

KIC 008022489

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})
008022489-01	OBS	2674.01	197.511030	272.386806	2555.2	11.152	125.4	122.5	1.67	5616	9.54	5.55
008022489-02	OBS	2674.03	2.535744	133.011687	63.6	4.090	19.6	21.3	1.67	5616	1.64	1846.29
008022489-03	OBS	2674.02	11.172515	140.010933	75.4	6.623	12.3	13.5	1.67	5616	1.71	255.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008022489-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
008022489-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
008022489-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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.

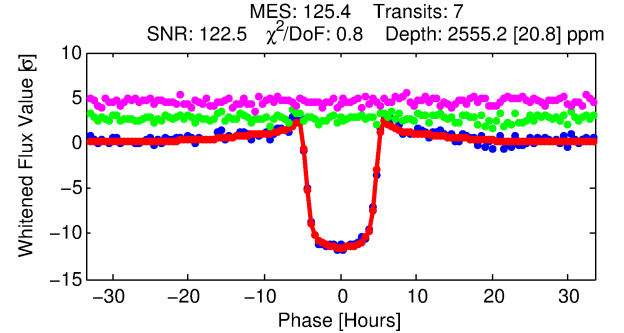
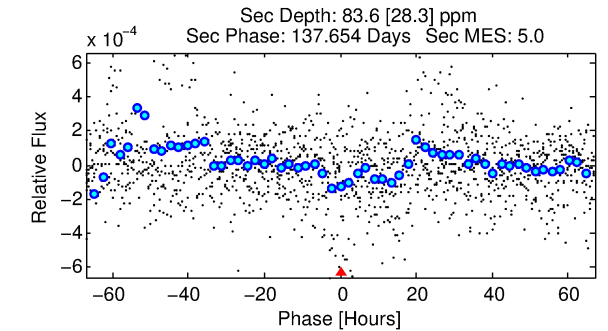
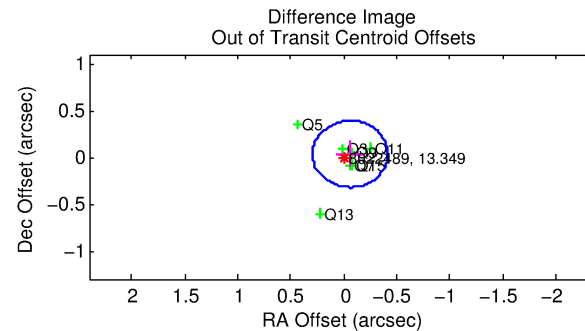
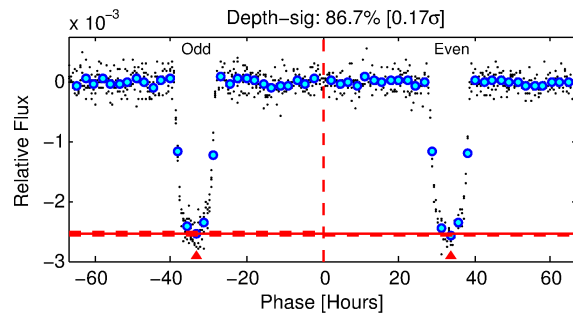
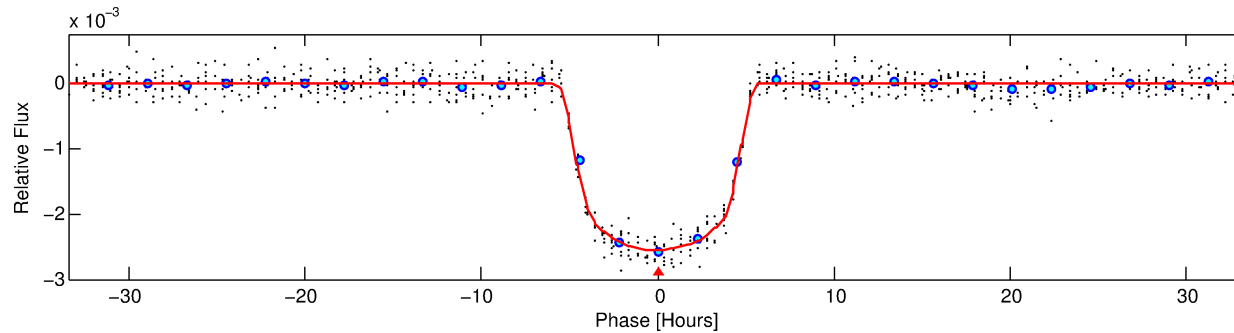
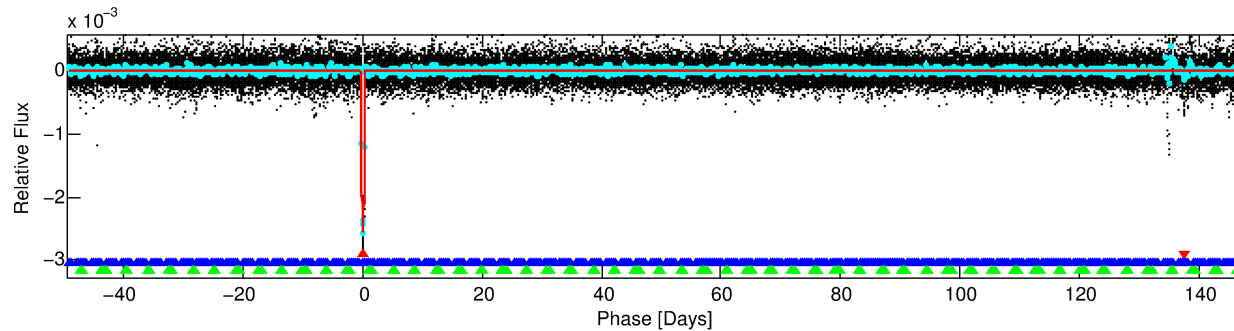
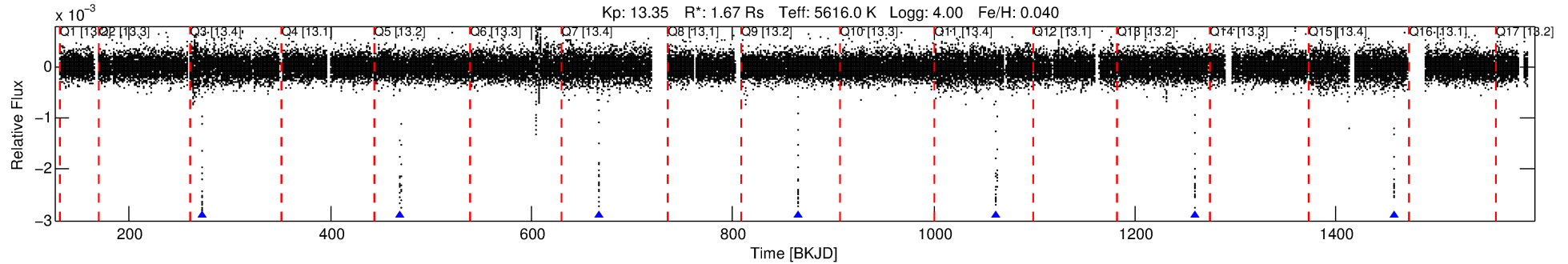
Ephemeris Match Information For 008022489-01

No Significant Match Found

DV One-Page Summary

KIC: 8022489 Candidate: 1 of 3 Period: 197.511 d

KOI: K02674.01 Corr: 0.996



DV Fit Results:

Period = 197.51103 [0.00042] d
Epoch = 272.3868 [0.0015] BKJD
Rp/R* = 0.0522 [0.0005]
a/R* = 88.53 [2.70]
b = 0.82 [0.01]
Seff = 5.55 [1.97]
Teq = 391 [35] K
Rp = 9.54 [2.16] Re
a = 0.6708 [0.1450] AU
Ag = 227.32 [109.83] [2.06 σ]
Teffp = 2350 [206] K [9.39 σ]

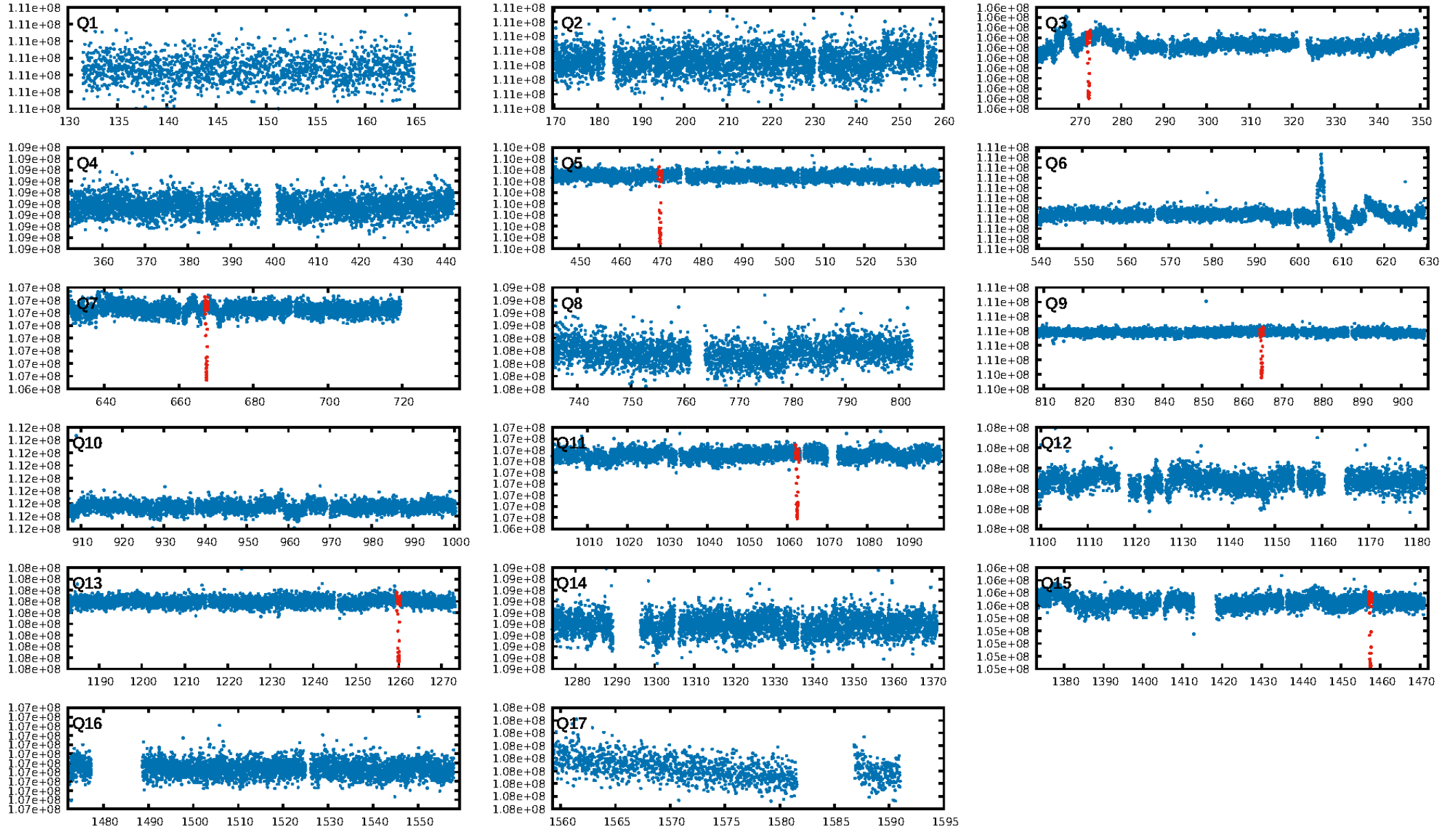
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [344.81 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 75.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 6.14
Centroid-sig: 34.0%
Centroid-so: 0.129 arcsec [1.27 σ]
OotOffset-rm: 0.070 arcsec [0.60 σ]
KicOffset-rm: 0.133 arcsec [1.19 σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 0.43 [3/7]

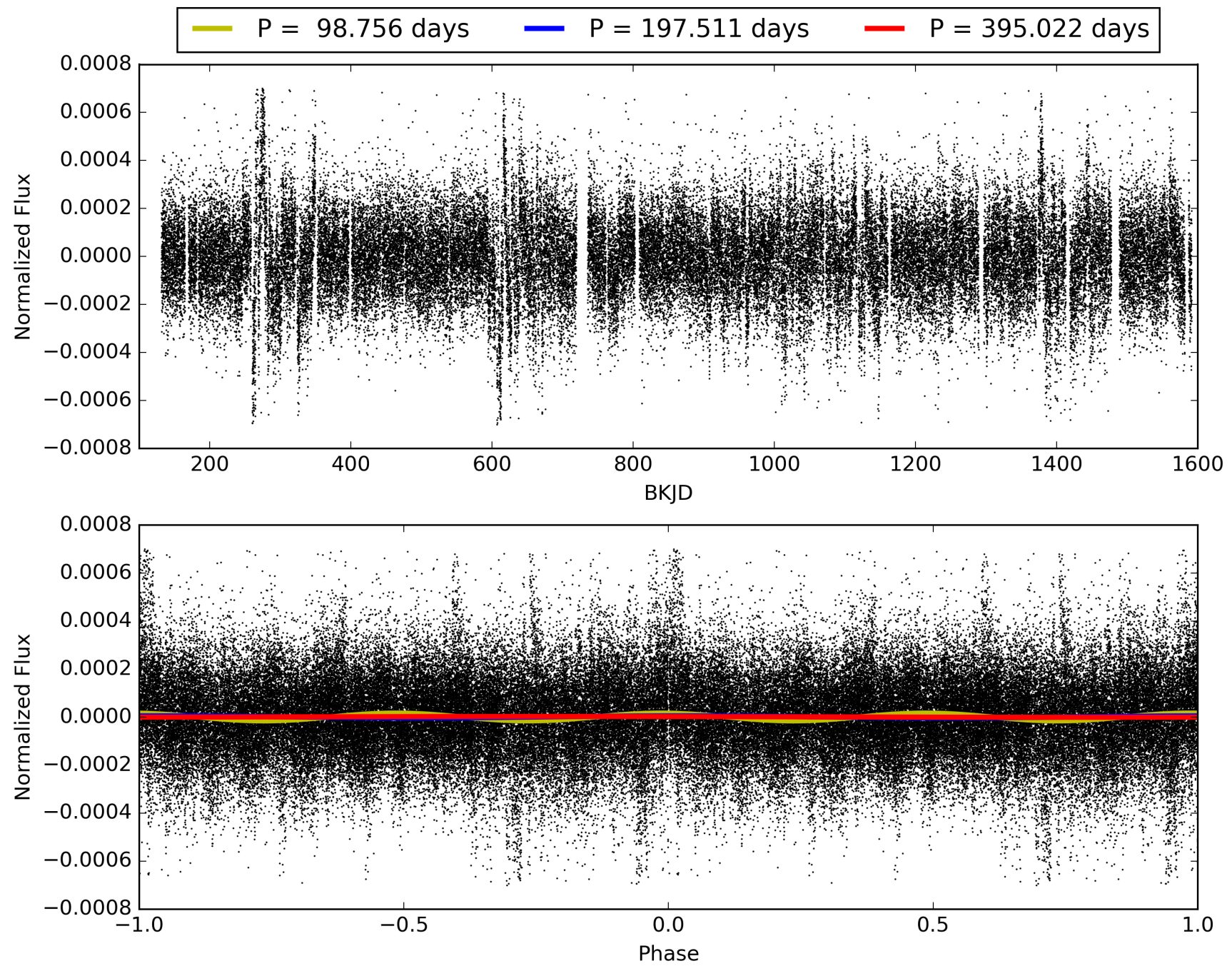
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:44:47 Z

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

TCE 008022489-01, PDC Light Curves

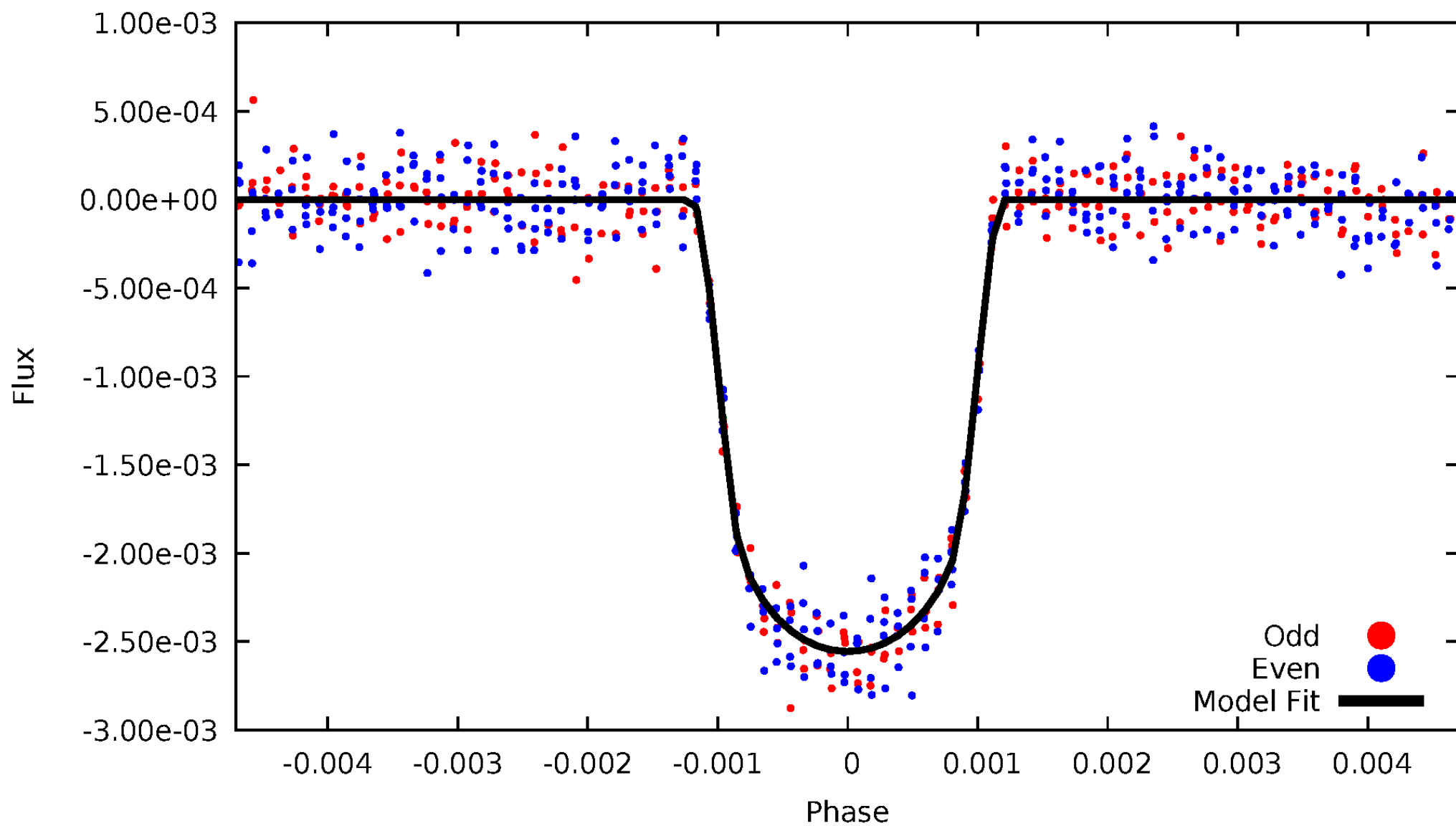


TCE 008022489-01



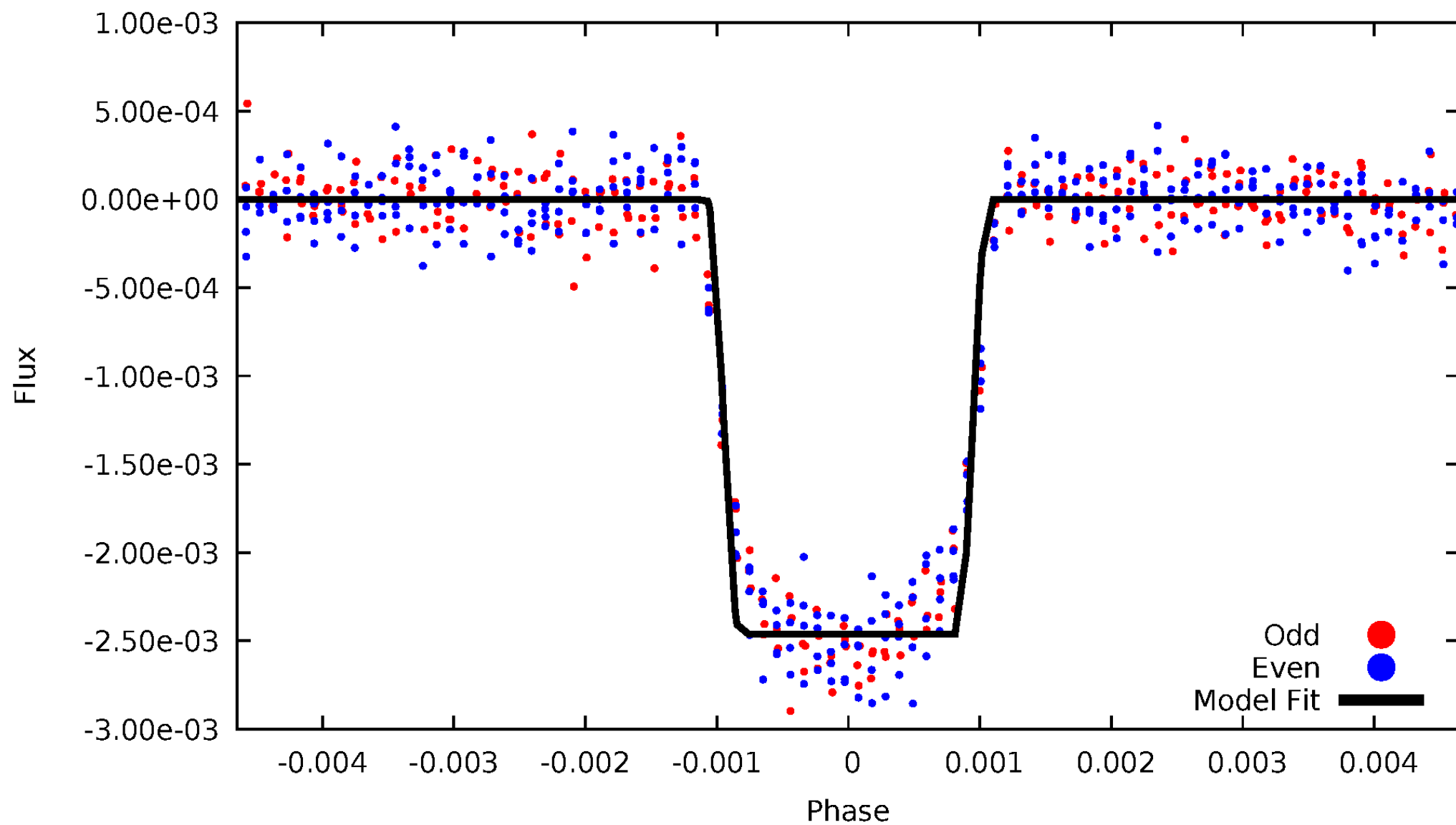
DV Odd/Even

TCE 008022489-01



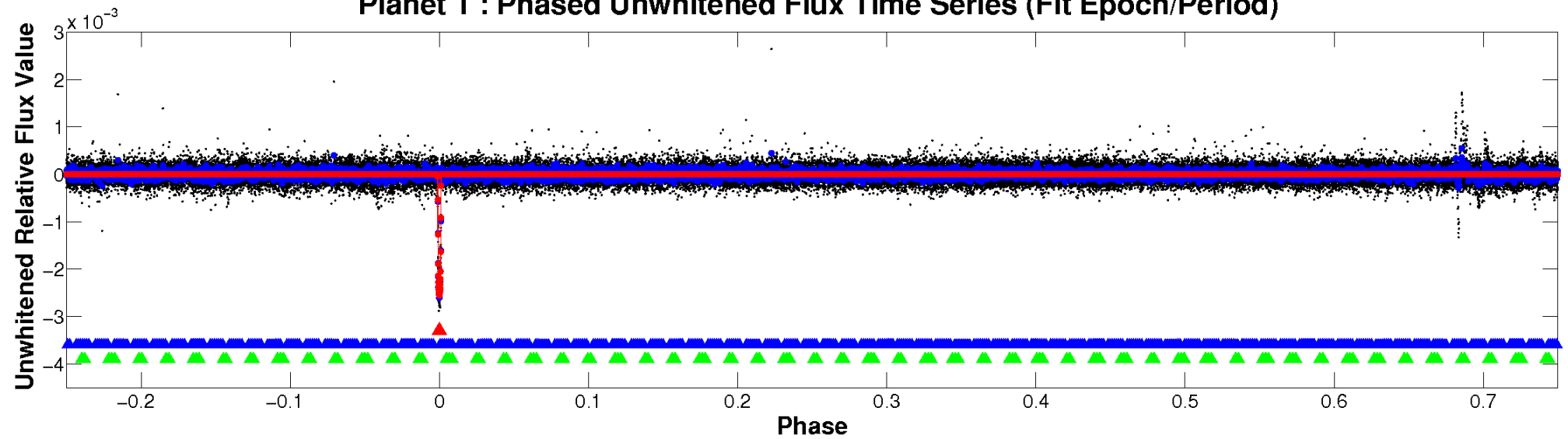
ALT Odd/Even

TCE 008022489-01

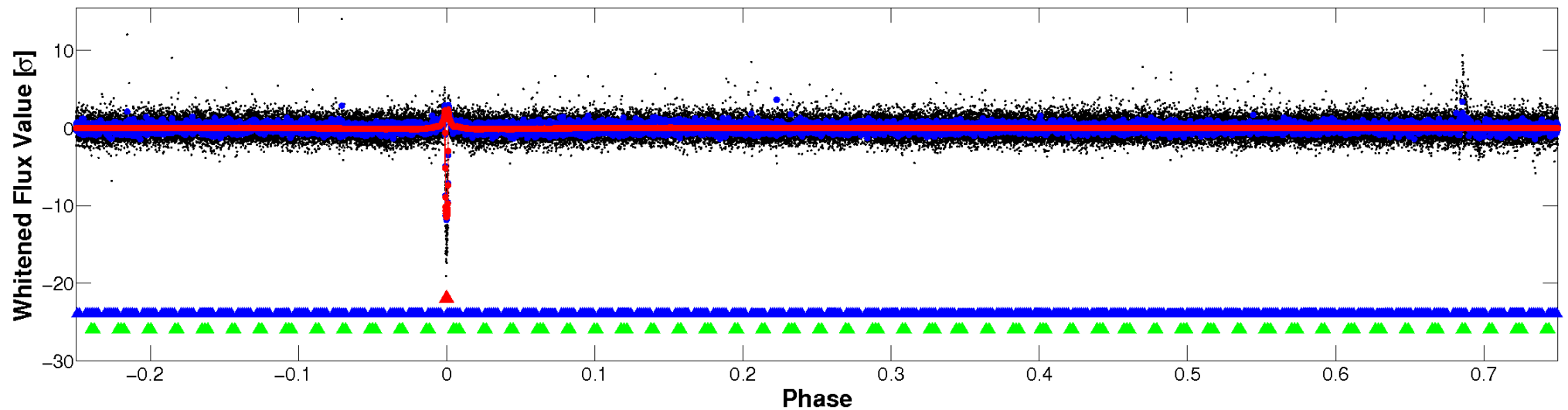


Non-Whitened Vs. Whitened Light Curve

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

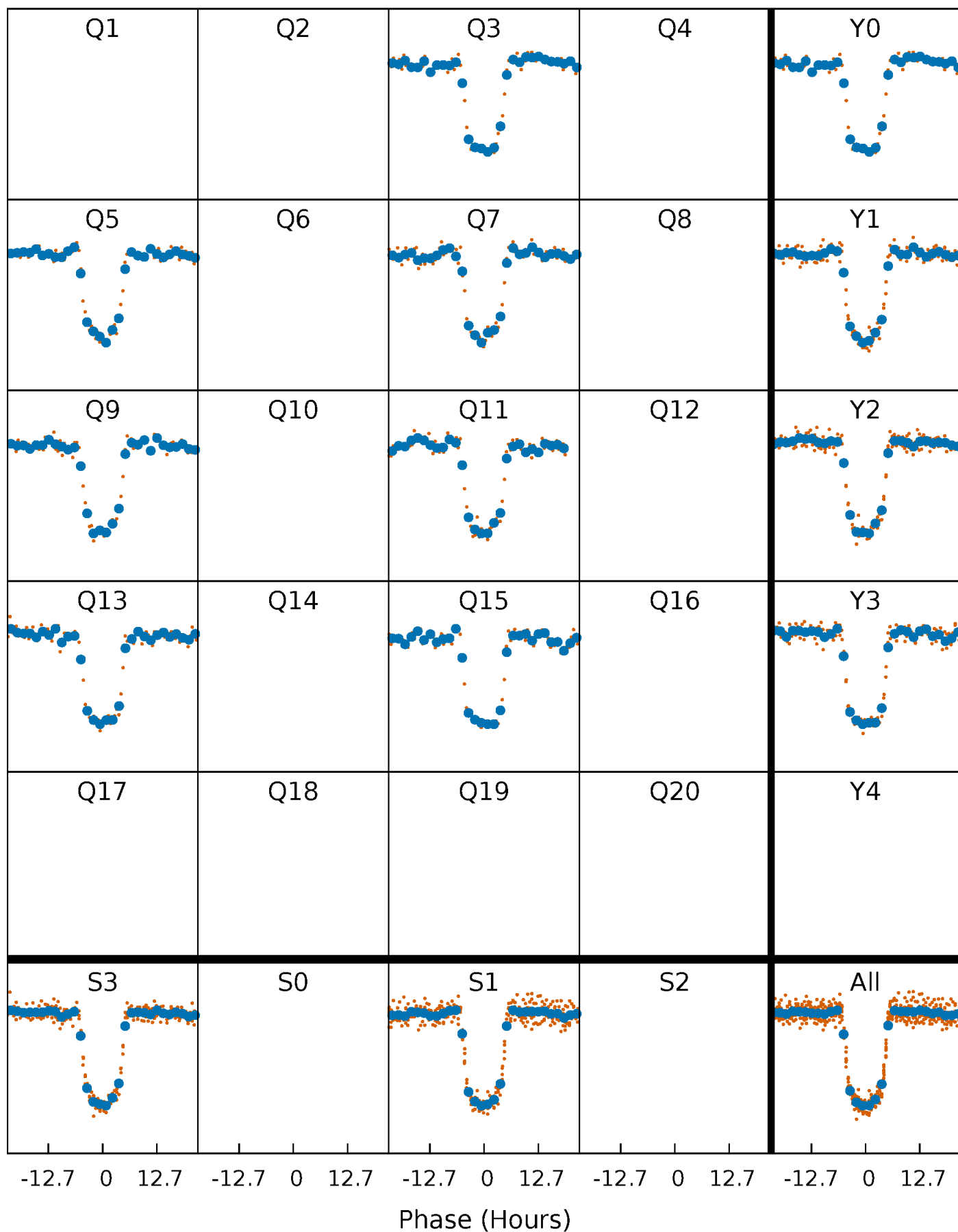


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



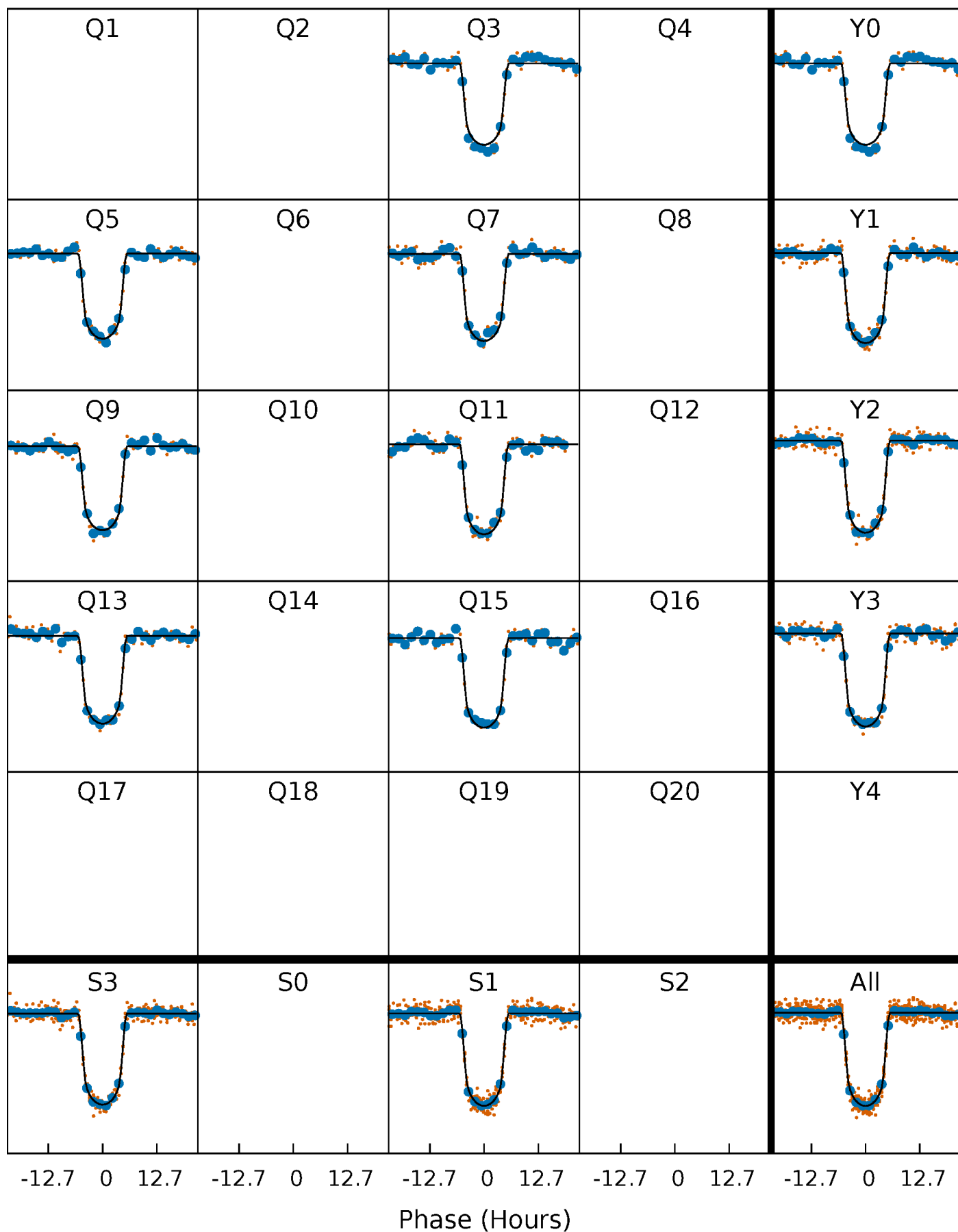
PDC Quarter-Phased Transit Curves

TCE 008022489-01 P=197.511030 Days $T_0=272.386806$ (BKJD)



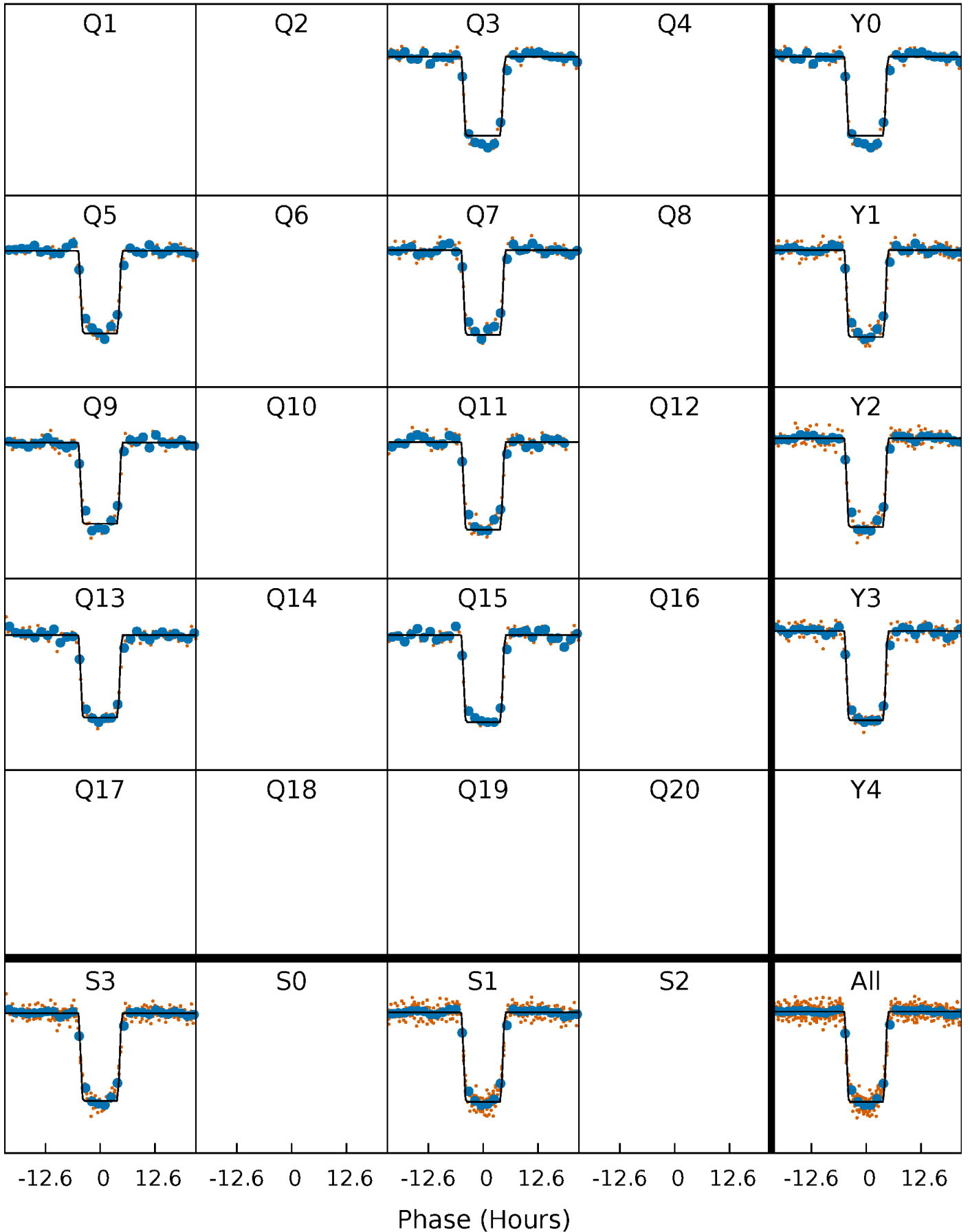
DV Quarter-Phased Transit Curves

TCE 008022489-01 P=197.511030 Days $T_0=272.386806$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

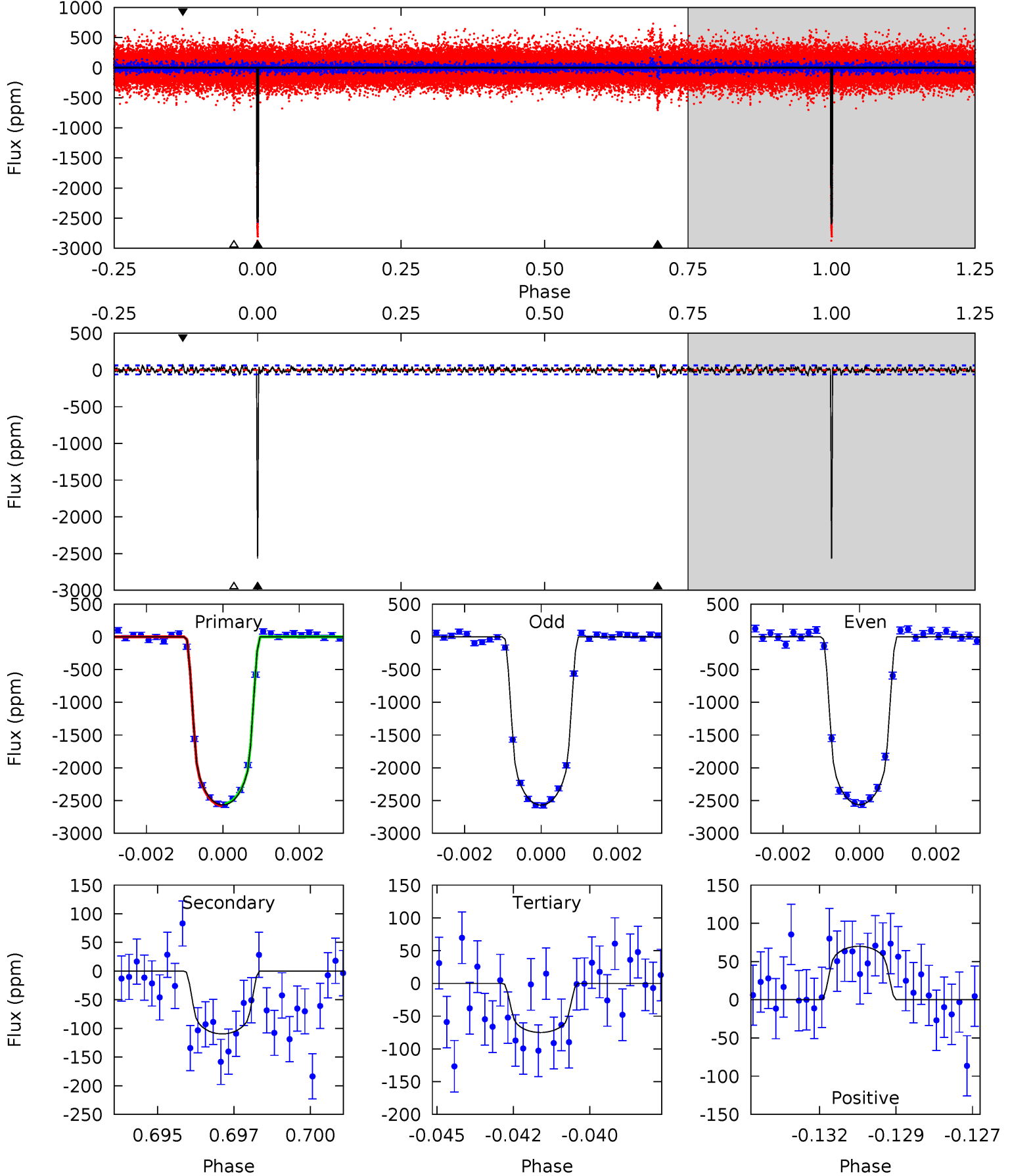
TCE 008022489-01 P=197.510791 Days $T_0=272.387554$ (BKJD)



DV Model-Shift Uniqueness Test

008022489-01, $P = 197.511030$ Days, $E = 74.875776$ Days

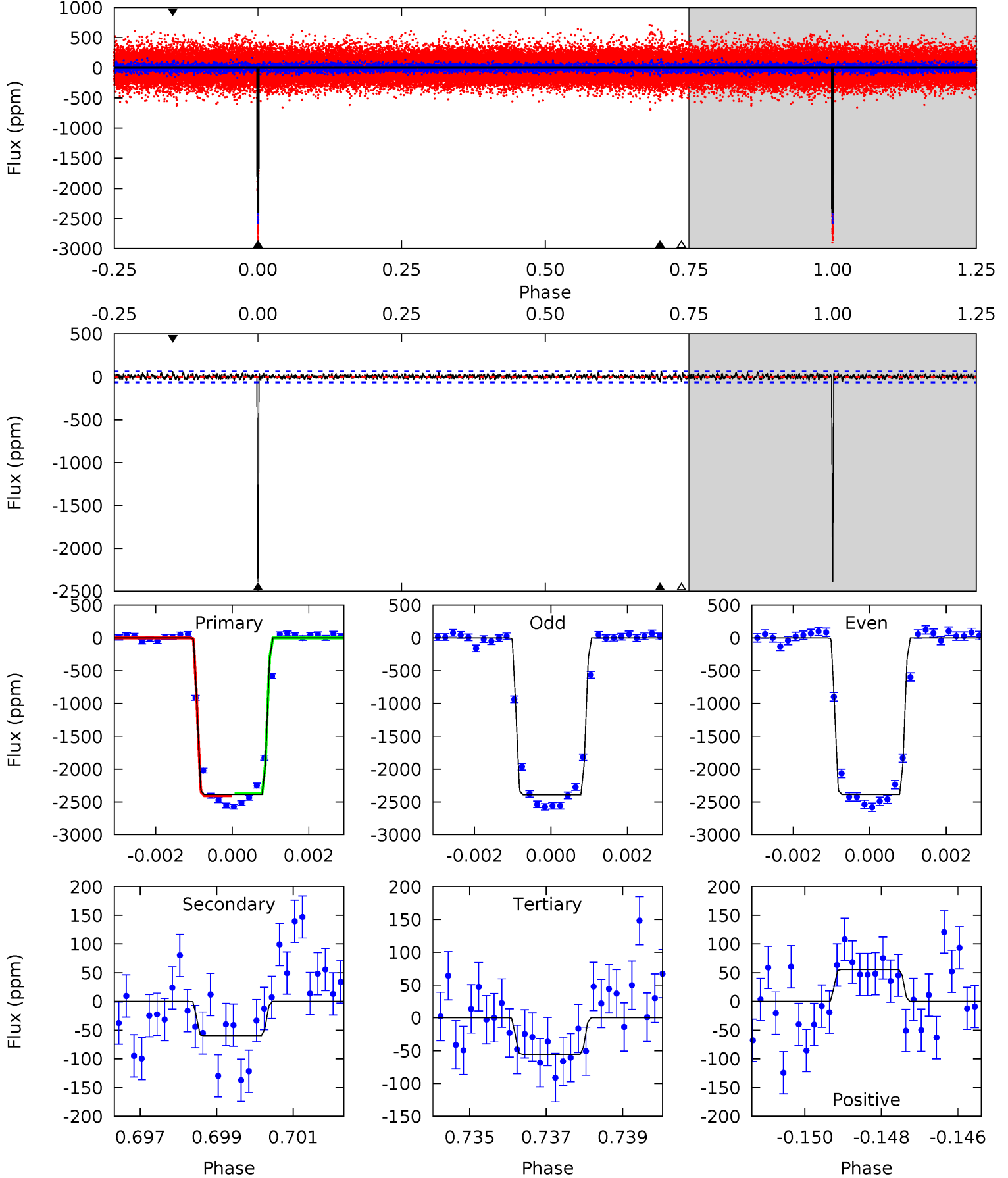
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
218.7	9.34	6.39	5.96	5.29	3.03	1.72	212.3	212.7	2.95	3.38	0.30	1.01	0.03	1.07



Alt Model-Shift Uniqueness Test

008022489-01, $P = 197.510791$ Days, $E = 74.876763$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
194.5	4.85	4.51	4.54	5.32	3.08	1.14	190.0	190.0	0.34	0.31	0.23	1.01	0.03	1.35



Stellar Parameters For KIC 008022489

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5616^{+124}_{-90}	$4.004^{+0.202}_{-0.093}$	$0.040^{+0.150}_{-0.150}$	$1.674^{+0.275}_{-0.378}$	$1.032^{+0.107}_{-0.097}$	$0.310^{+0.354}_{-0.097}$
	+2%/-2%	+5%/-2%	+375%/-375%	+16%/-23%	+10%/-9%	+114%/-31%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 008022489-01 / KOI 2674.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-110 ± 12	$9.35^{+0.98}_{-1.12}$	542^{+26}_{-34}	3129^{+67}_{-57}	316^{+89}_{-63}
Alt.	-60 ± 12	$8.95^{+0.77}_{-1.17}$	543^{+25}_{-34}	2914^{+82}_{-99}	187^{+66}_{-47}

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

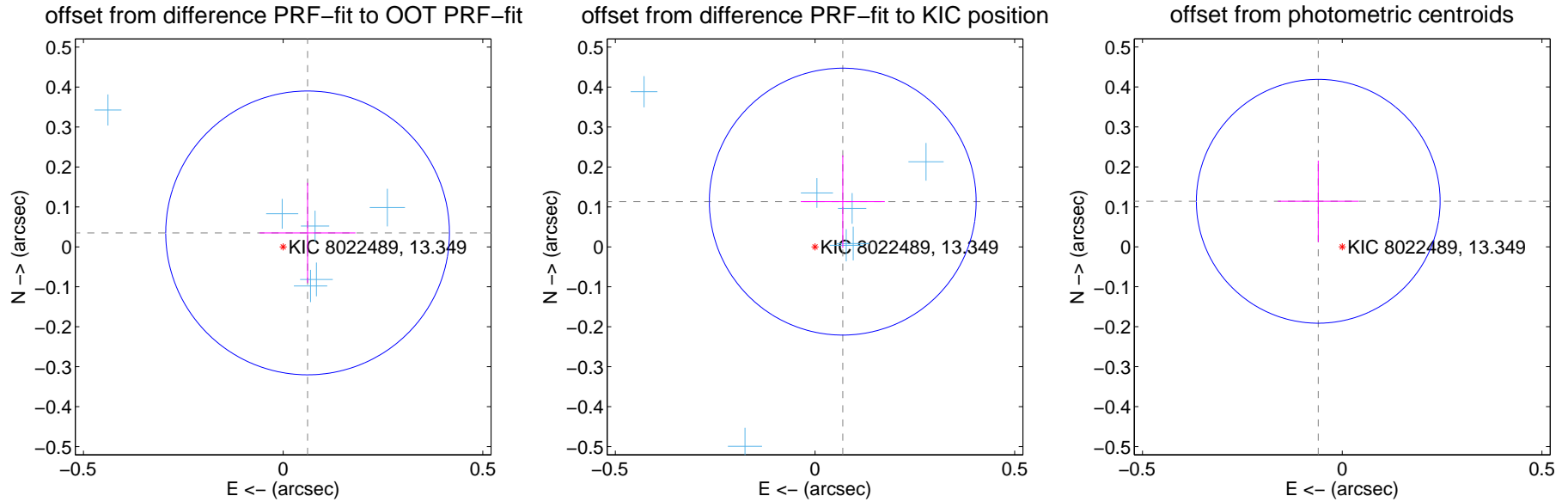
DV Centroid Data

Supplemental centroid analysis for 008022489-01. Kepler magnitude: 13.35. Transit SNR 122.46

There are 7 quarters with good PRF difference image offsets

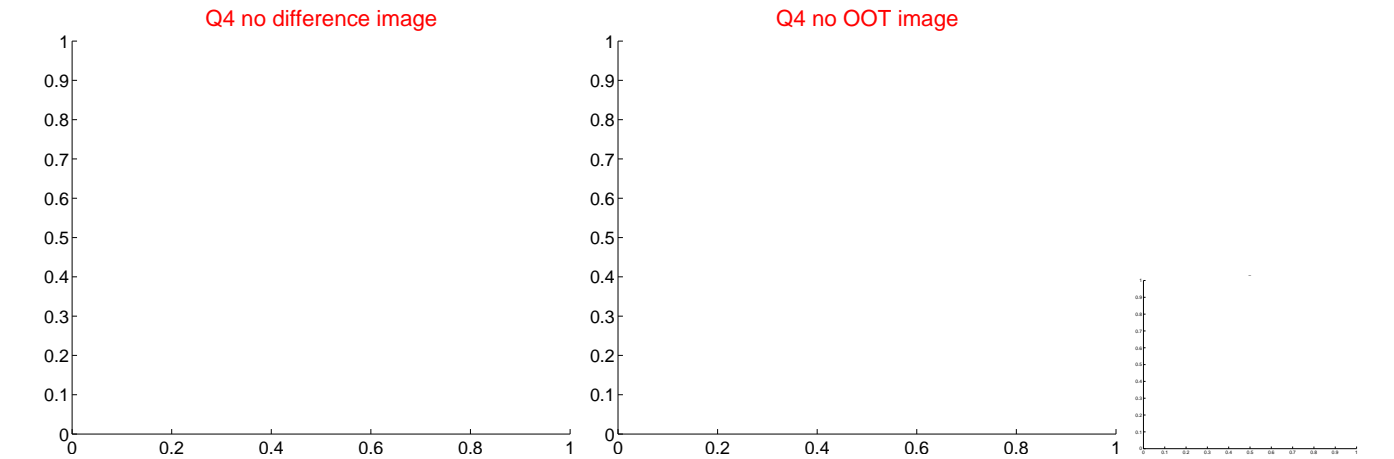
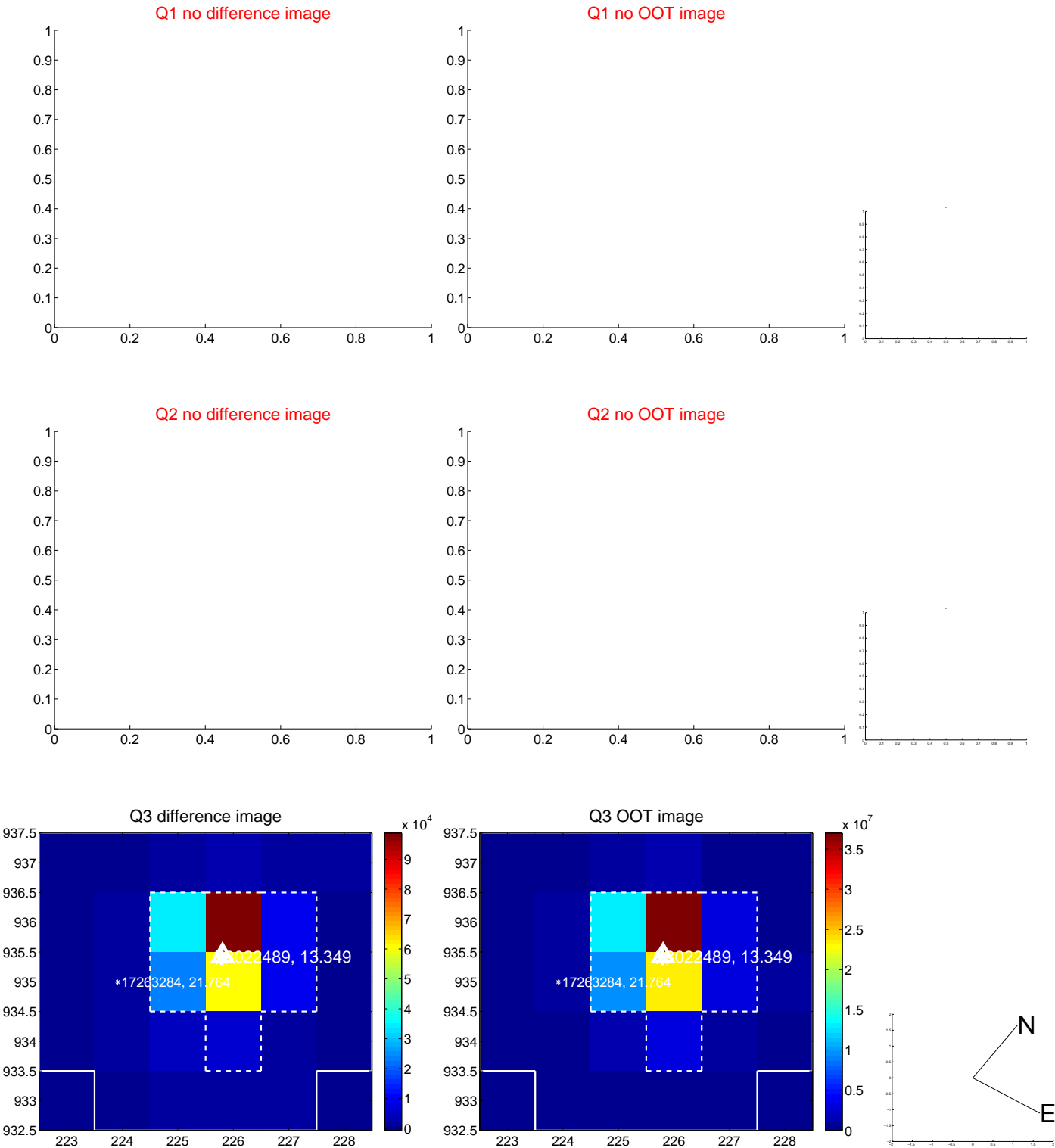
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.070 ± 0.118	0.60	-0.061 ± 0.120	0.035 ± 0.125
PRF-fit source offset from KIC position	0.133 ± 0.111	1.19	-0.069 ± 0.105	0.113 ± 0.116
photometric centroid source offset	0.13 ± 0.10	1.27	0.06 ± 0.10	0.11 ± 0.10

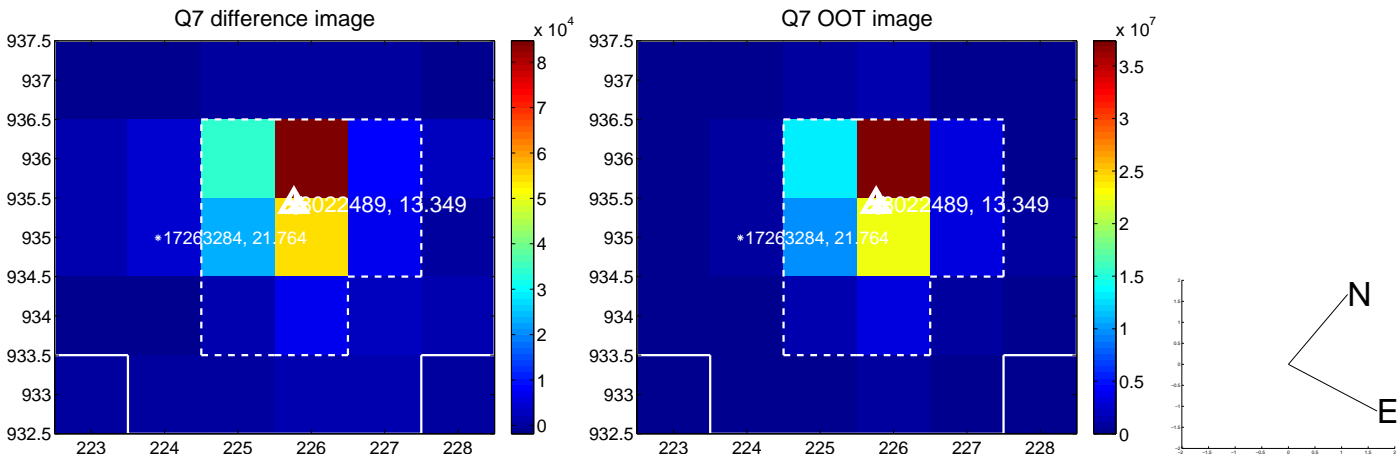
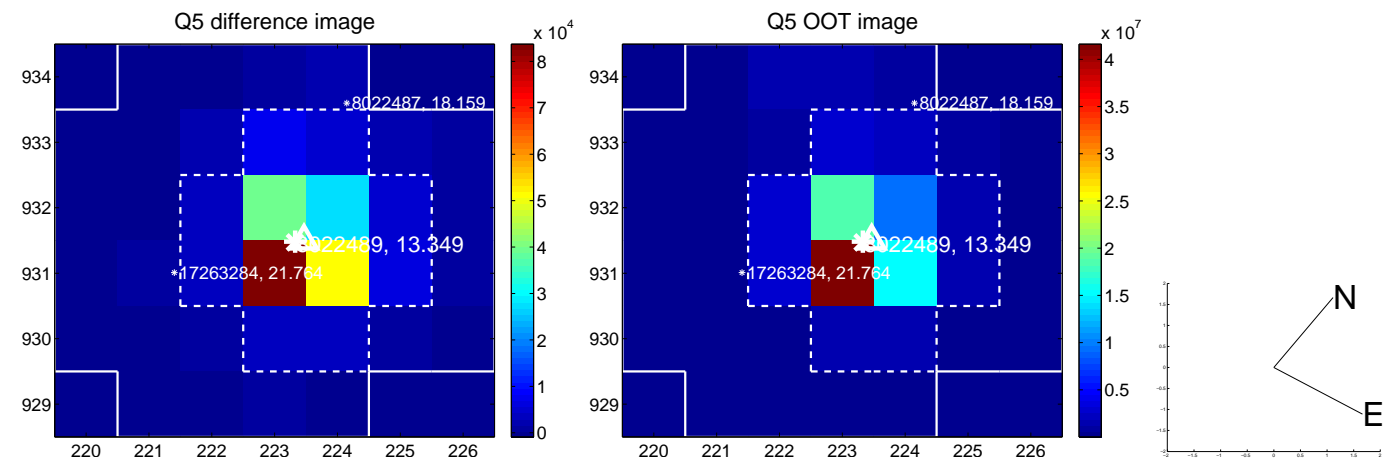


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

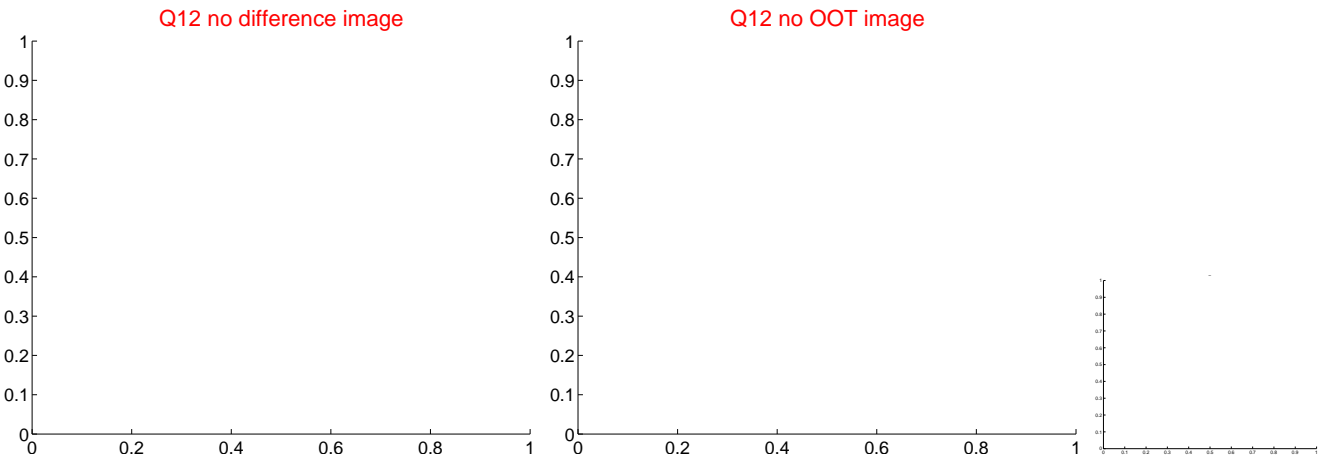
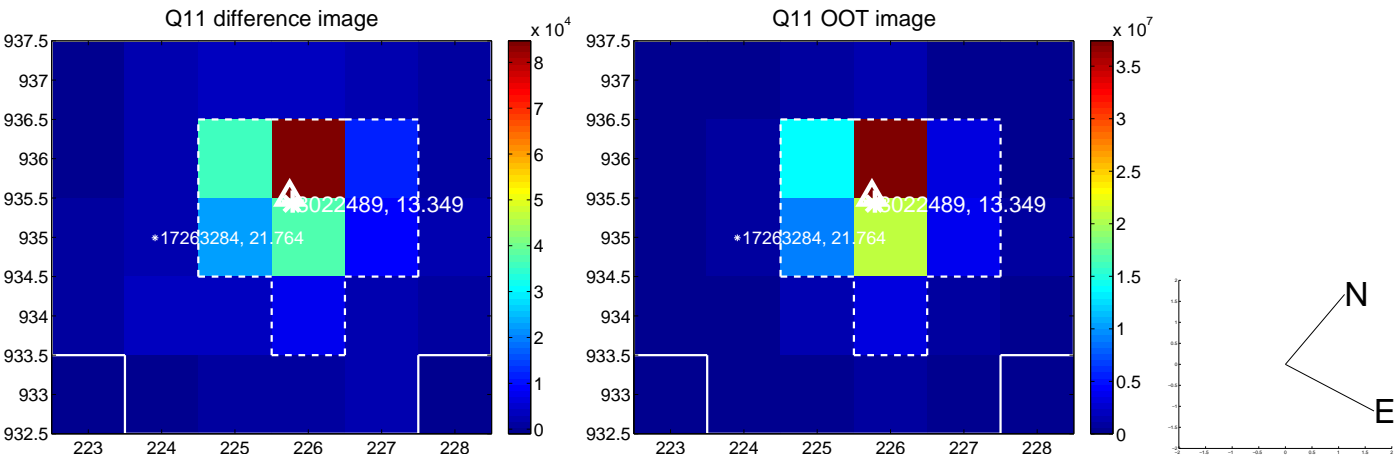
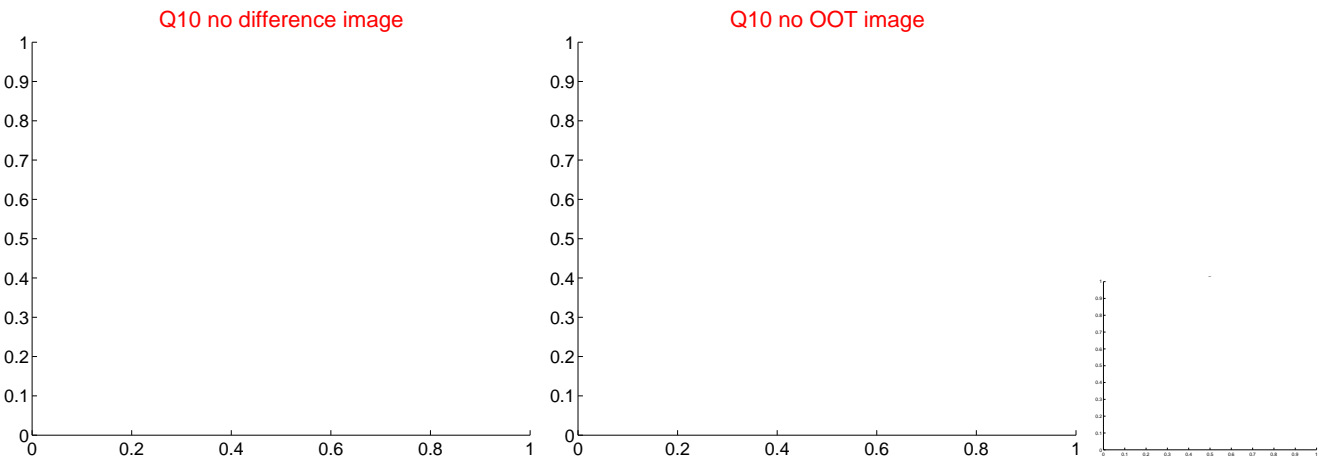
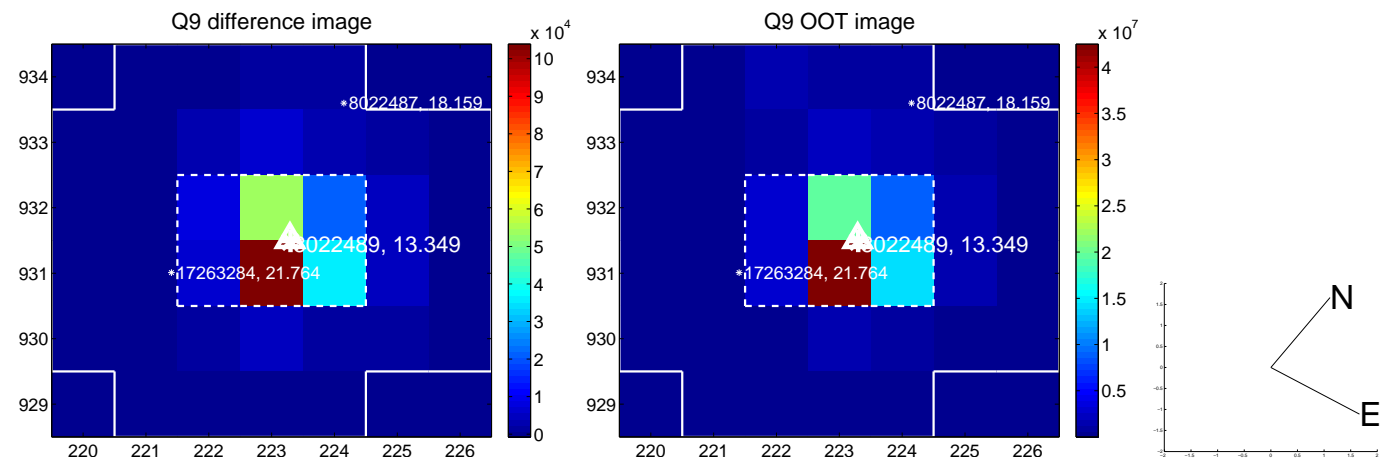
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



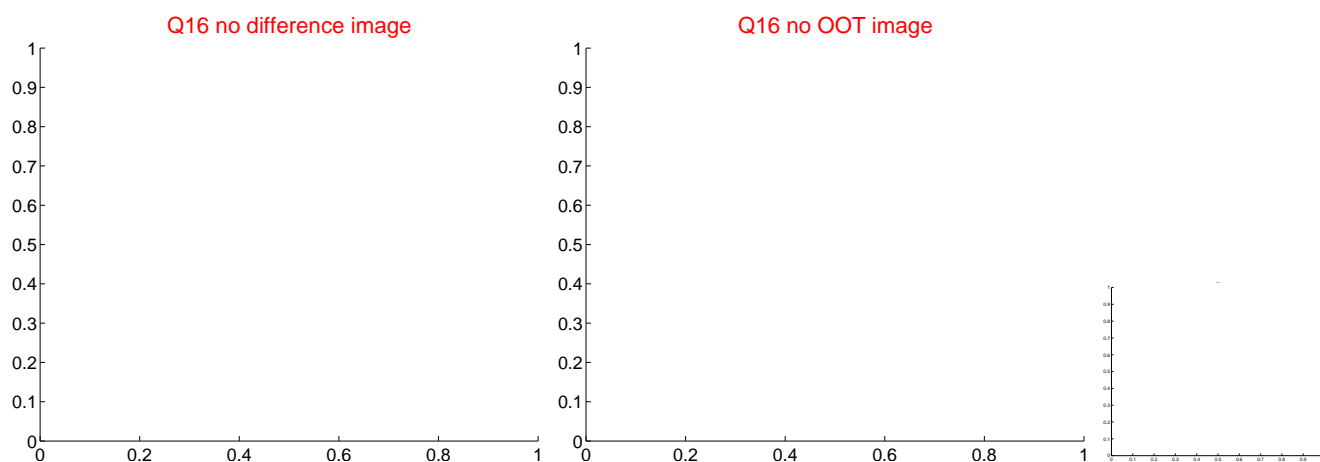
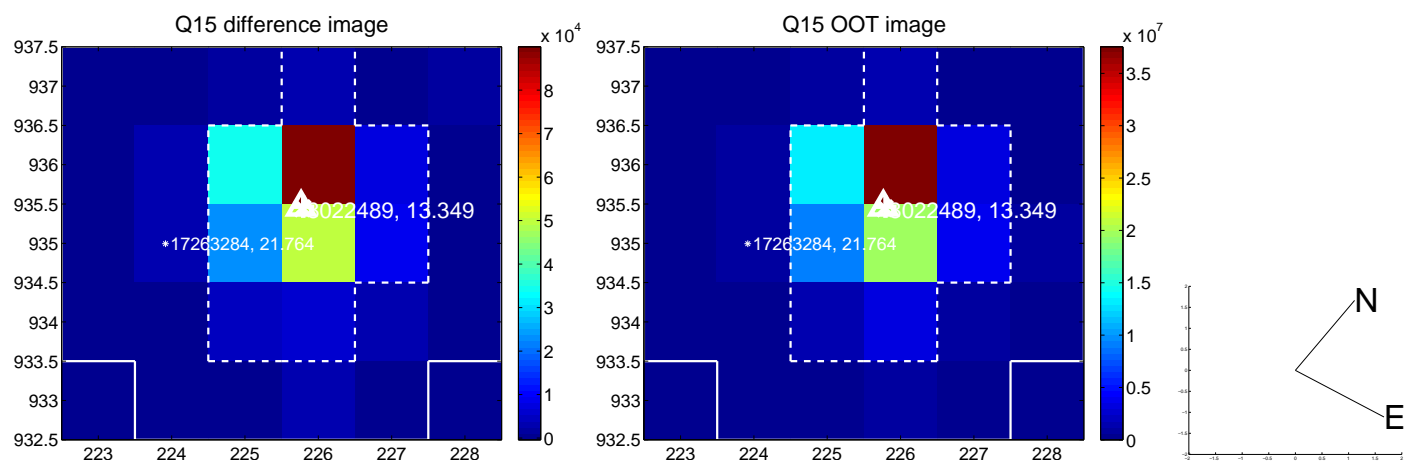
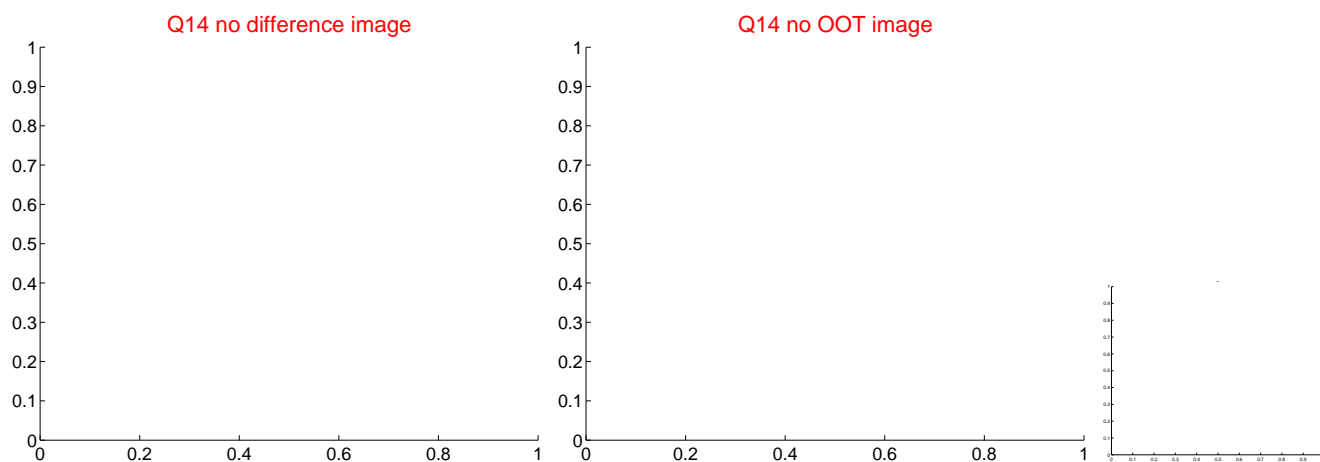
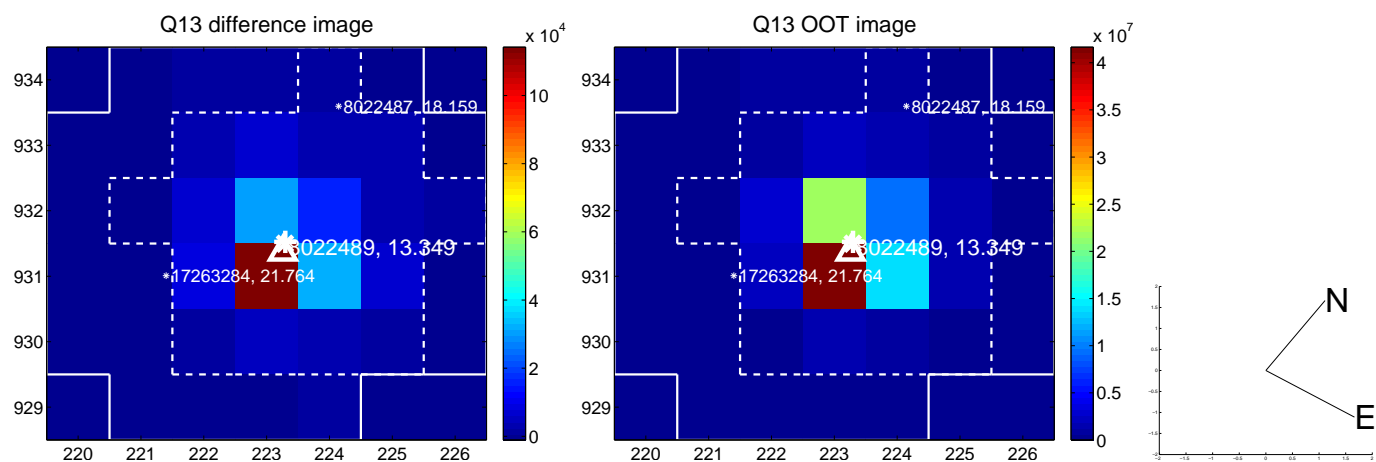
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



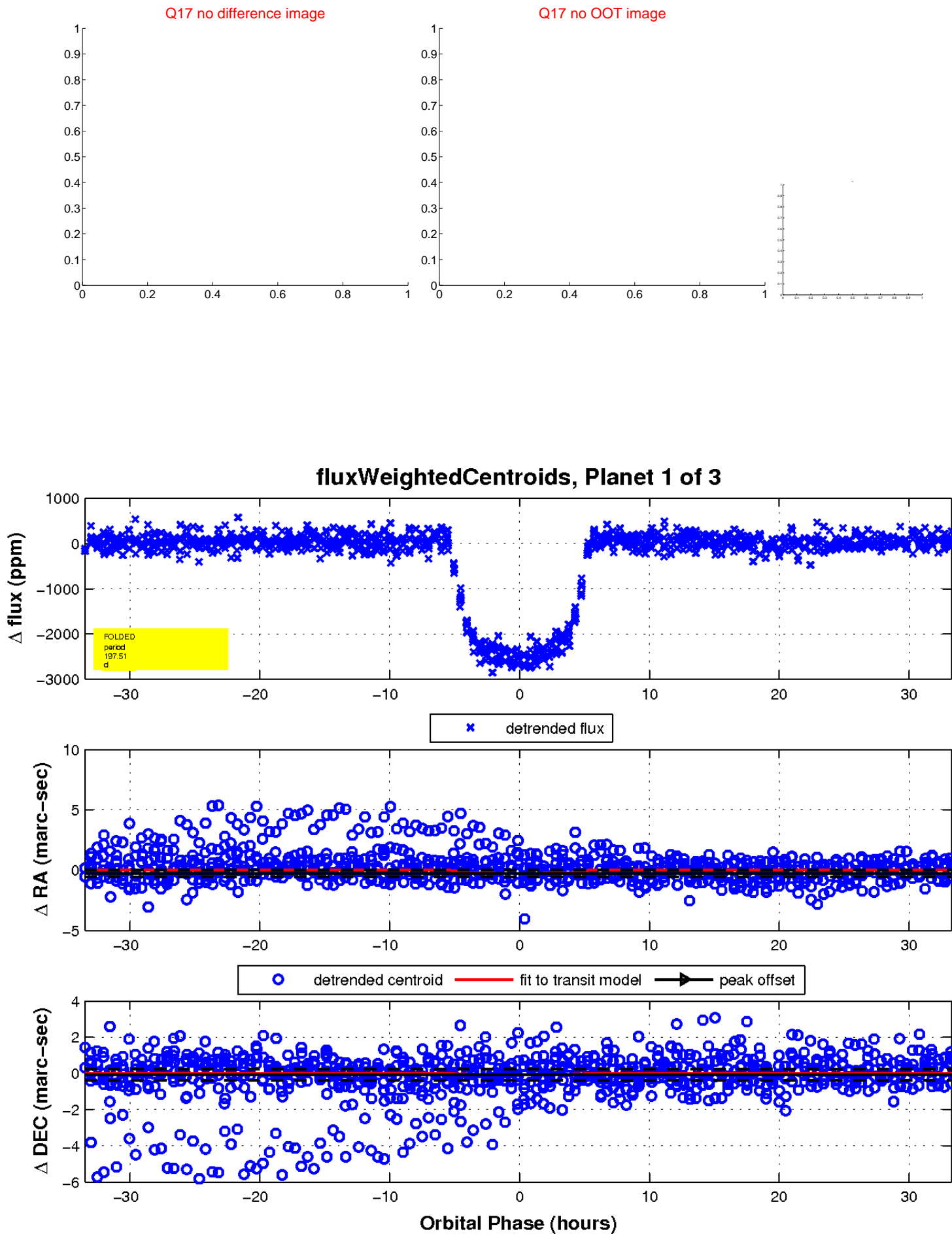
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



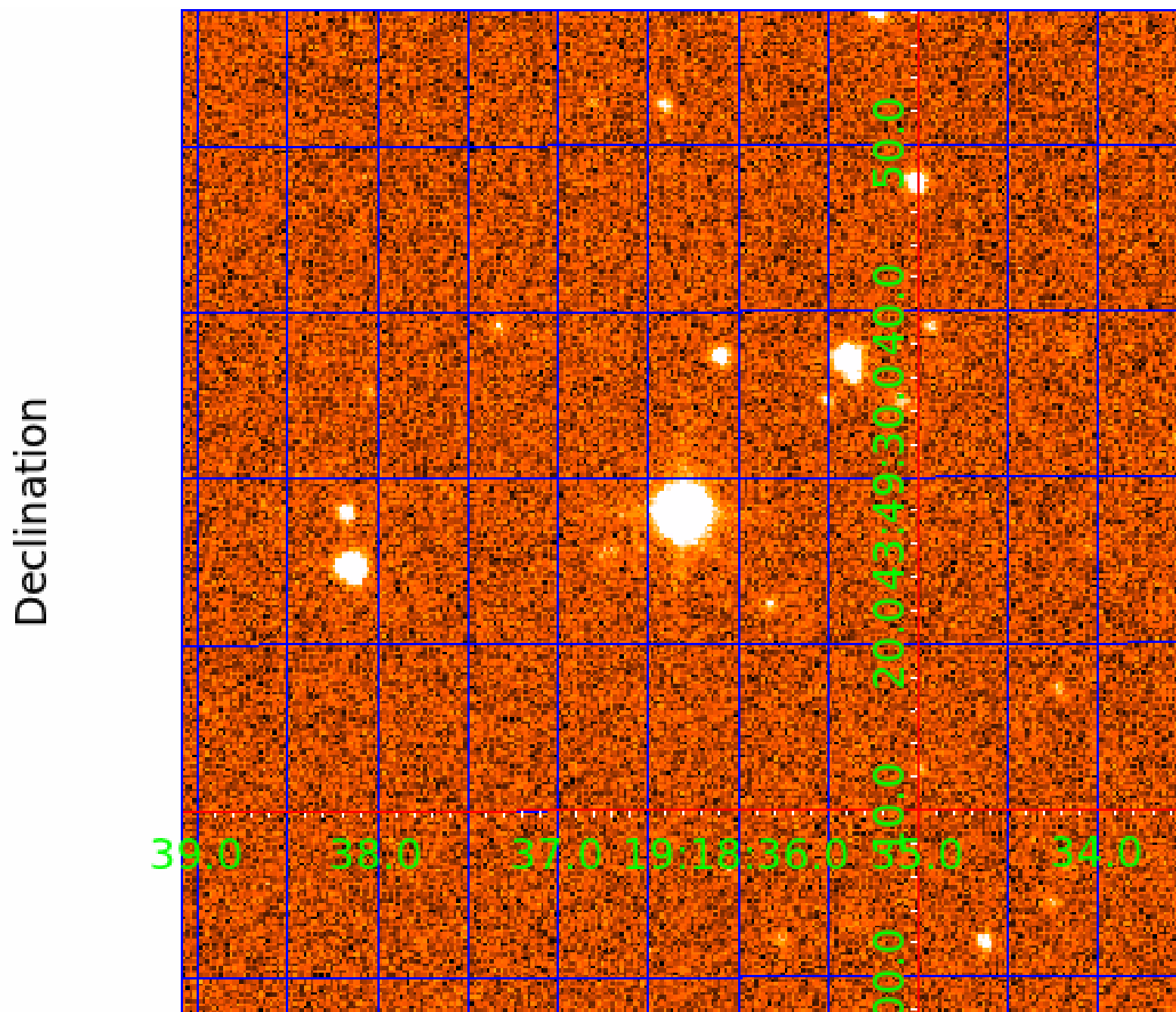
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image



KIC 008022489

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})
008022489-01	OBS	2674.01	197.511030	272.386806	2555.2	11.152	125.4	122.5	1.67	5616	9.54	5.55
008022489-02	OBS	2674.03	2.535744	133.011687	63.6	4.090	19.6	21.3	1.67	5616	1.64	1846.29
008022489-03	OBS	2674.02	11.172515	140.010933	75.4	6.623	12.3	13.5	1.67	5616	1.71	255.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008022489-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
008022489-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
008022489-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

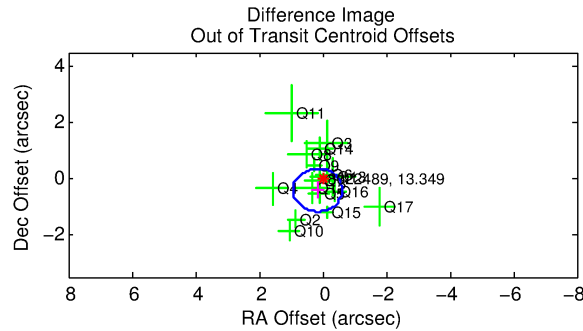
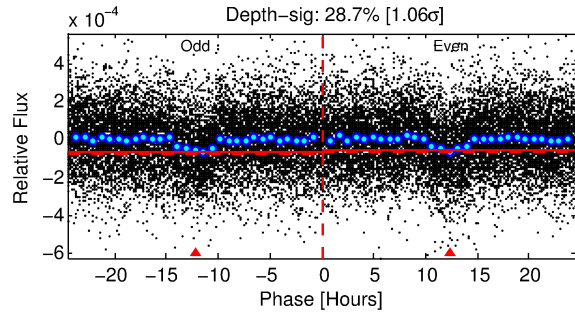
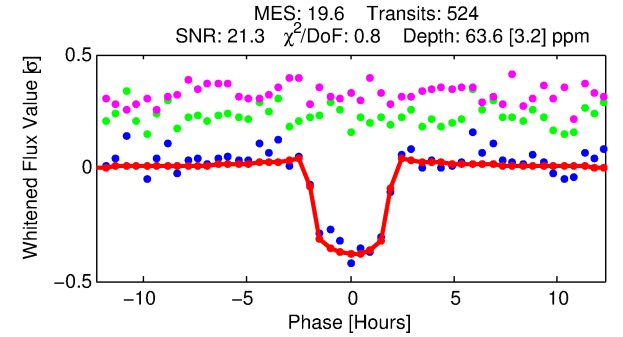
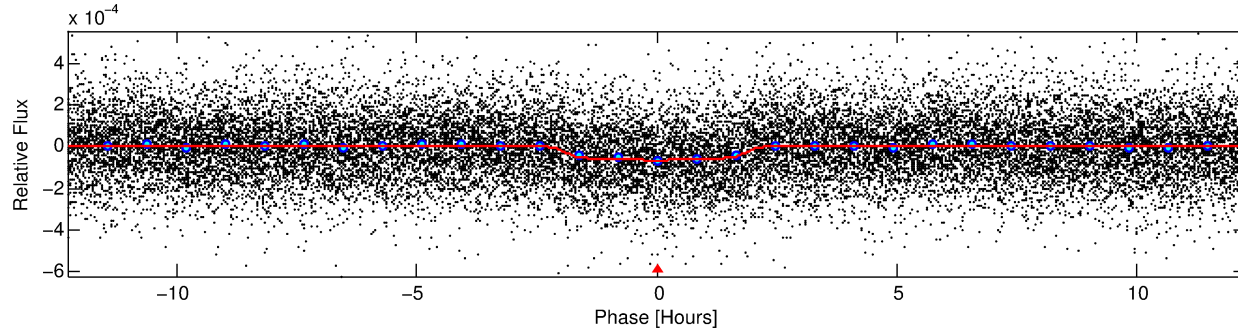
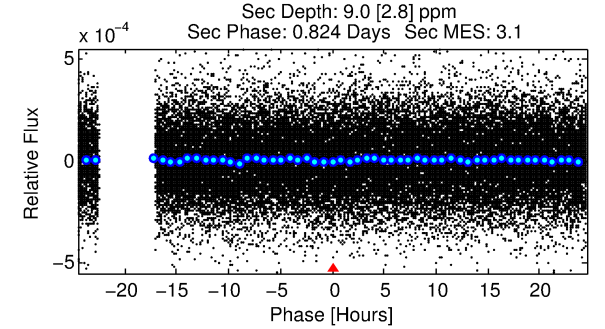
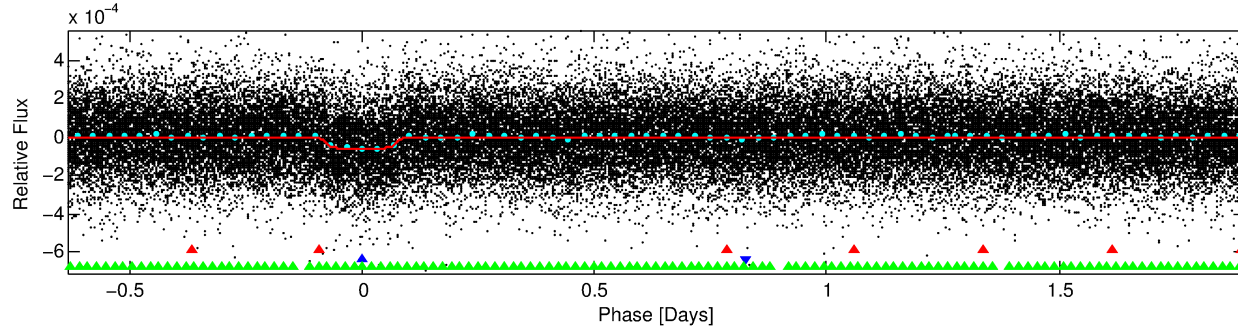
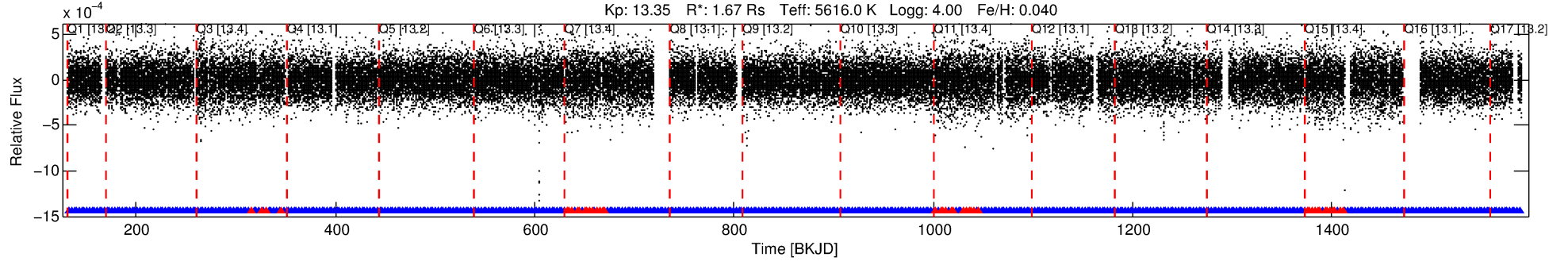
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008022489-02

No Significant Match Found

DV One-Page Summary

KIC: 8022489 Candidate: 2 of 3 Period: 2.536 d
KOI: K02674.03 Corr: 0.982



DV Fit Results:

Period = 2.53574 [0.00001] d
Epoch = 133.0117 [0.0025] BKJD
Rp/R* = 0.0090 [0.0019]
a/R* = 2.14 [1.70]
b = 0.92 [0.16]
Seff = 1846.29 [656.96]
Teq = 1671 [149] K
Rp = 1.64 [0.51] Re
a = 0.0368 [0.0079] AU
Ag = 2.49 [1.56] [0.96σ]
Teffp = 3247 [430] K [3.46σ]

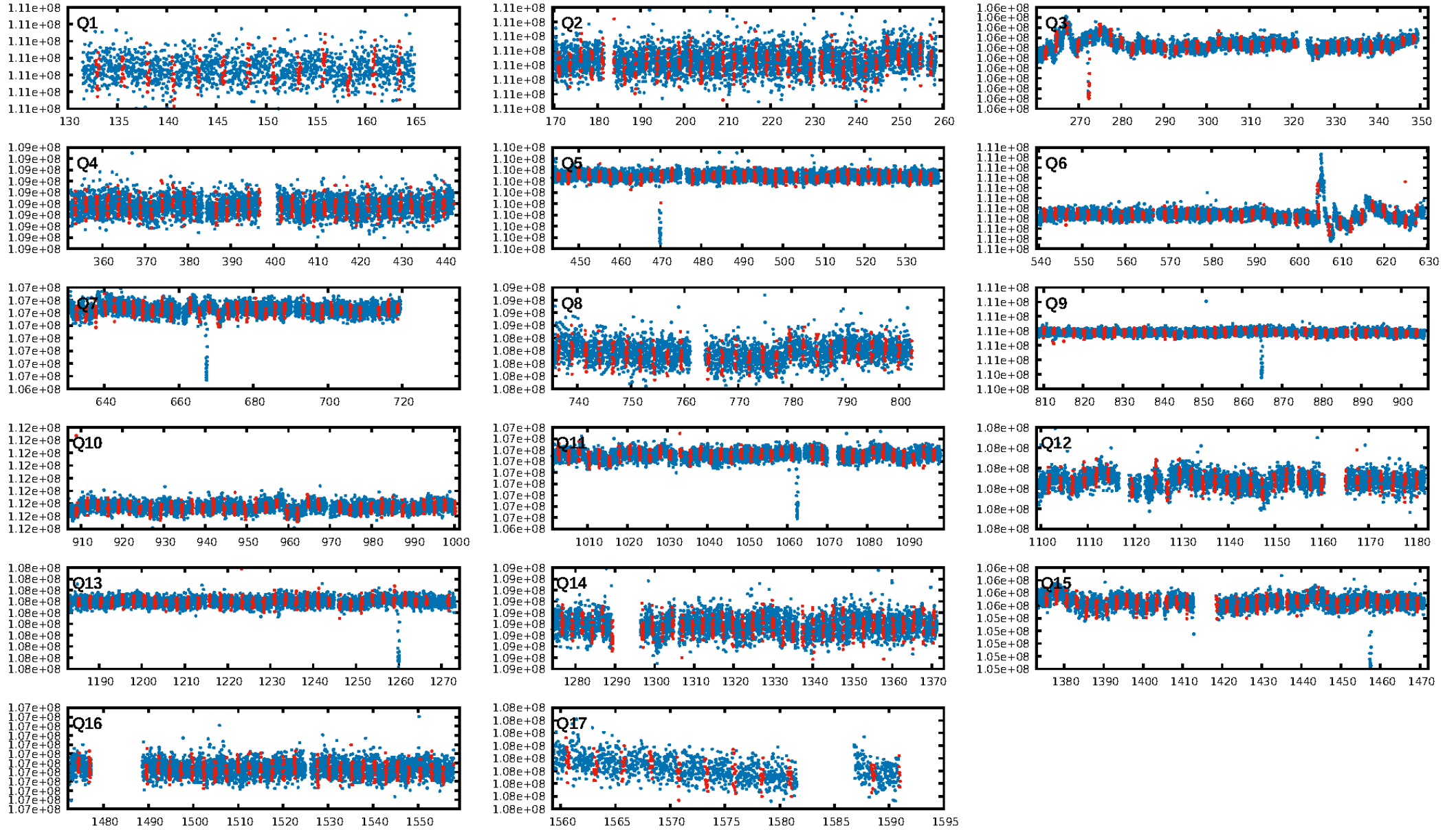
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [26.63σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.46e-76
RollingBand-fgt: 0.92 [458/500]
GhostDiagnostic-chr: 4.474
Centroid-sig: 20.2%
Centroid-so: 0.499 arcsec [0.81σ]
OotOffset-rm: 0.437 arcsec [1.71σ]
KicOffset-rm: 0.375 arcsec [1.46σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

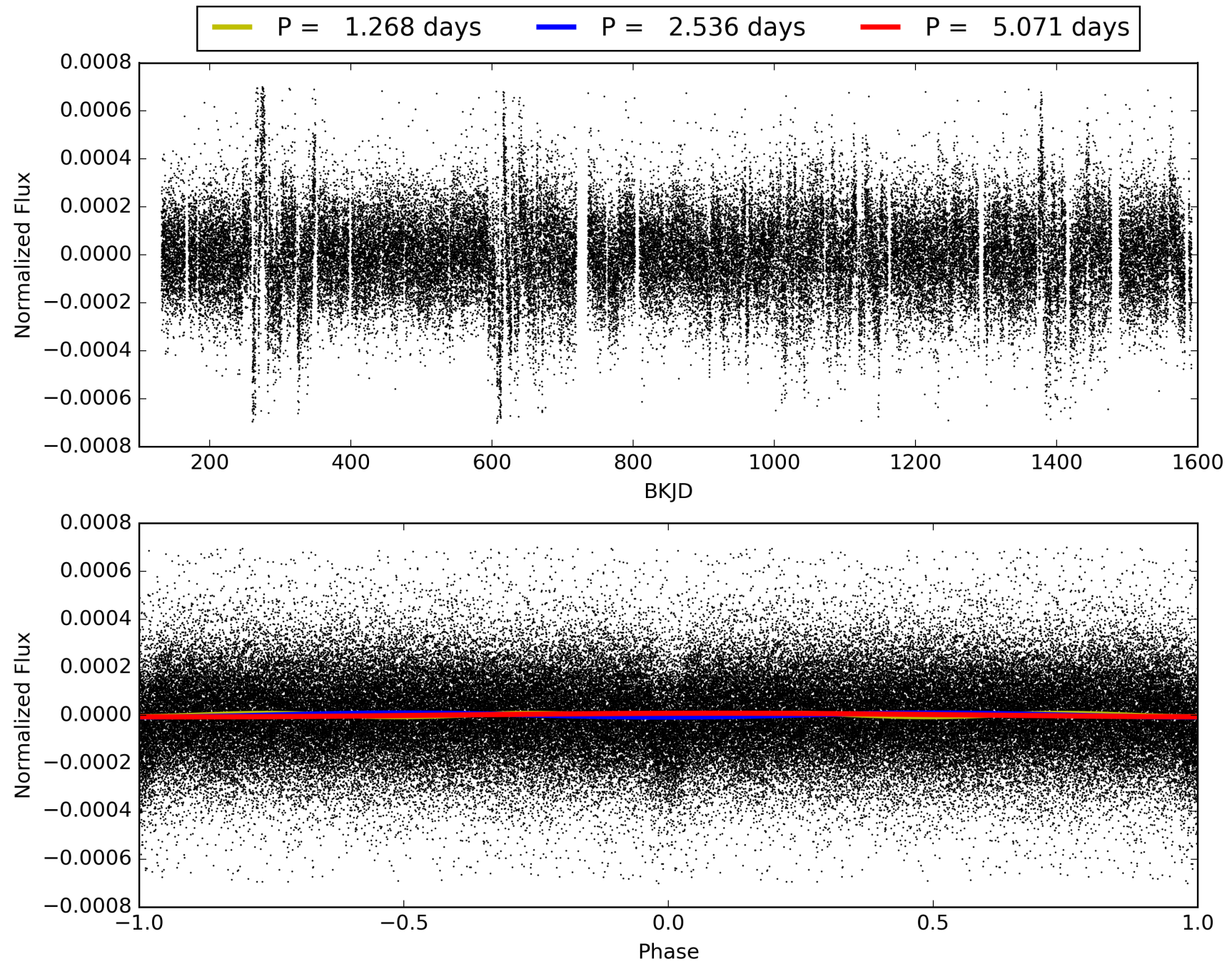
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:44:54 Z

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

TCE 008022489-02, PDC Light Curves

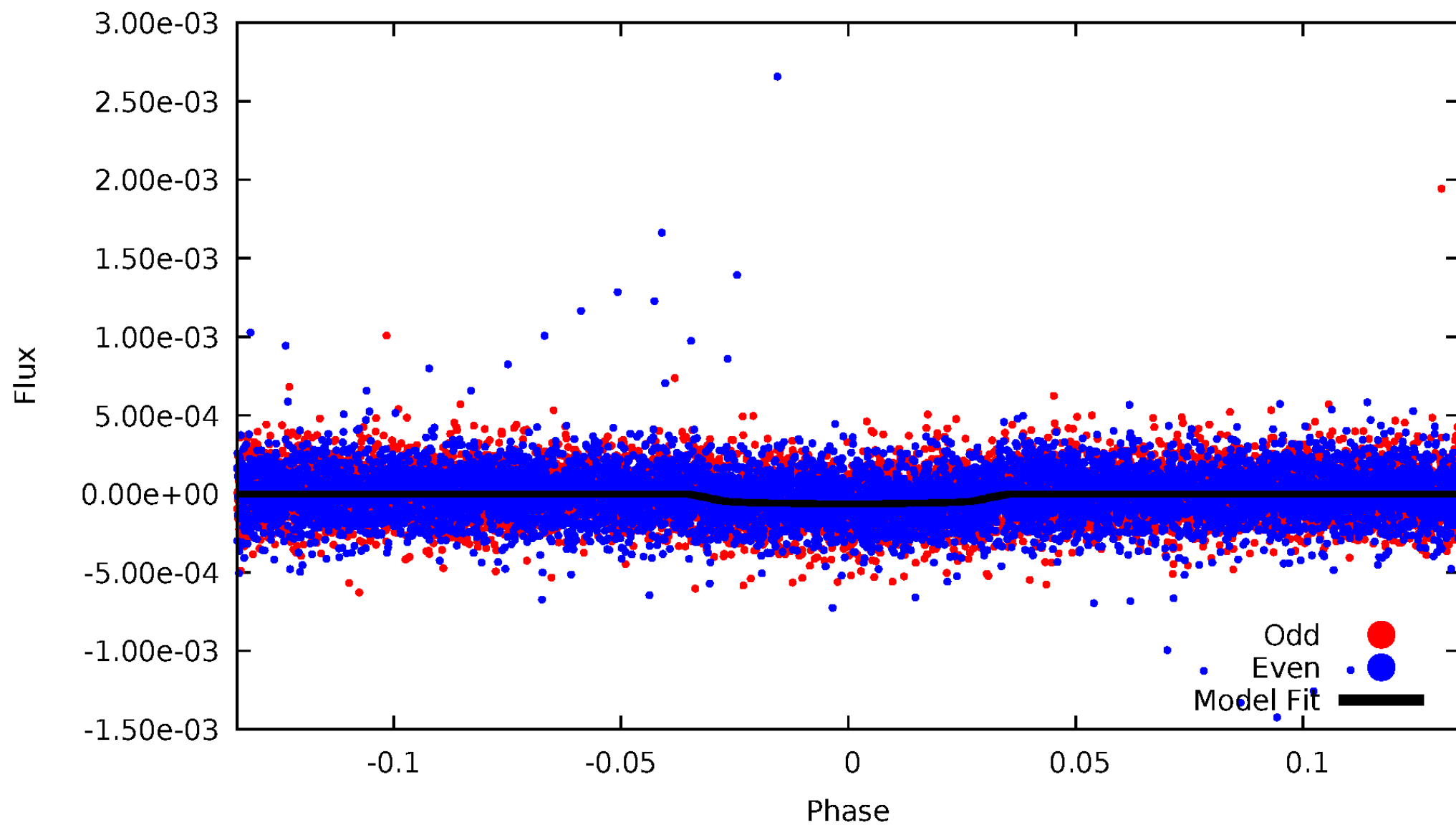


TCE 008022489-02



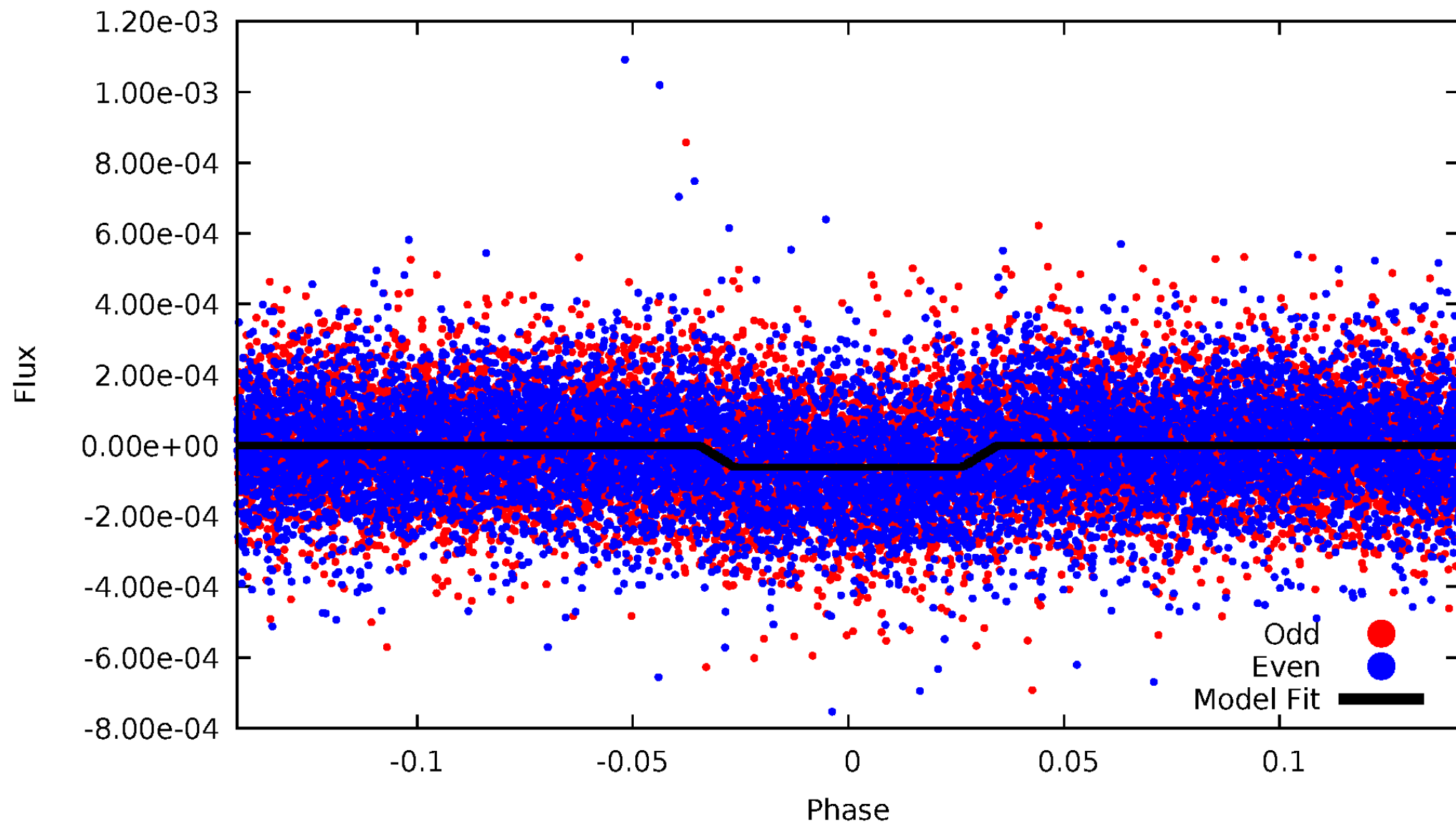
DV Odd/Even

TCE 008022489-02



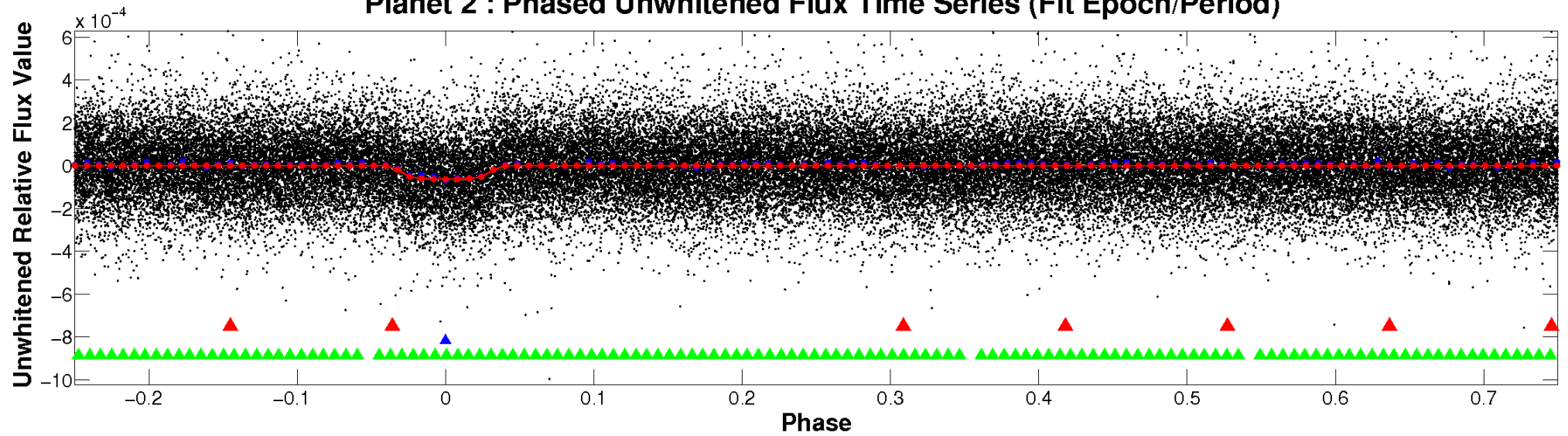
ALT Odd/Even

TCE 008022489-02

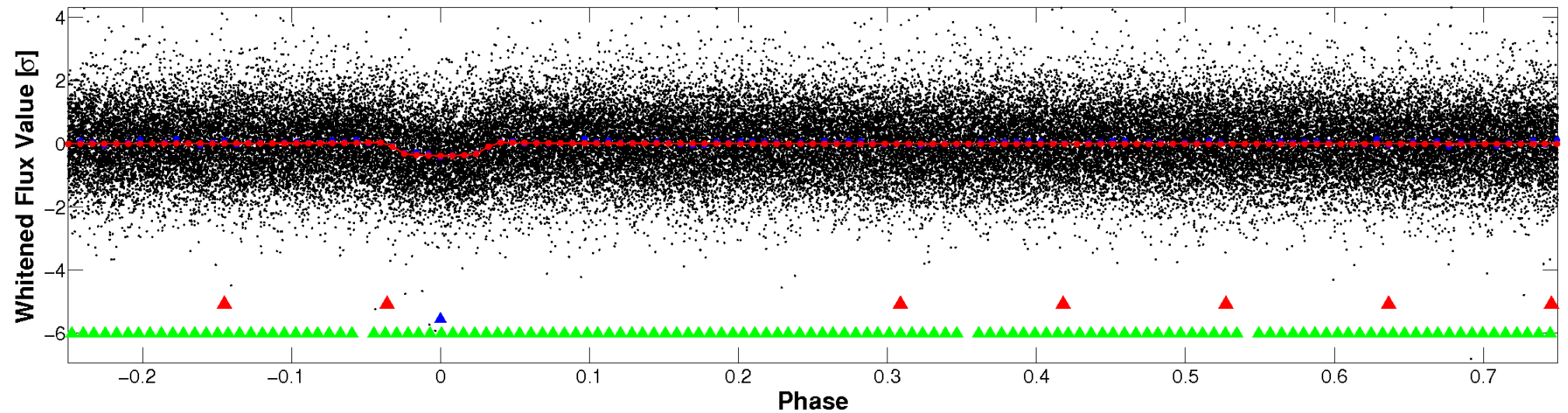


Non-Whitened Vs. Whitened Light Curve

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

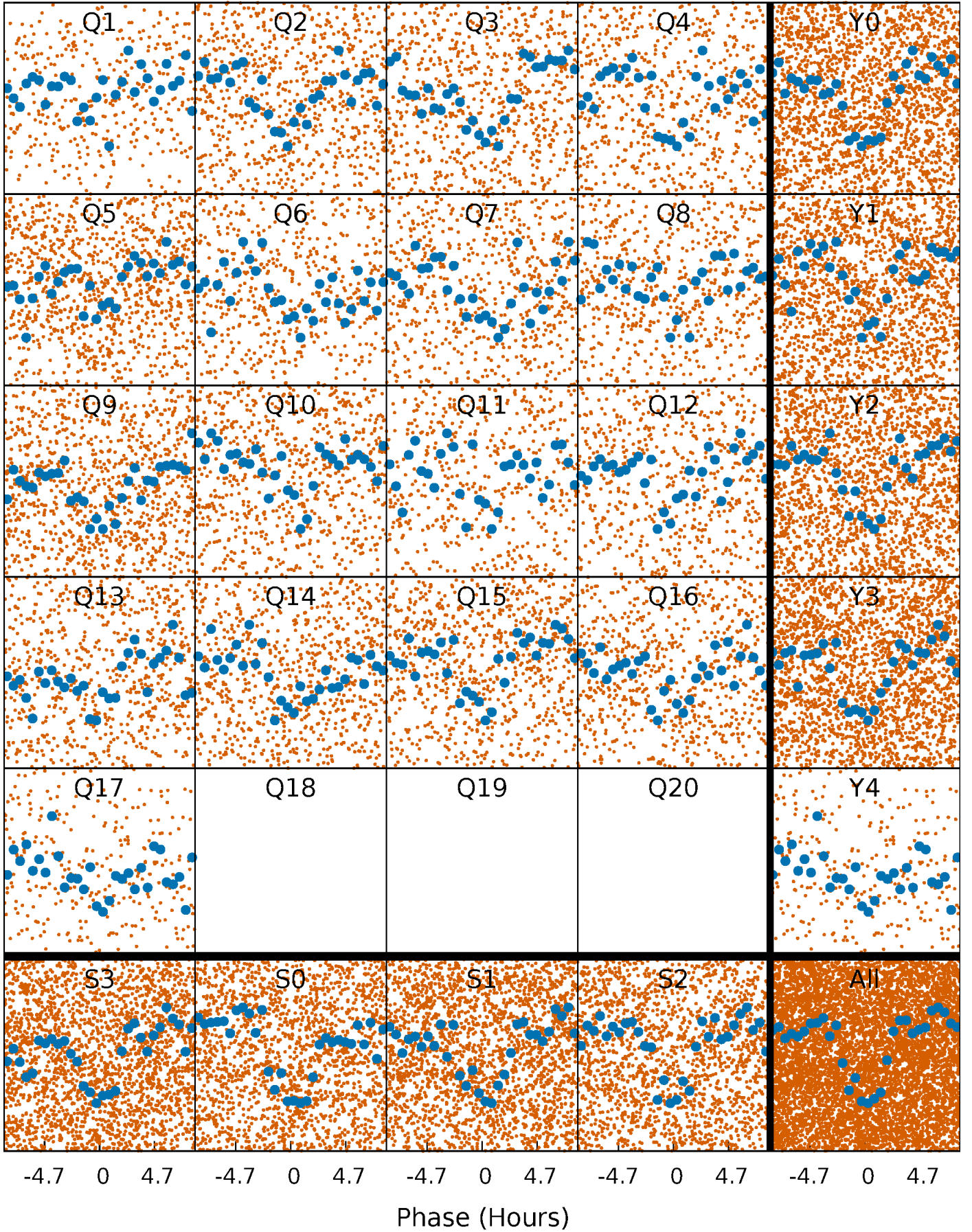


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



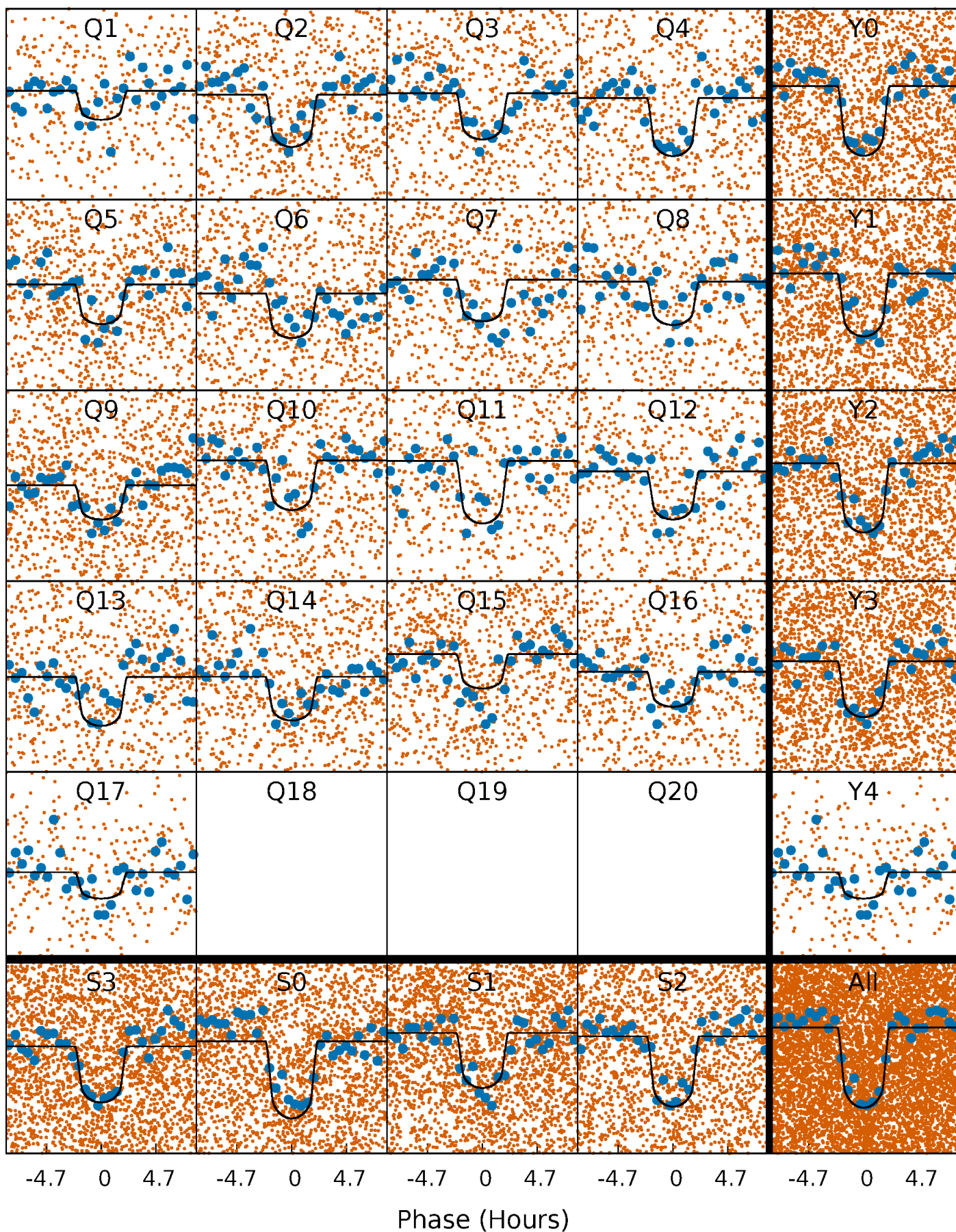
PDC Quarter-Phased Transit Curves

TCE 008022489-02 P= 2.535744 Days $T_0=133.011687$ (BKJD)



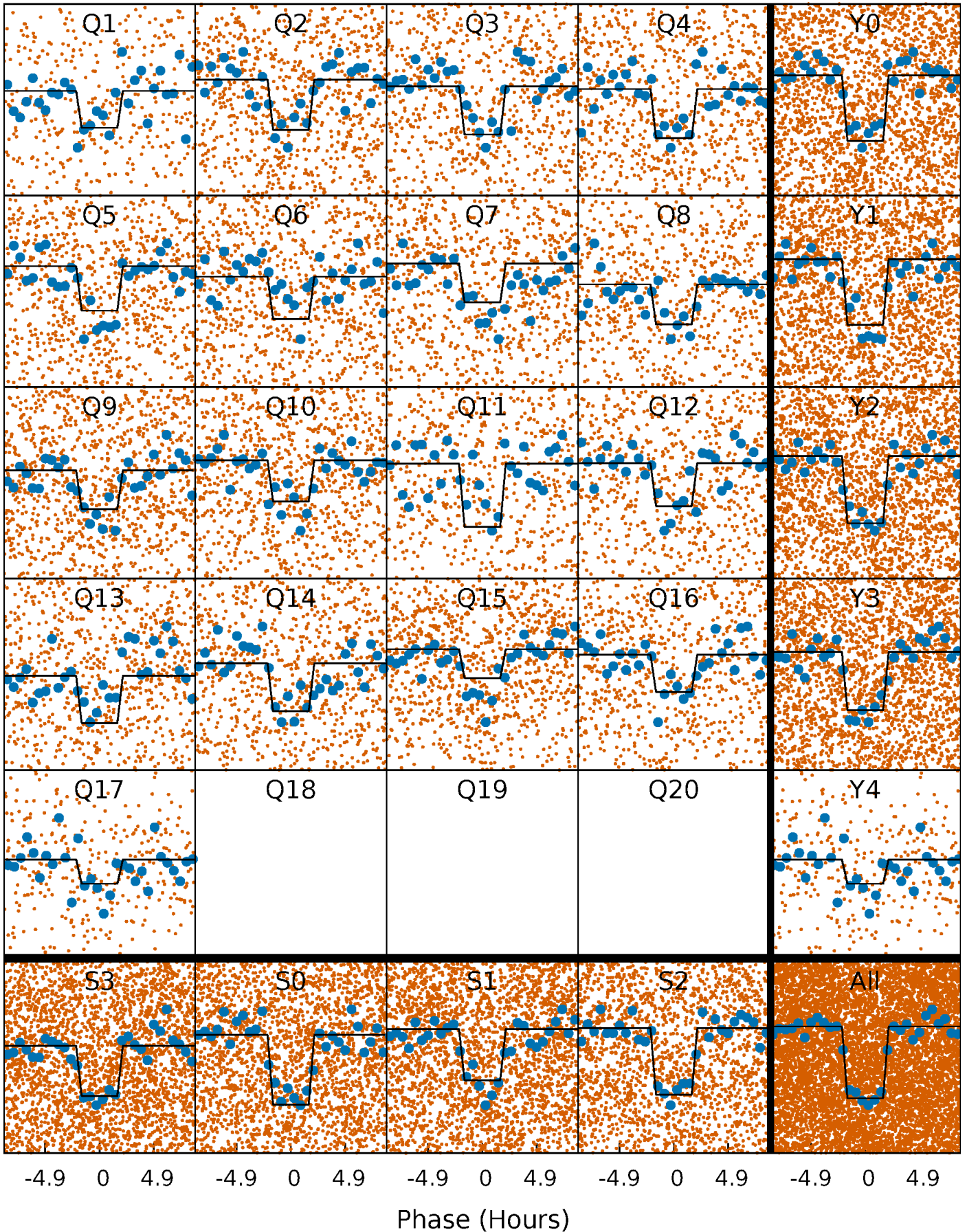
DV Quarter-Phased Transit Curves

TCE 008022489-02 P= 2.535744 Days $T_0=133.011687$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

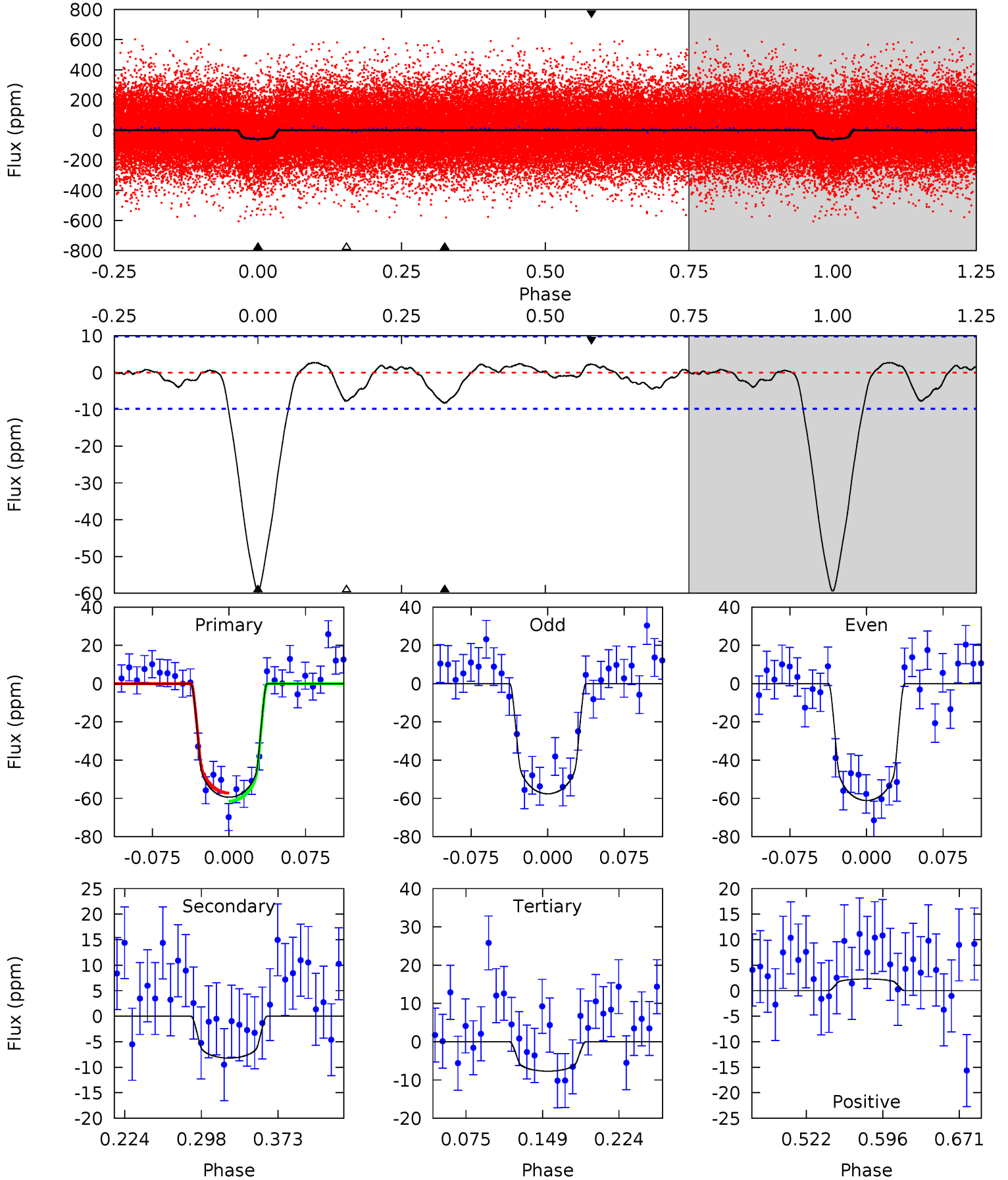
TCE 008022489-02 P= 2.535721 Days $T_0=133.018709$ (BKJD)



DV Model-Shift Uniqueness Test

008022489-02, P = 2.535744 Days, E = 130.475943 Days

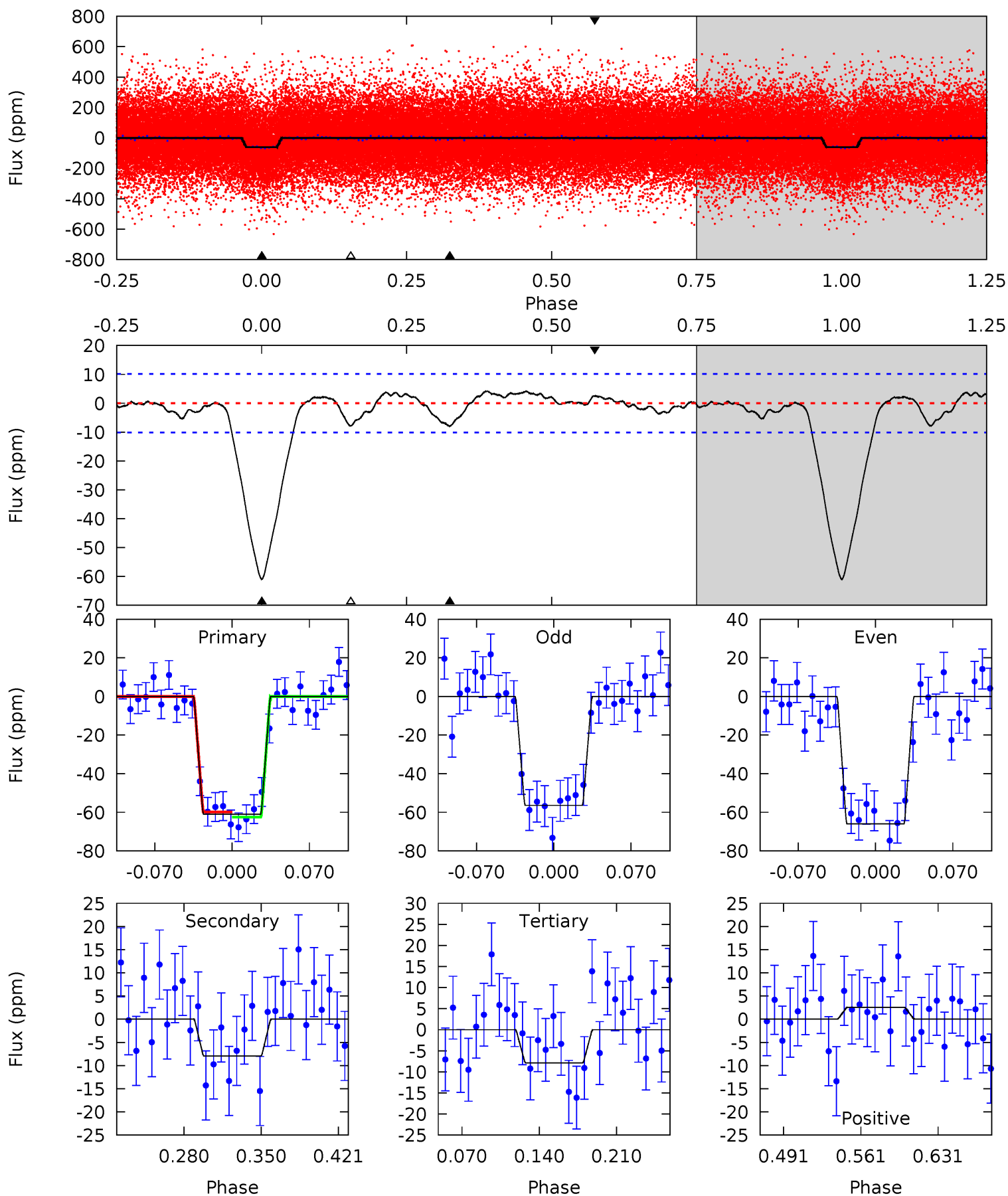
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.0	3.87	3.63	1.08	4.63	1.78	1.07	24.3	26.9	0.24	2.79	0.83	1.01	0.04	1.00



Alt Model-Shift Uniqueness Test

008022489-02, P = 2.535721 Days, E = 130.482988 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.9	3.63	3.59	1.16	4.64	1.81	1.15	24.3	26.7	0.05	2.48	2.18	0.95	0.06	0.60



Stellar Parameters For KIC 008022489

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5616^{+124}_{-90}	$4.004^{+0.202}_{-0.093}$	$0.040^{+0.150}_{-0.150}$	$1.674^{+0.275}_{-0.378}$	$1.032^{+0.107}_{-0.097}$	$0.310^{+0.354}_{-0.097}$
	+2%/-2%	+5%/-2%	+375%/-375%	+16%/-23%	+10%/-9%	+114%/-31%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 008022489-02 / KOI 2674.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8 ± 2	$1.58^{+0.37}_{-0.40}$	2318^{+116}_{-146}	3541^{+405}_{-283}	$2.460^{+2.003}_{-0.989}$
Alt.	-8 ± 2	$1.37^{+0.39}_{-0.34}$	2308^{+113}_{-129}	3694^{+419}_{-341}	$3.085^{+2.695}_{-1.271}$

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

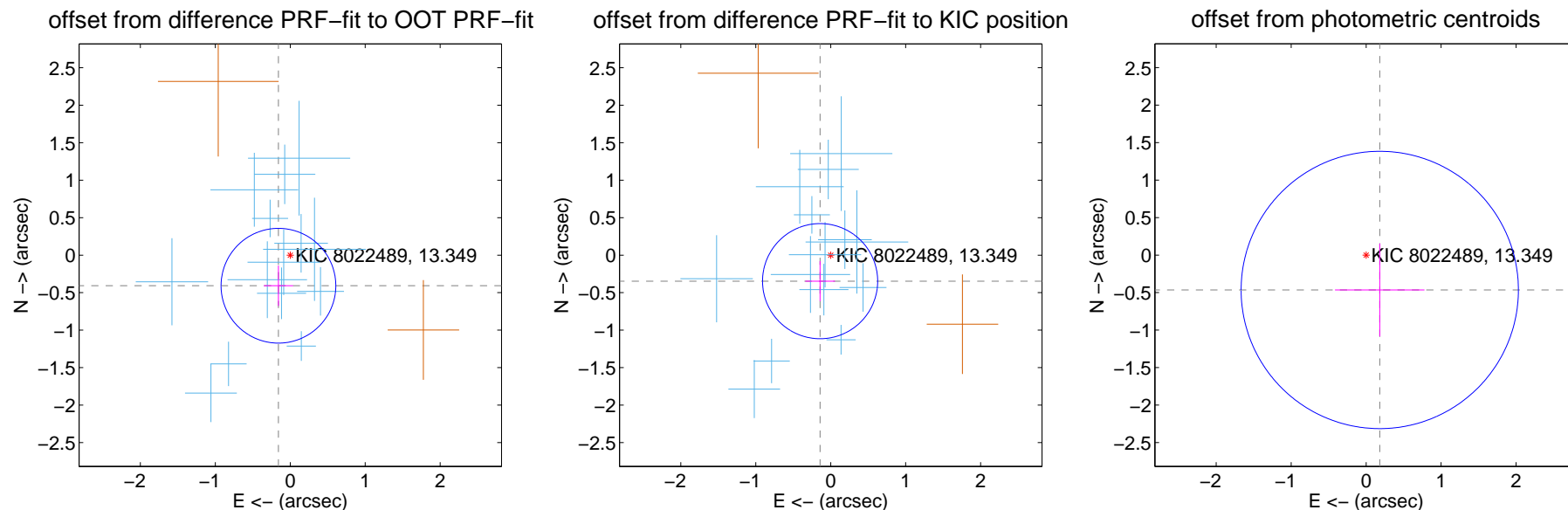
DV Centroid Data

Supplemental centroid analysis for 008022489-02. Kepler magnitude: 13.35. Transit SNR 21.29

There are 14 quarters with good PRF difference image offsets

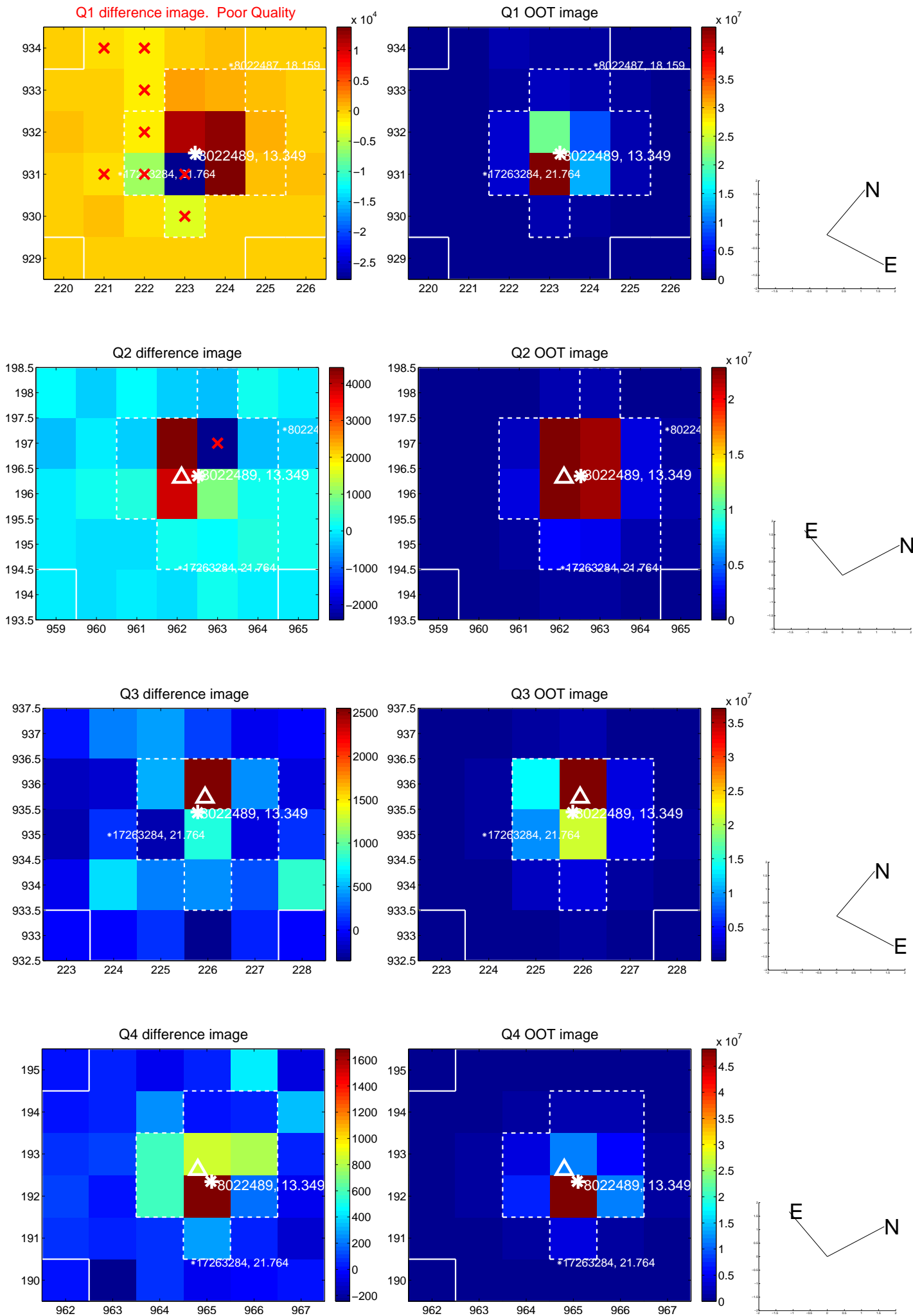
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.437 ± 0.255	1.71	0.158 ± 0.195	-0.408 ± 0.269
PRF-fit source offset from KIC position	0.375 ± 0.256	1.46	0.142 ± 0.198	-0.347 ± 0.267
photometric centroid source offset	0.50 ± 0.62	0.81	-0.18 ± 0.60	-0.47 ± 0.62

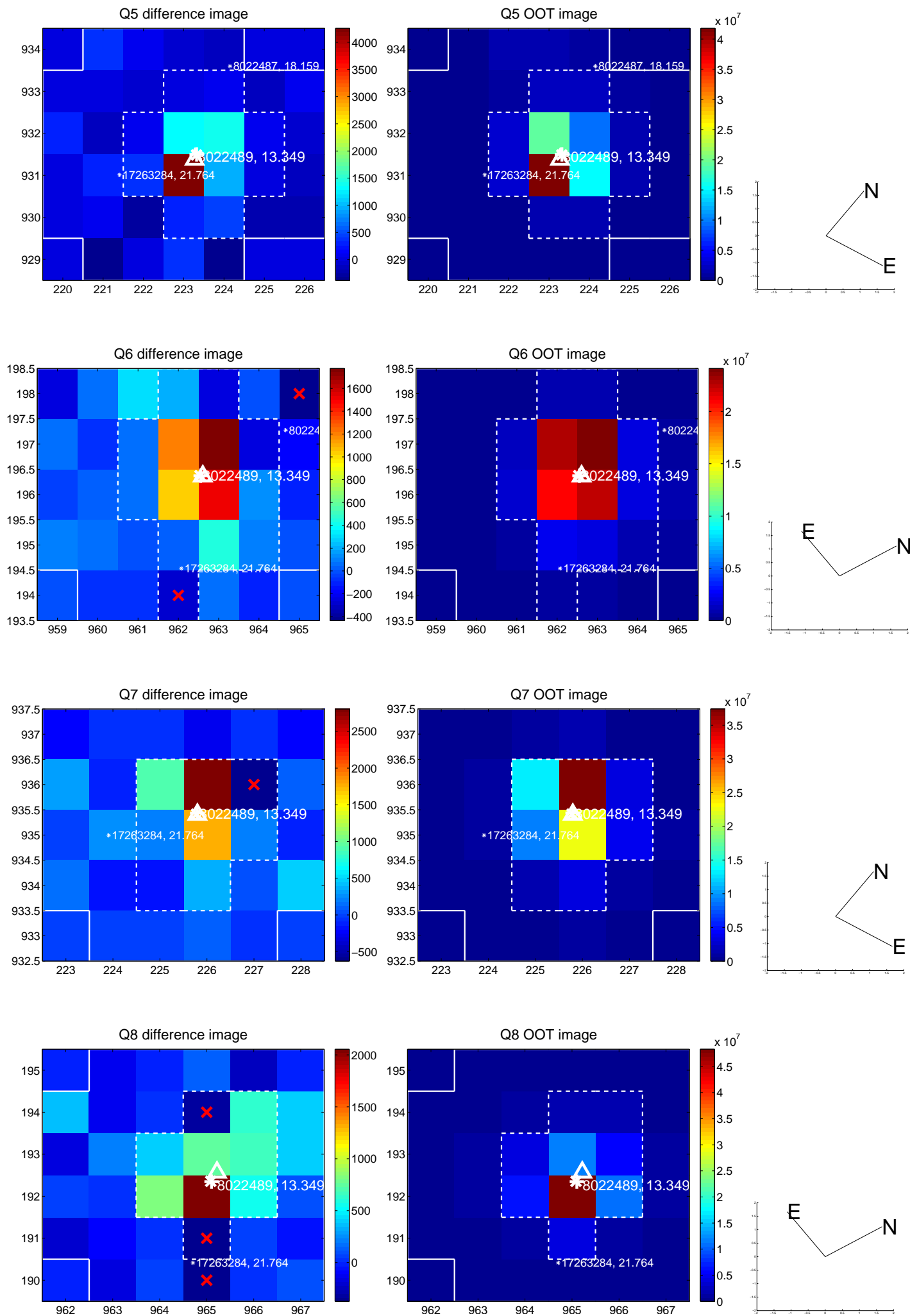


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

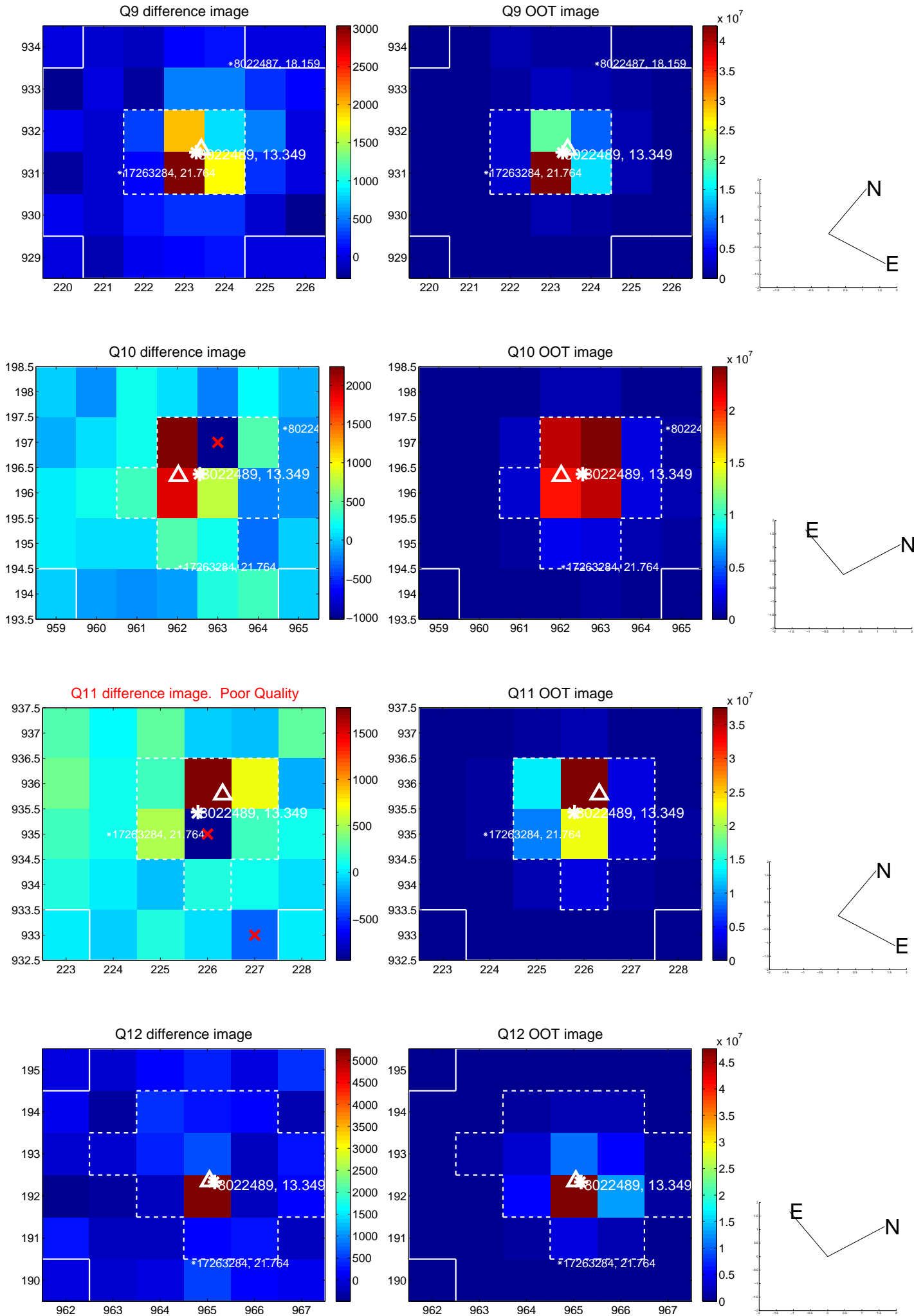
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



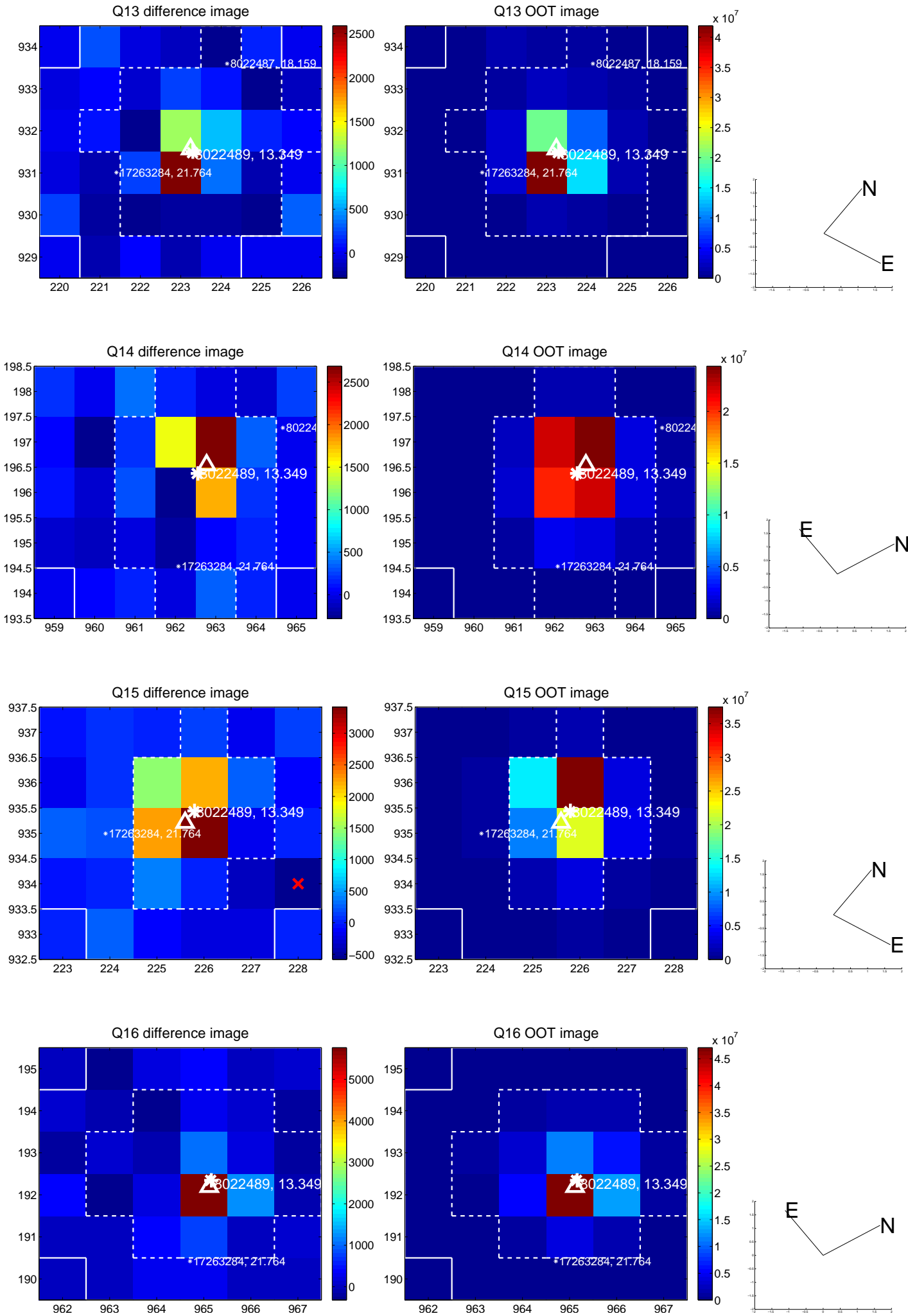
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



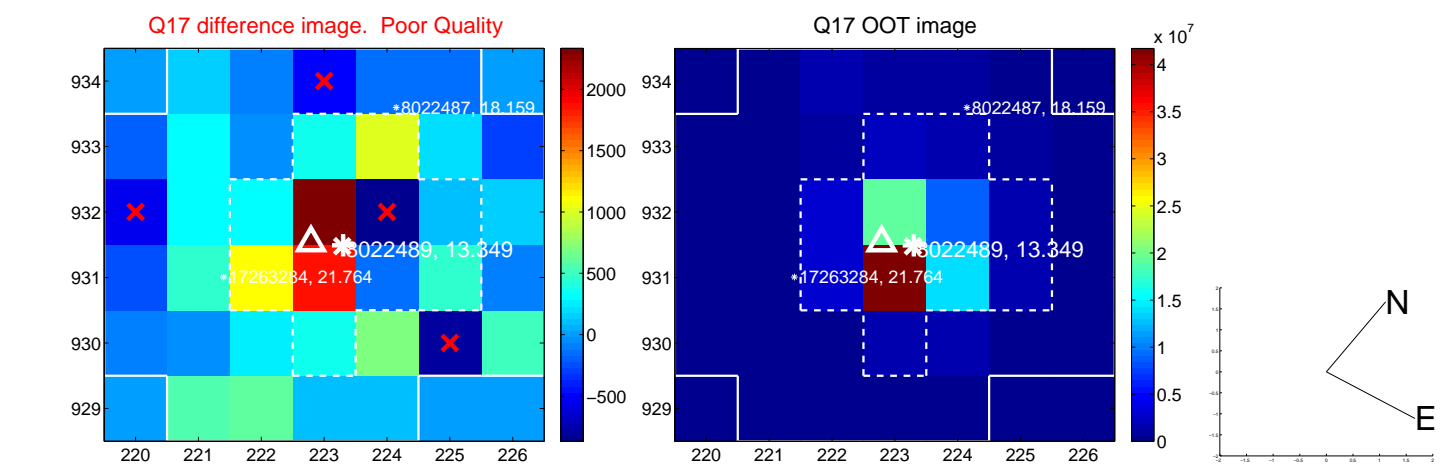
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



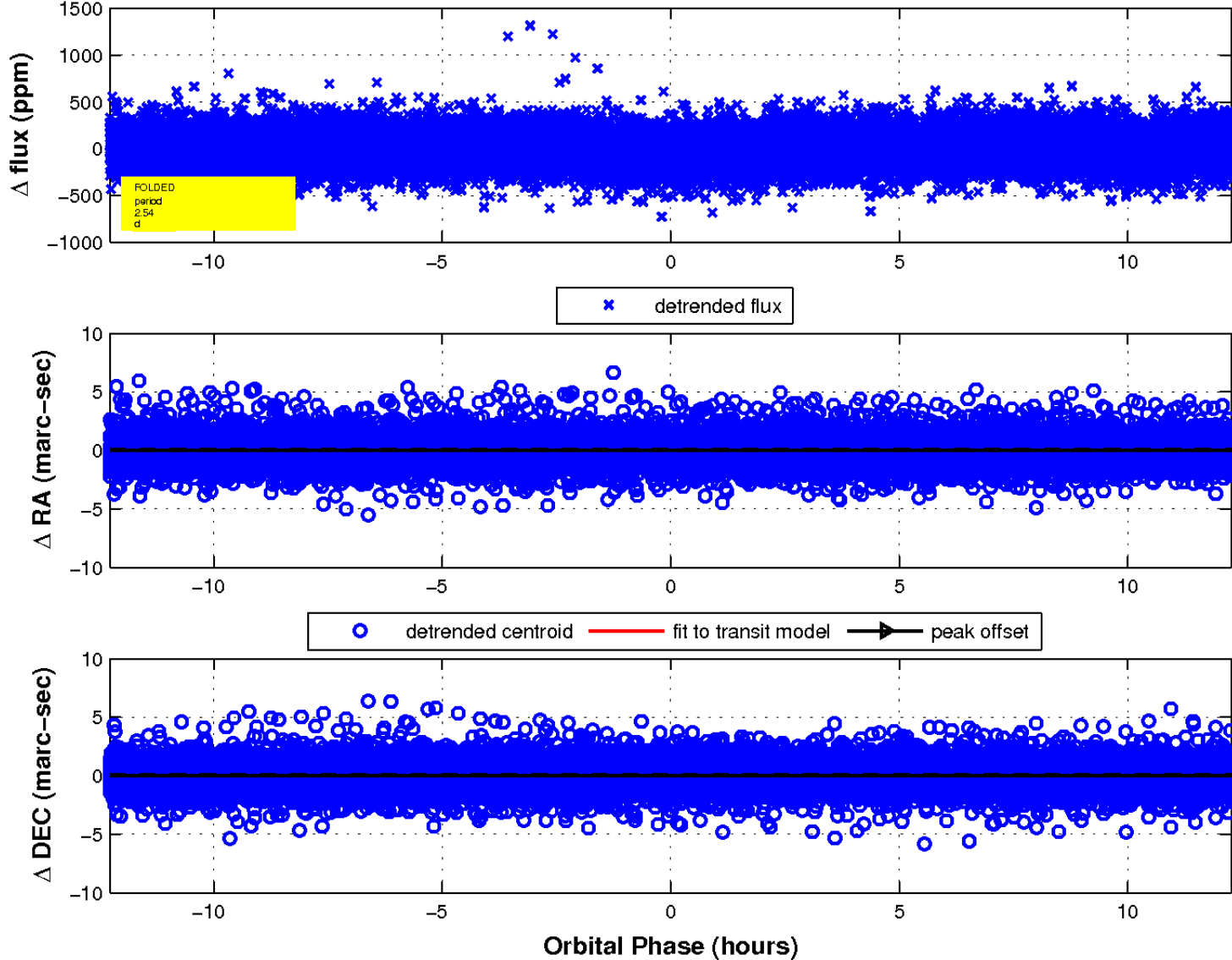
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

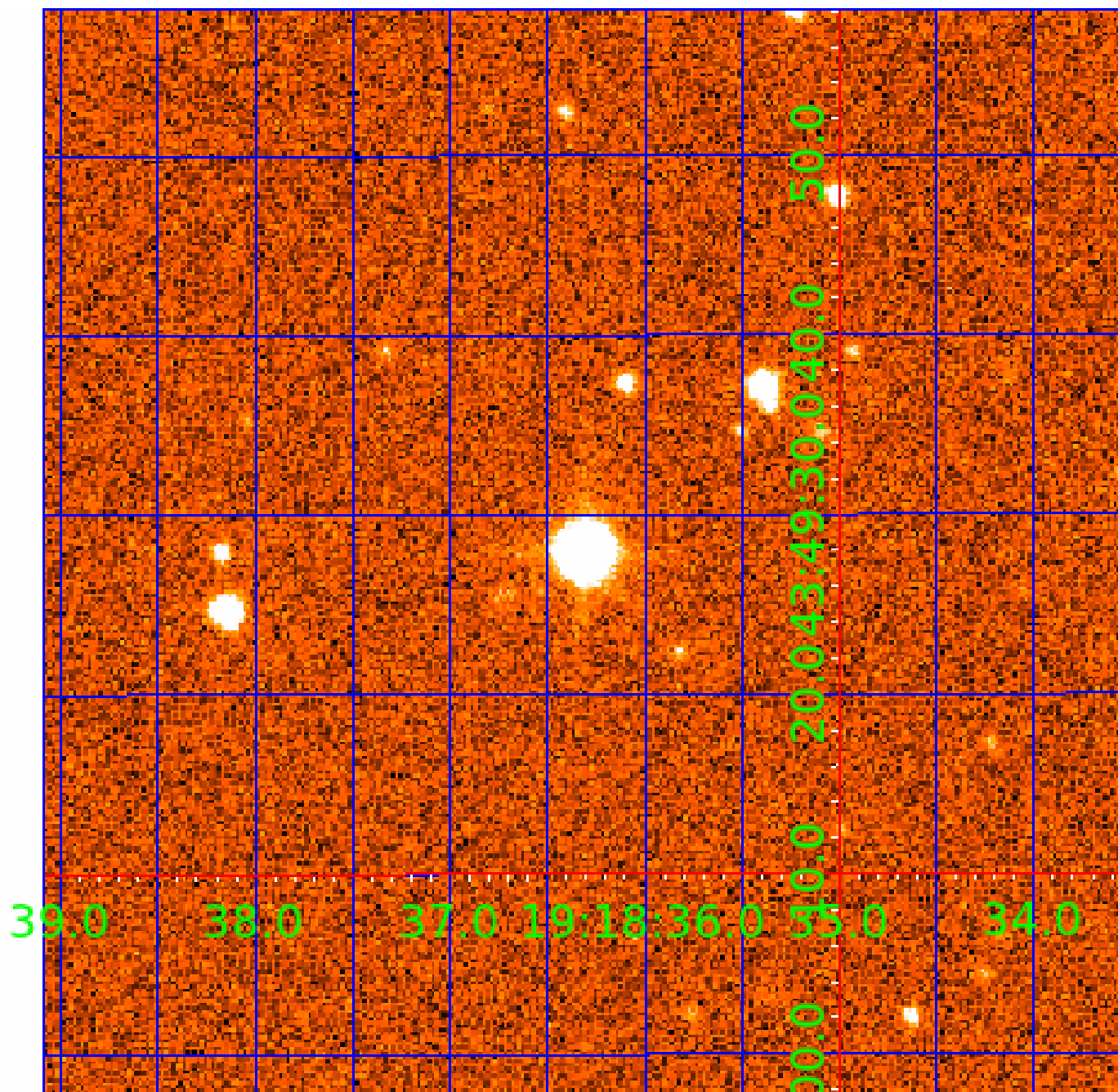


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 008022489

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})
008022489-01	OBS	2674.01	197.511030	272.386806	2555.2	11.152	125.4	122.5	1.67	5616	9.54	5.55
008022489-02	OBS	2674.03	2.535744	133.011687	63.6	4.090	19.6	21.3	1.67	5616	1.64	1846.29
008022489-03	OBS	2674.02	11.172515	140.010933	75.4	6.623	12.3	13.5	1.67	5616	1.71	255.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008022489-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
008022489-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
008022489-03	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

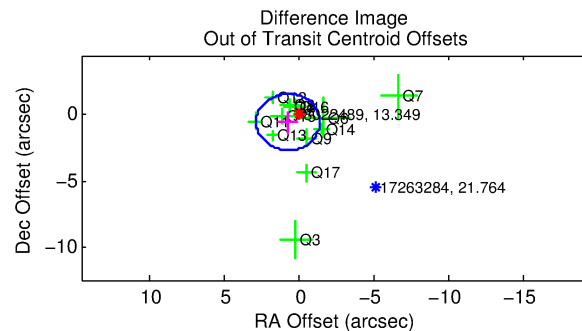
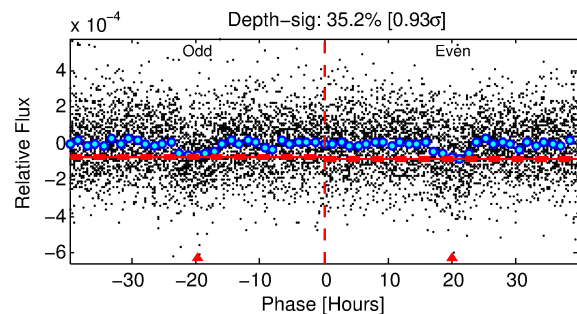
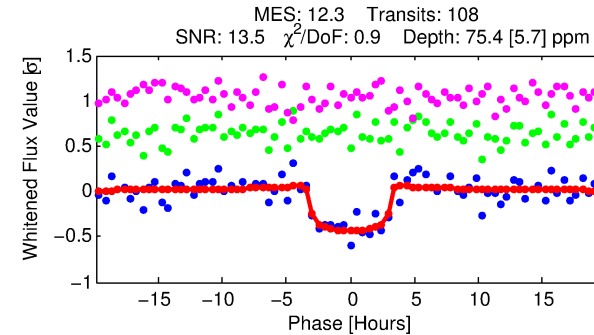
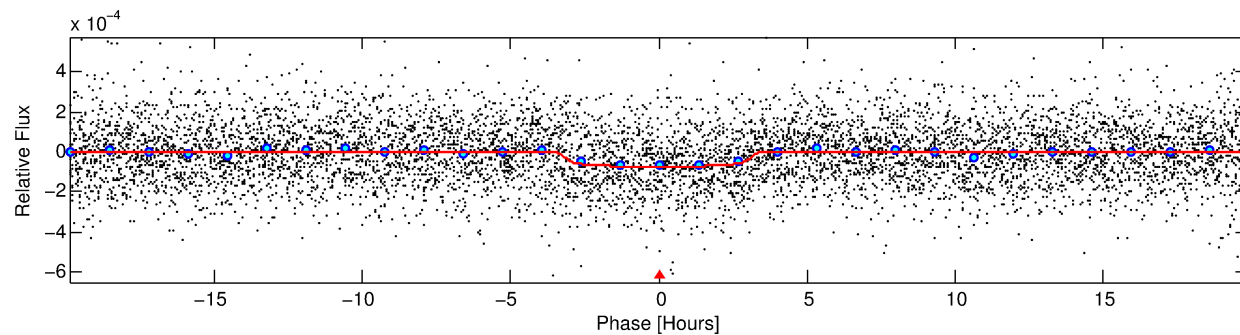
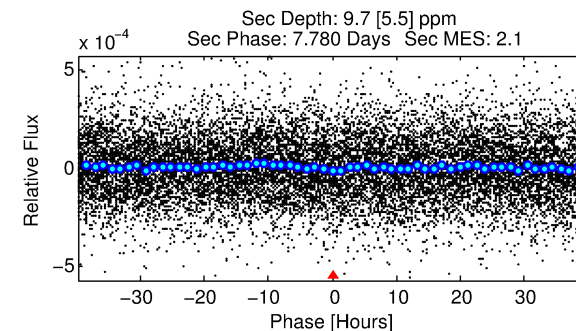
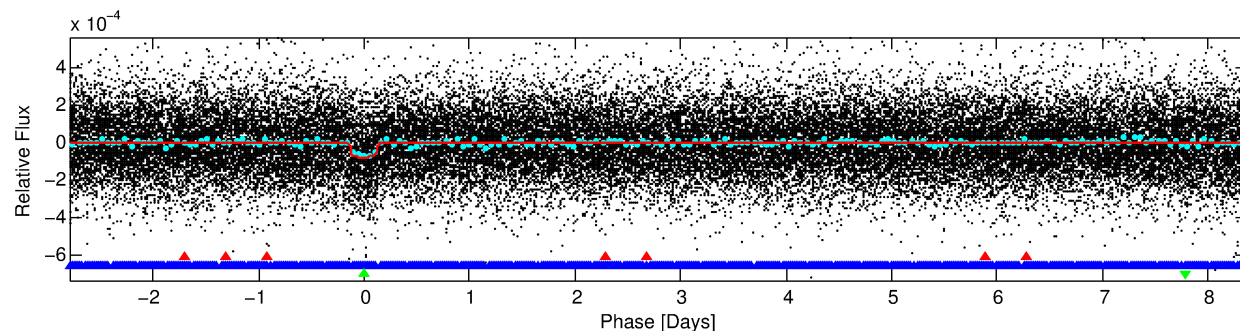
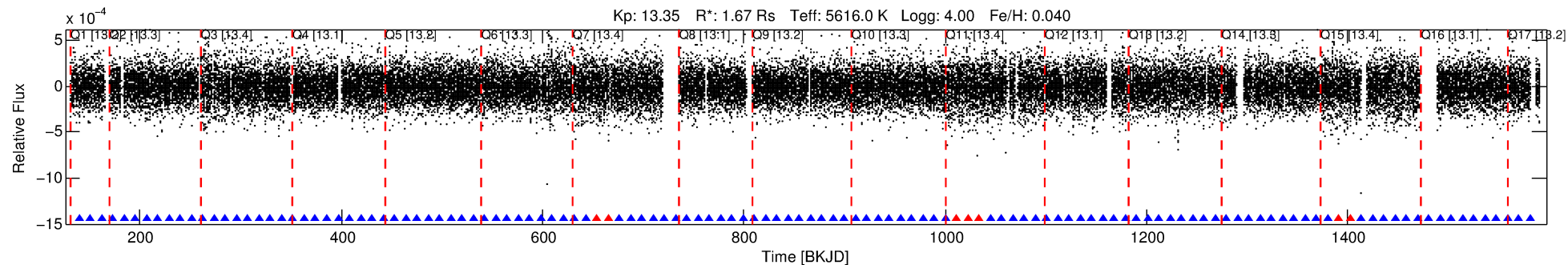
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008022489-03

No Significant Match Found

DV One-Page Summary

KIC: 8022489 Candidate: 3 of 3 Period: 11.173 d
KOI: K02674.02 Corr: 0.950



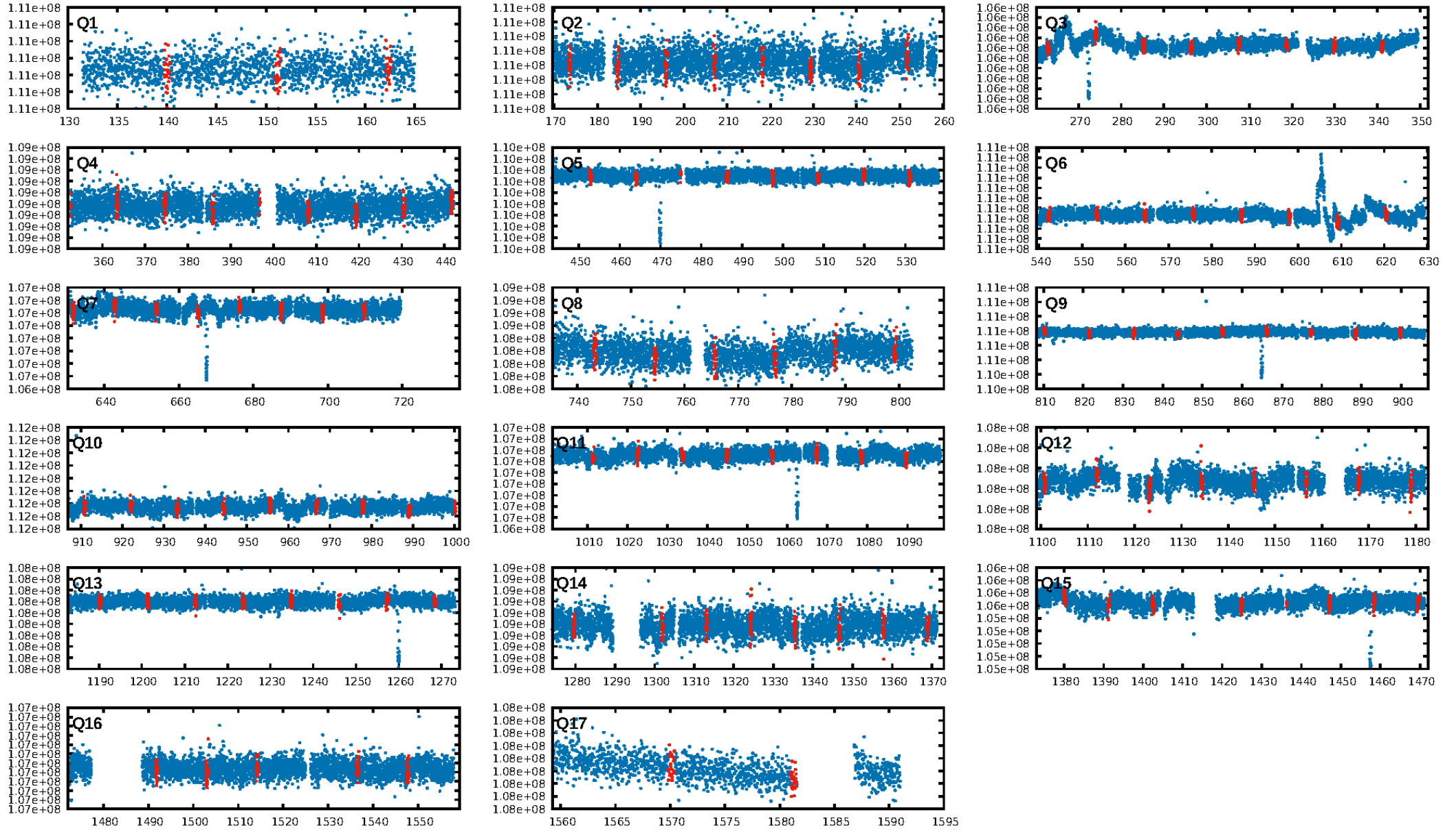
DV Fit Results:

Period = 11.17252 [0.00012] d
Epoch = 140.0109 [0.0080] BKJD
Rp/R* = 0.0094 [0.0029]
a/R* = 6.34 [8.88]
b = 0.88 [0.36]
Seff = 255.61 [90.95]
Teq = 1020 [91] K
Rp = 1.71 [0.66] Re
a = 0.0988 [0.0214] AU
Ag = 17.93 [16.34] [1.04σ]
Teffp = 3244 [688] K [3.20σ]

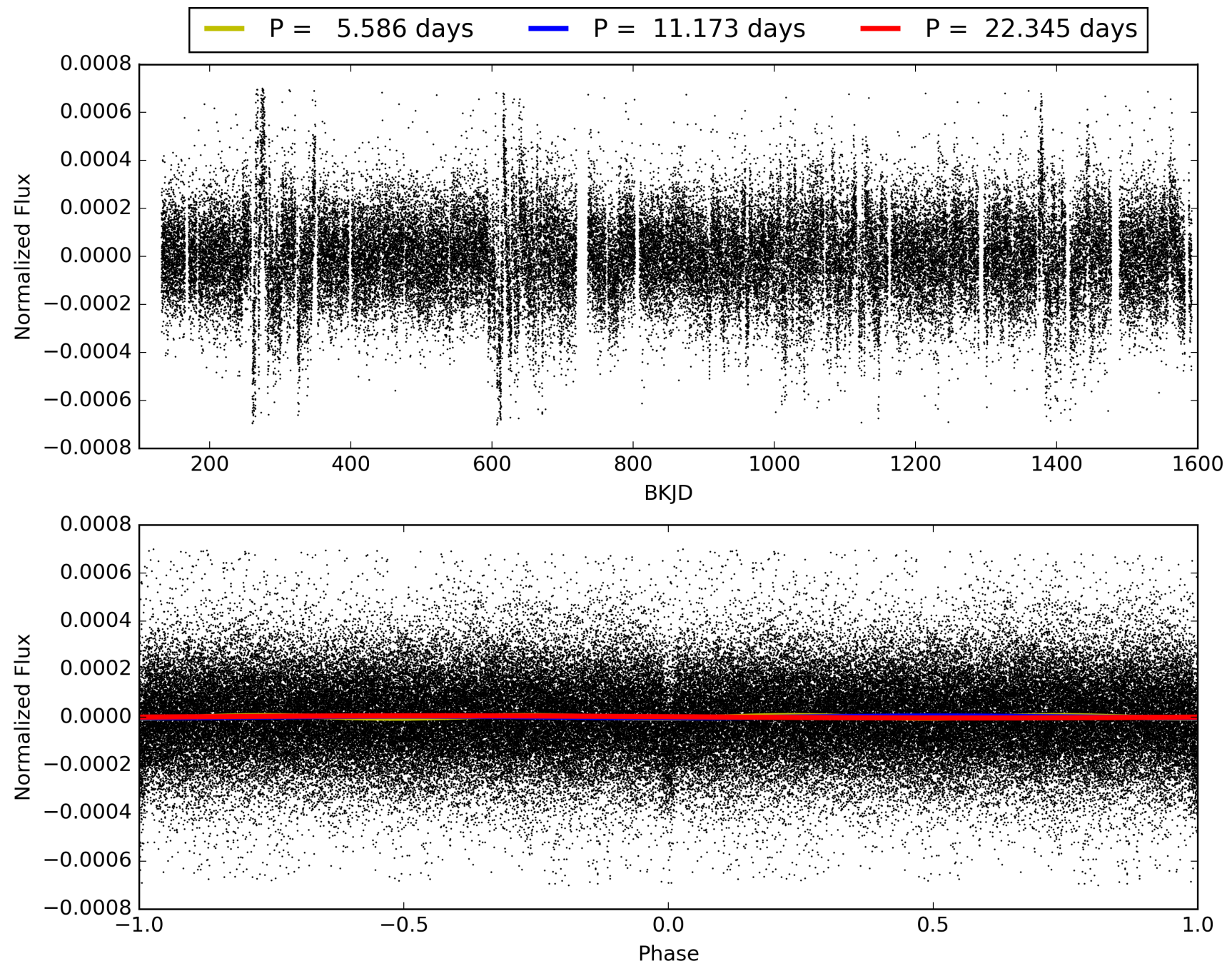
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [26.63σ]
LongPeriod-sig: 100.0% [344.81σ]
ModelChiSquare2-sig: 89.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.51e-31
RollingBand-fgt: 0.93 [96/103]
GhostDiagnostic-chr: 3.762
Centroid-sig: 64.8%
Centroid-so: 0.335 arcsec [0.38σ]
OotOffset-rm: 0.886 arcsec [1.25σ]
OotOffset-st: 2/4/4/3 [13]
KicOffset-rm: 0.825 arcsec [1.18σ]
KicOffset-st: 2/4/4/3 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008022489-03, PDC Light Curves

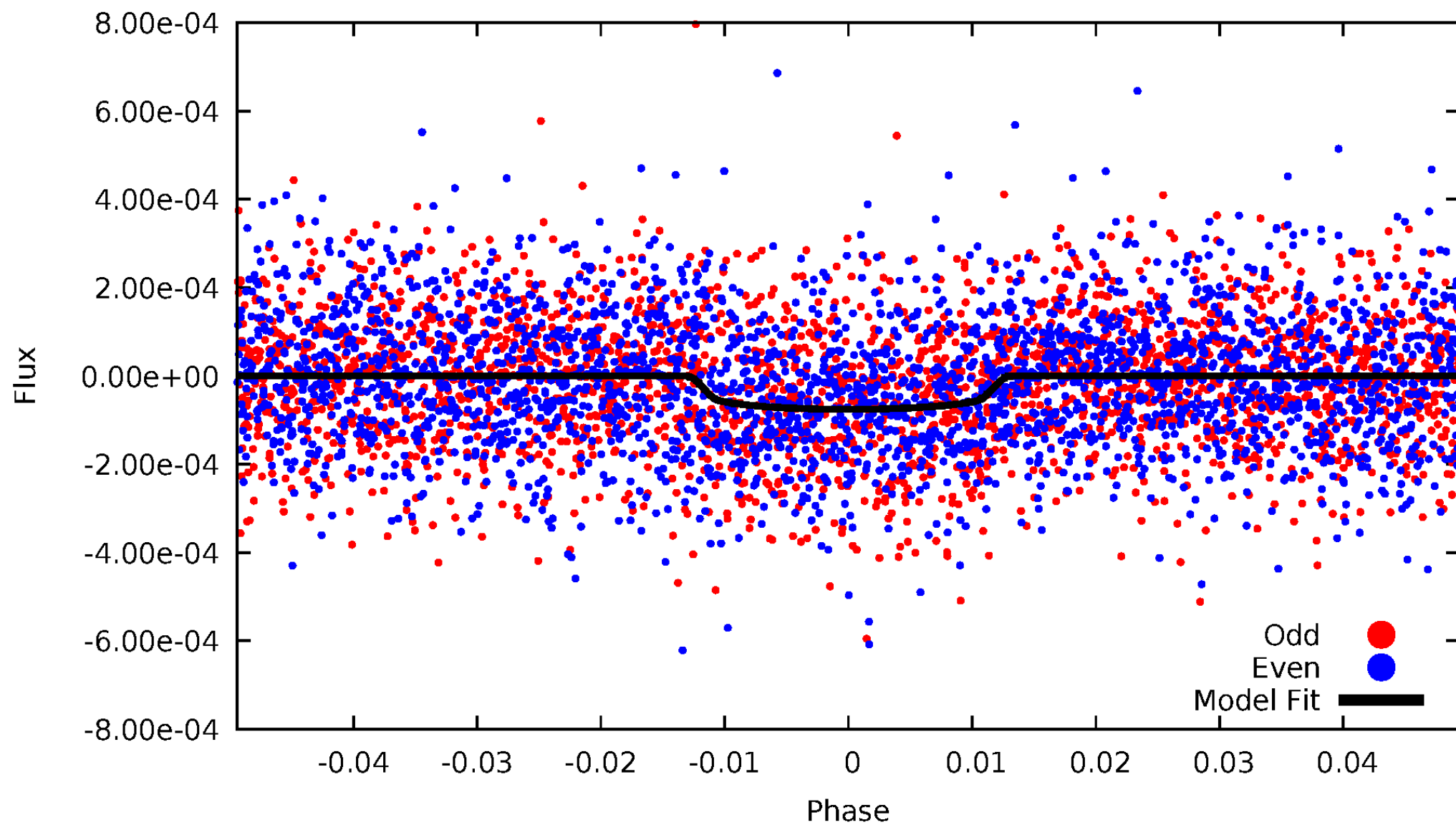


TCE 008022489-03



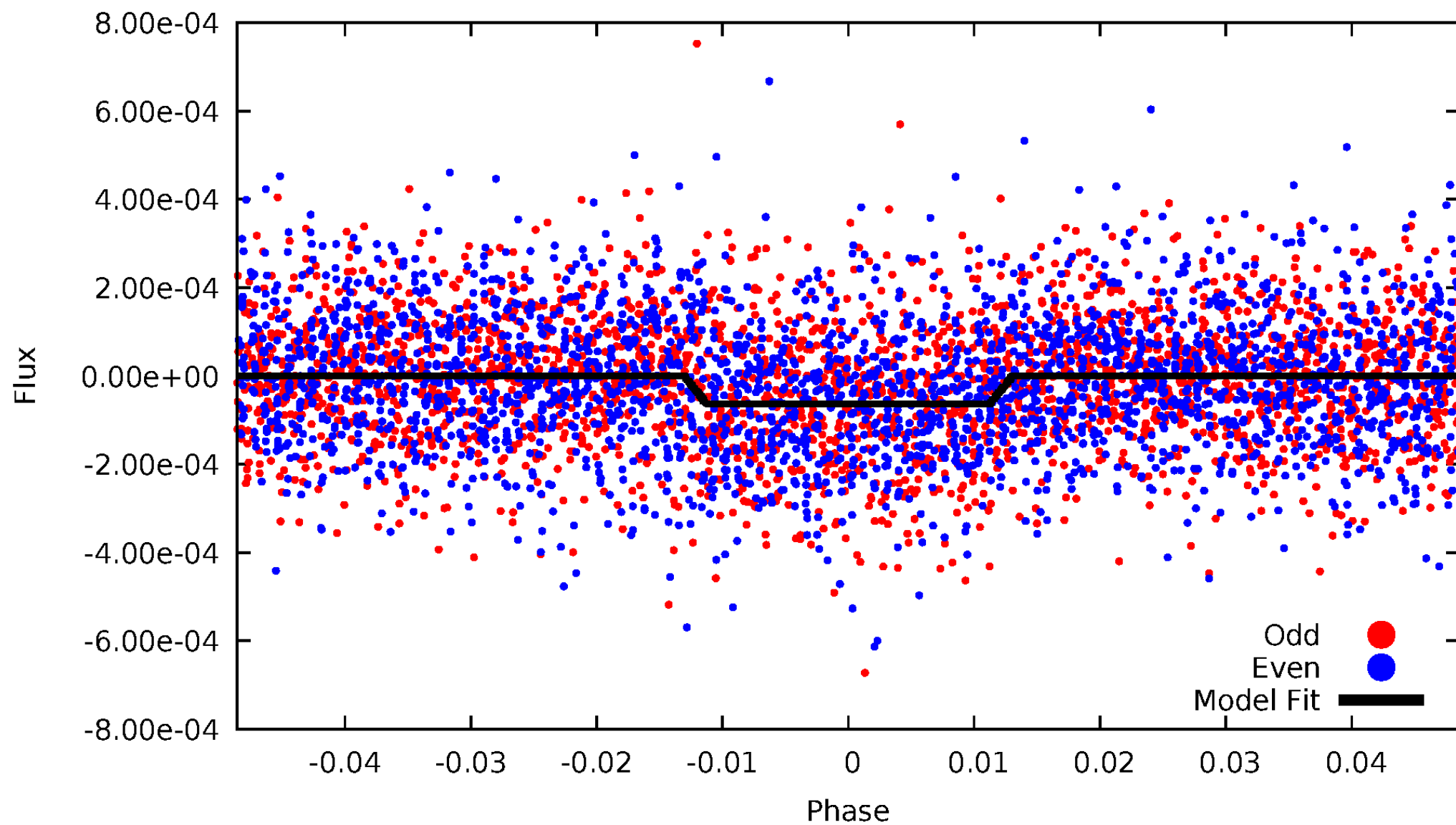
DV Odd/Even

TCE 008022489-03

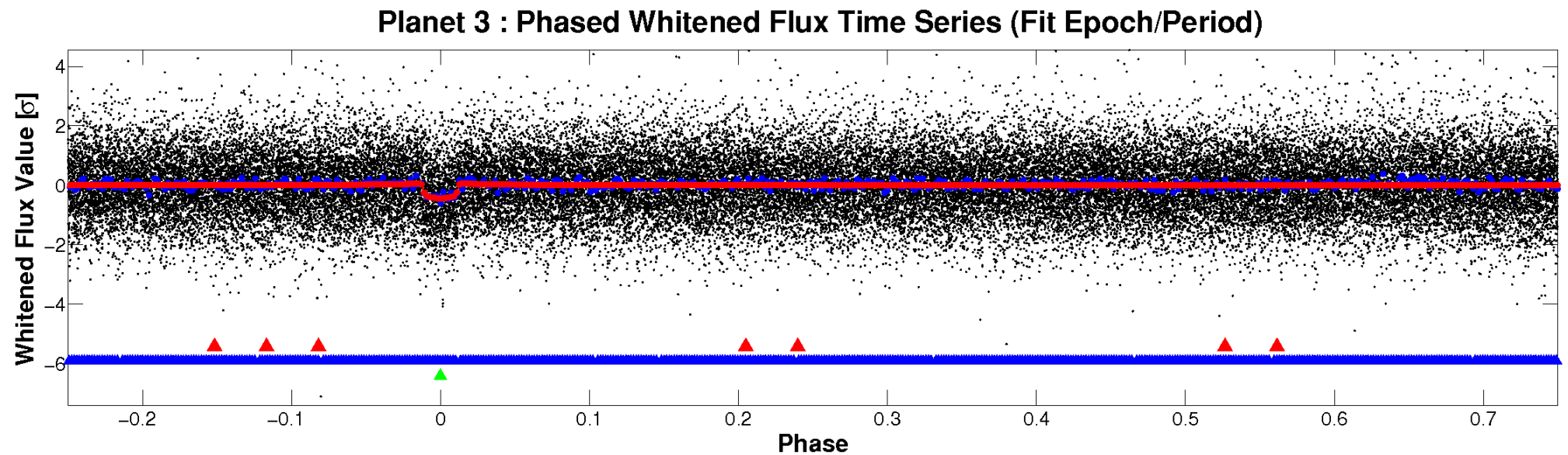
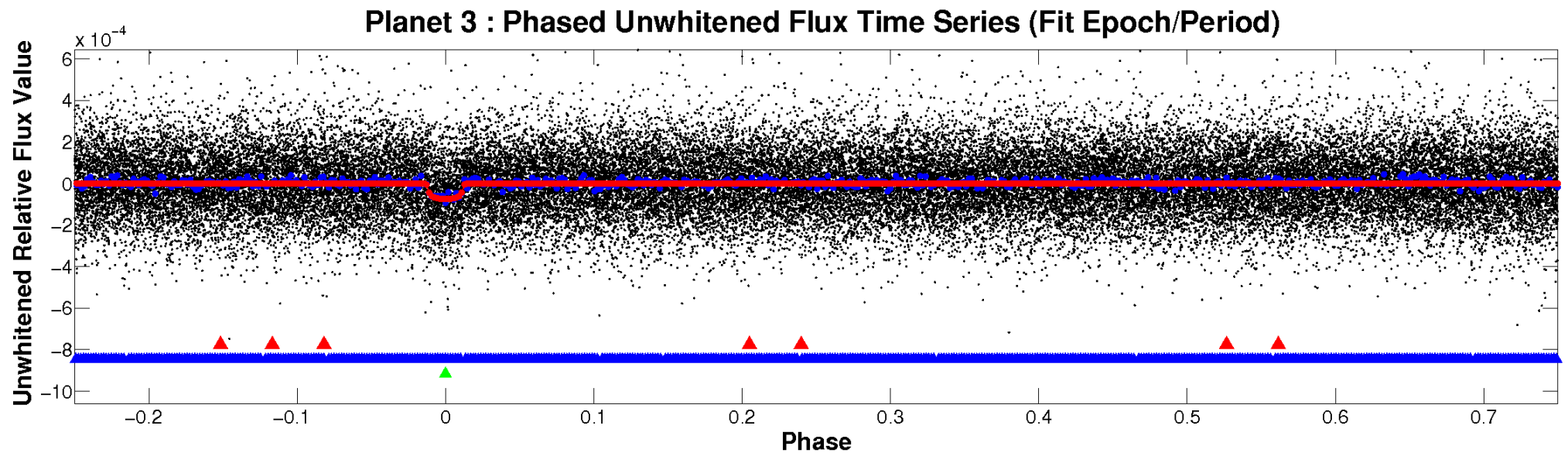


ALT Odd/Even

TCE 008022489-03

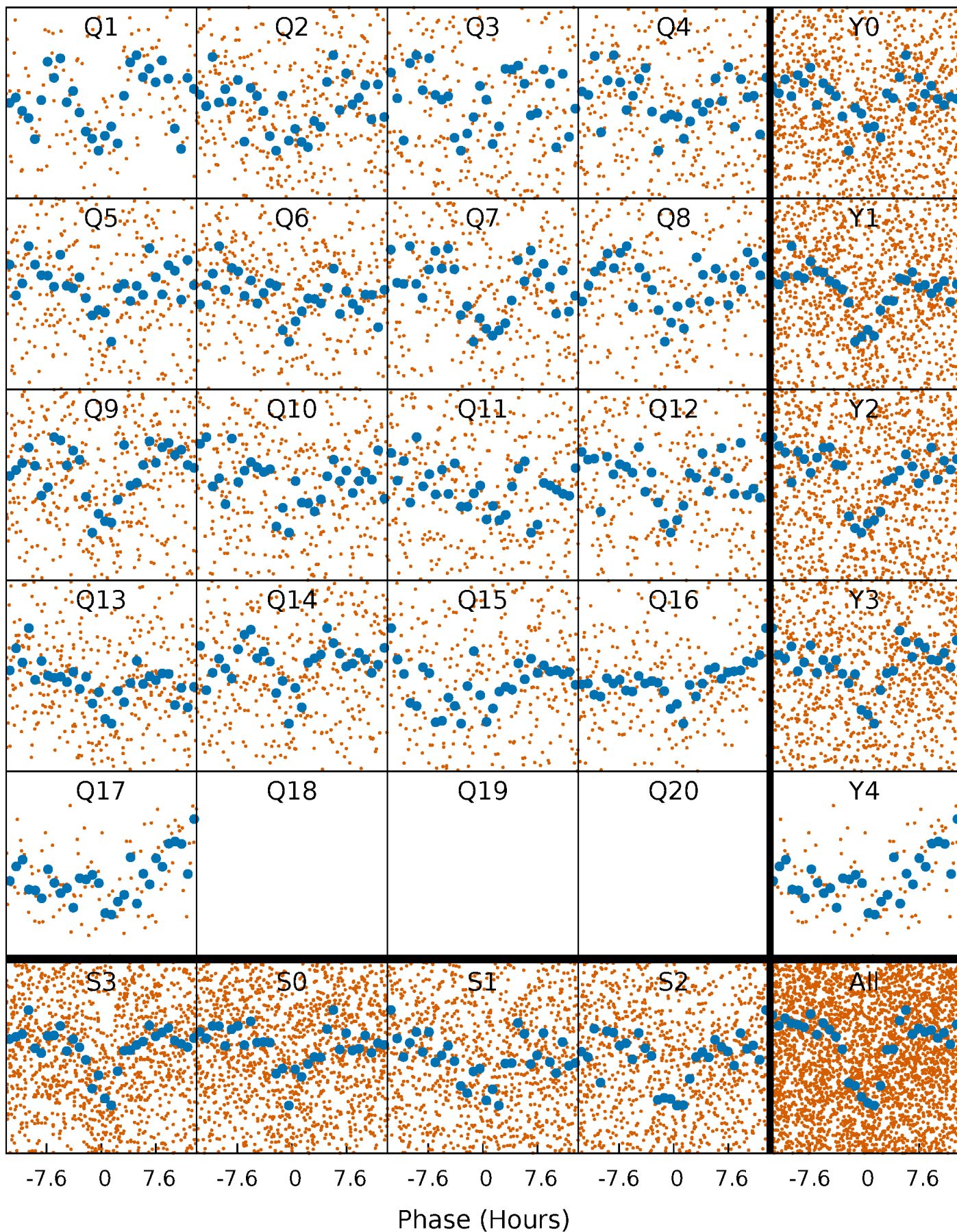


Non-Whitened Vs. Whitened Light Curve



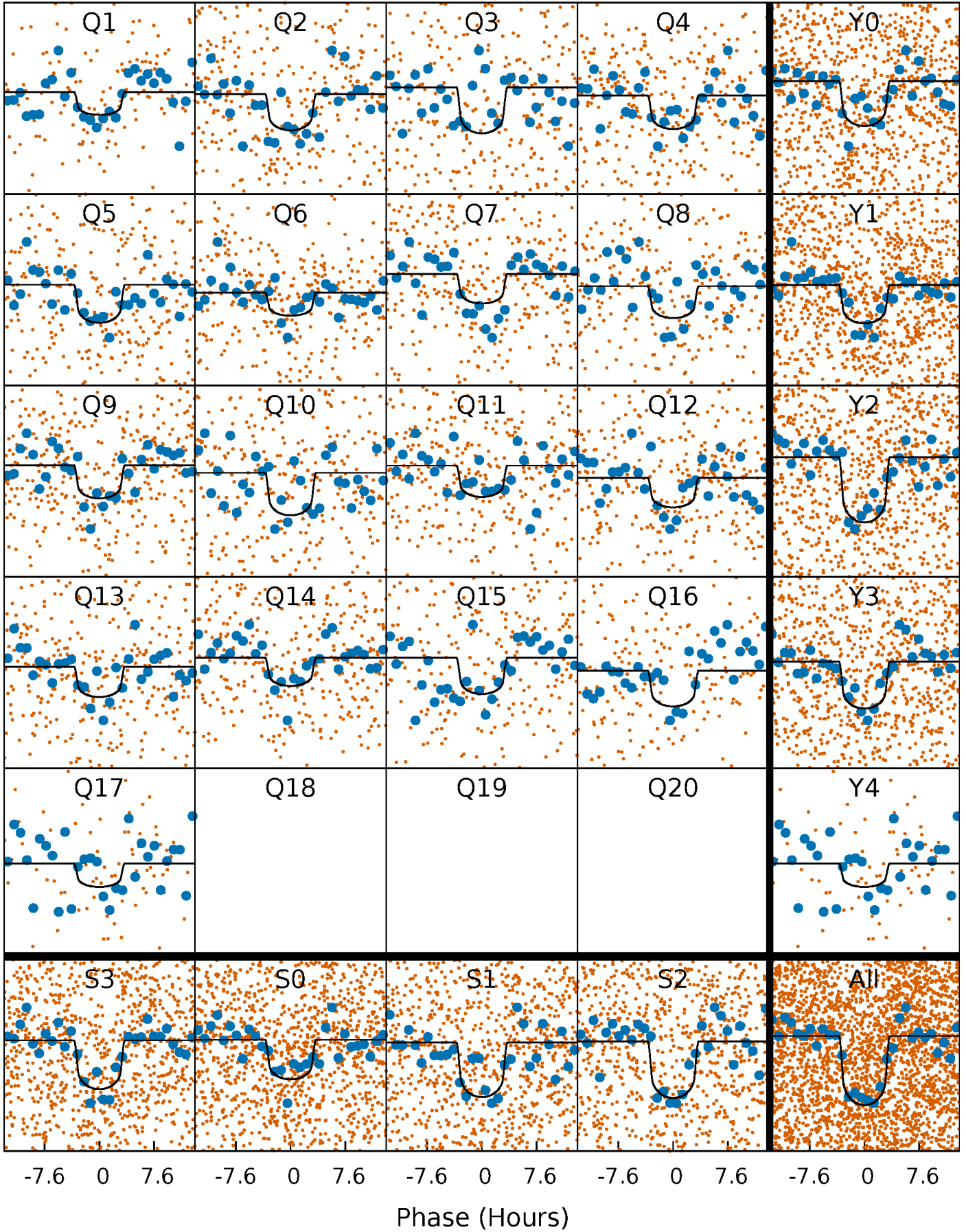
PDC Quarter-Phased Transit Curves

TCE 008022489-03 P= 11.172515 Days $T_0=140.010933$ (BKJD)



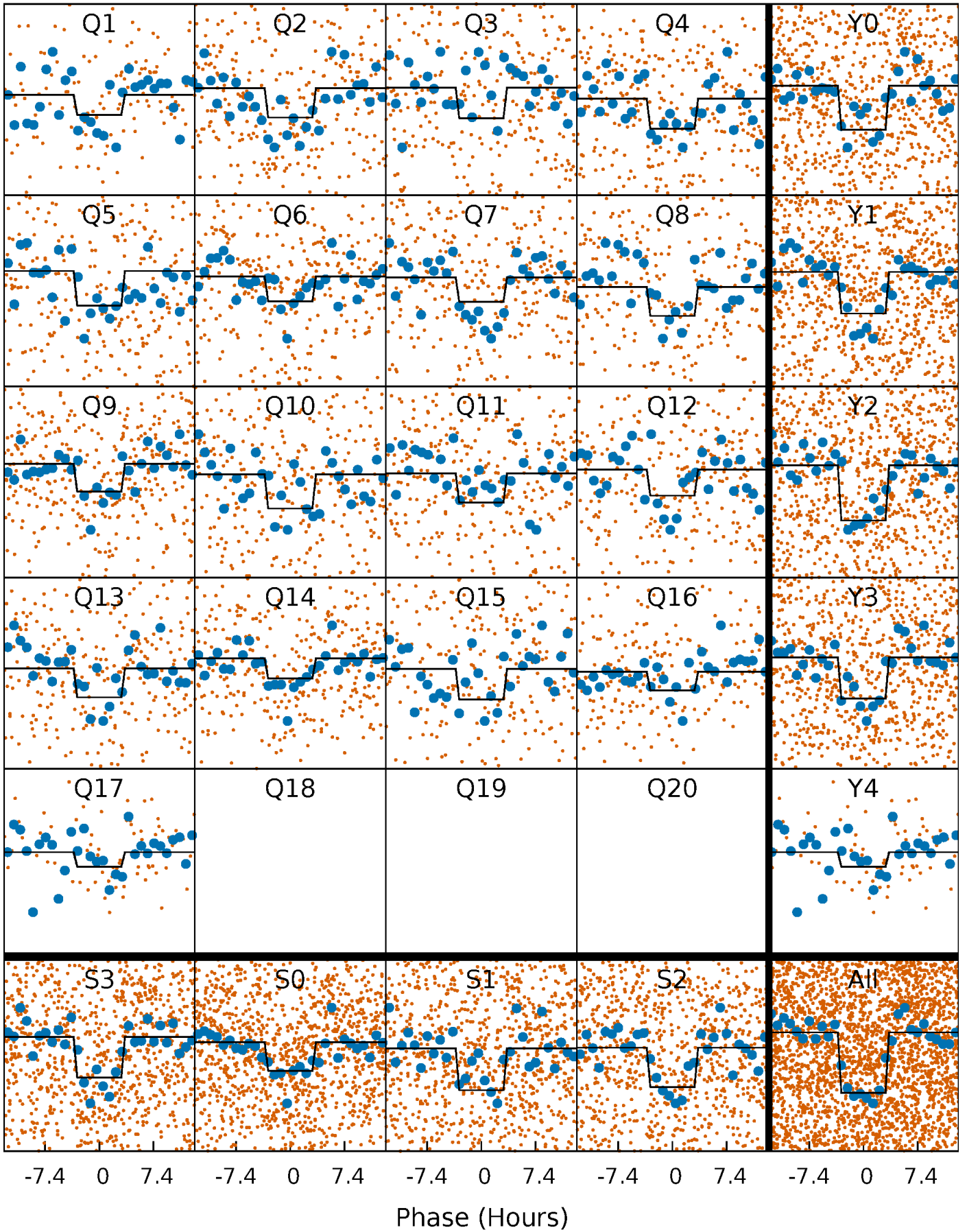
DV Quarter-Phased Transit Curves

TCE 008022489-03 P= 11.172515 Days $T_0=140.010933$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

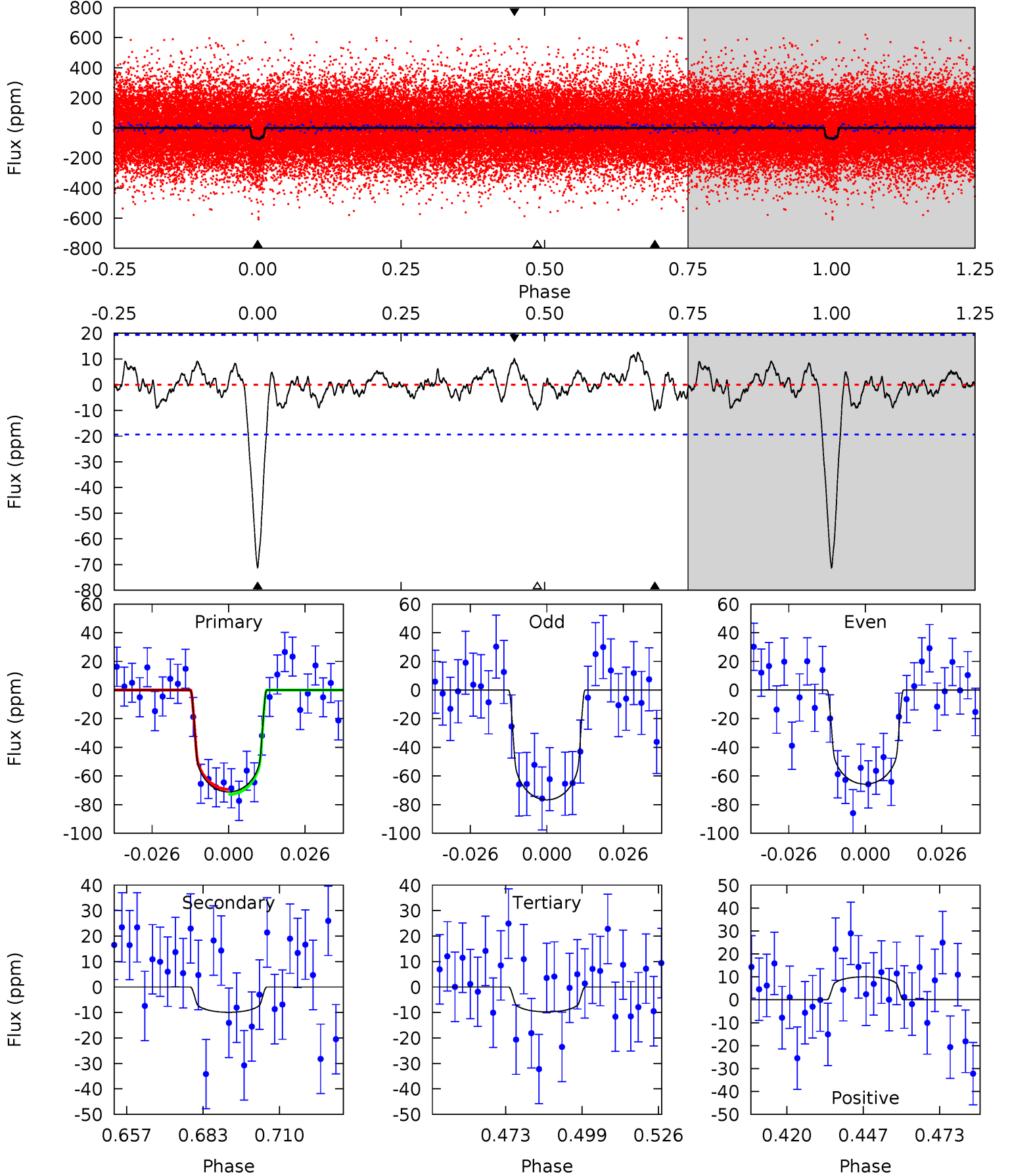
TCE 008022489-03 P= 11.172392 Days $T_0=140.018494$ (BKJD)



DV Model-Shift Uniqueness Test

008022489-03, P = 11.172515 Days, E = 128.838418 Days

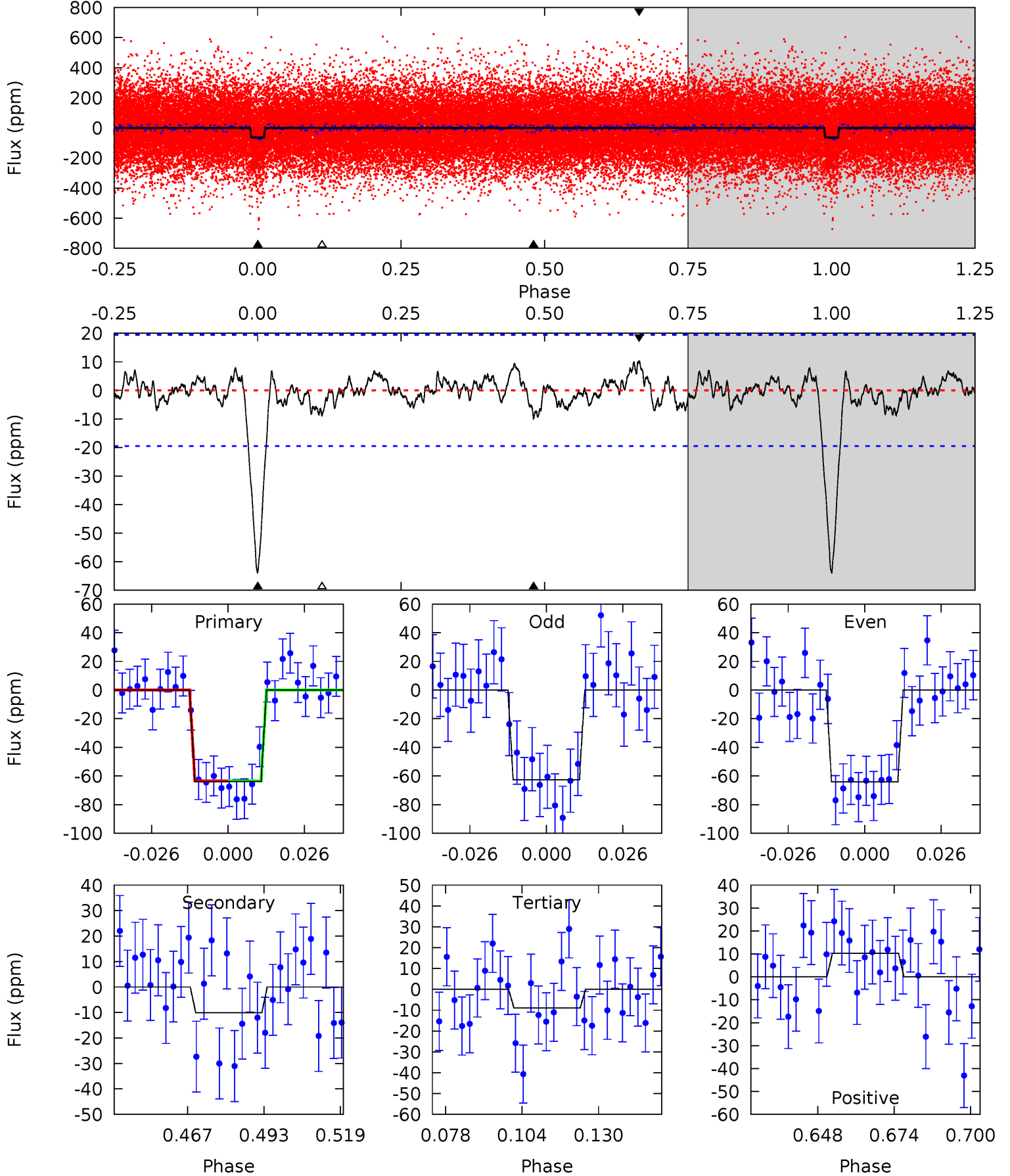
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	2.47	2.43	2.50	4.84	2.22	1.03	15.3	15.2	0.04	-0.02	1.37	1.03	0.15	0.45



Alt Model-Shift Uniqueness Test

008022489-03, P = 11.172392 Days, E = 128.846102 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	2.49	2.22	2.54	4.84	2.23	0.92	13.6	13.3	0.27	-0.04	0.18	1.05	0.14	0.02



Stellar Parameters For KIC 008022489

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5616^{+124}_{-90}	$4.004^{+0.202}_{-0.093}$	$0.040^{+0.150}_{-0.150}$	$1.674^{+0.275}_{-0.378}$	$1.032^{+0.107}_{-0.097}$	$0.310^{+0.354}_{-0.097}$
	+2%/-2%	+5%/-2%	+375%/-375%	+16%/-23%	+10%/-9%	+114%/-31%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 008022489-03 / KOI 2674.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 4	$1.62^{+0.58}_{-0.52}$	1412^{+71}_{-85}	3642^{+621}_{-405}	20^{+28}_{-11}
Alt.	-10 ± 4	$1.46^{+0.51}_{-0.55}$	1416^{+71}_{-88}	3842^{+741}_{-480}	25^{+44}_{-14}

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 $A_{obs} \gg 1.0$

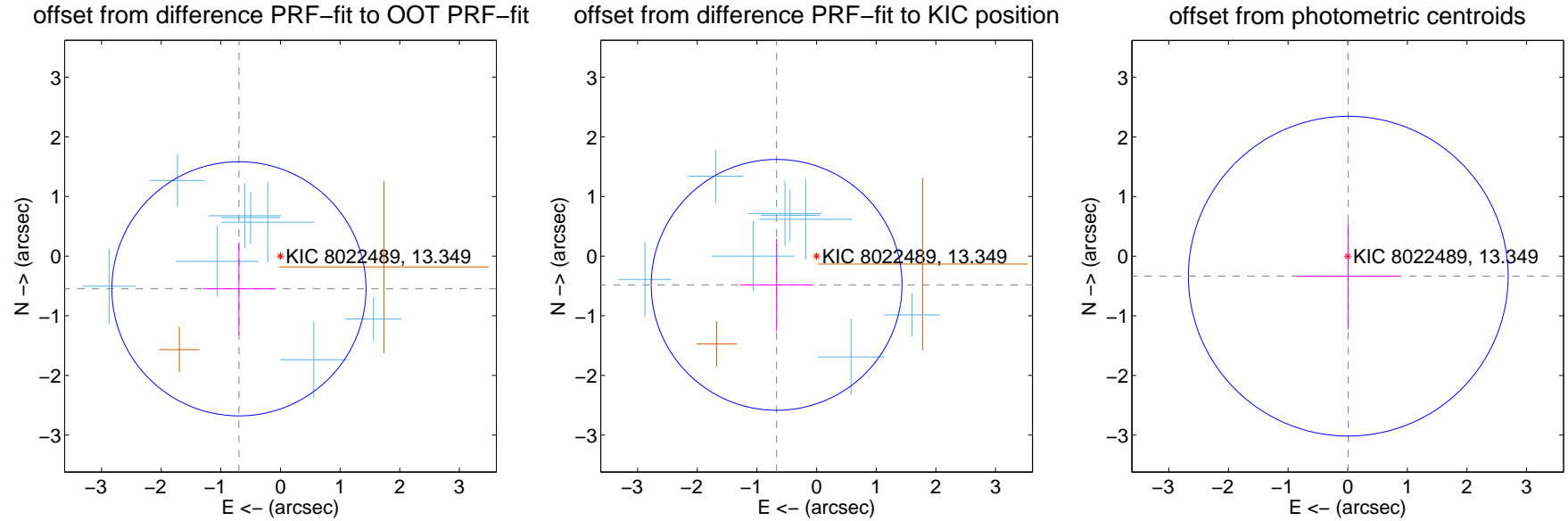
DV Centroid Data

Supplemental centroid analysis for 008022489-03. Kepler magnitude: 13.35. Transit SNR 13.50

There are 8 quarters with good PRF difference image offsets

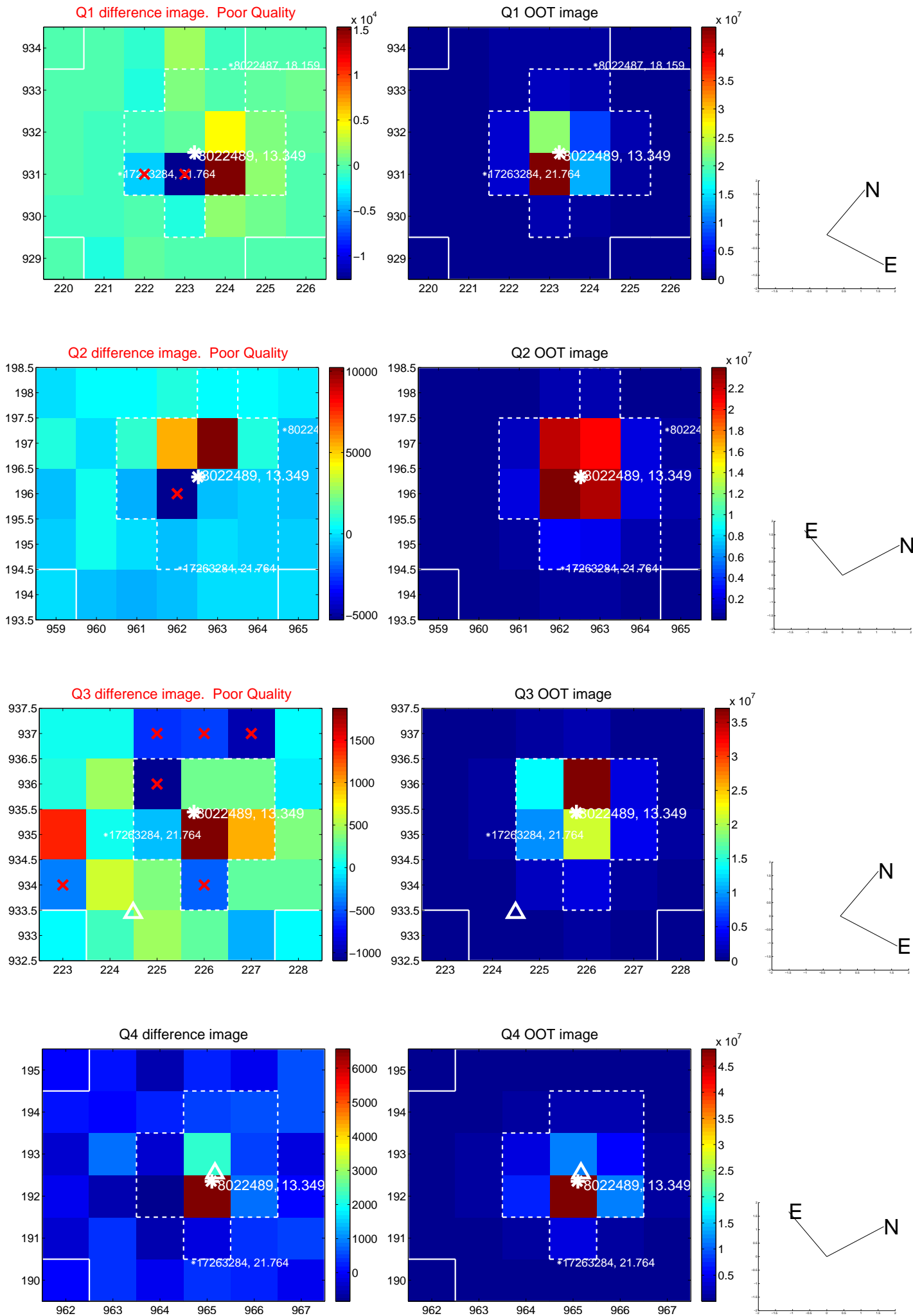
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.886 ± 0.710	1.25	0.696 ± 0.600	-0.548 ± 0.781
PRF-fit source offset from KIC position	0.825 ± 0.701	1.18	0.670 ± 0.618	-0.482 ± 0.775
photometric centroid source offset	0.34 ± 0.89	0.38	-0.01 ± 0.87	-0.34 ± 0.89

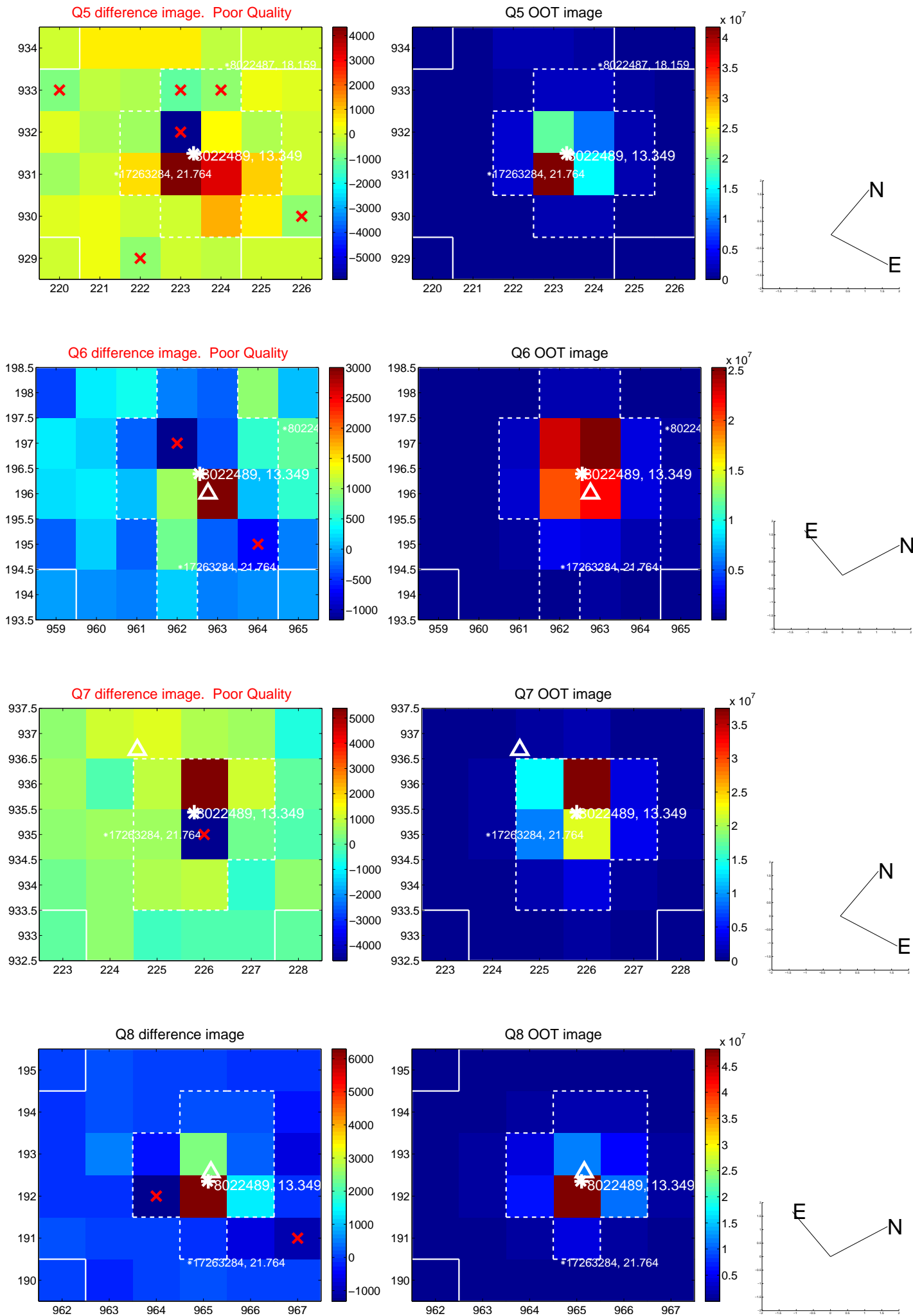


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

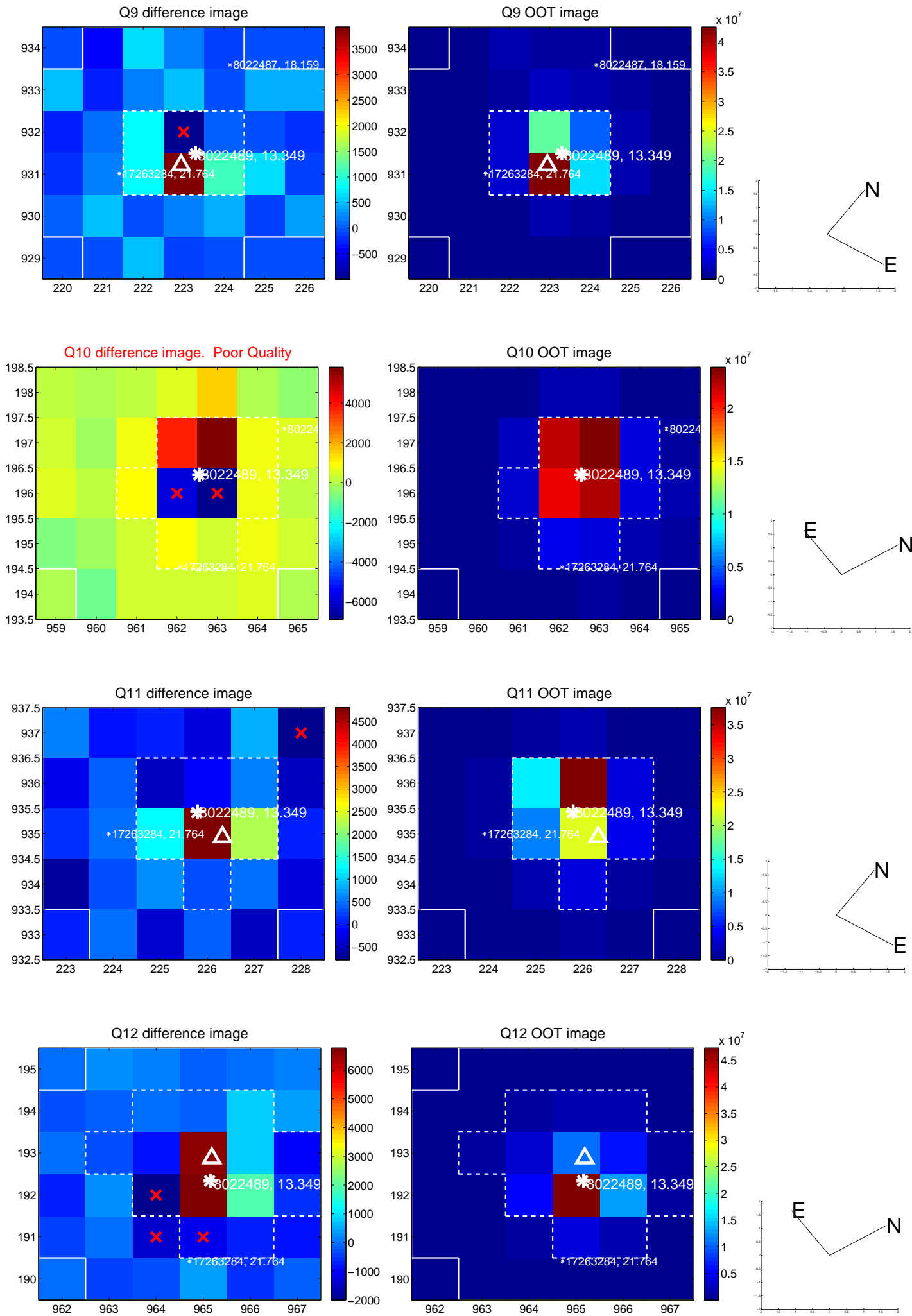
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



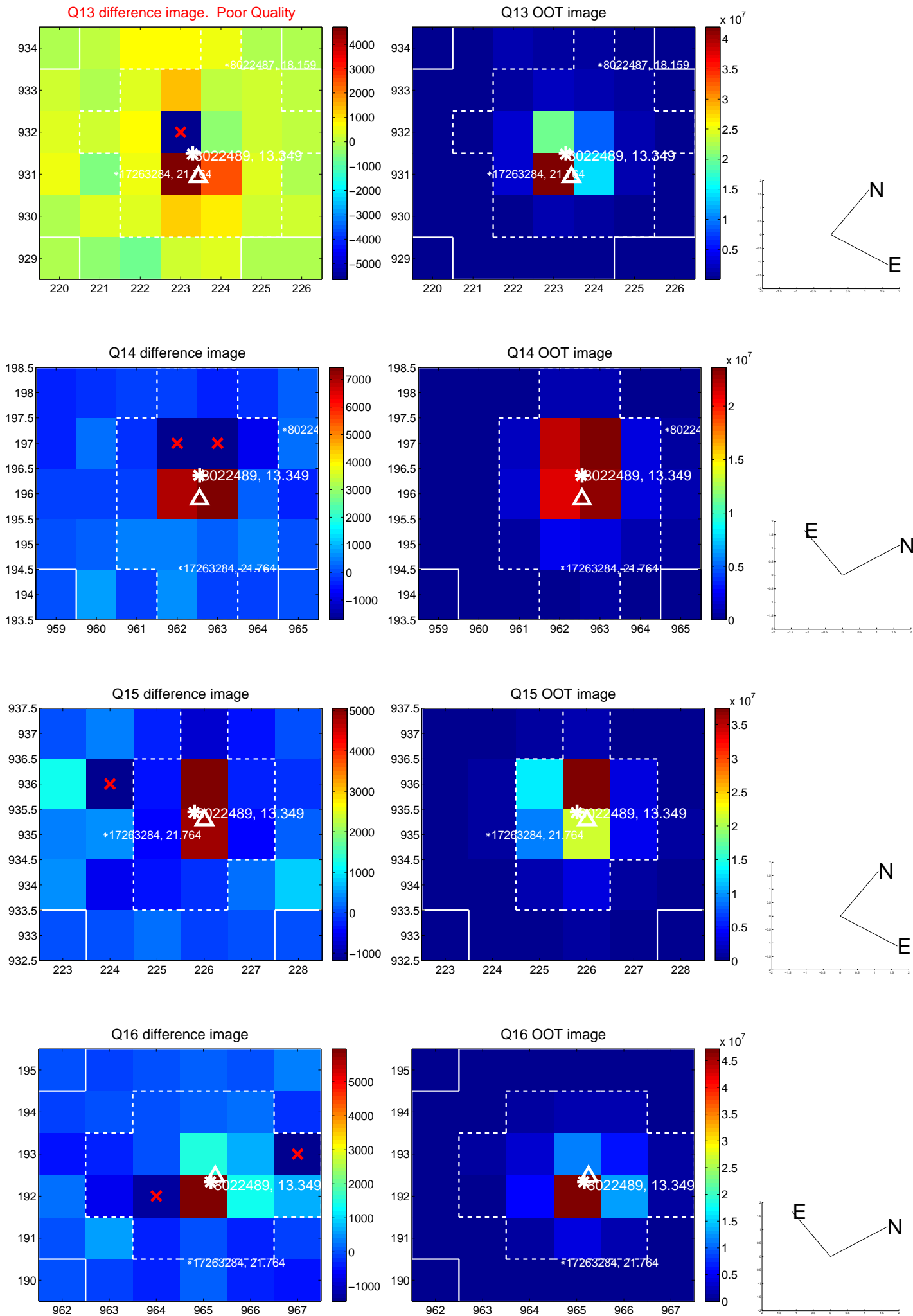
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



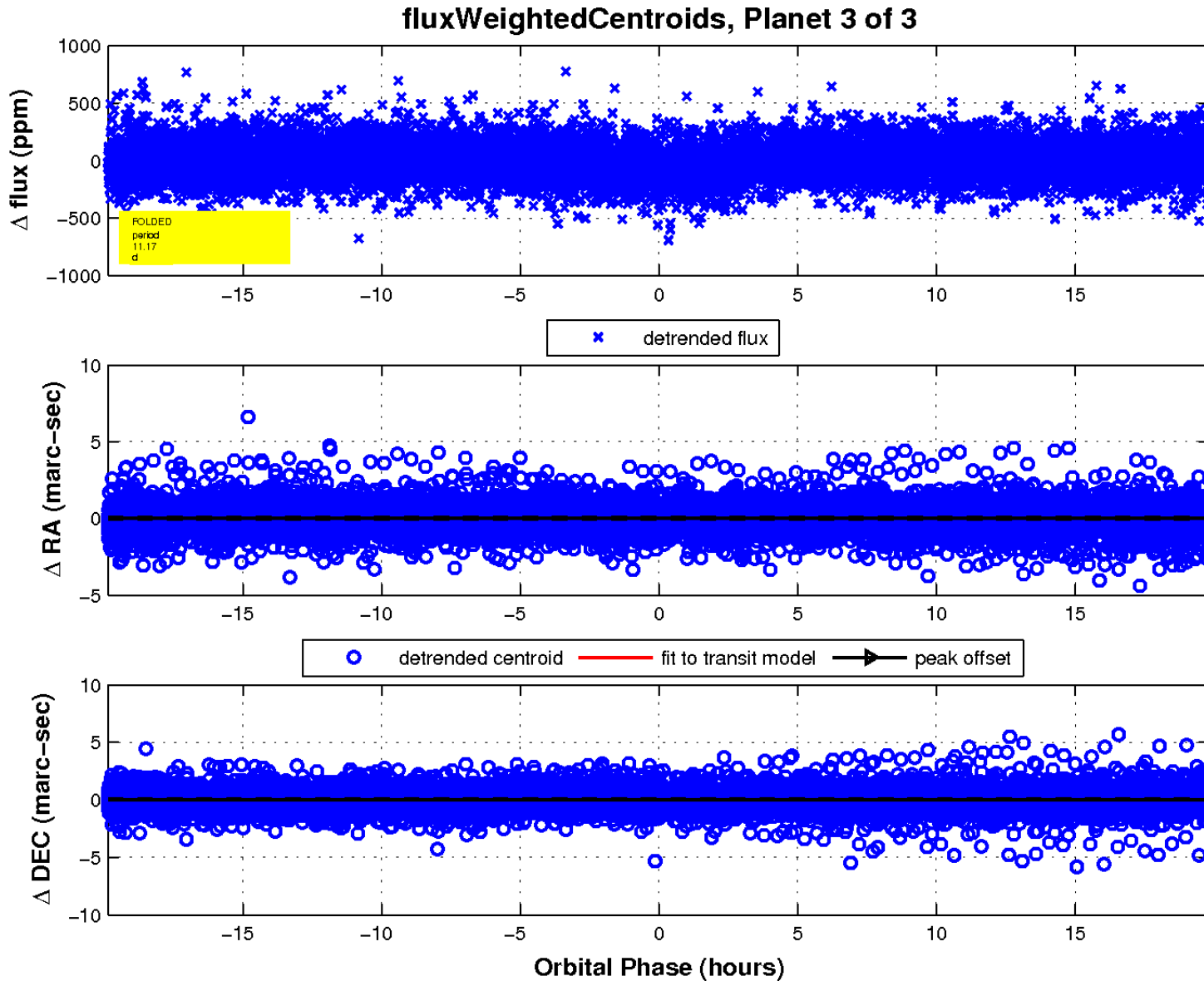
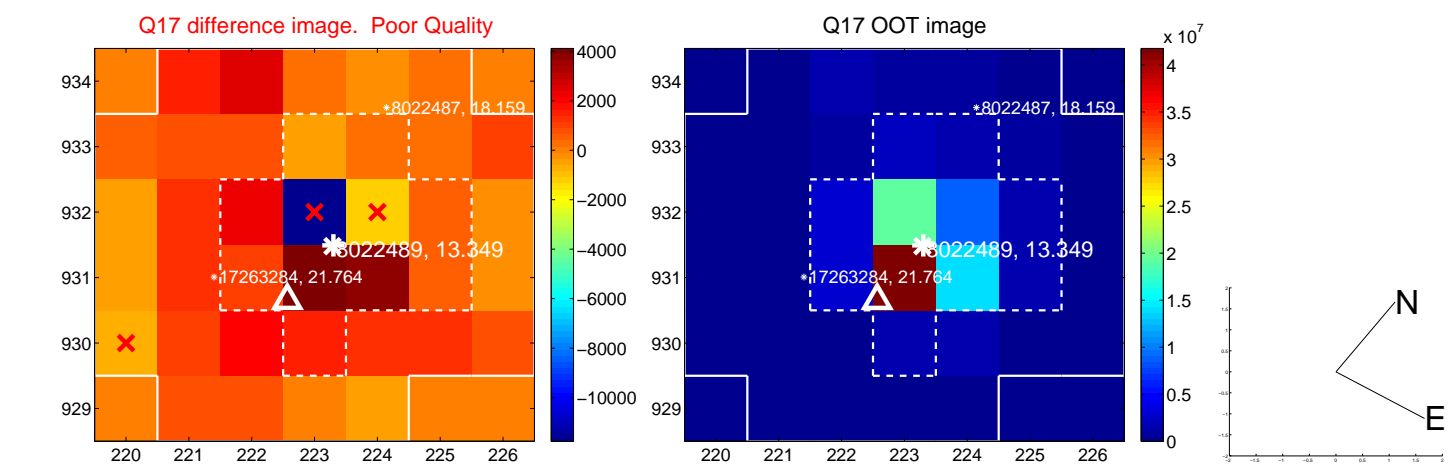
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

