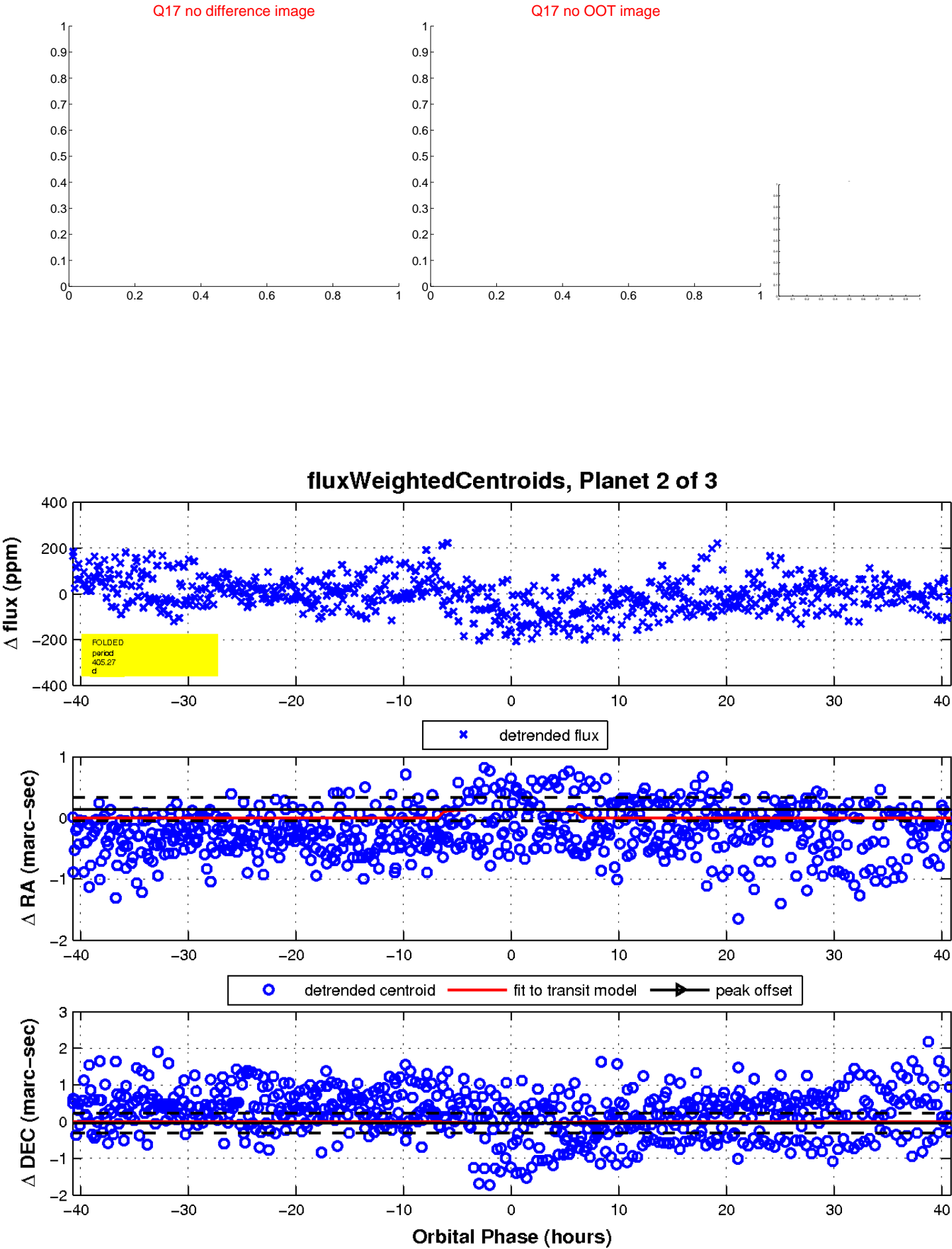
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

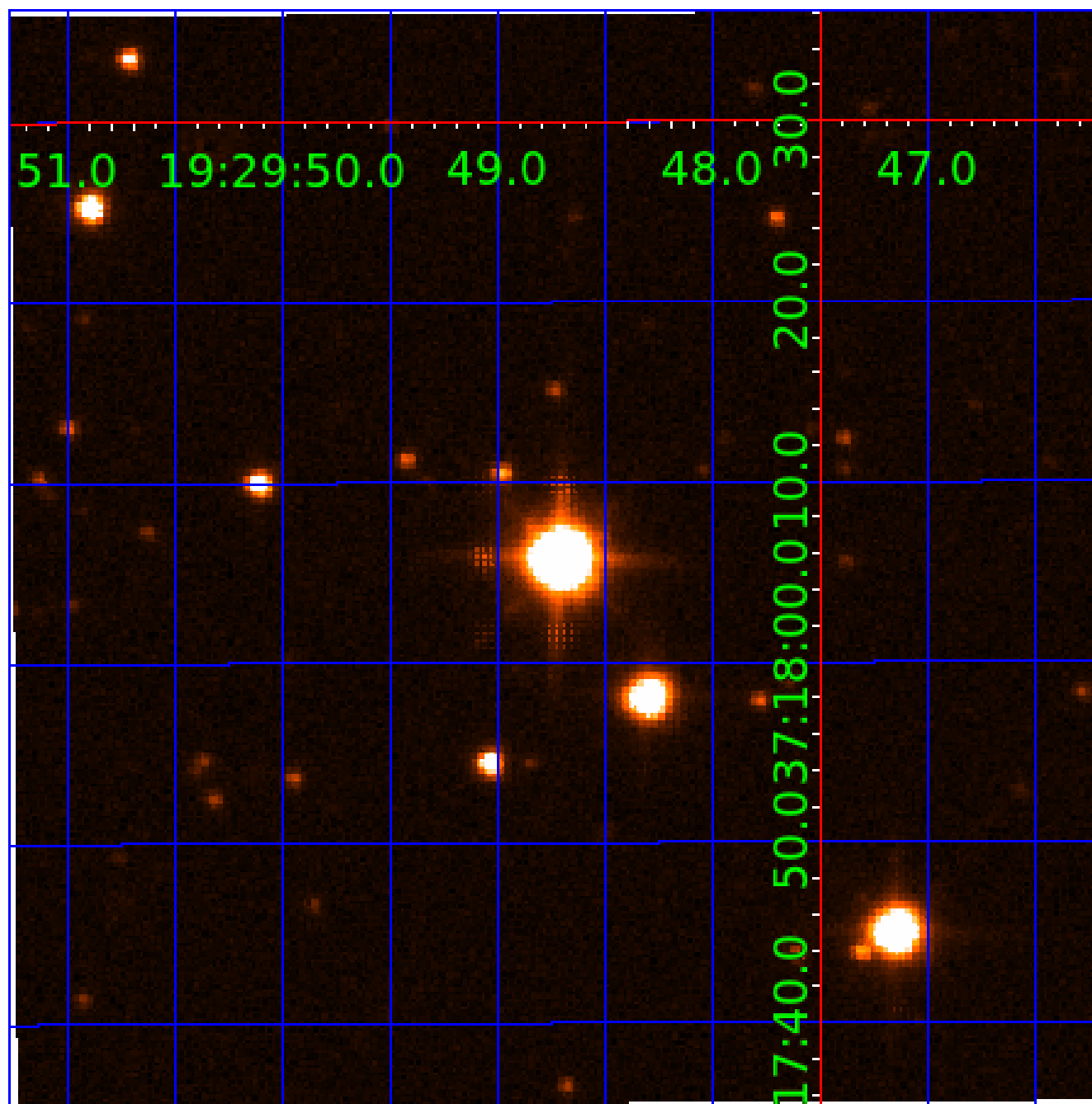


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 001872948

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})
001872948-01	OBS	No	1.386476	131.586393	7.5	5.680	10.0	9.9	3.57	7710	1.05	41888.75
001872948-02	OBS	No	405.273007	304.395918	133.0	13.626	9.5	8.1	3.57	7710	4.73	21.59
001872948-03	OBS	No	30.487944	134.075720	22.0	10.956	7.4	7.8	3.57	7710	1.94	679.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001872948-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED
001872948-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED
001872948-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

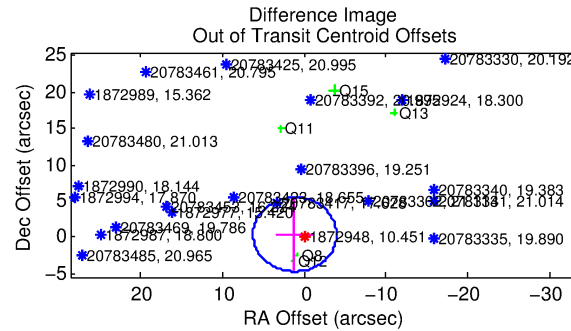
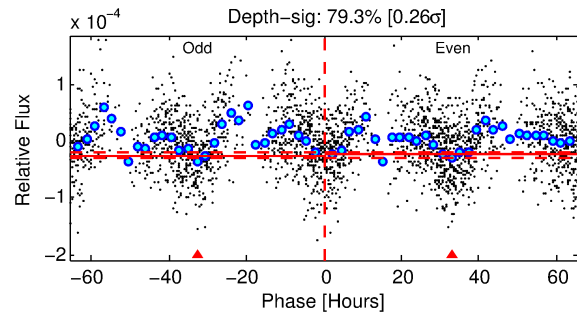
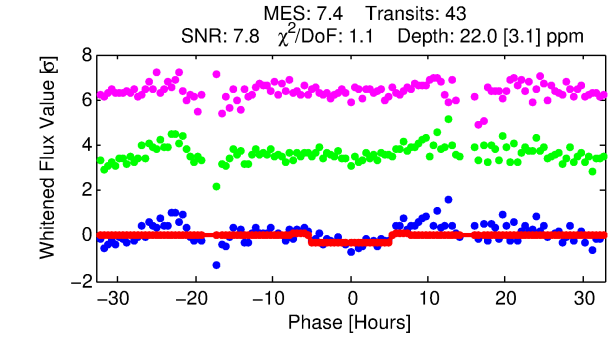
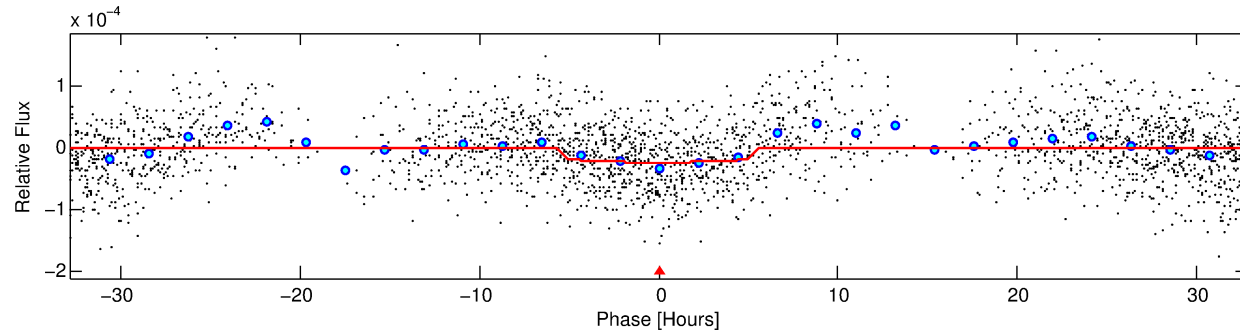
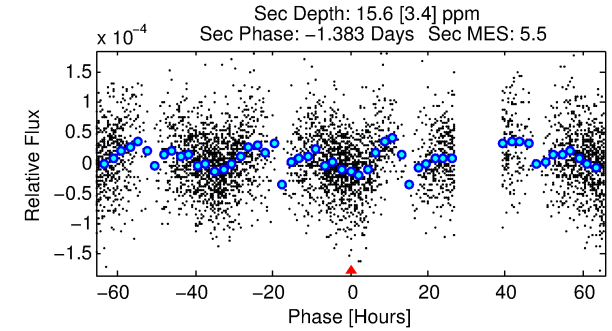
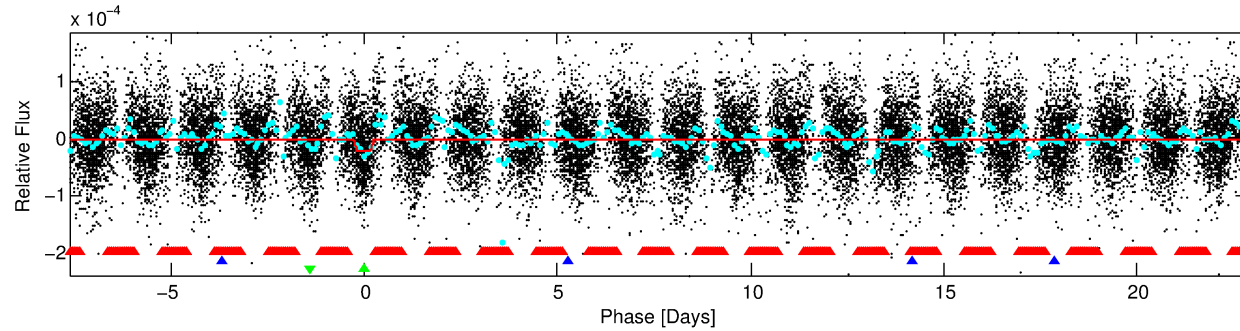
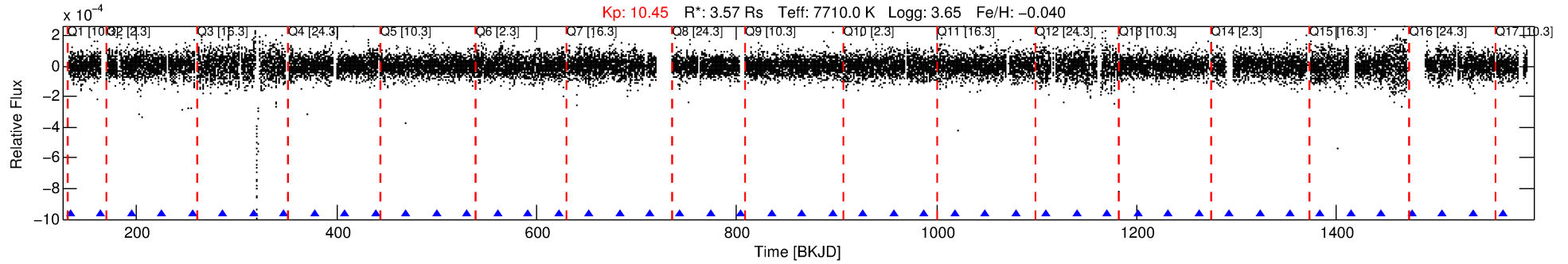
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001872948-03

No Significant Match Found

DV One-Page Summary

KIC: 1872948 Candidate: 3 of 3 Period: 30.488 d



DV Fit Results:

Period = 30.48794 [0.00093] d
Epoch = 134.0757 [0.0261] BKJD
Rp/R* = 0.0050 [0.0010]
a/R* = 9.65 [10.81]
b = 0.90 [0.25]
Seff = 679.95 [543.41]
Teq = 1302 [260] K
Rp = 1.94 [1.06] Re
a = 0.2434 [0.1189] AU
Ag = 134.36 [121.36] [1.10σ]
Teffp = 6854 [826] K [6.41σ]

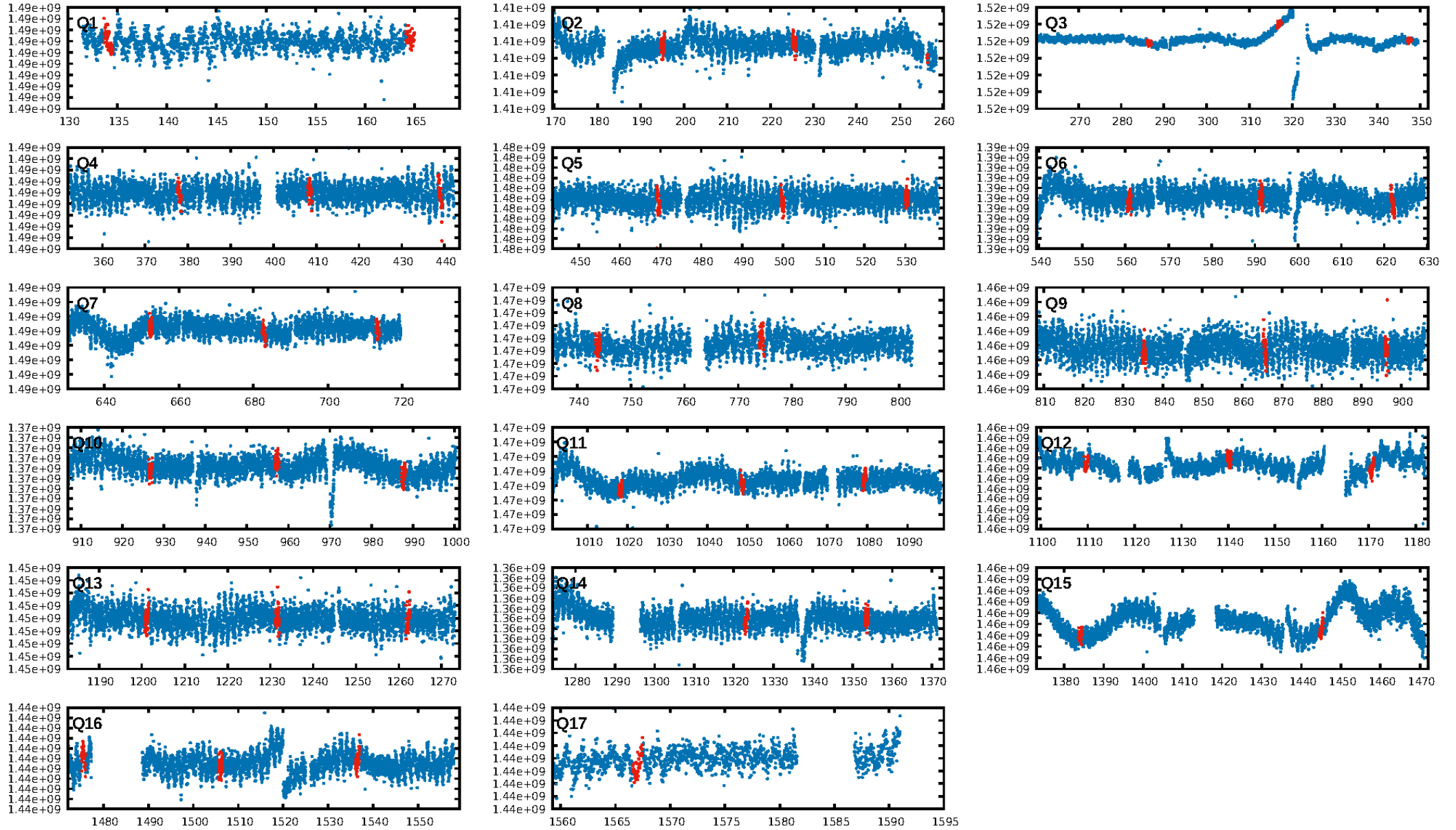
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [56.59σ]
LongPeriod-sig: 100.0% [514.44σ]
ModelChiSquare2-sig: 78.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.40e-08
RollingBand-fgt: 1.00 [40/40]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.2%
Centroid-so: 7.736 arcsec [1.89σ]
OotOffset-rm: 1.202 arcsec [0.71σ]
KicOffset-rm: 0.916 arcsec [0.31σ]
OotOffset-st: 0/2/2/1 [5]
KicOffset-st: 0/2/2/1 [5]
DiffImageQuality-fgm: 0.20 [1/5]
DiffImageOverlap-fno: 0.00 [0/17]

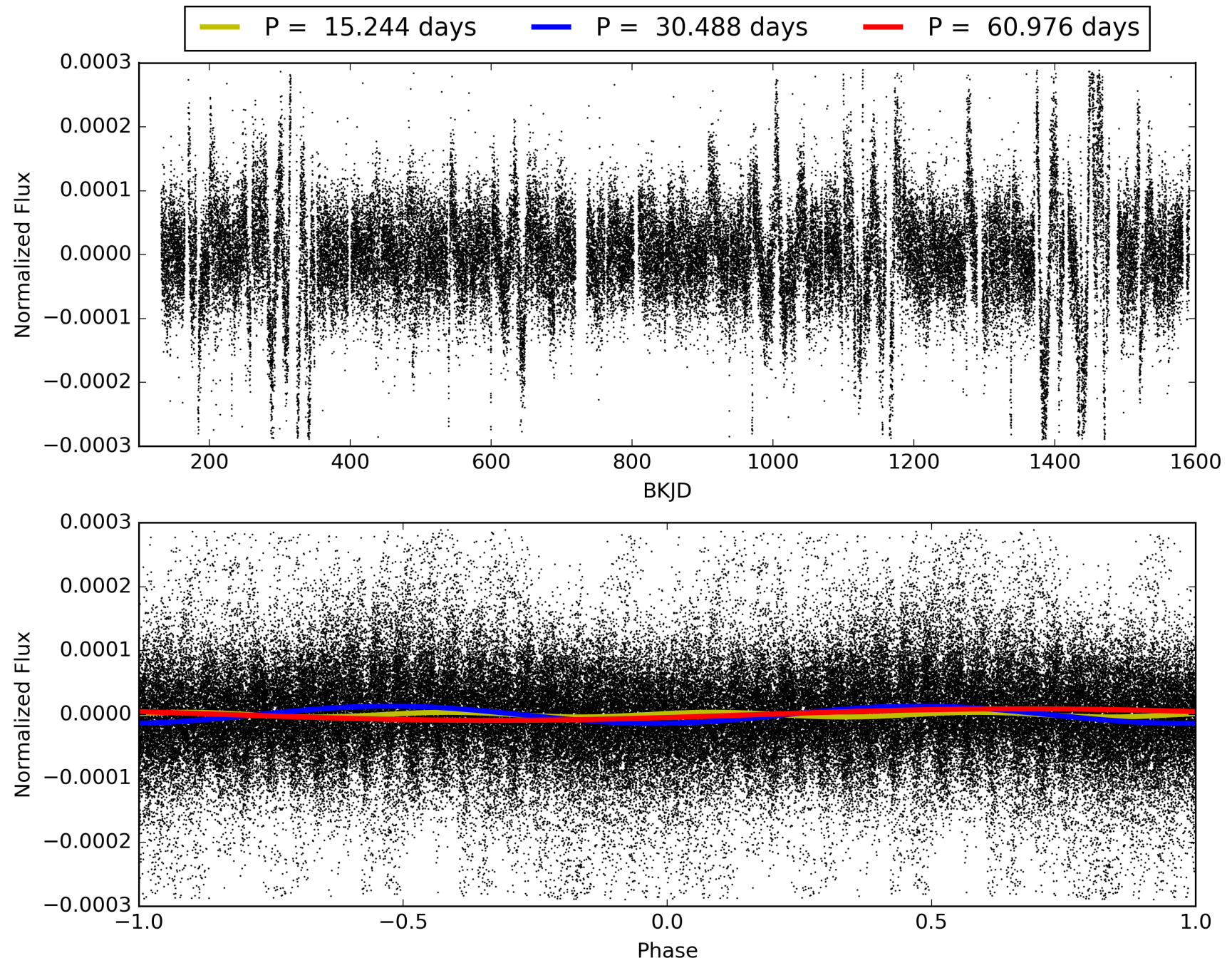
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:02:38 Z

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

TCE 001872948-03, PDC Light Curves

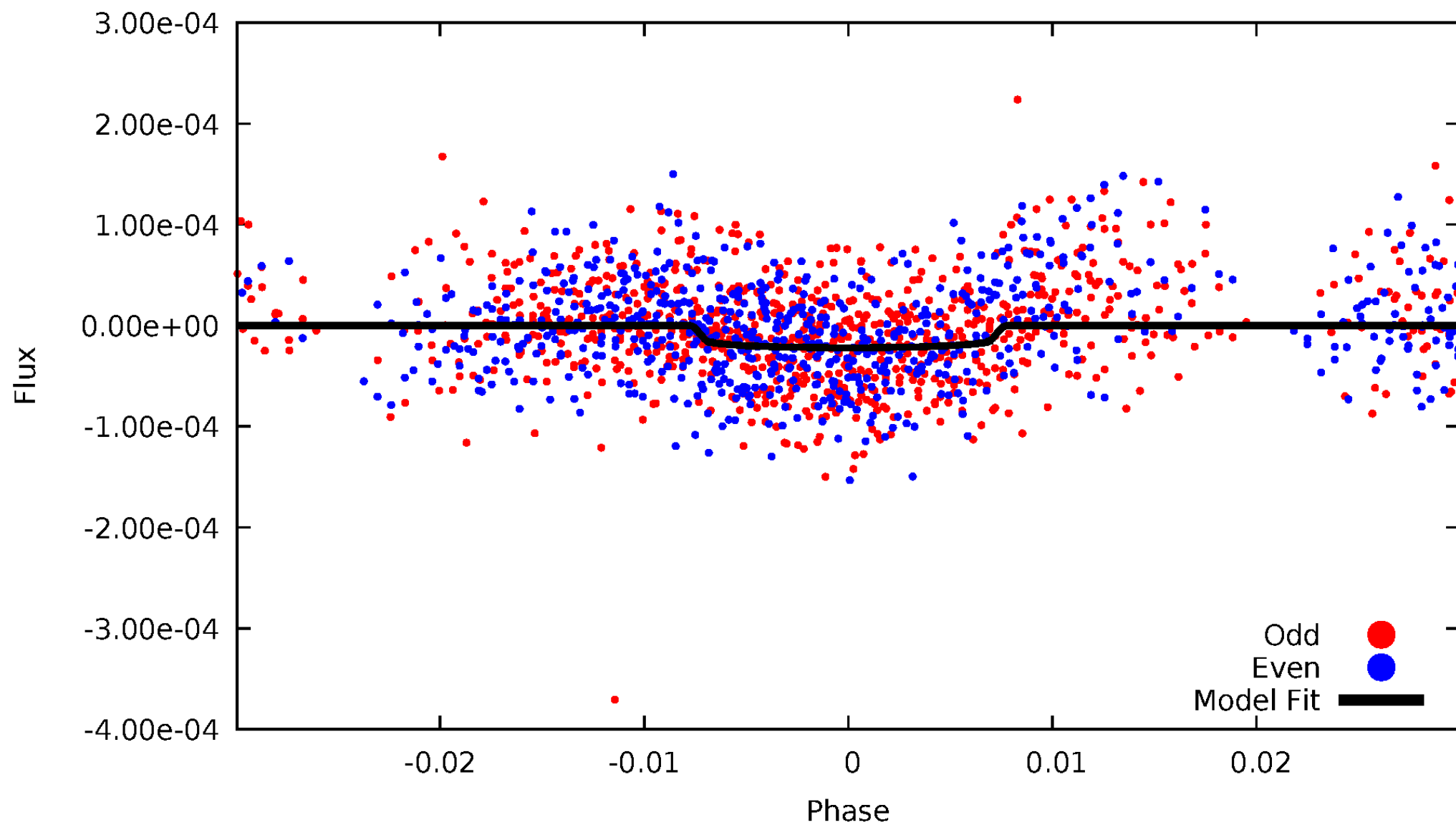


TCE 001872948-03



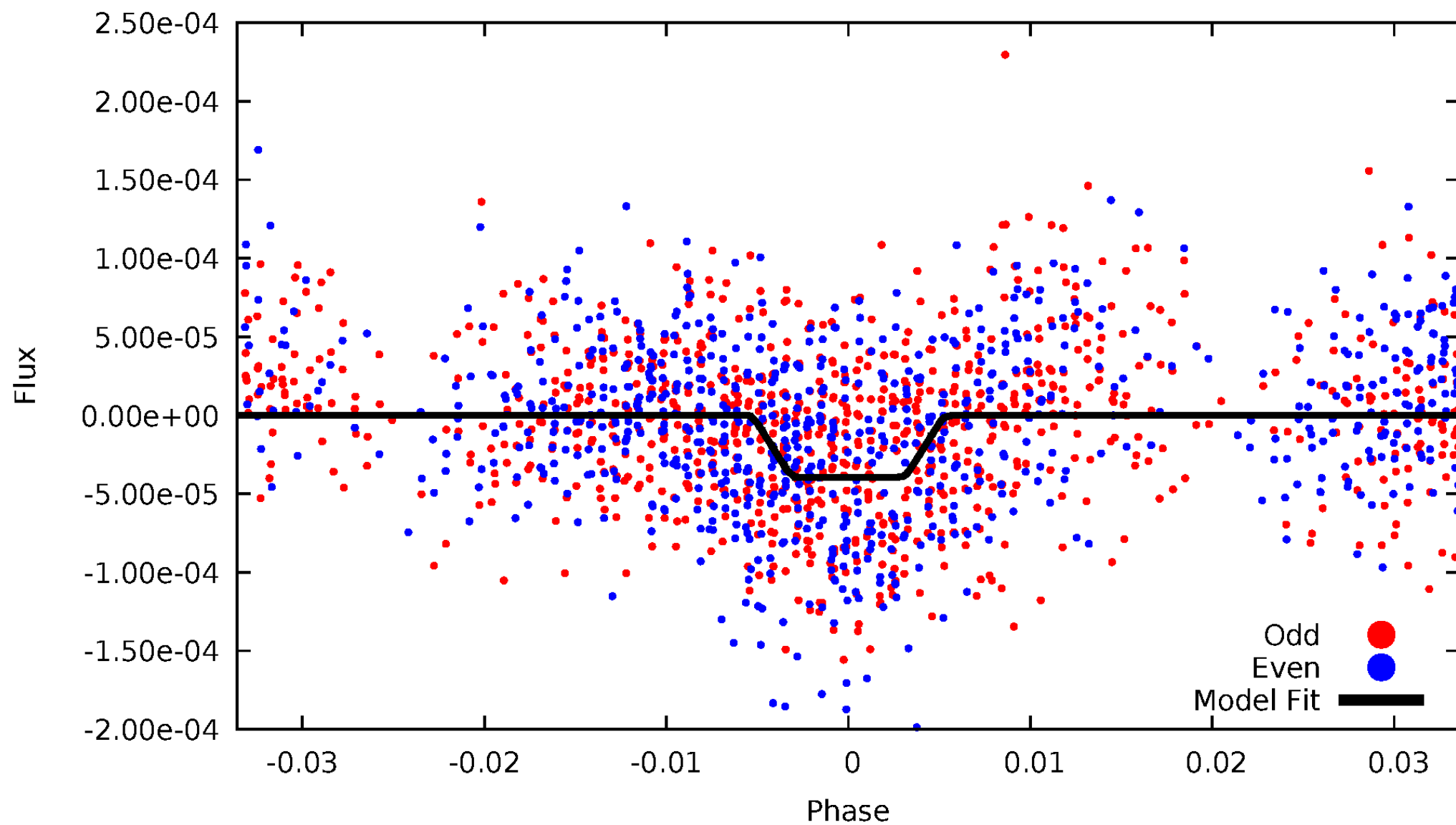
DV Odd/Even

TCE 001872948-03



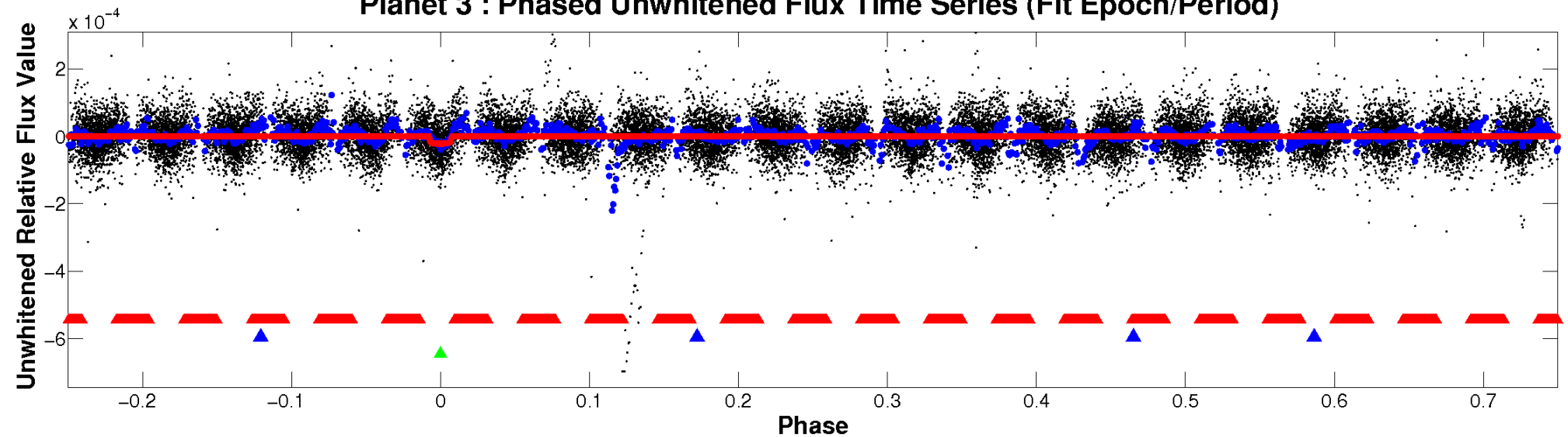
ALT Odd/Even

TCE 001872948-03

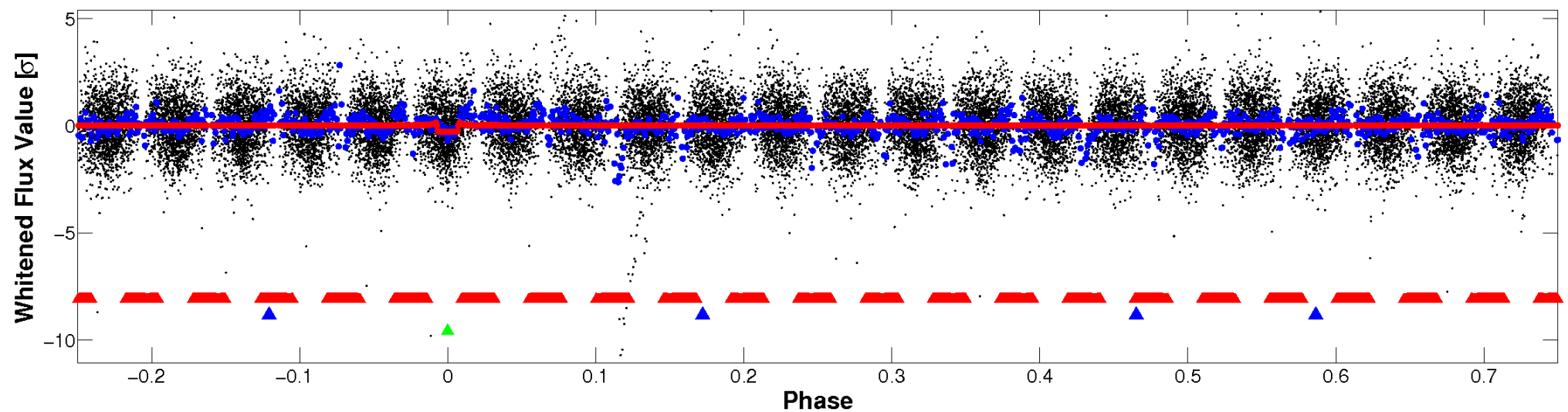


Non-Whitened Vs. Whitened Light Curve

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

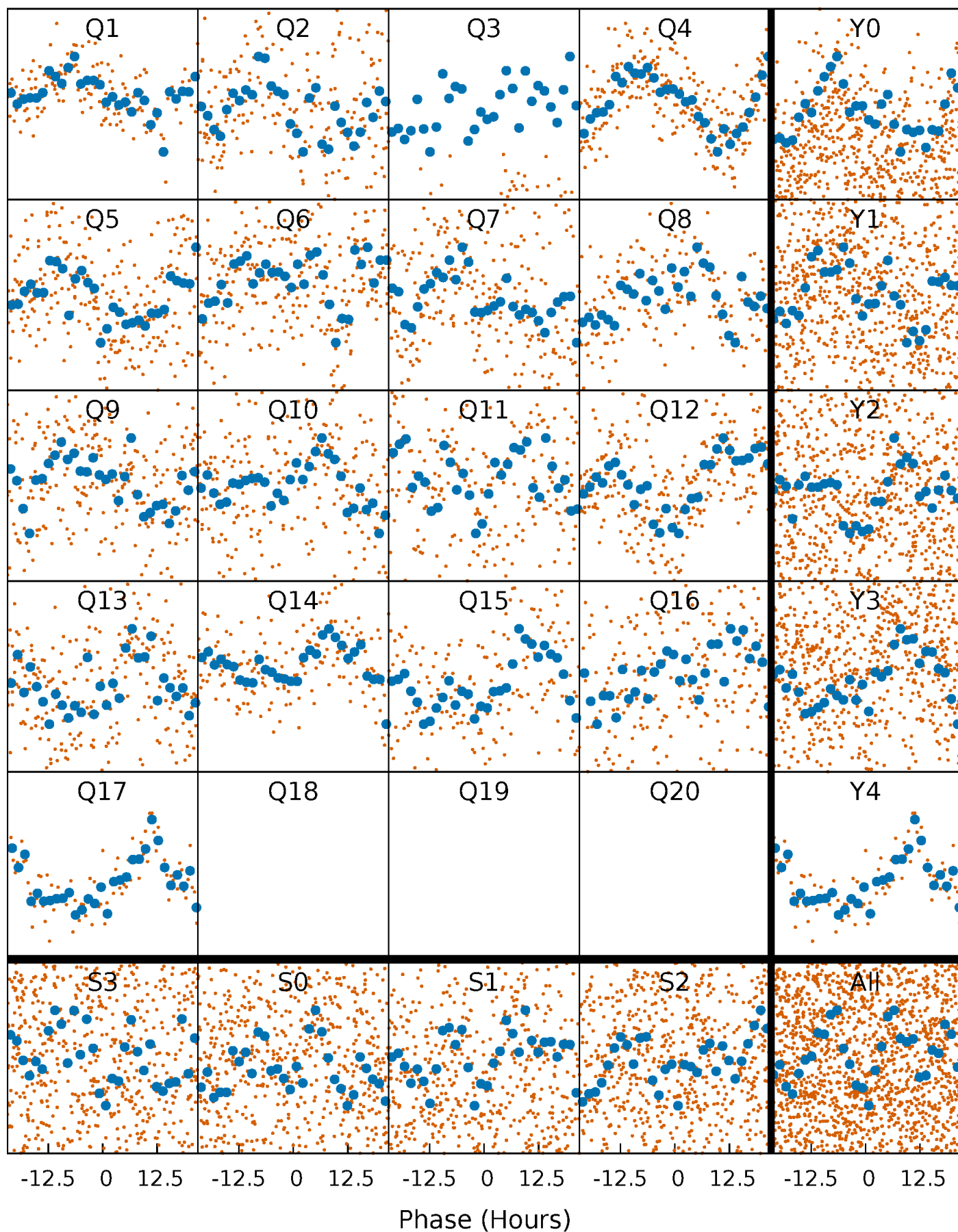


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



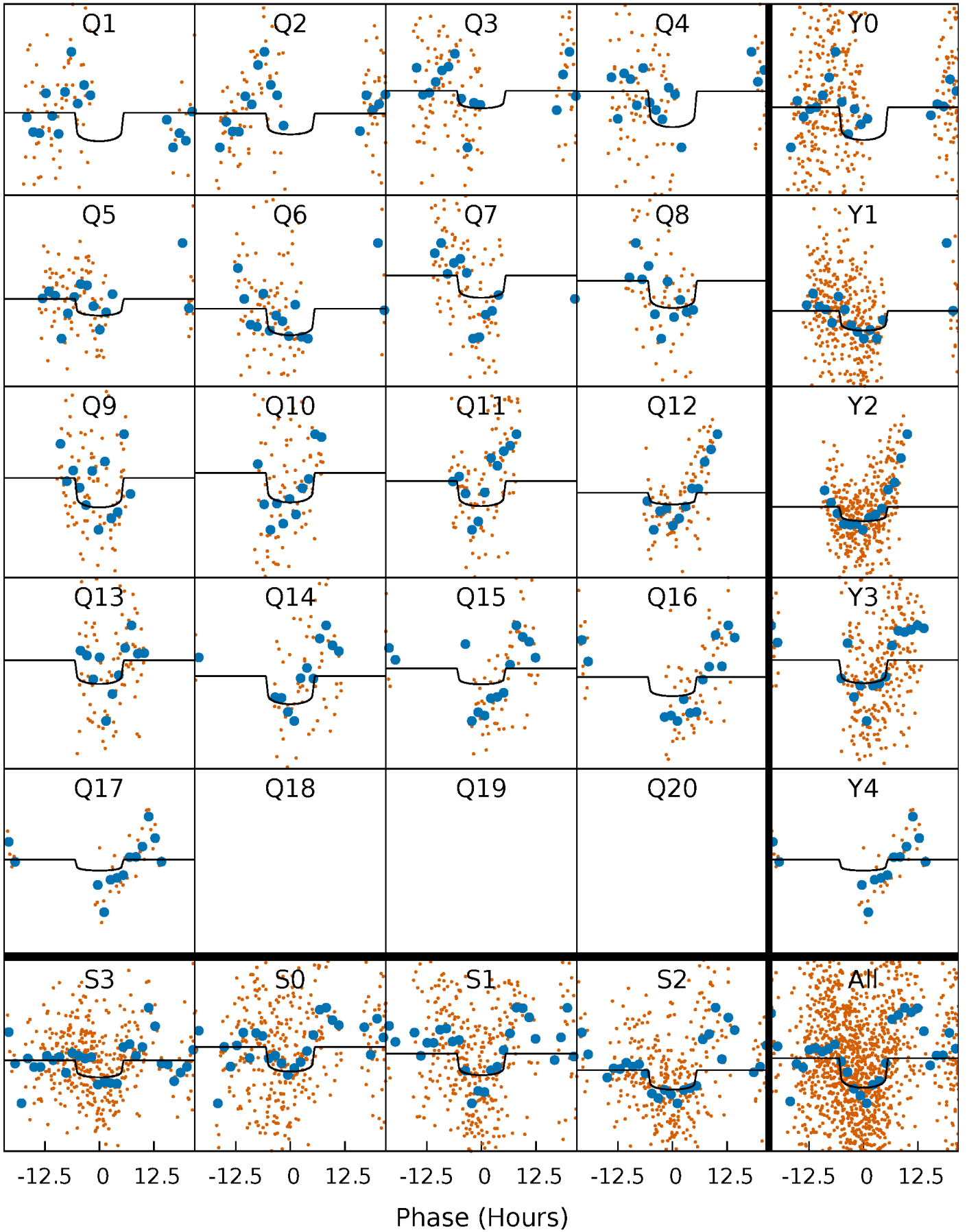
PDC Quarter-Phased Transit Curves

TCE 001872948-03 P= 30.487944 Days $T_0=134.075720$ (BKJD)



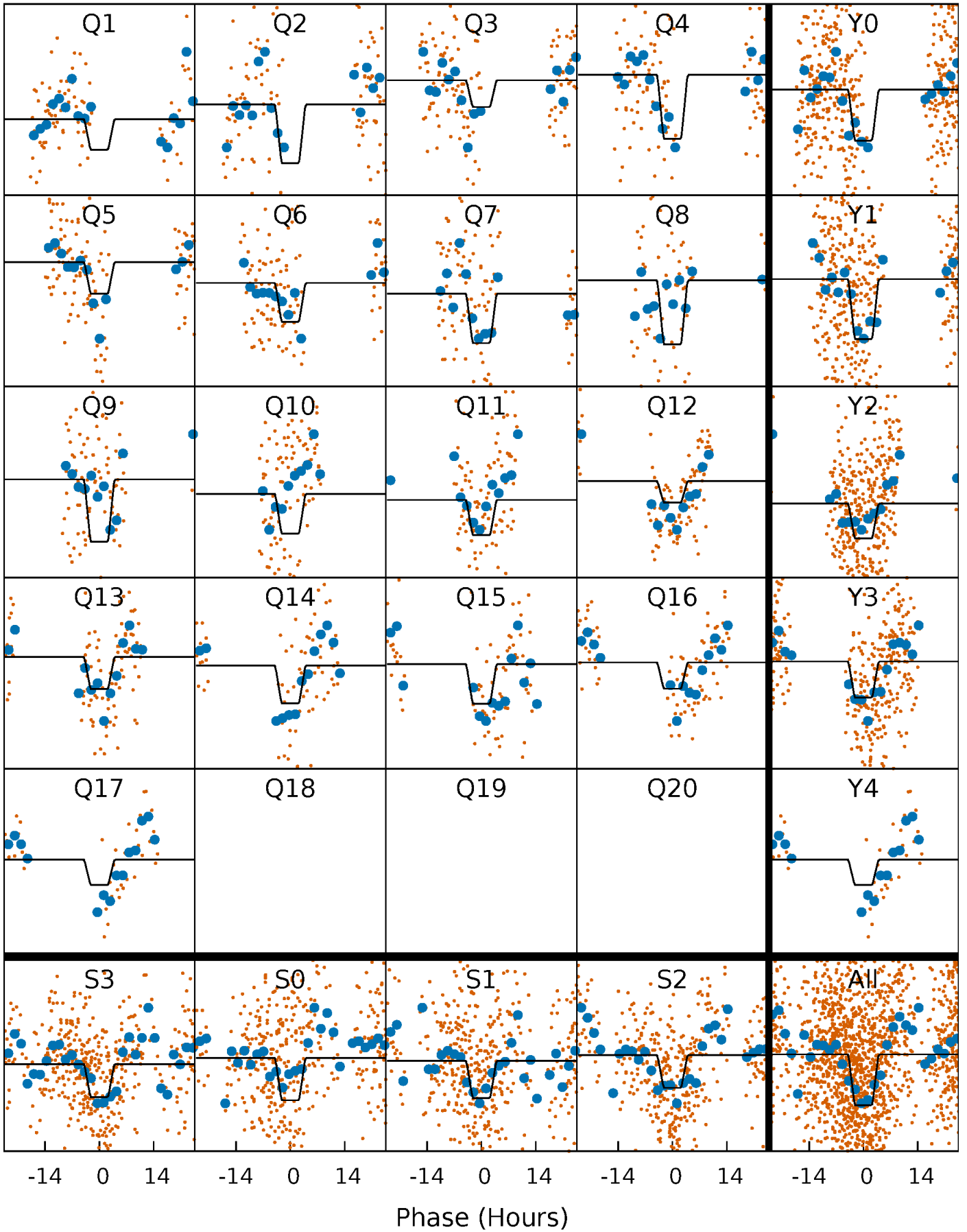
DV Quarter-Phased Transit Curves

TCE 001872948-03 P= 30.487944 Days $T_0=134.075720$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

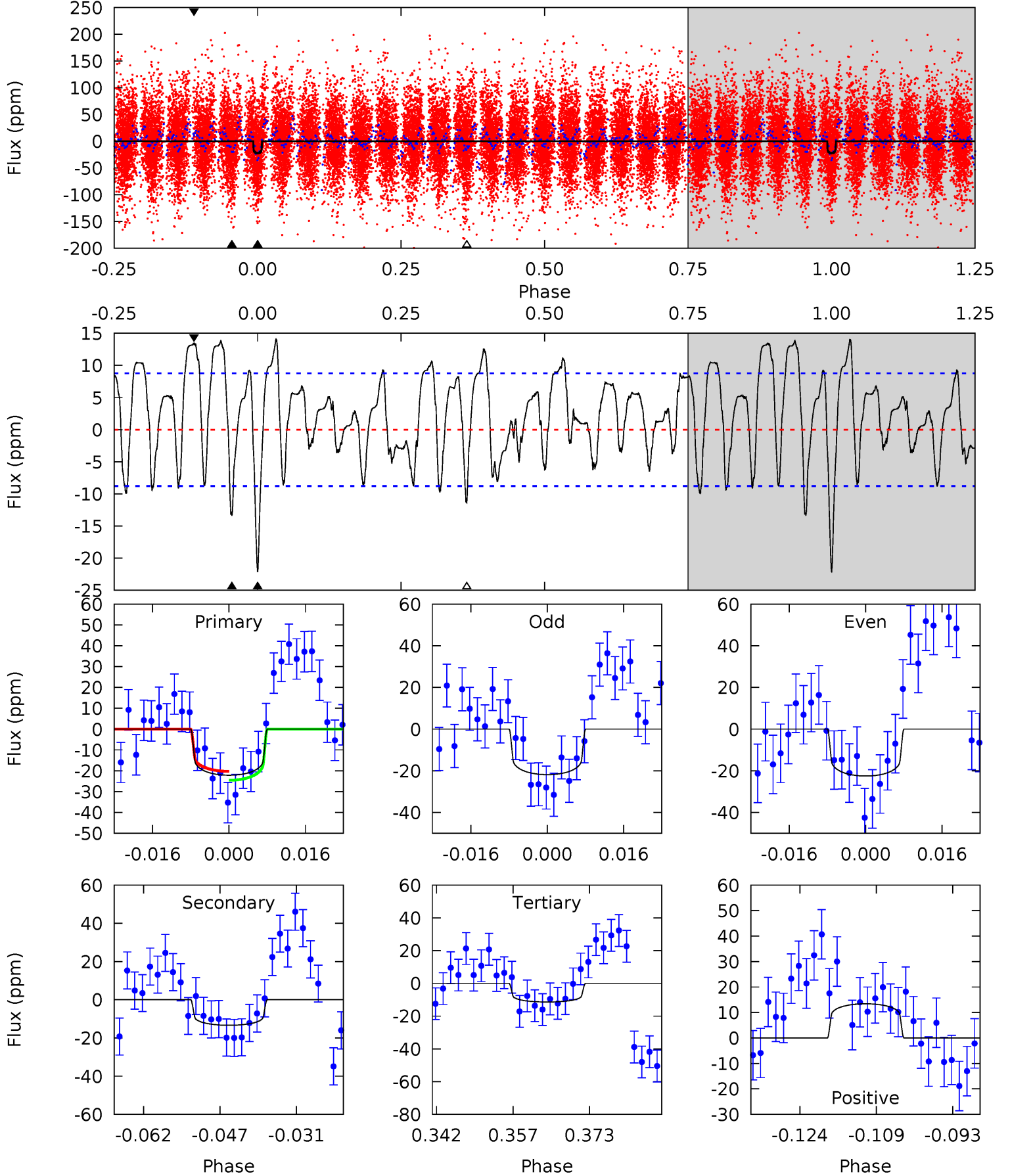
TCE 001872948-03 $P = 30.487025$ Days $T_0 = 134.088755$ (BKJD)



DV Model-Shift Uniqueness Test

001872948-03, P = 30.487944 Days, E = 103.587776 Days

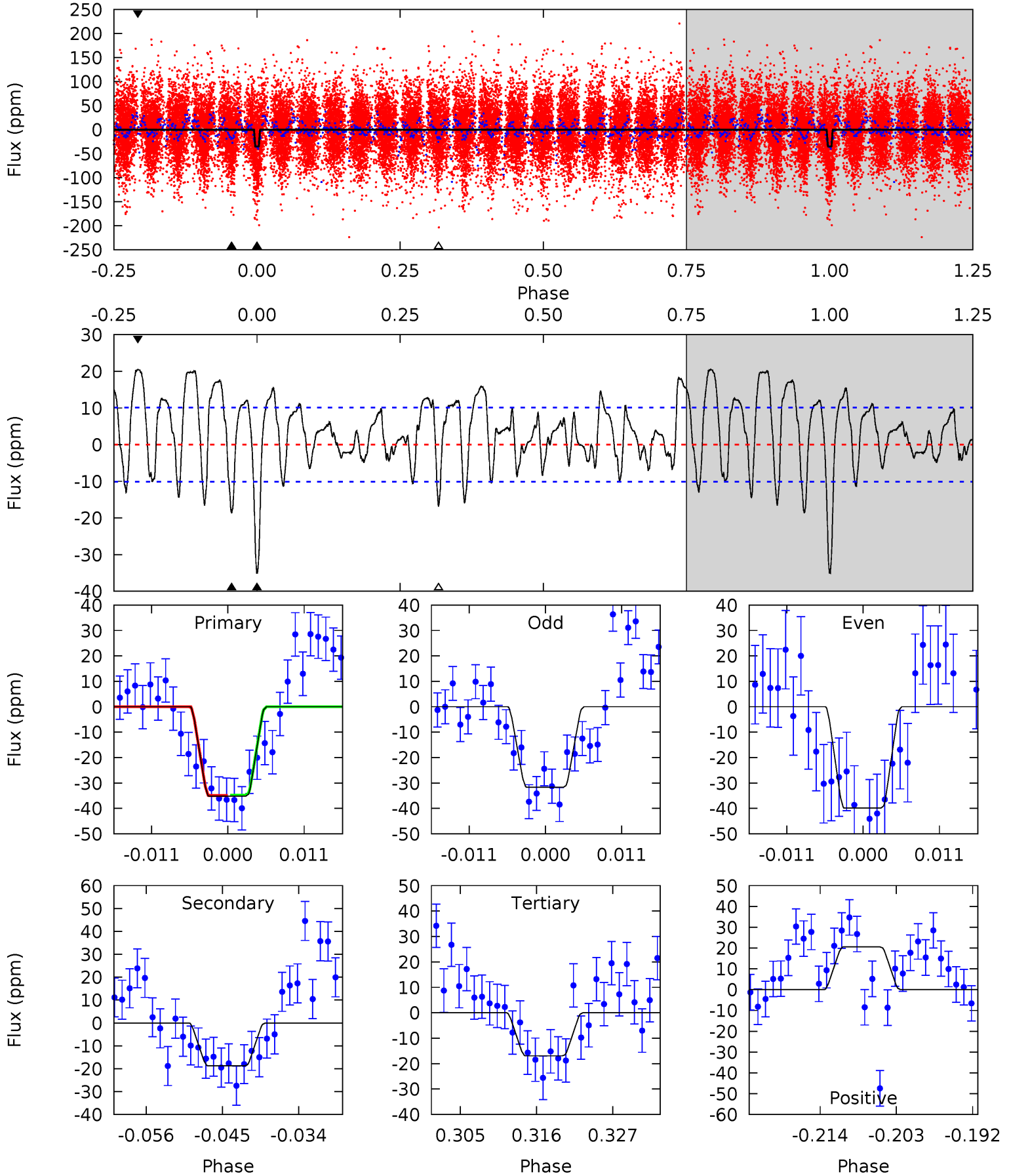
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	7.52	6.42	7.55	4.94	2.42	3.22	6.06	4.92	1.10	-0.03	0.18	1.09	0.39	1.20



Alt Model-Shift Uniqueness Test

001872948-03, P = 30.487025 Days, E = 103.601730 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	9.26	8.36	10.1	5.00	2.53	3.88	9.01	7.24	0.90	-0.88	2.01	1.44	0.37	0.05



Stellar Parameters For KIC 001872948

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7710^{+213}_{-320}	$3.649^{+0.459}_{-0.081}$	$-0.040^{+0.200}_{-0.300}$	$3.567^{+0.725}_{-1.812}$	$2.068^{+0.332}_{-0.499}$	$0.064^{+0.269}_{-0.022}$
	+3%/-4%	+13%/-2%	+500%/-750%	+20%/-51%	+16%/-24%	+419%/-34%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 001872948-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 2	$1.81^{+0.50}_{-0.55}$	1756^{+124}_{-217}	6409^{+810}_{-634}	134^{+134}_{-51}
Alt.	-19 ± 2	$2.22^{+0.56}_{-0.67}$	1735^{+141}_{-219}	6264^{+578}_{-471}	128^{+117}_{-46}

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

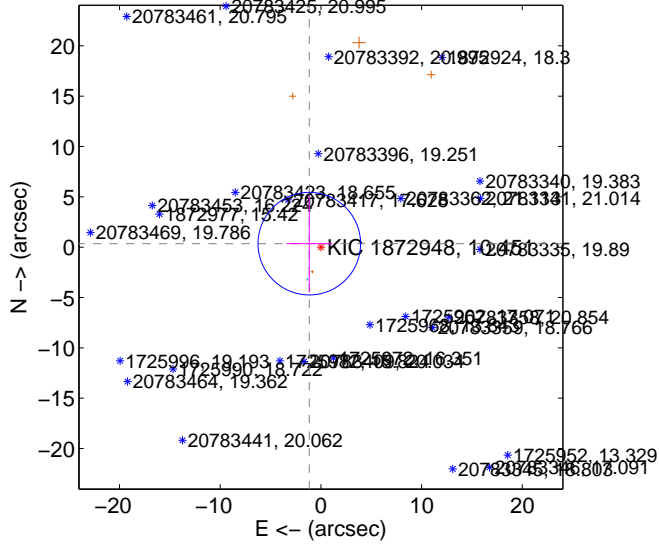
Supplemental centroid analysis for 001872948-03. **Kepler magnitude: 10.45.** Transit SNR 7.77

There are 1 quarters with good PRF difference image offsets

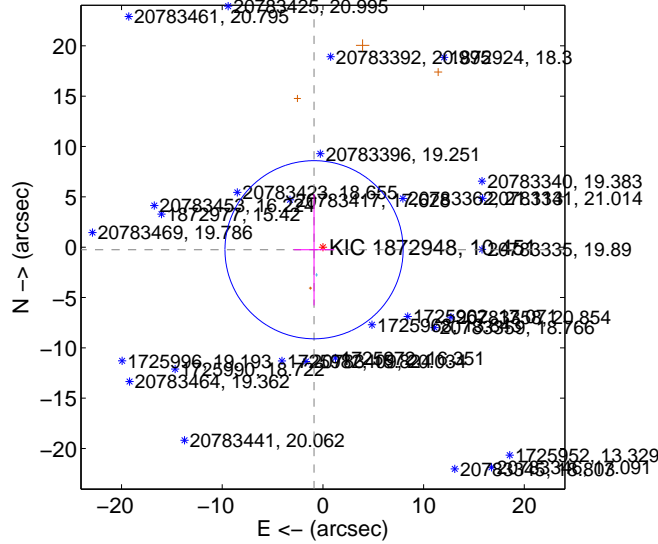
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.202 ± 1.698	0.71	1.150 ± 2.269	0.350 ± 4.846
PRF-fit source offset from KIC position	0.916 ± 2.949	0.31	0.880 ± 2.002	-0.255 ± 5.525
photometric centroid source offset	7.74 ± 4.10	1.89	-2.78 ± 2.85	-7.22 ± 4.25

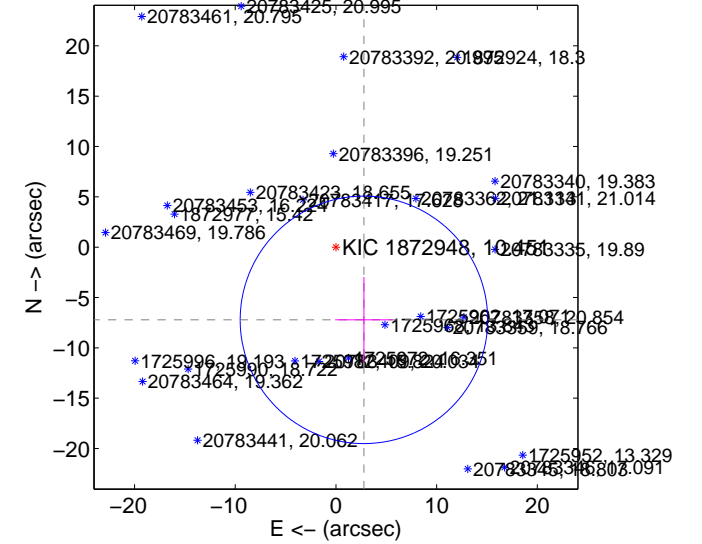
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

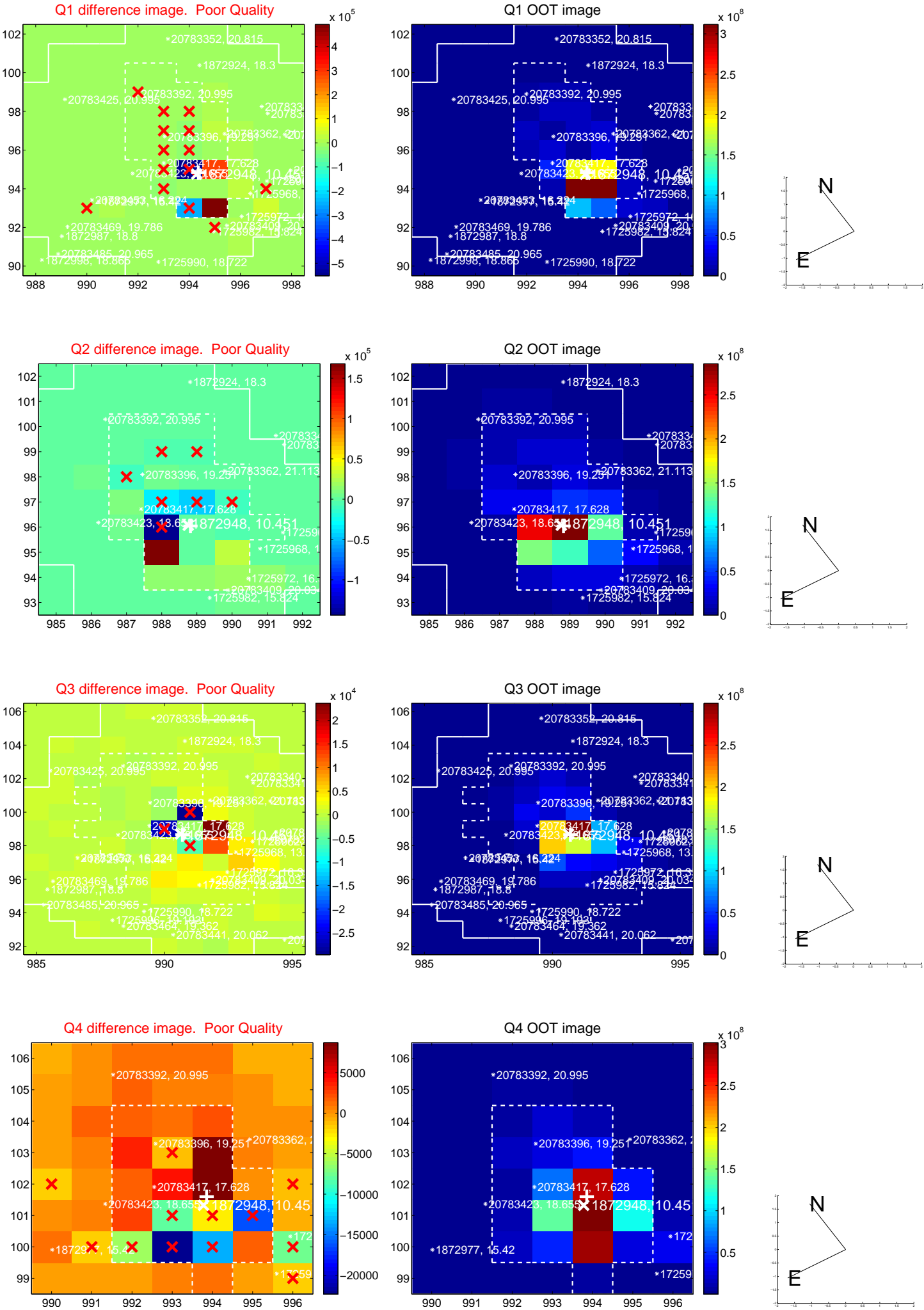


offset from photometric centroids

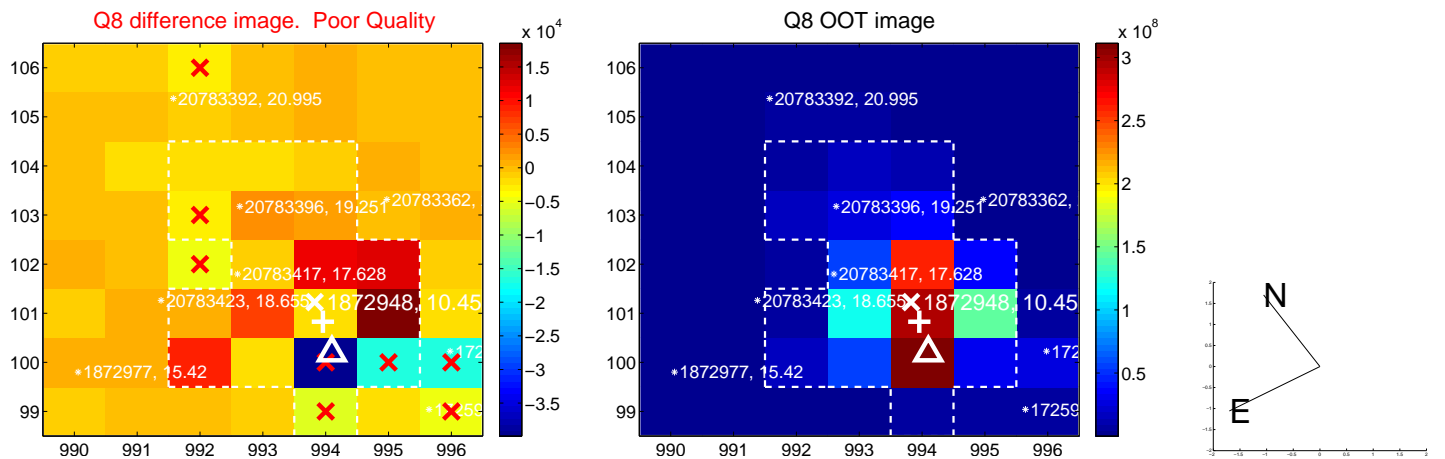
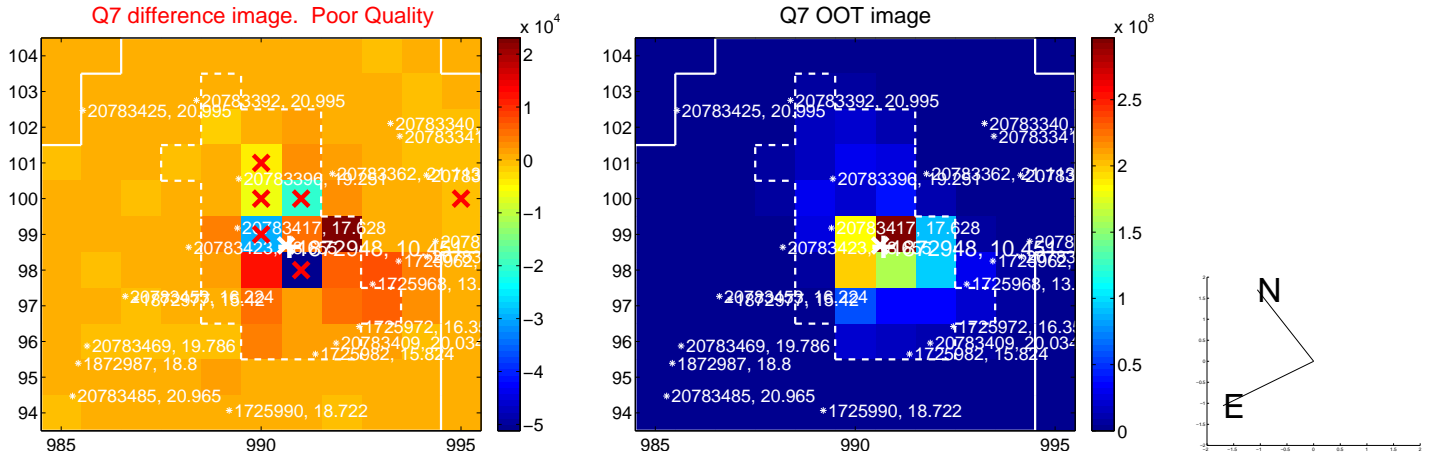
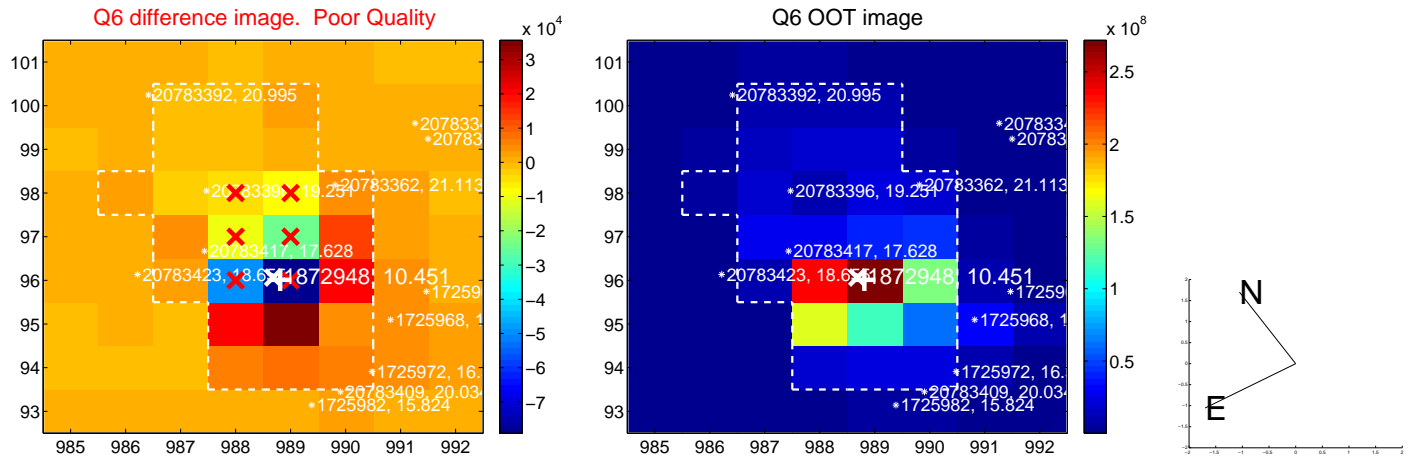
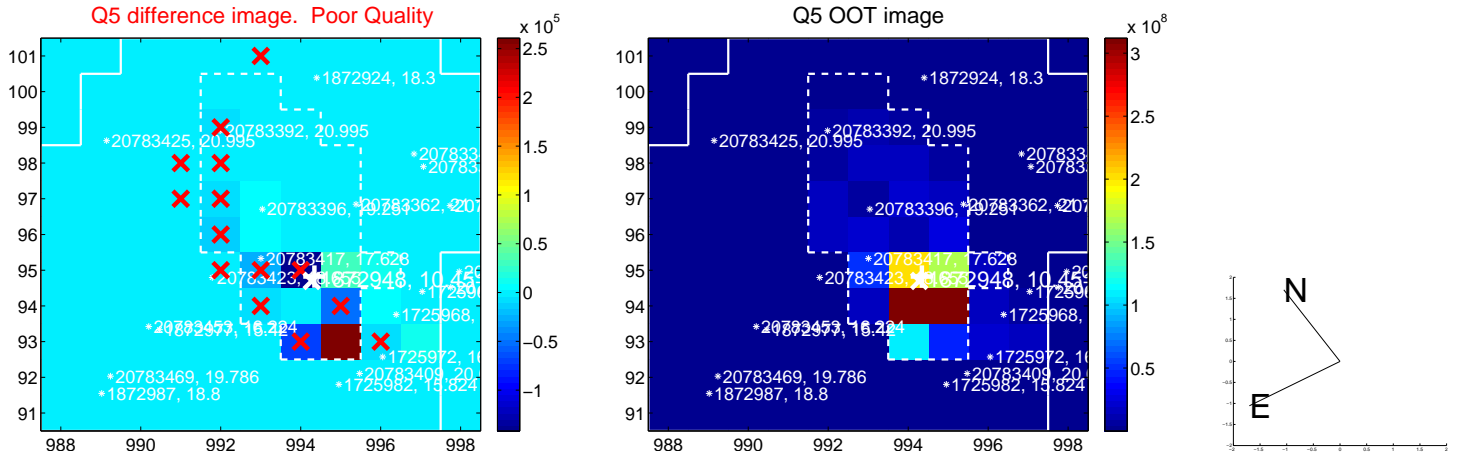


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

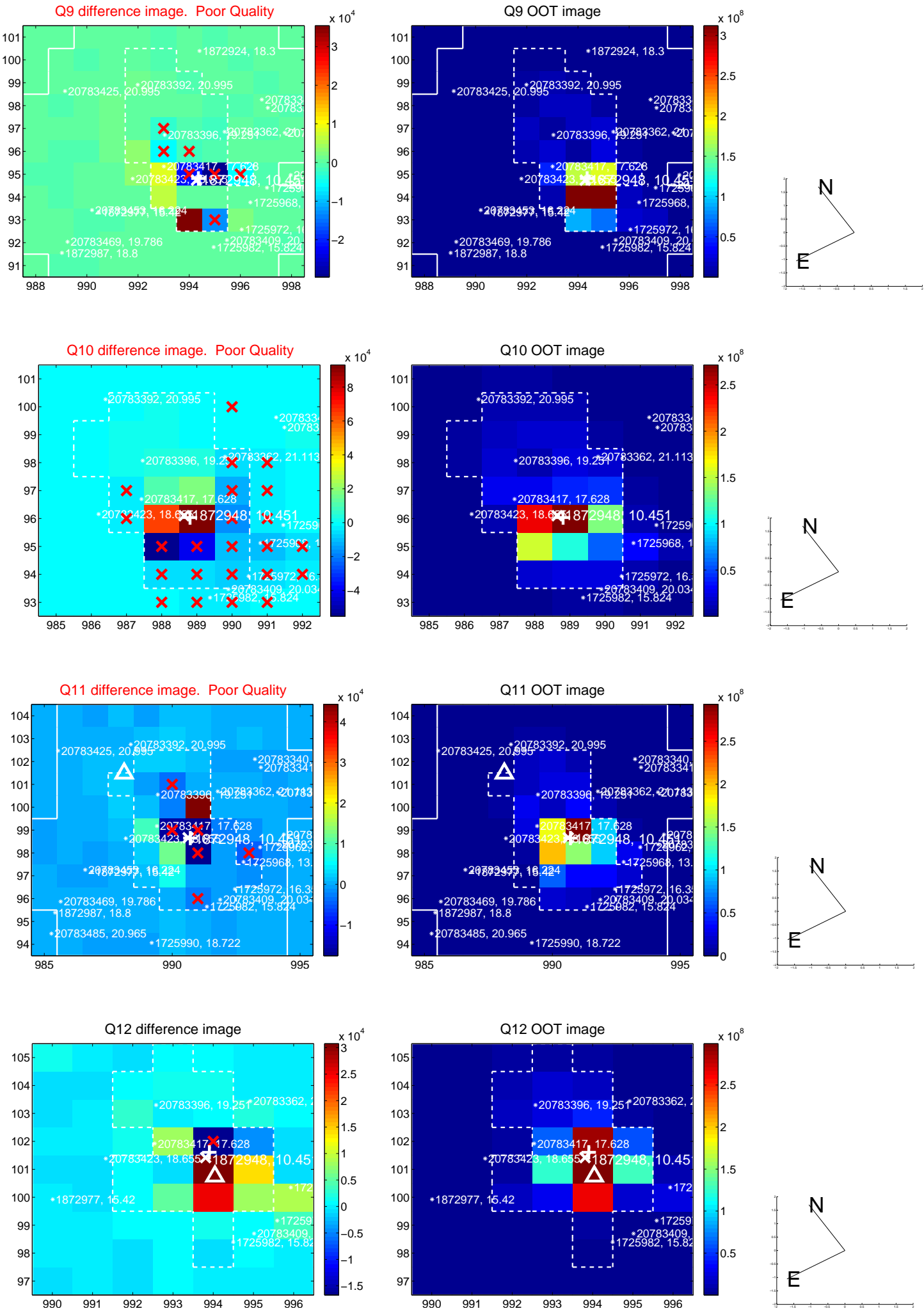
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



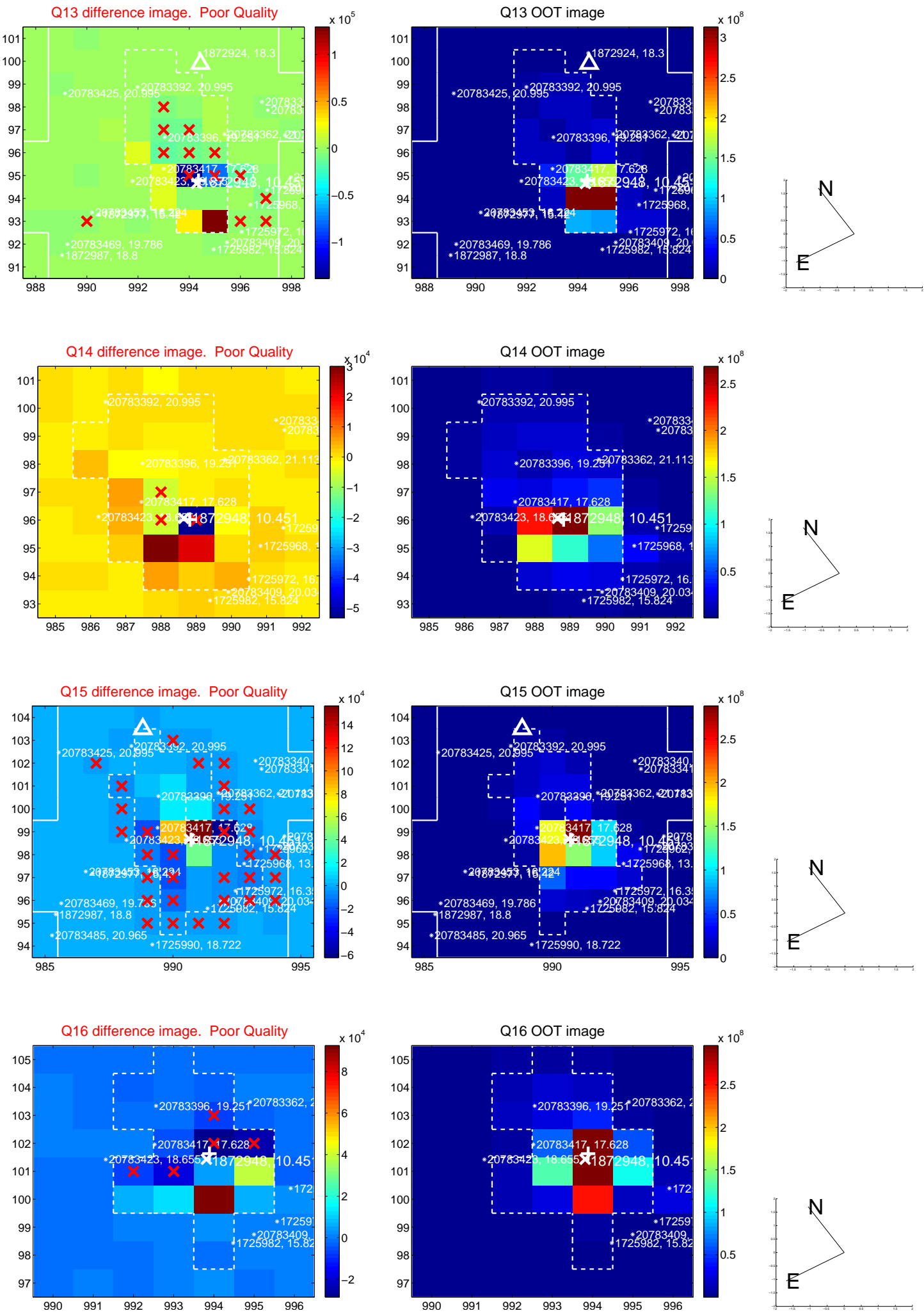
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



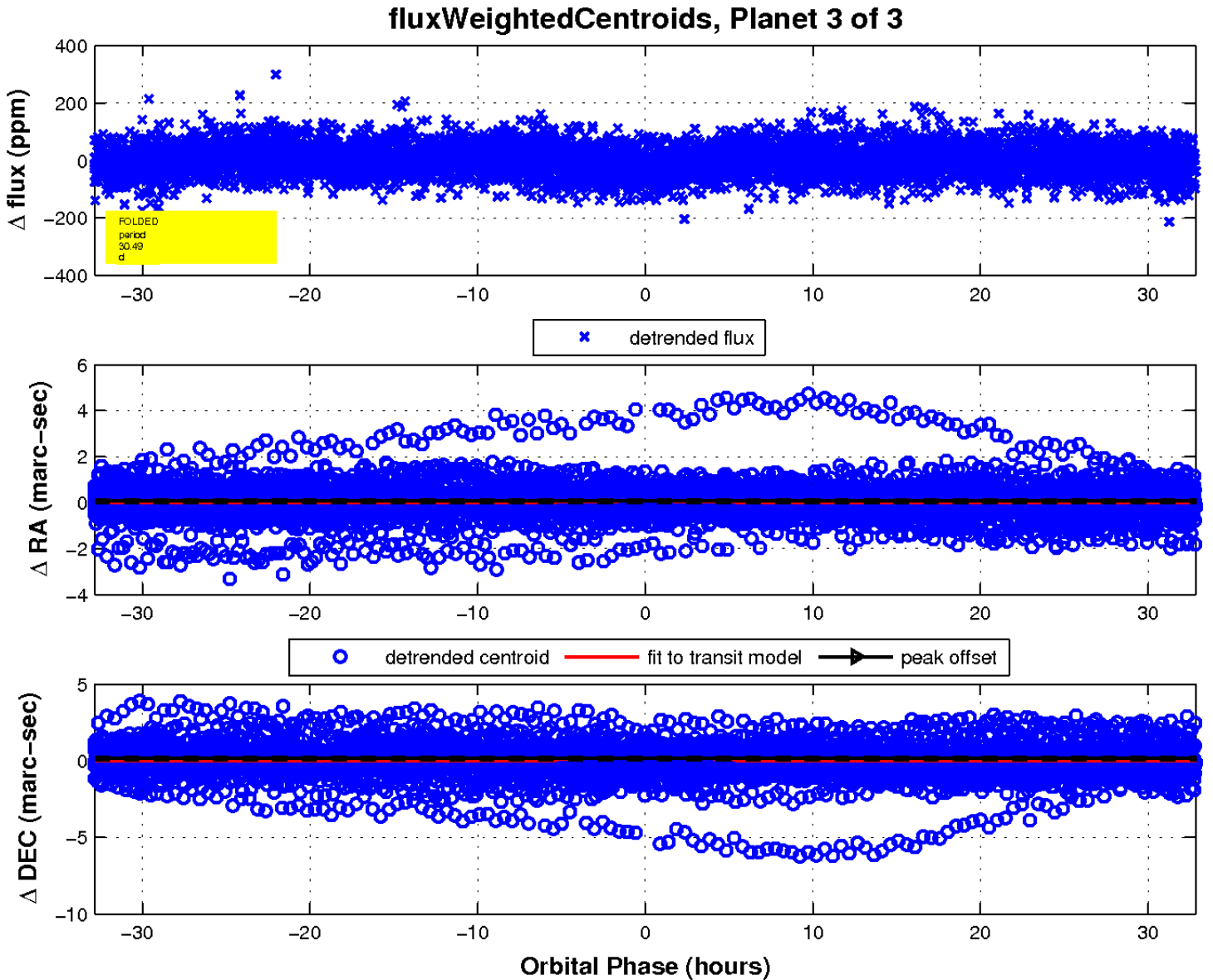
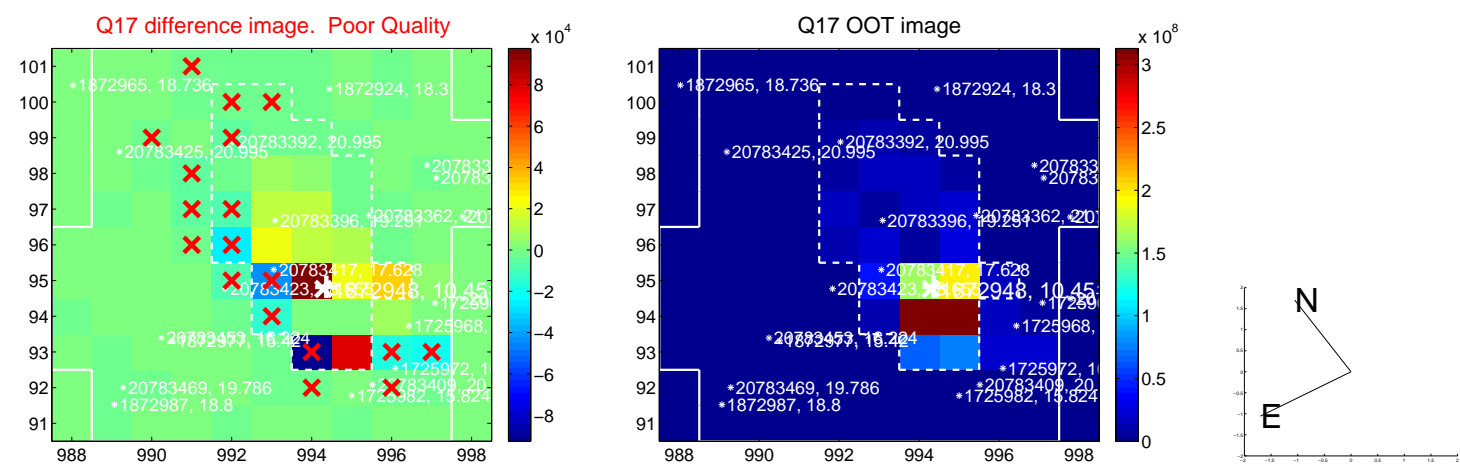
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

