

KIC 005202905

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})
005202905-01	OBS	1932.01	22.824317	144.477858	291.9	7.620	35.6	39.2	1.85	6642	3.75	189.84
005202905-02	OBS	1932.02	14.844538	143.581339	164.3	5.949	24.6	26.0	1.85	6642	2.59	336.89
005202905-03	OBS	No	2.063089	133.176249	29.1	2.802	8.2	8.3	1.85	6642	1.16	4679.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005202905-01	OBS	PC	0.94	0	0	0	0	NO_COMMENT
005202905-02	OBS	PC	0.64	0	0	0	0	NO_COMMENT
005202905-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

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

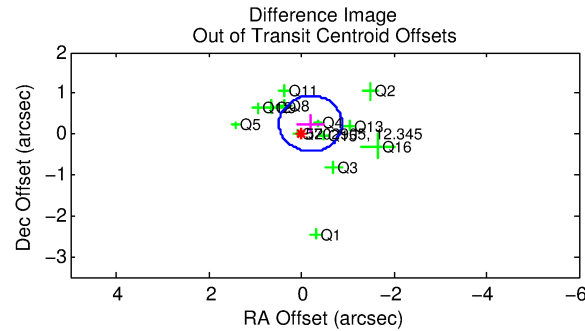
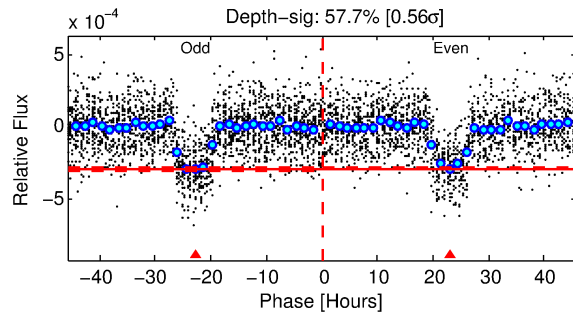
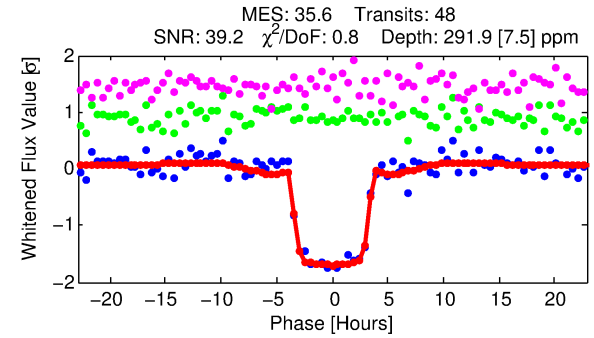
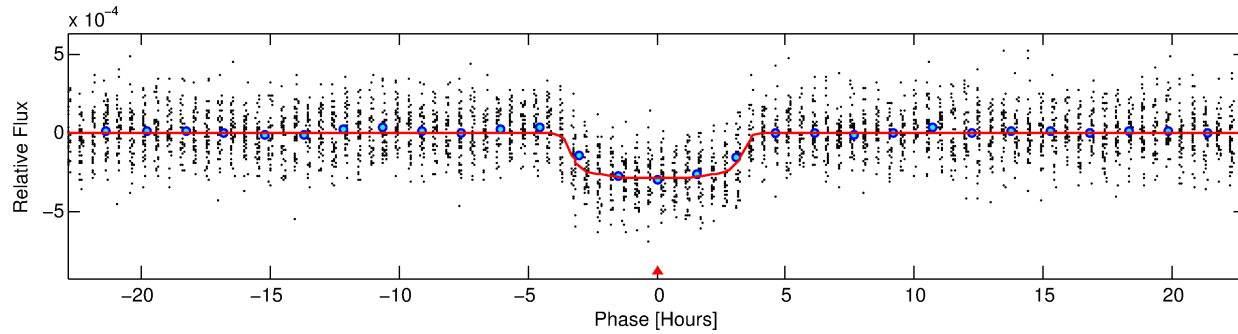
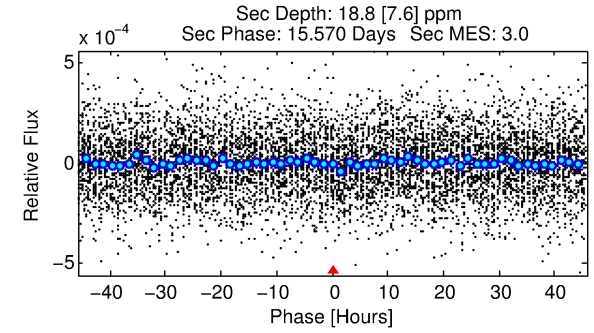
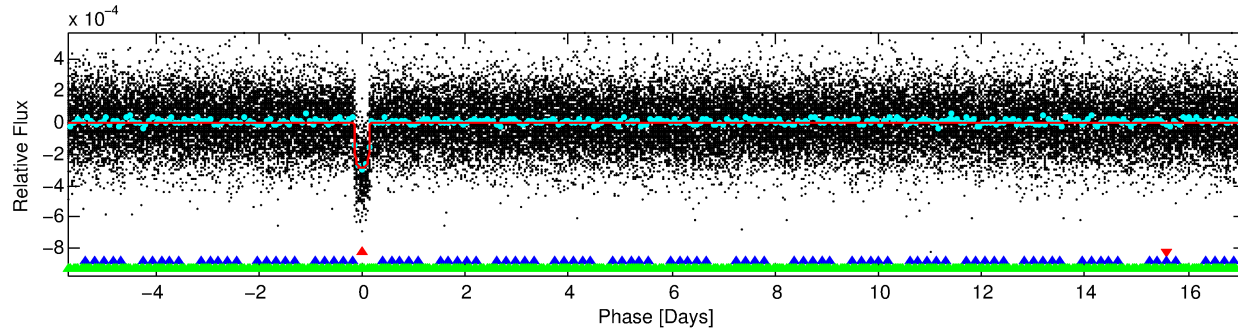
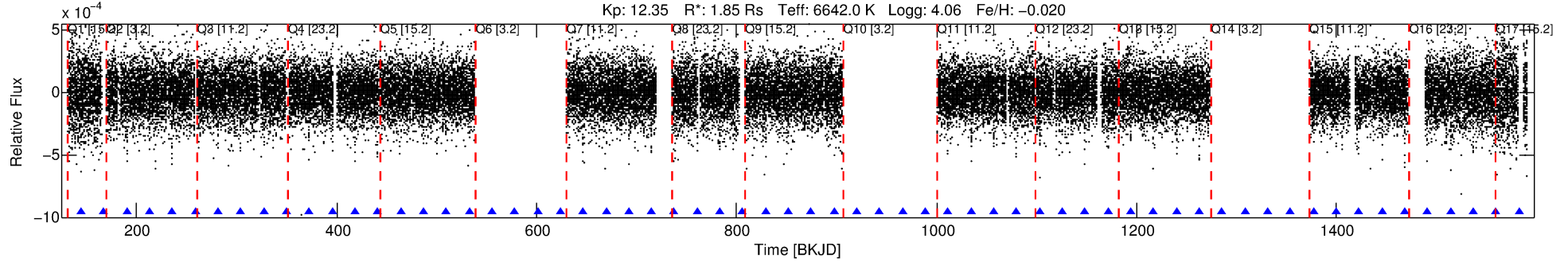
Ephemeris Match Information For 005202905-01

No Significant Match Found

DV One-Page Summary

KIC: 5202905 Candidate: 1 of 3 Period: 22.824 d
KOI: K01932.01 Name: Kepler-340c Corr: 0.923

Kp: 12.35 R*: 1.85 Rs Teff: 6642.0 K Logg: 4.06 Fe/H: -0.020



DV Fit Results:

Period = 22.82432 [0.00010] d
Epoch = 144.4779 [0.0036] BKJD
Rp/R* = 0.0186 [0.0005]
a/R* = 10.05 [1.23]
b = 0.92 [0.02]
Seff = 189.84 [60.34]
Teq = 947 [75] K
Rp = 3.75 [0.82] Re
a = 0.1769 [0.0348] AU
Ag = 23.05 [11.69] [1.89σ]
Teffp = 3207 [334] K [6.60σ]

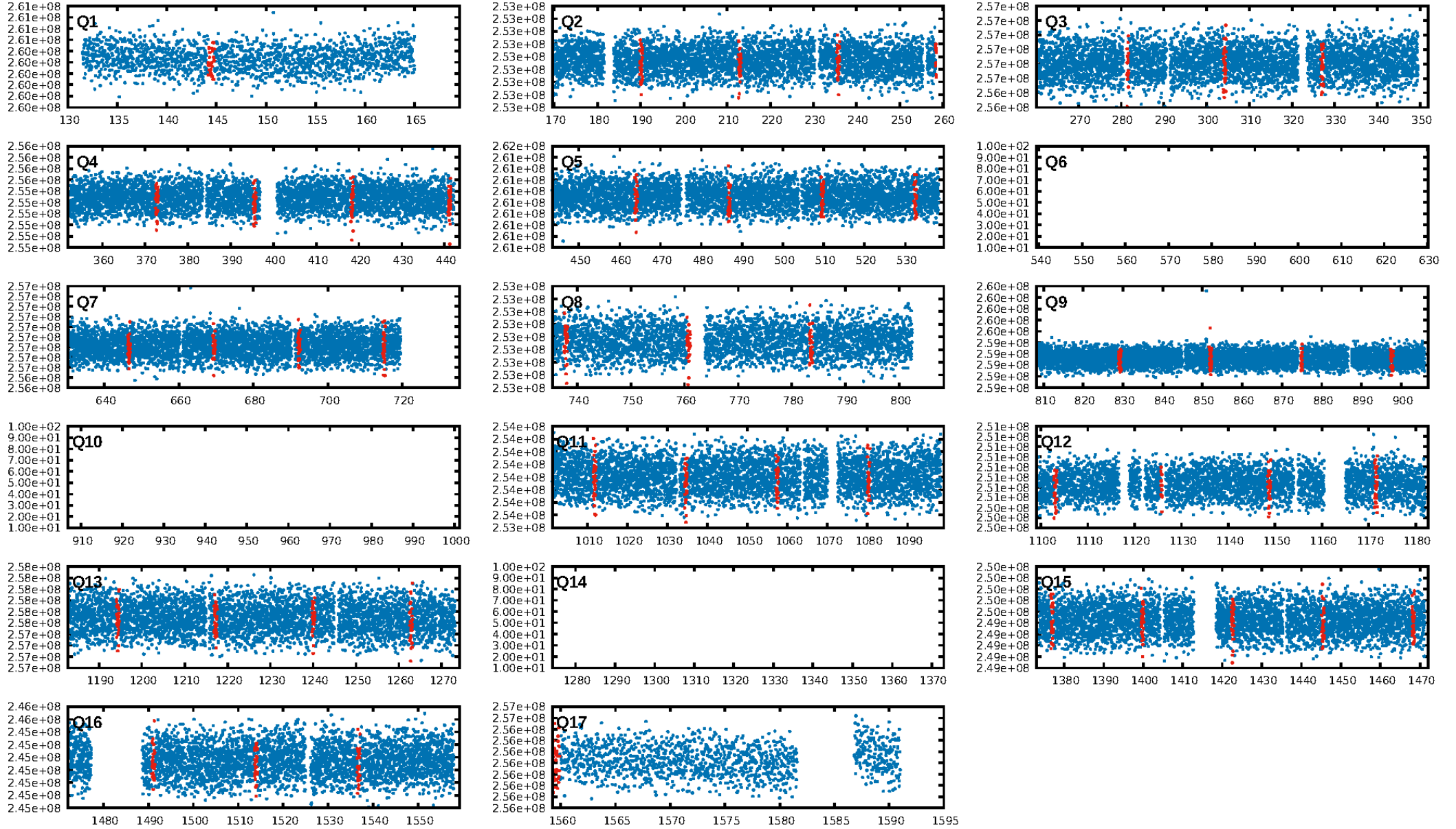
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.81σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.66e-286
RollingBand-fgt: 1.00 [46/46]
GhostDiagnostic-chr: 3.504
Centroid-sig: 62.5%
Centroid-so: 0.039 arcsec [0.18σ]
OotOffset-rm: 0.321 arcsec [1.41σ]
KicOffset-rm: 0.444 arcsec [1.98σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 0.46 [6/13]

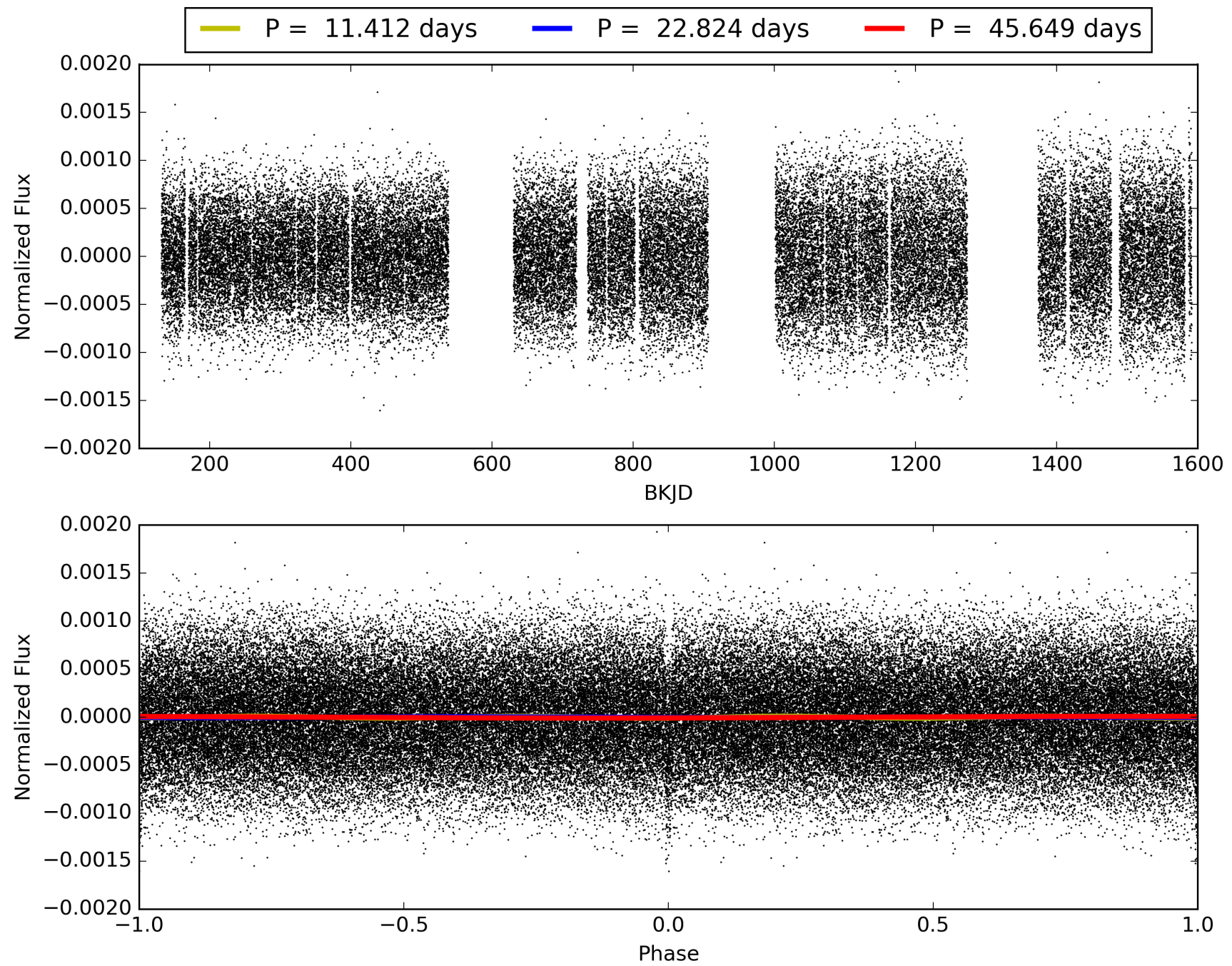
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:05:49 Z

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

TCE 005202905-01, PDC Light Curves

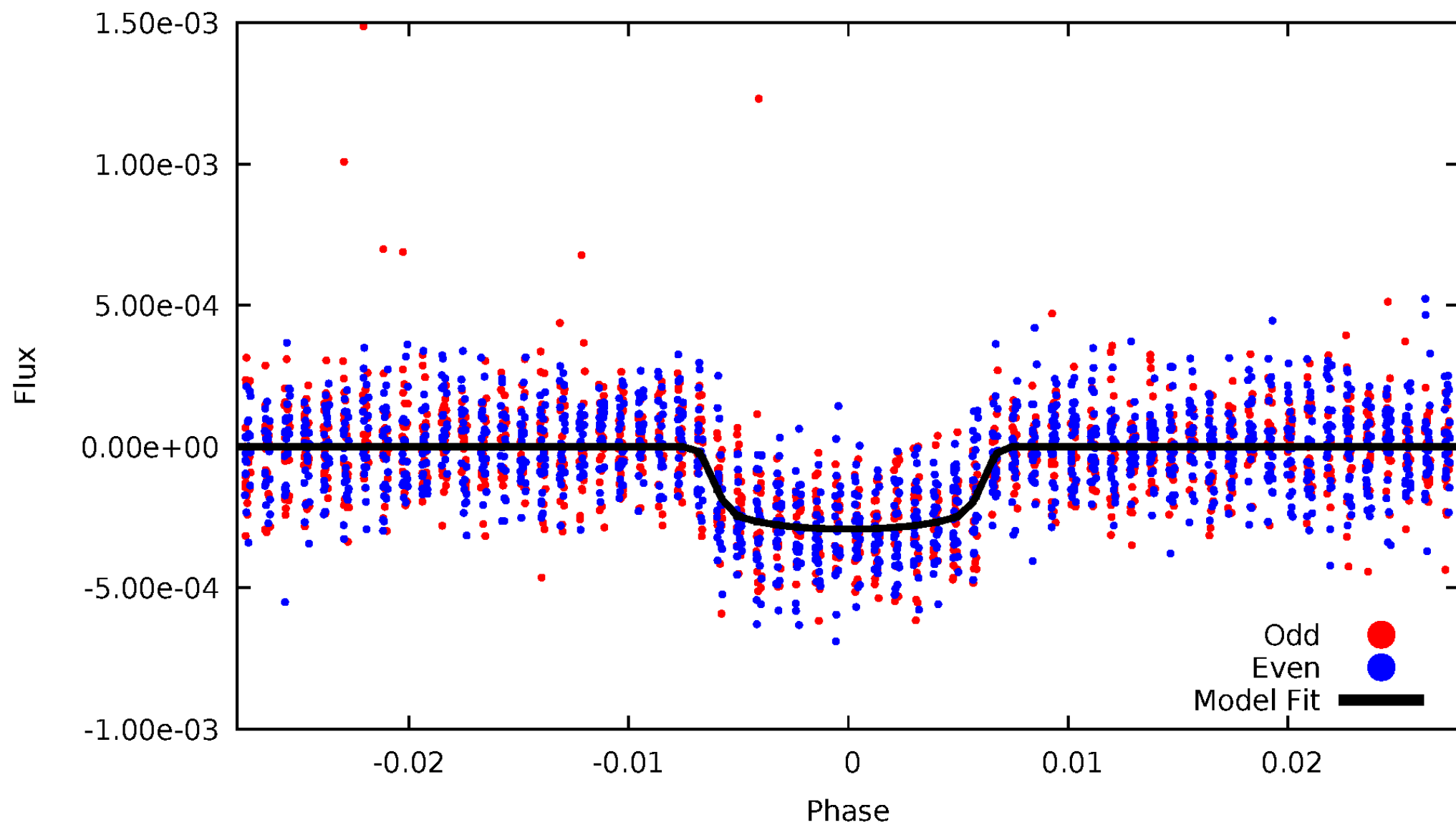


TCE 005202905-01



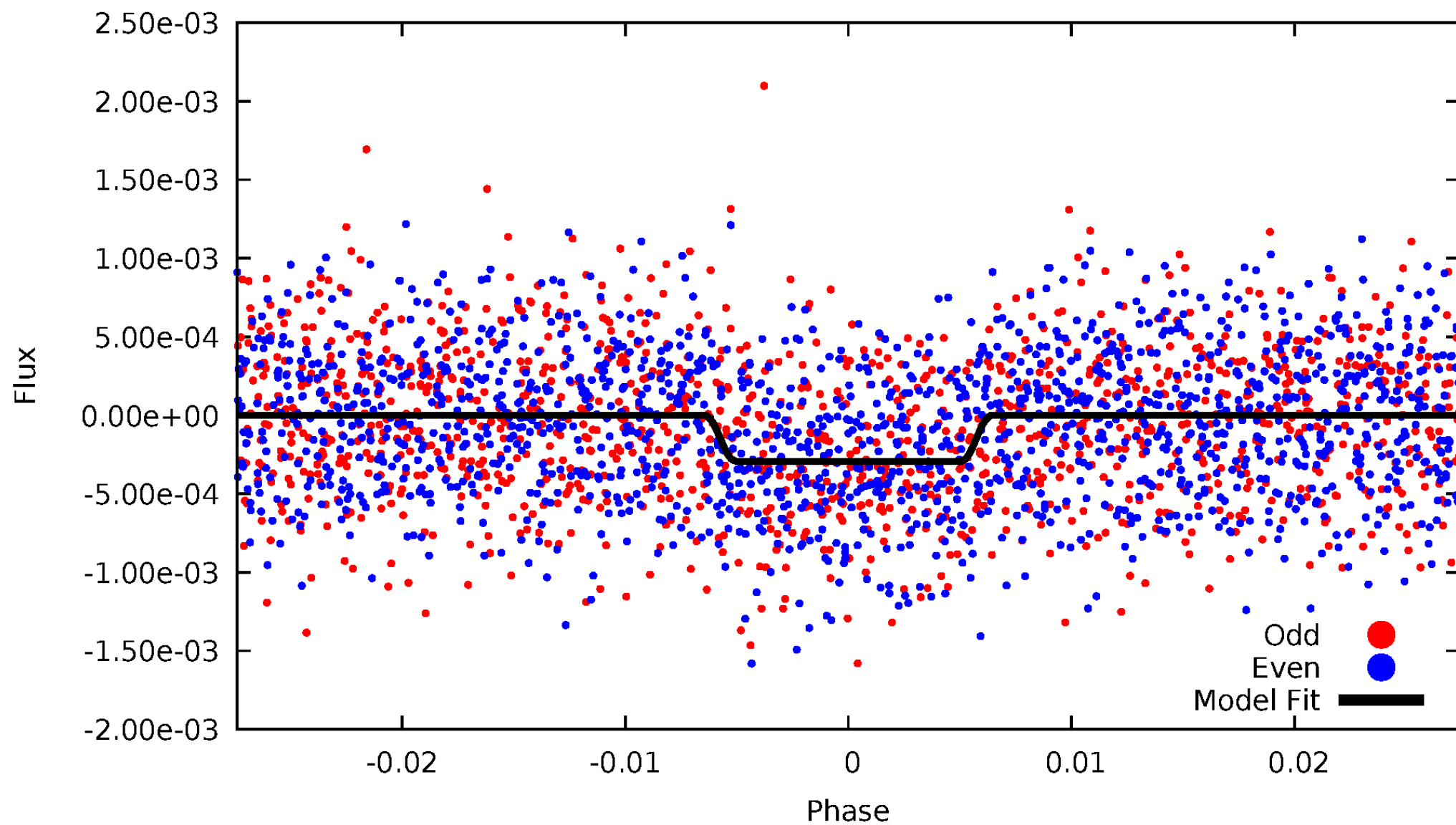
DV Odd/Even

TCE 005202905-01



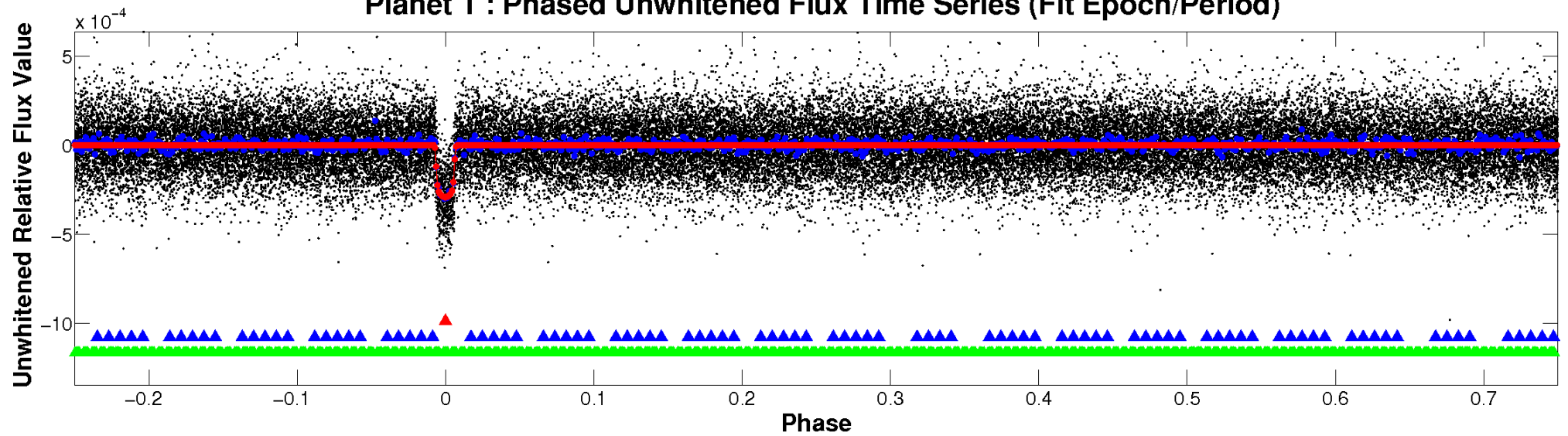
ALT Odd/Even

TCE 005202905-01

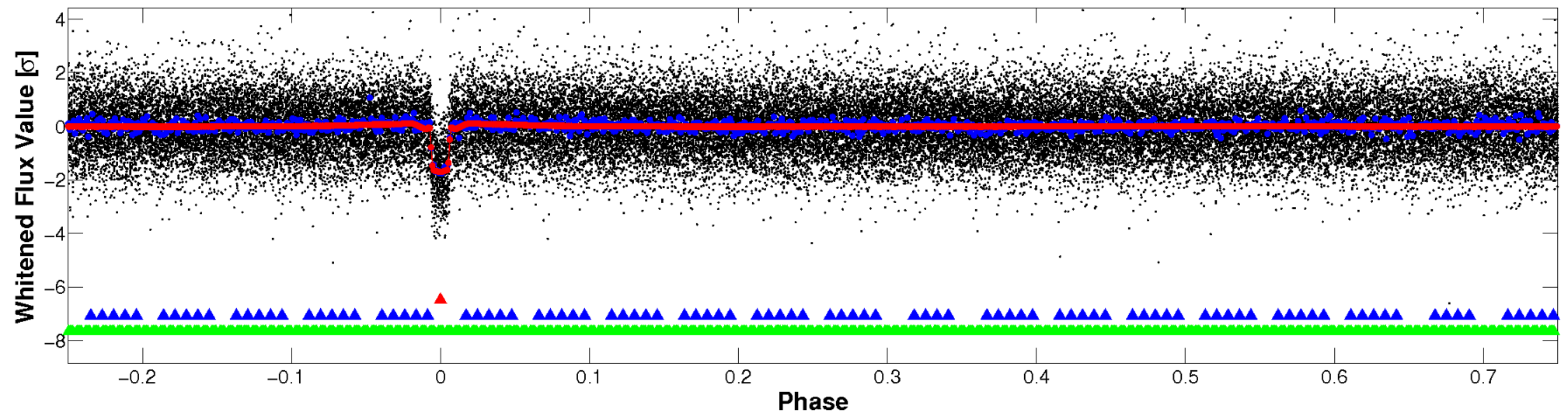


Non-Whitened Vs. Whitened Light Curve

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

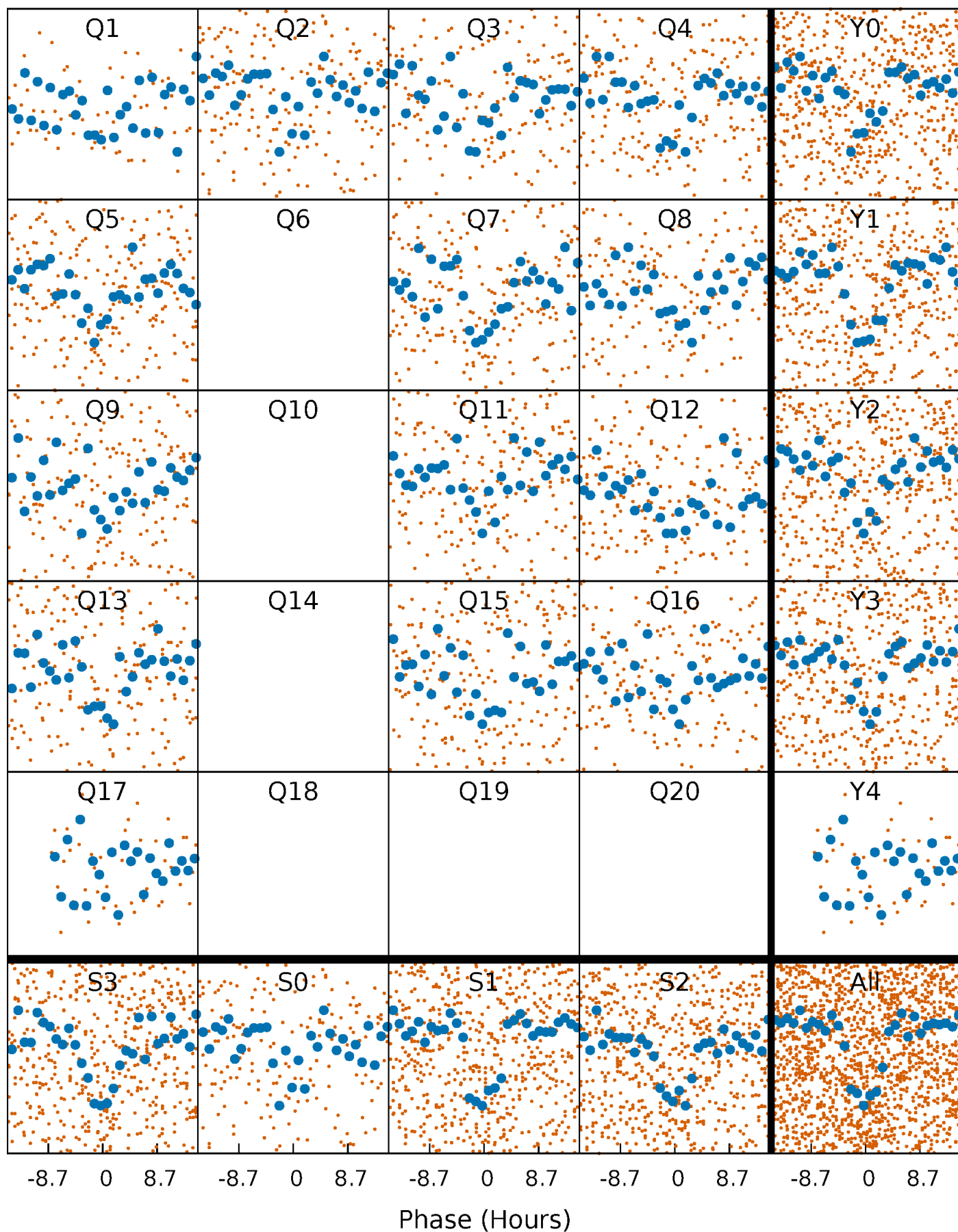


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



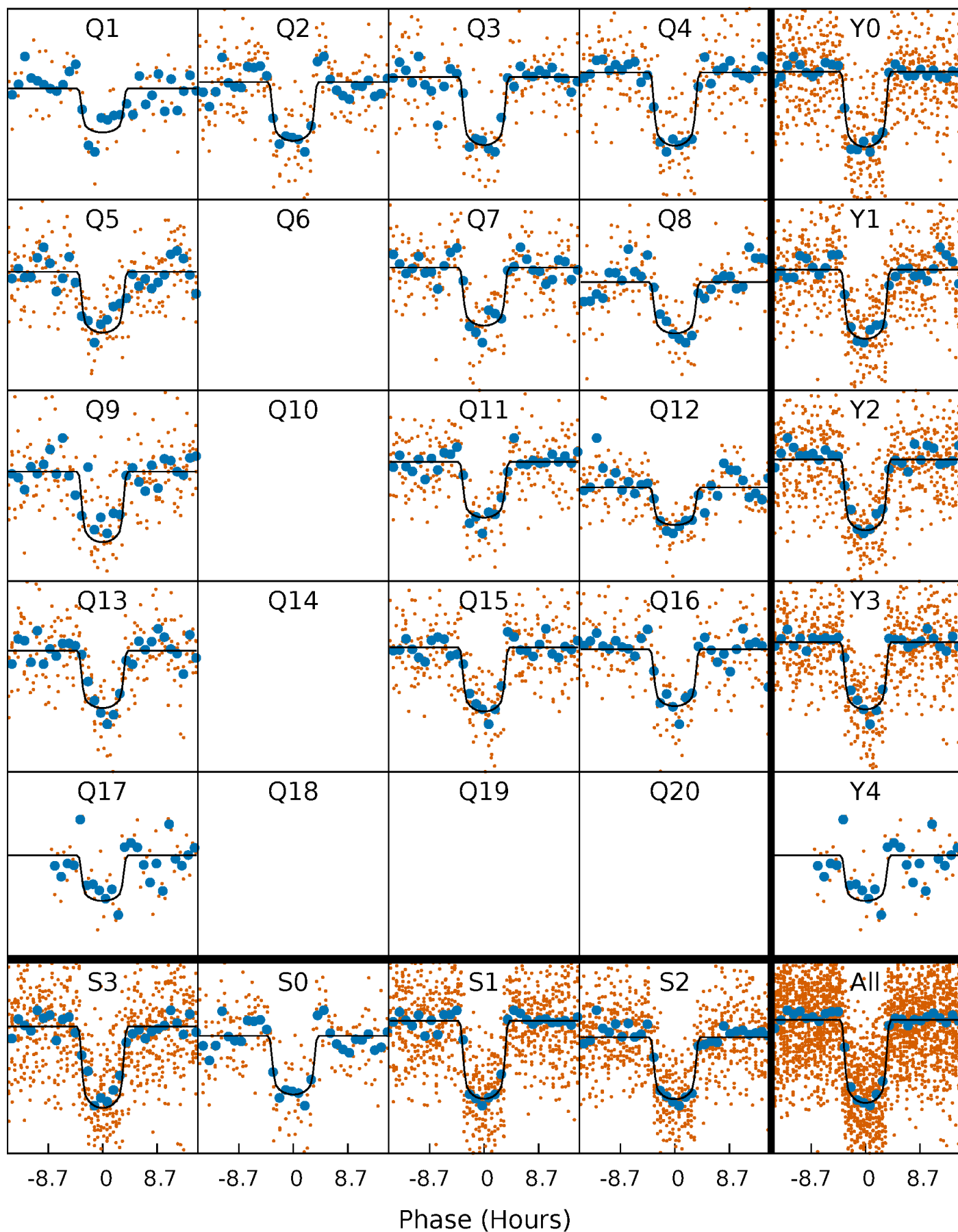
PDC Quarter-Phased Transit Curves

TCE 005202905-01 P= 22.824317 Days $T_0=144.477858$ (BKJD)



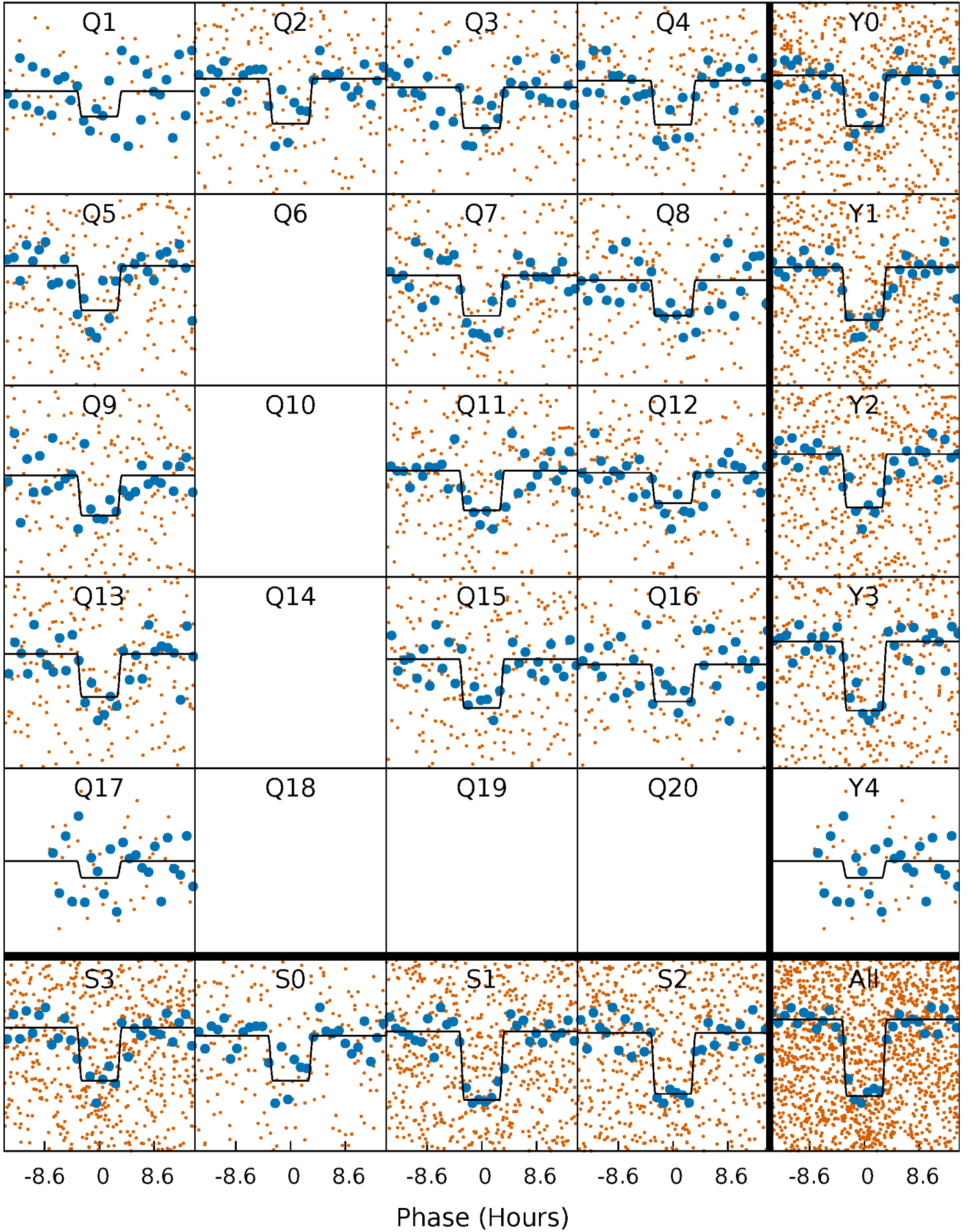
DV Quarter-Phased Transit Curves

TCE 005202905-01 P= 22.824317 Days $T_0=144.477858$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

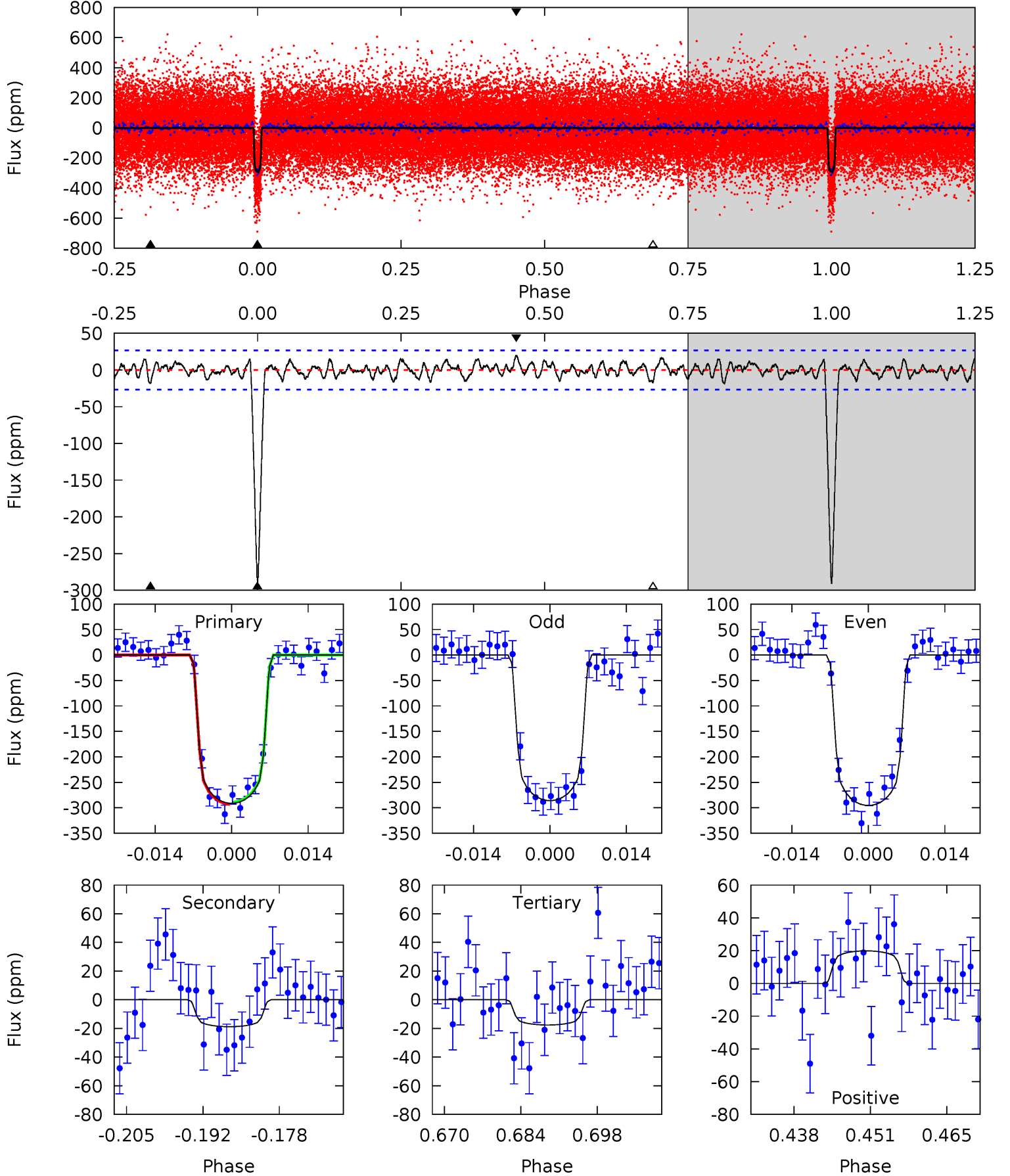
TCE 005202905-01 P= 22.824058 Days $T_0=144.478995$ (BKJD)



DV Model-Shift Uniqueness Test

005202905-01, $P = 22.824317$ Days, $E = 121.653541$ Days

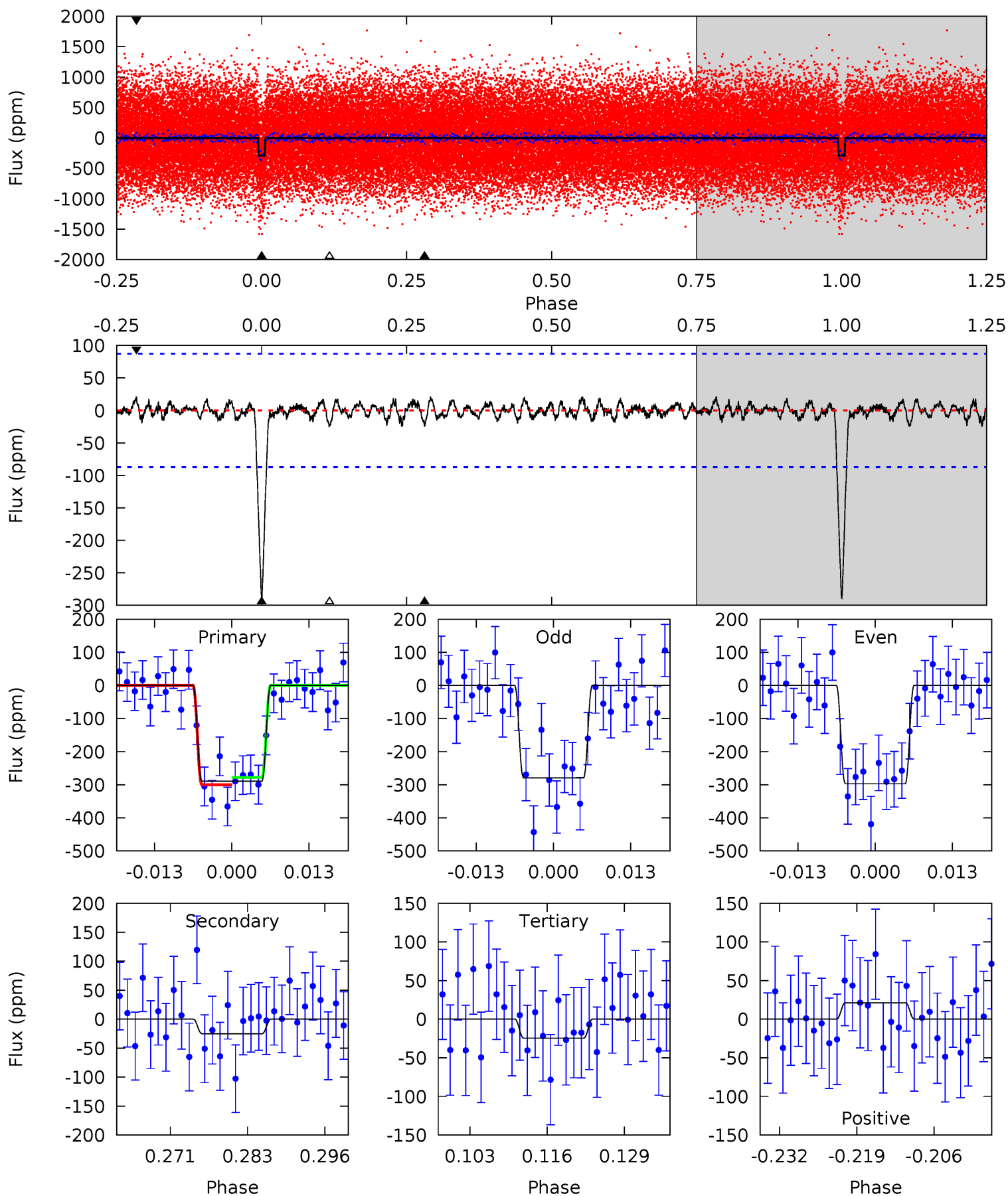
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.3	3.51	3.29	3.71	4.97	2.47	1.29	51.1	50.6	0.22	-0.20	0.88	0.95	0.06	0.40



Alt Model-Shift Uniqueness Test

005202905-01, P = 22.824058 Days, E = 121.654937 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	1.43	1.40	1.22	4.98	2.49	0.46	15.1	15.3	0.03	0.21	0.49	0.96	0.07	0.63



Stellar Parameters For KIC 005202905

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6642^{+105}_{-157}	$4.057^{+0.174}_{-0.116}$	$-0.020^{+0.150}_{-0.150}$	$1.846^{+0.326}_{-0.399}$	$1.421^{+0.109}_{-0.164}$	$0.318^{+0.281}_{-0.109}$
	+2%/-2%	+4%/-3%	+750%/-750%	+18%/-22%	+8%/-12%	+88%/-34%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 005202905-01 / KOI 1932.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-19 ± 5	$3.72^{+0.39}_{-0.41}$	1316^{+67}_{-77}	3632^{+151}_{-182}	24^{+9}_{-7}
Alt.	-25 ± 18	$3.42^{+0.36}_{-0.40}$	1311^{+68}_{-72}	3892^{+427}_{-693}	36^{+29}_{-26}

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

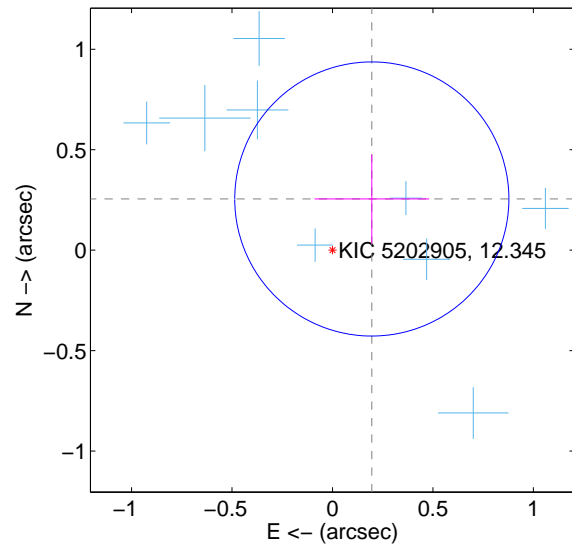
Supplemental centroid analysis for 005202905-01. Kepler magnitude: 12.35. Transit SNR 39.25

There are 13 quarters with good PRF difference image offsets

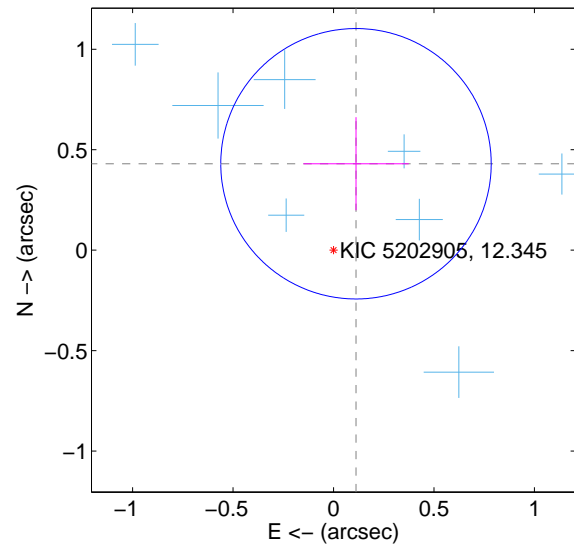
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.321 ± 0.227	1.41	-0.196 ± 0.285	0.255 ± 0.221
PRF-fit source offset from KIC position	0.444 ± 0.224	1.98	-0.112 ± 0.262	0.430 ± 0.232
photometric centroid source offset	0.04 ± 0.21	0.18	-0.04 ± 0.21	0.01 ± 0.23

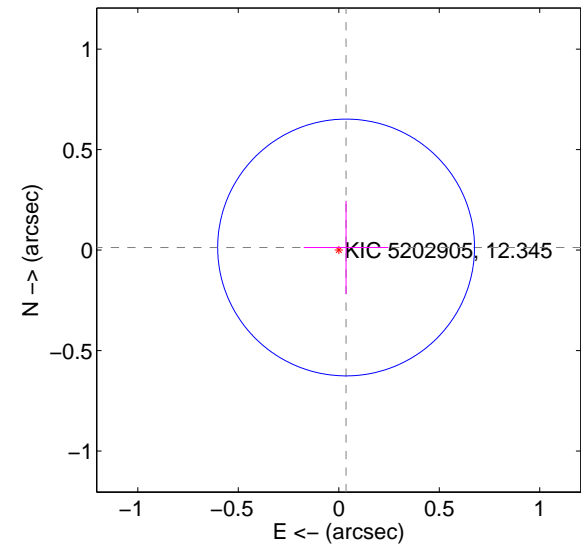
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

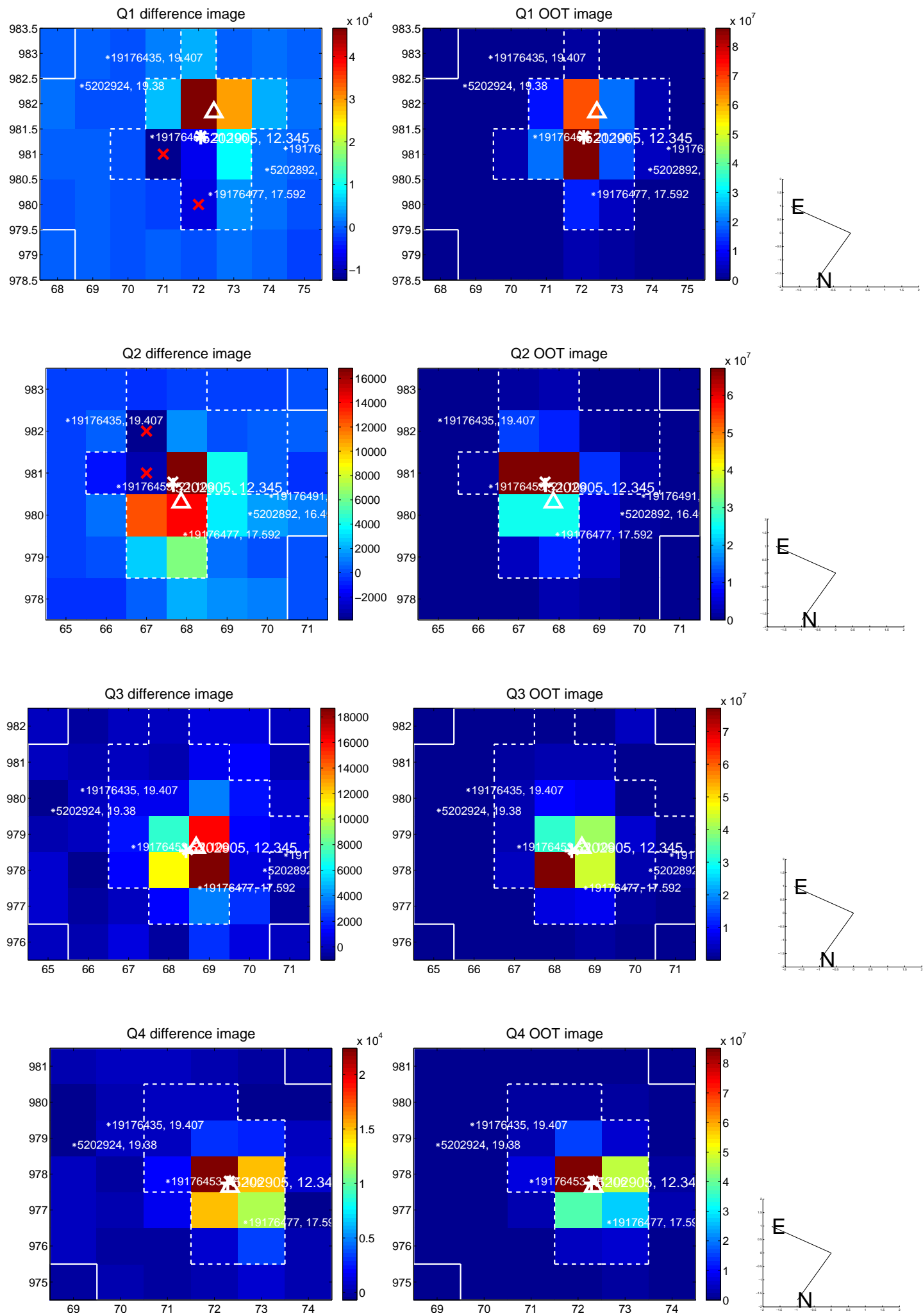


offset from photometric centroids

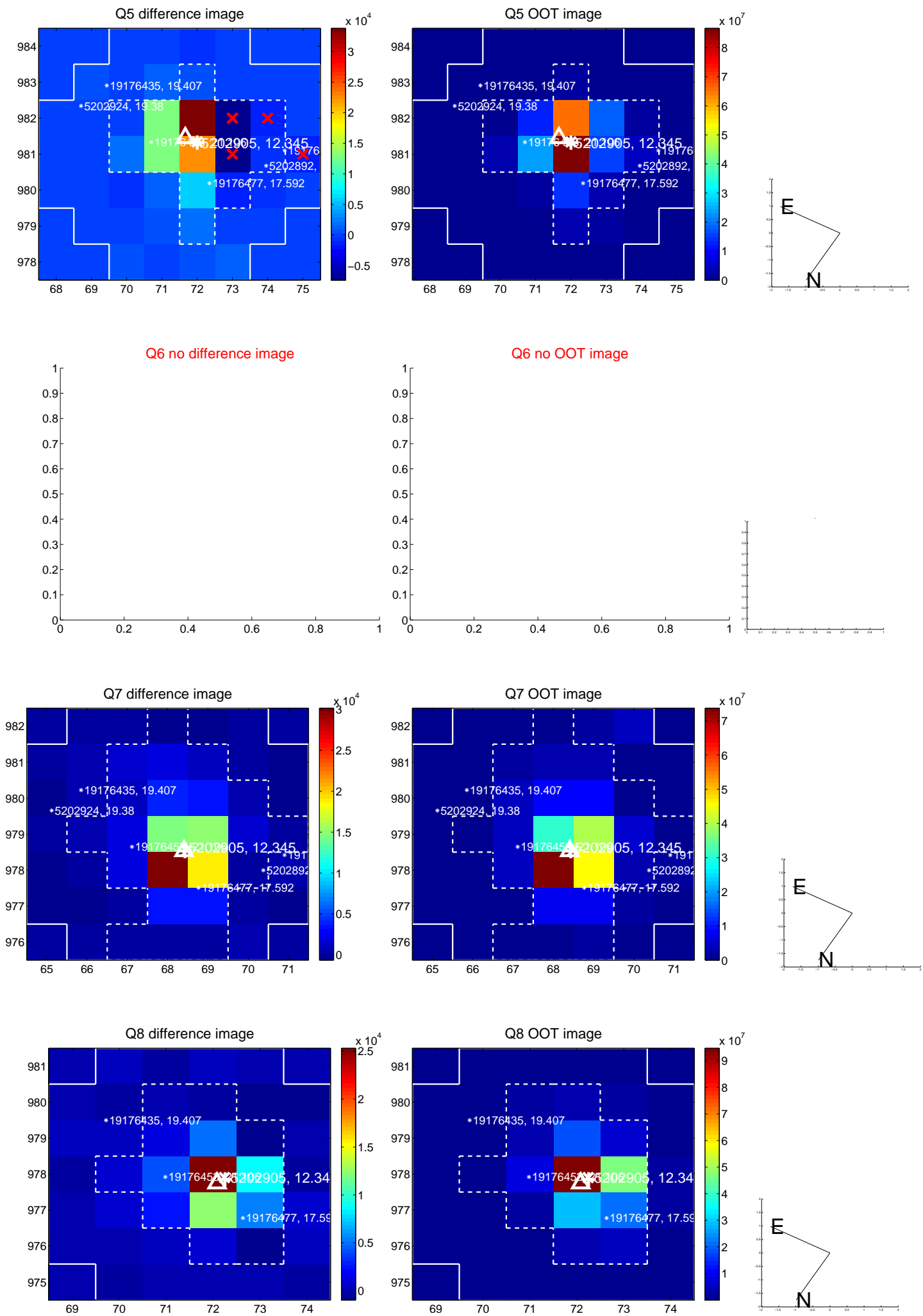


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

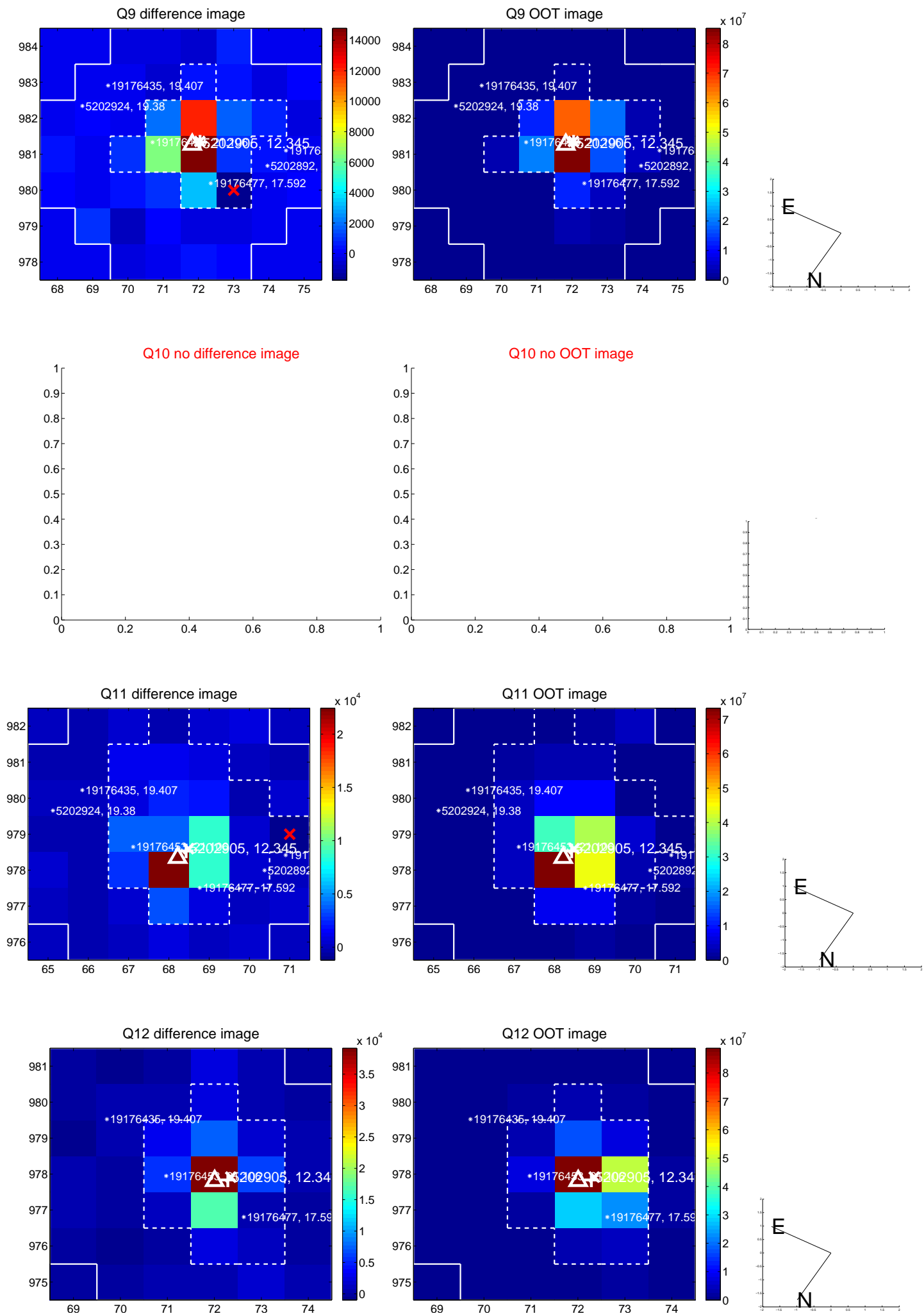
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



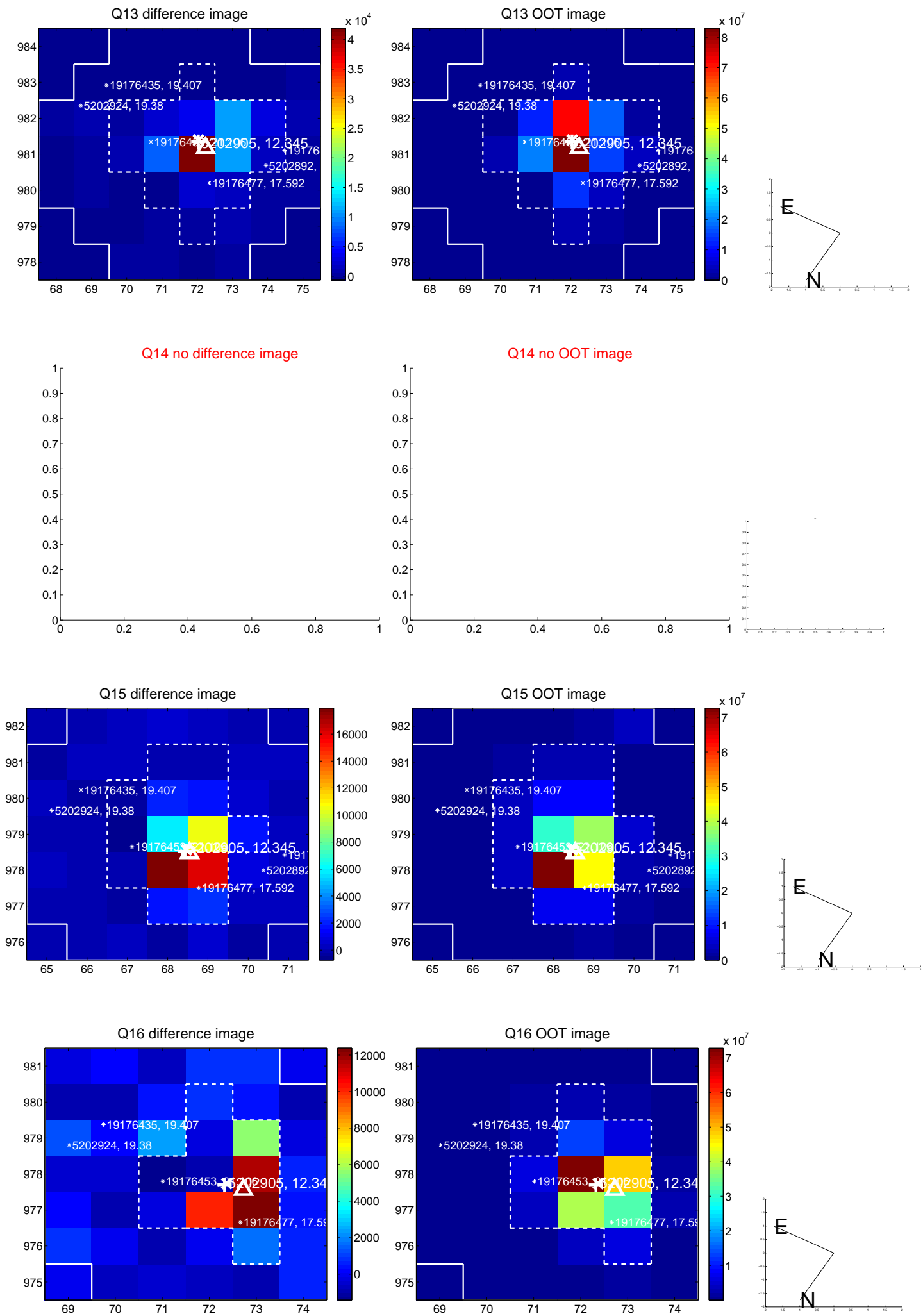
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



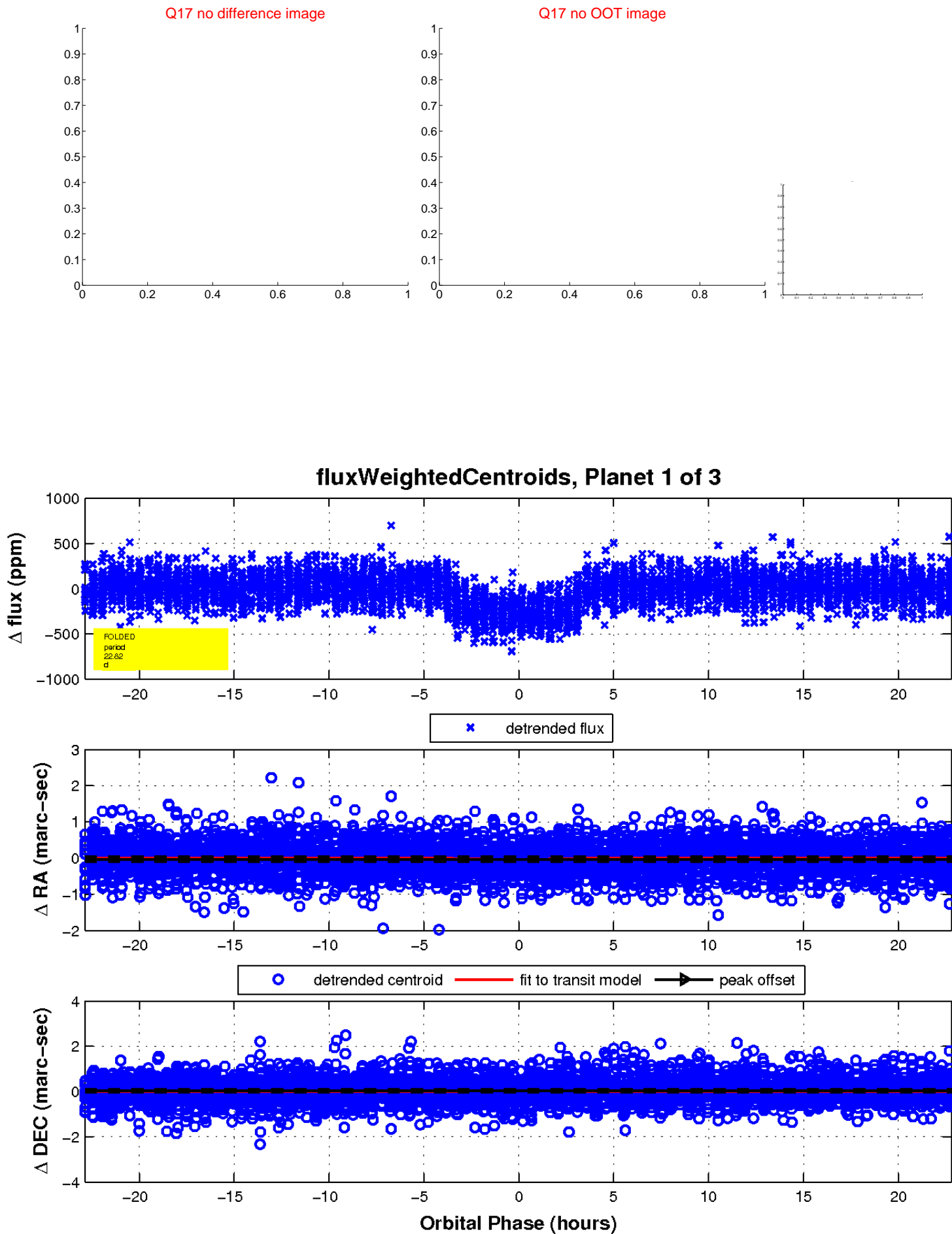
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

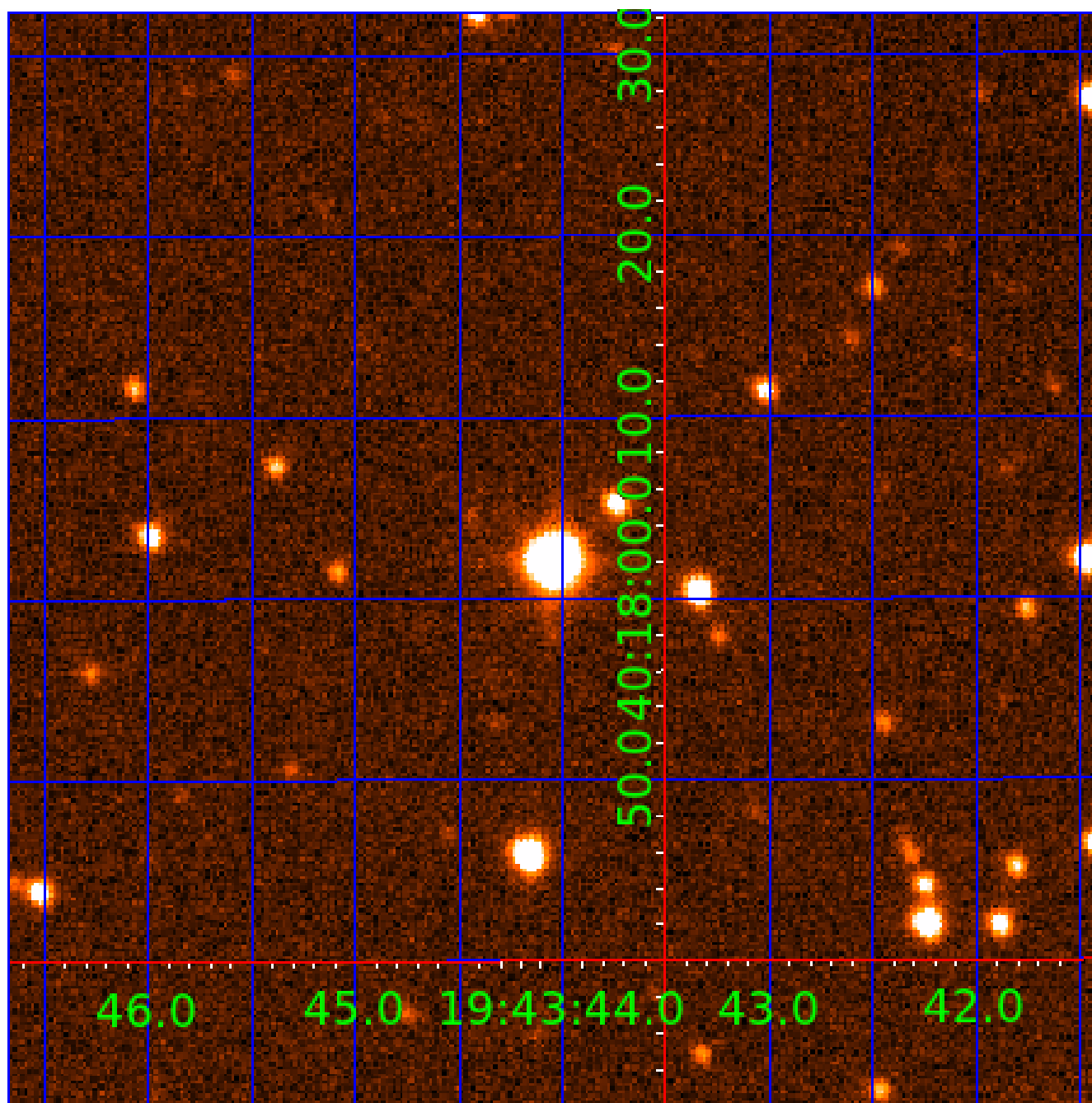


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005202905

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})
005202905-01	OBS	1932.01	22.824317	144.477858	291.9	7.620	35.6	39.2	1.85	6642	3.75	189.84
005202905-02	OBS	1932.02	14.844538	143.581339	164.3	5.949	24.6	26.0	1.85	6642	2.59	336.89
005202905-03	OBS	No	2.063089	133.176249	29.1	2.802	8.2	8.3	1.85	6642	1.16	4679.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005202905-01	OBS	PC	0.94	0	0	0	0	NO_COMMENT
005202905-02	OBS	PC	0.64	0	0	0	0	NO_COMMENT
005202905-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

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

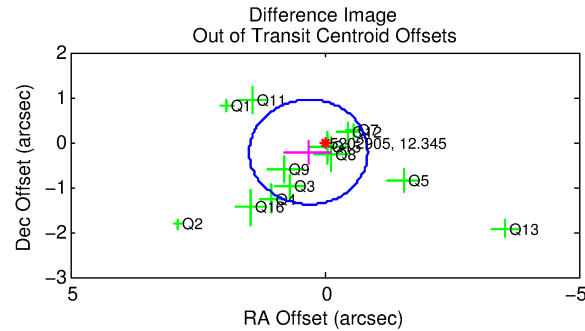
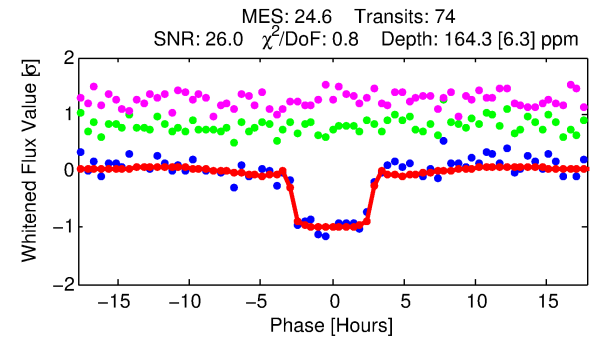
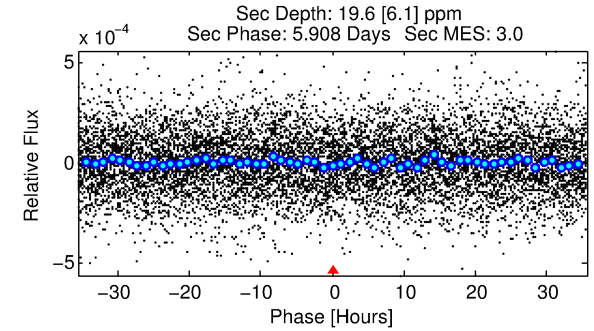
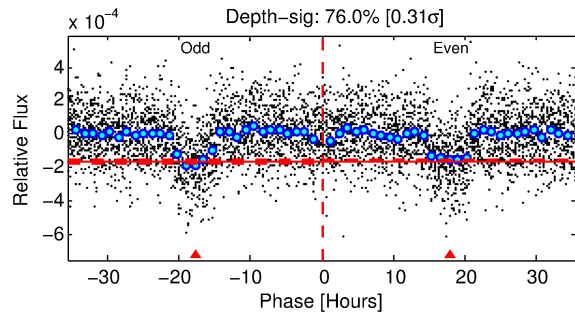
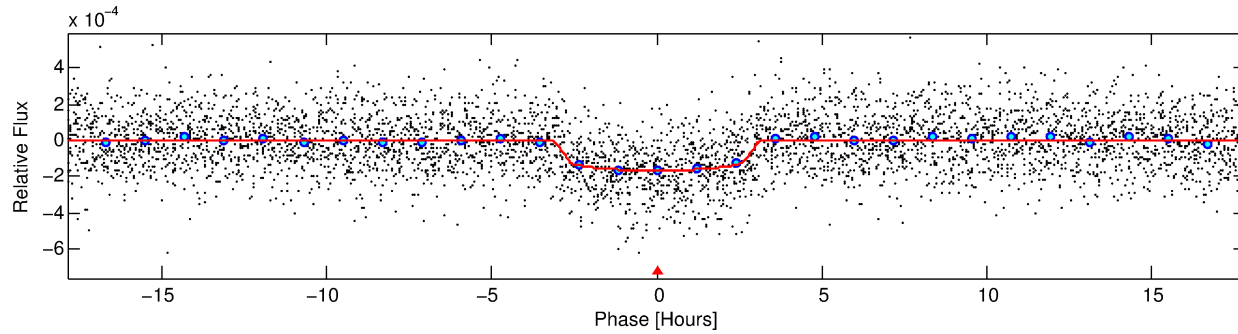
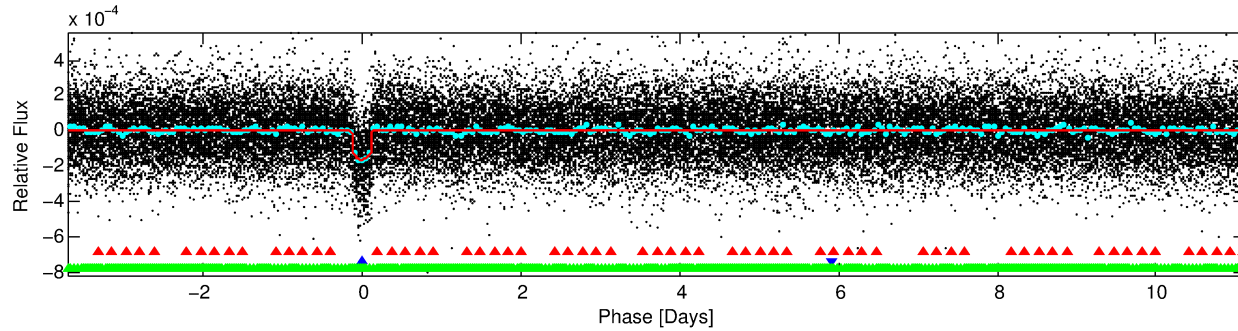
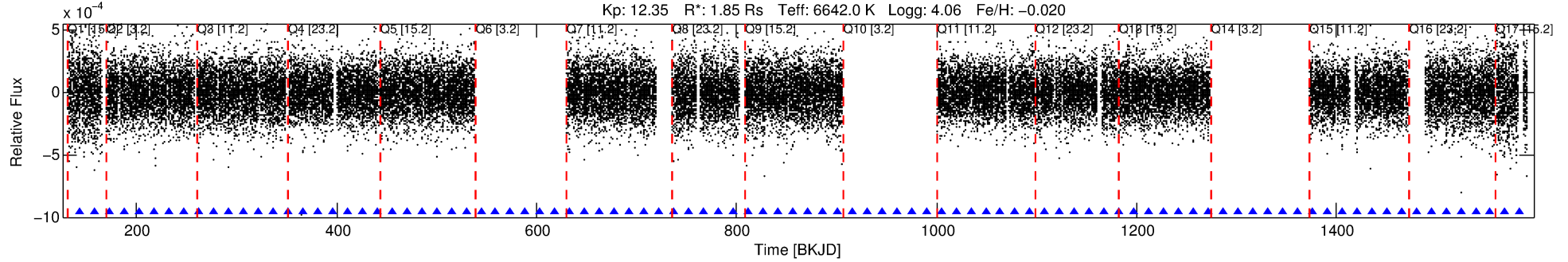
Ephemeris Match Information For 005202905-02

No Significant Match Found

DV One-Page Summary

KIC: 5202905 Candidate: 2 of 3 Period: 14.845 d
KOI: K01932.02 Name: Kepler-340b Corr: 0.968

Kp: 12.35 R*: 1.85 Rs Teff: 6642.0 K Logg: 4.06 Fe/H: -0.020



DV Fit Results:

Period = 14.84454 [0.00007] d
Epoch = 143.5813 [0.0039] BKJD
Rp/R* = 0.0128 [0.0028]
a/R* = 12.54 [15.42]
b = 0.77 [0.65]
Seff = 336.89 [107.09]
Teq = 1092 [87] K
Rp = 2.59 [0.80] Re
a = 0.1328 [0.0261] AU
Ag = 28.47 [17.58] [1.56σ]
Teffp = 3902 [532] K [5.21σ]

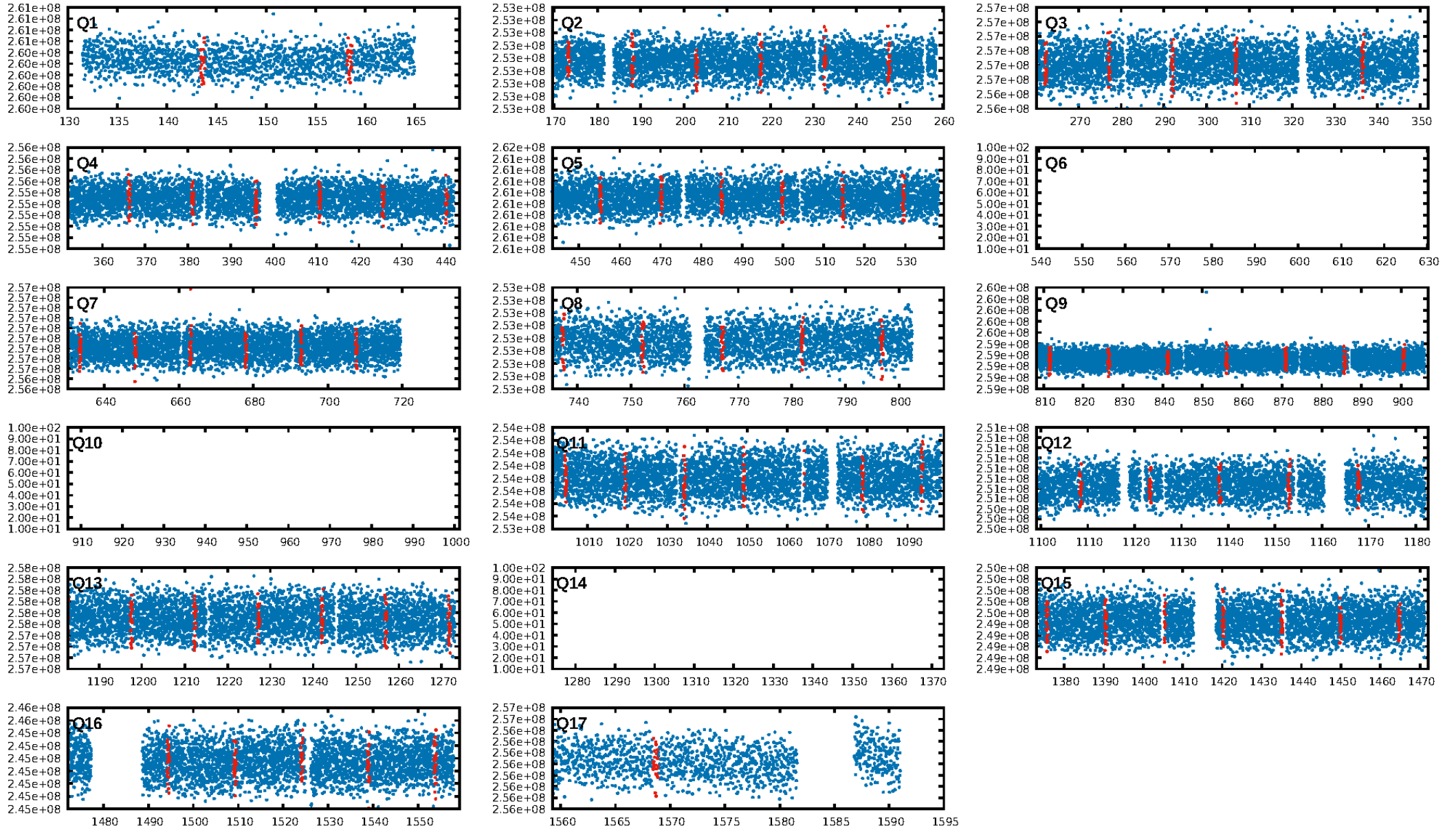
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [46.65σ]
LongPeriod-sig: 100.0% [19.81σ]
ModelChiSquare2-sig: 70.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.92e-131
RollingBand-fgt: 1.00 [71/71]
GhostDiagnostic-chr: 12.02
Centroid-sig: 0.0%
Centroid-so: 0.829 arcsec [2.56σ]
OotOffset-rm: 0.385 arcsec [0.99σ]
KicOffset-rm: 0.432 arcsec [1.08σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 0.86 [12/14]

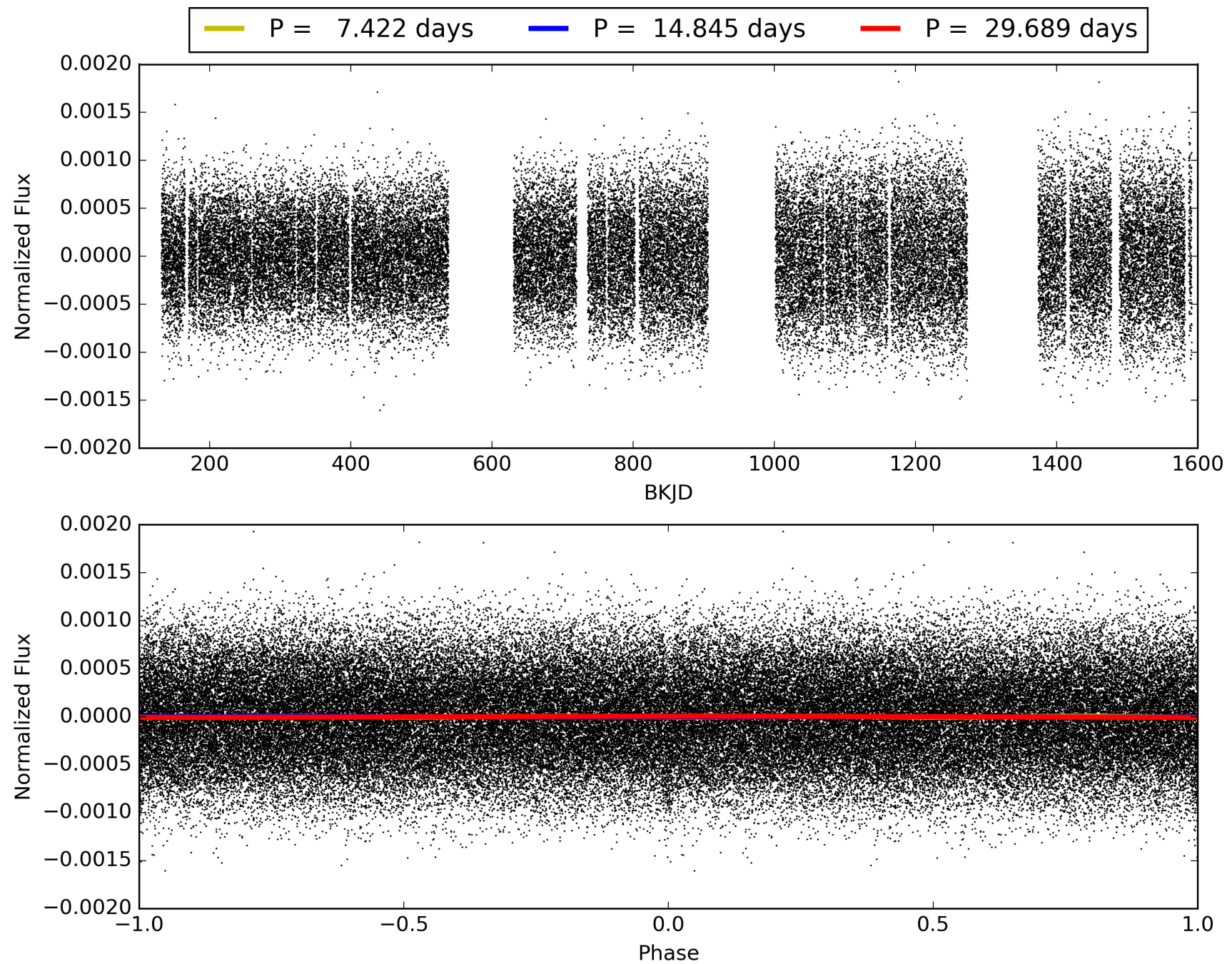
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:05:55 Z

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

TCE 005202905-02, PDC Light Curves

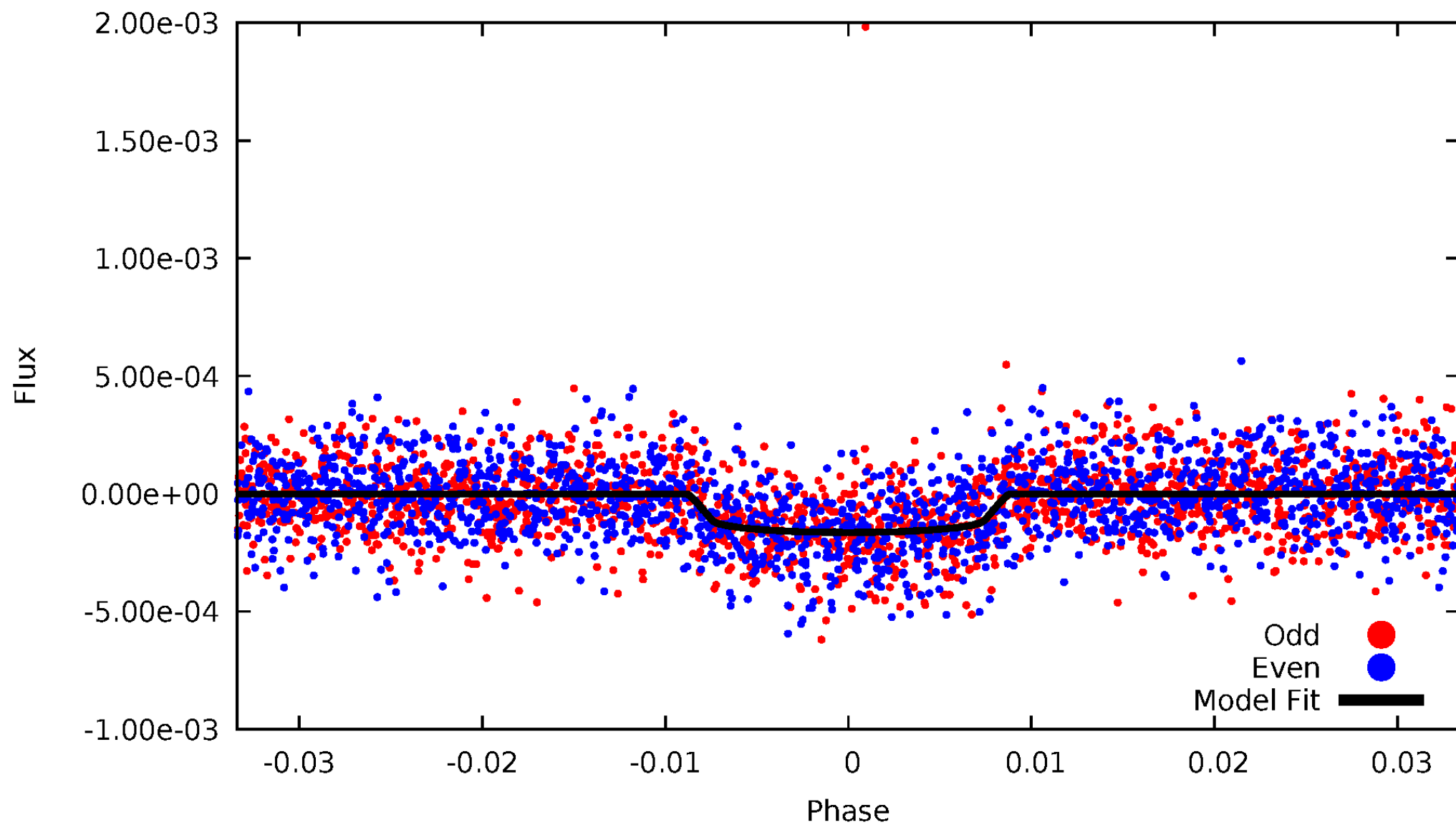


TCE 005202905-02



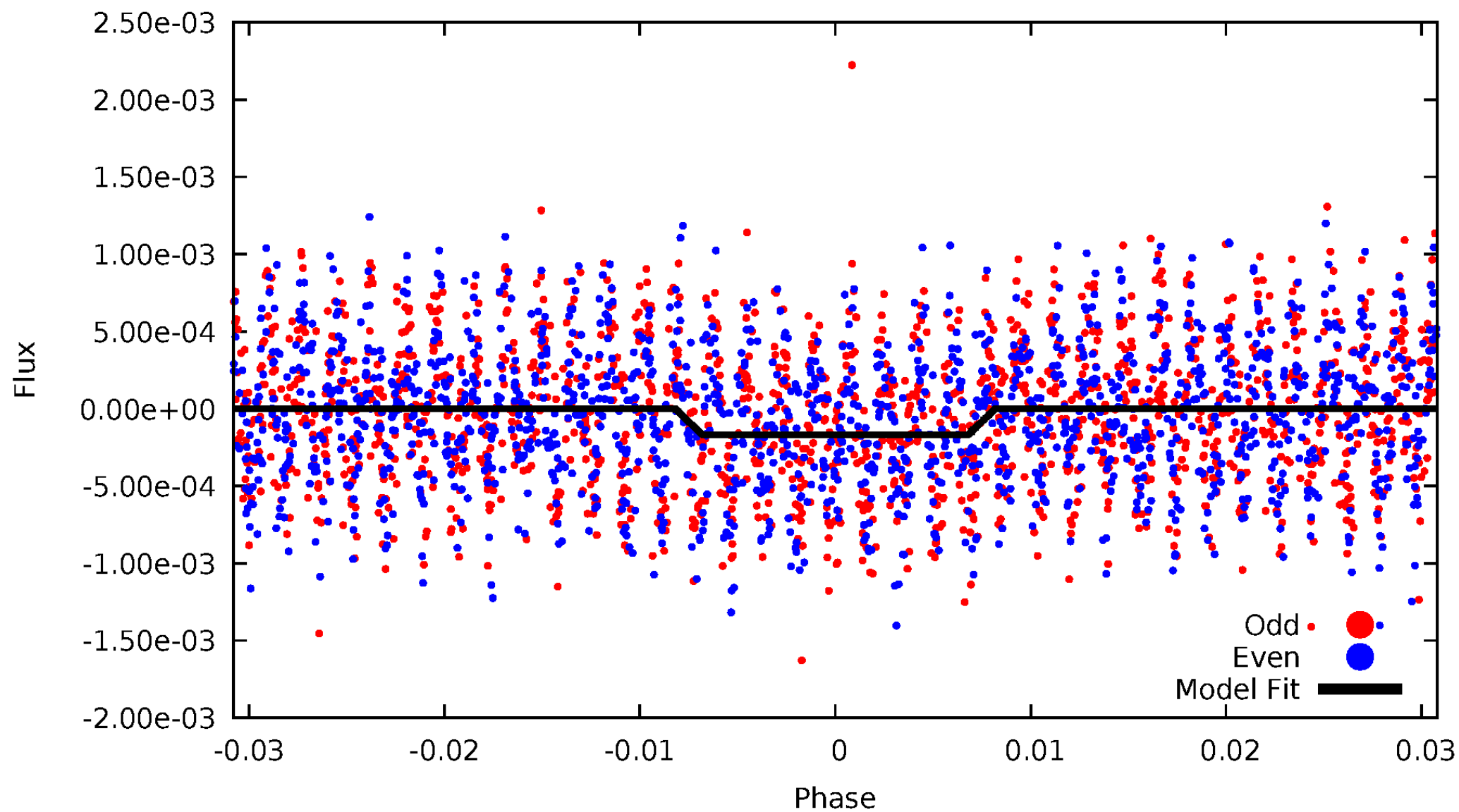
DV Odd/Even

TCE 005202905-02



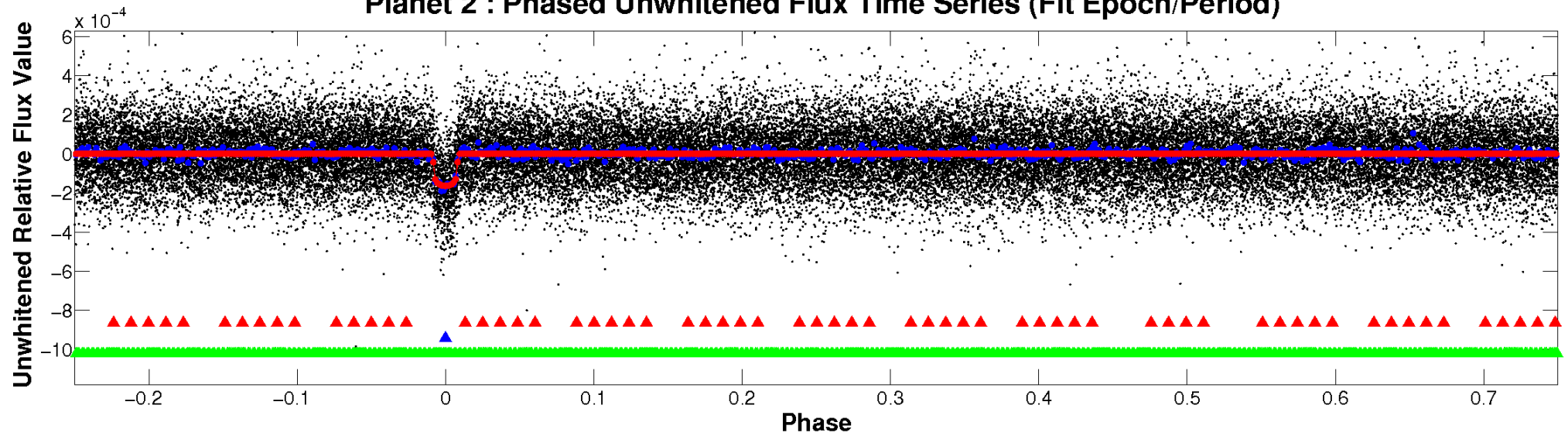
ALT Odd/Even

TCE 005202905-02

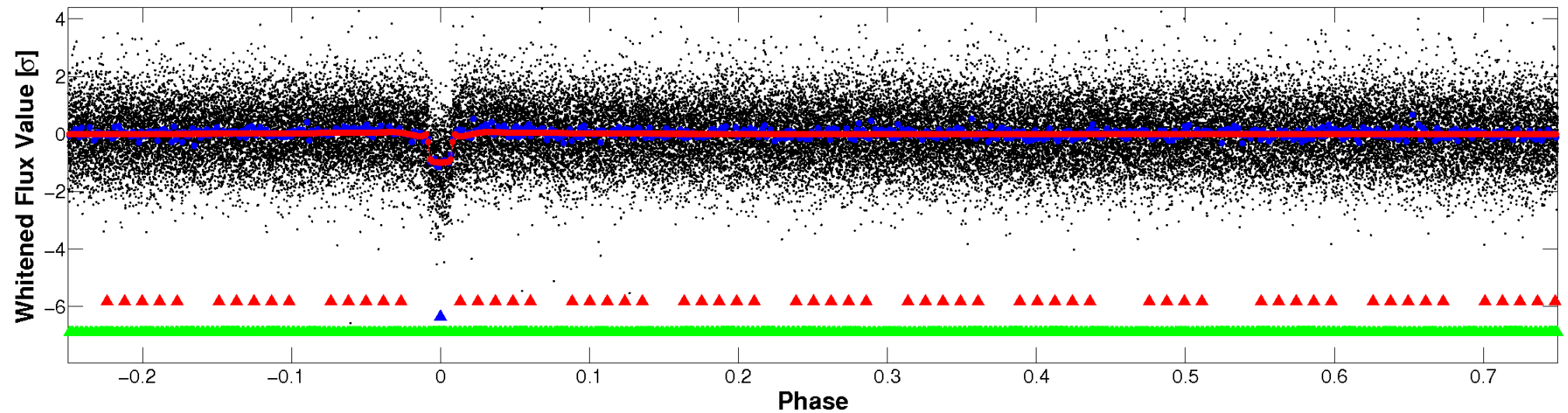


Non-Whitened Vs. Whitened Light Curve

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

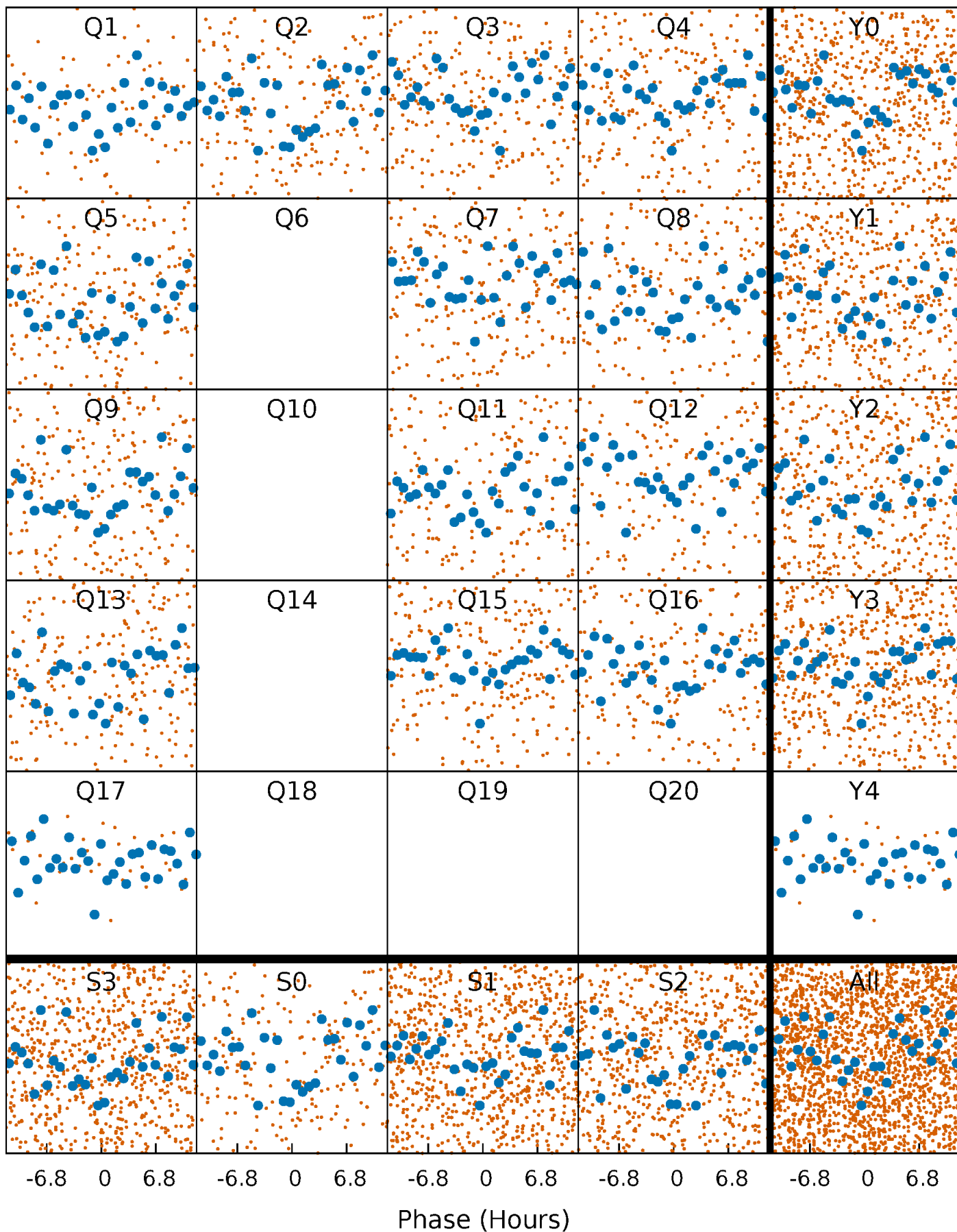


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



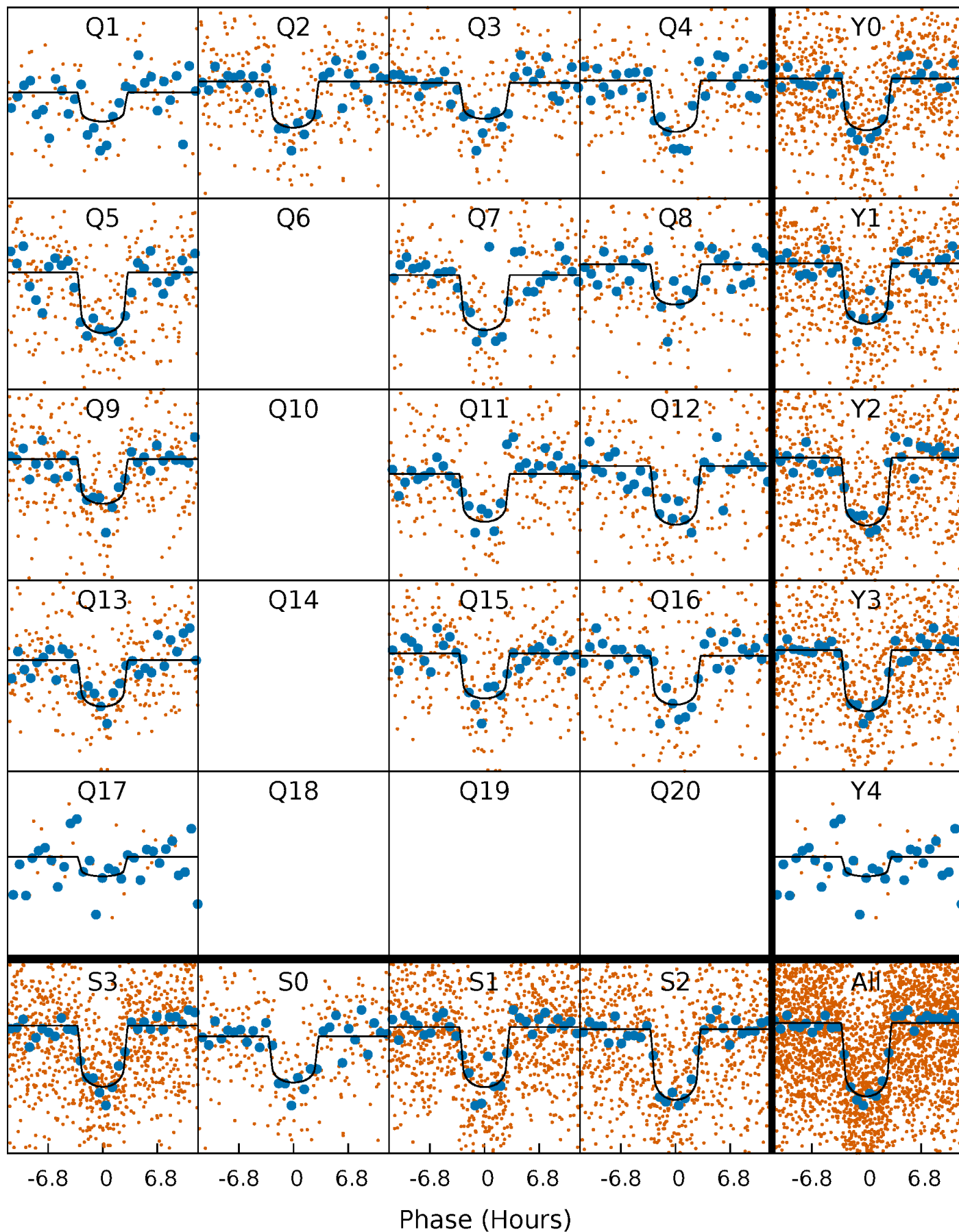
PDC Quarter-Phased Transit Curves

TCE 005202905-02 P= 14.844538 Days $T_0=143.581339$ (BKJD)



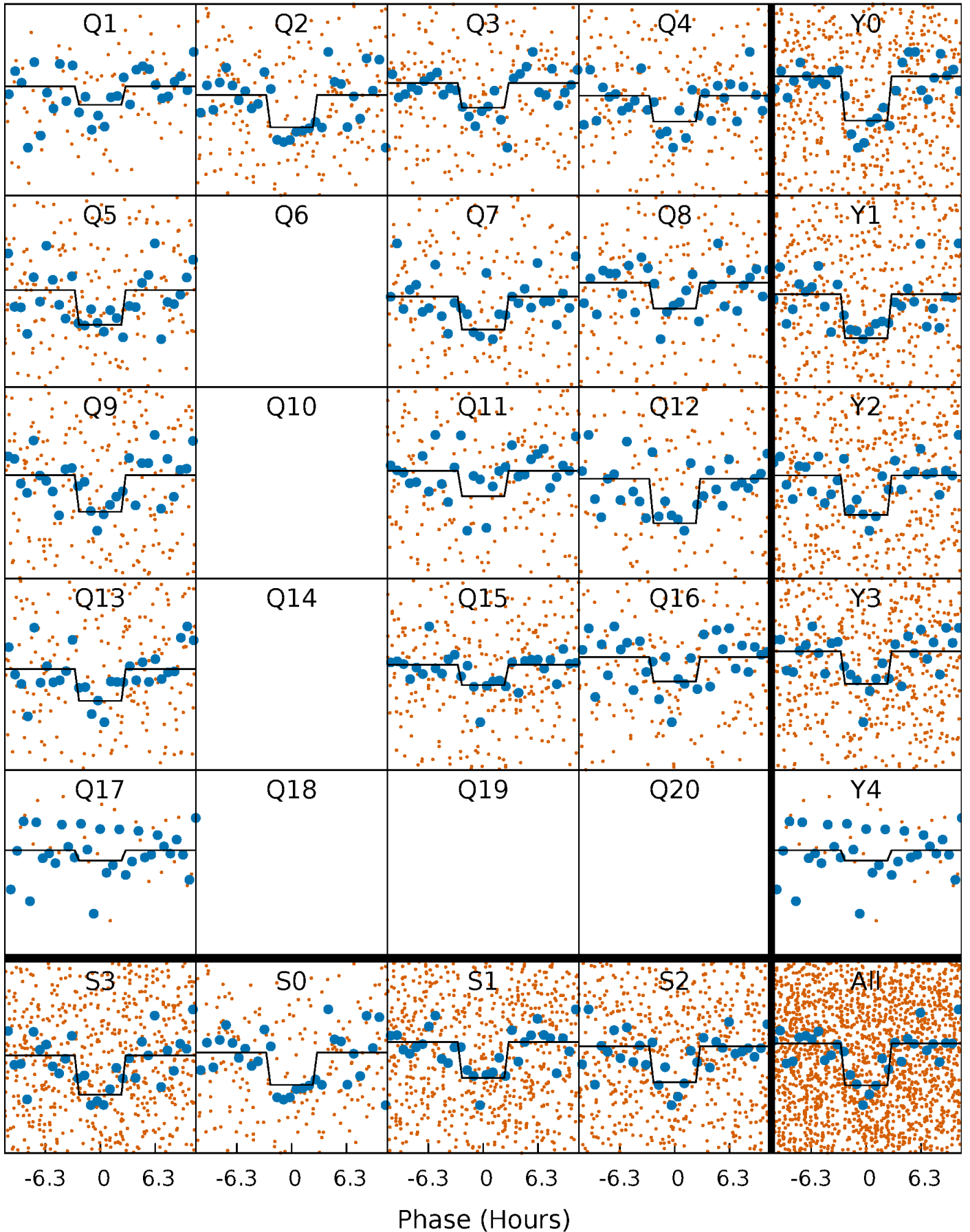
DV Quarter-Phased Transit Curves

TCE 005202905-02 P= 14.844538 Days $T_0=143.581339$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

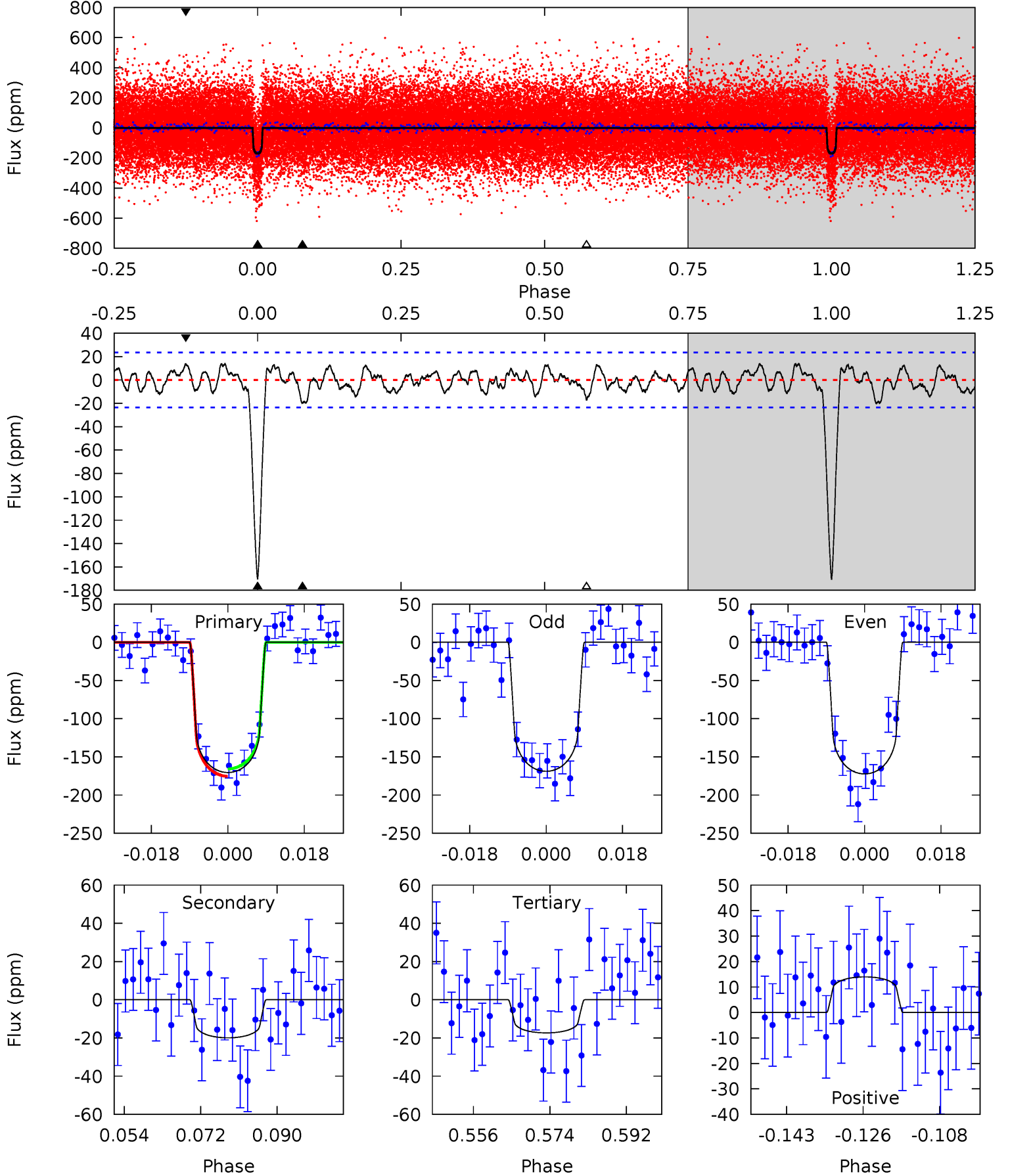
TCE 005202905-02 P= 14.844549 Days $T_0=143.582213$ (BKJD)



DV Model-Shift Uniqueness Test

005202905-02, P = 14.844538 Days, E = 128.736801 Days

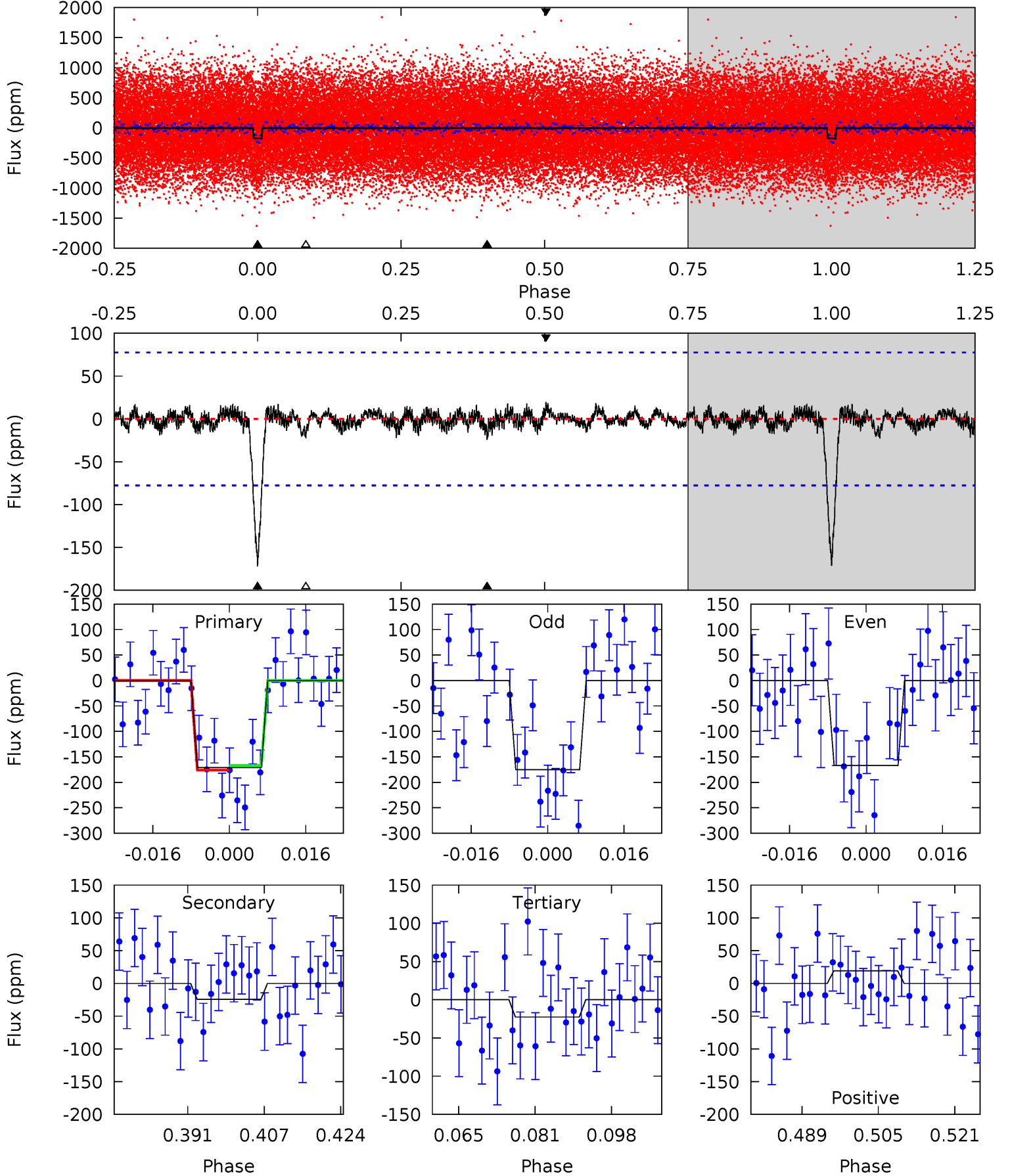
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.6	4.16	3.62	2.92	4.91	2.37	1.38	32.0	32.7	0.54	1.24	0.36	0.91	0.08	1.01



Alt Model-Shift Uniqueness Test

005202905-02, P = 14.844549 Days, E = 128.737664 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	1.54	1.43	1.21	4.93	2.40	0.43	9.44	9.66	0.10	0.33	0.25	0.98	0.10	0.29



Stellar Parameters For KIC 005202905

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6642^{+105}_{-157}	$4.057^{+0.174}_{-0.116}$	$-0.020^{+0.150}_{-0.150}$	$1.846^{+0.326}_{-0.399}$	$1.421^{+0.109}_{-0.164}$	$0.318^{+0.281}_{-0.109}$
	+2%/-2%	+4%/-3%	+750%/-750%	+18%/-22%	+8%/-12%	+88%/-34%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 005202905-02 / KOI 1932.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-20 ± 5	$2.53^{+0.67}_{-0.58}$	1515^{+81}_{-88}	4140^{+484}_{-345}	29^{+24}_{-12}
Alt.	-24 ± 16	$2.61^{+0.58}_{-0.66}$	1516^{+75}_{-83}	4270^{+689}_{-728}	34^{+40}_{-22}

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

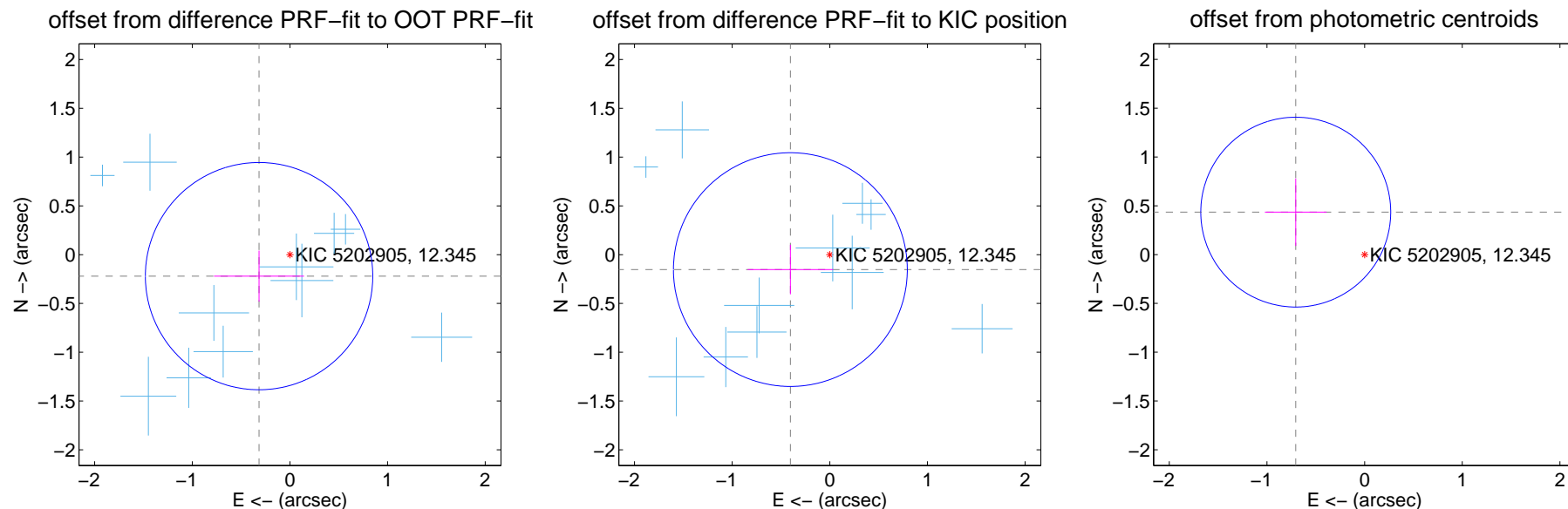
DV Centroid Data

Supplemental centroid analysis for 005202905-02. Kepler magnitude: 12.35. Transit SNR 25.97

There are 12 quarters with good PRF difference image offsets

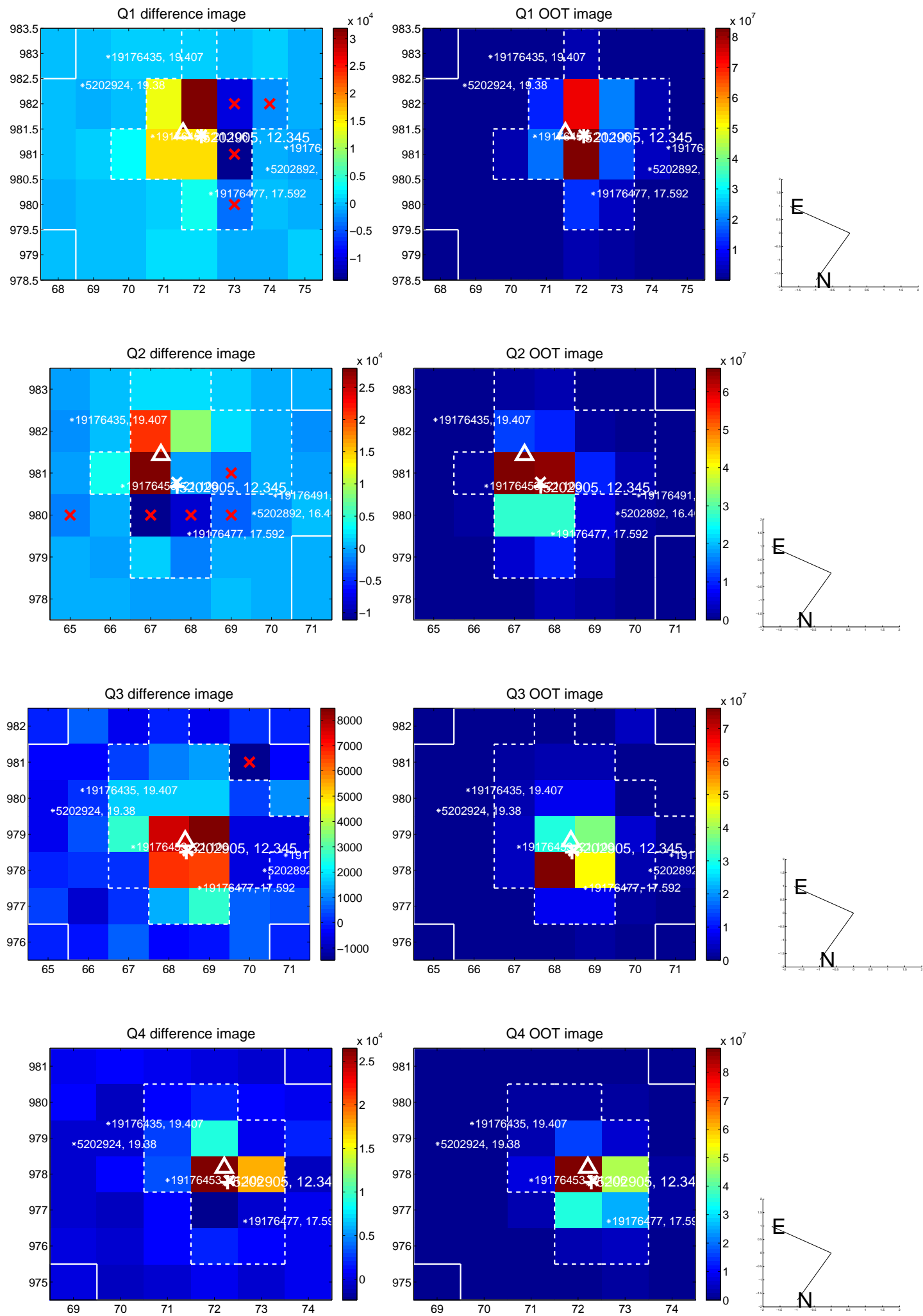
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.385 ± 0.388	0.99	0.316 ± 0.461	-0.220 ± 0.261
PRF-fit source offset from KIC position	0.432 ± 0.399	1.08	0.404 ± 0.437	-0.153 ± 0.253
photometric centroid source offset	0.83 ± 0.32	2.56	0.71 ± 0.32	0.44 ± 0.35

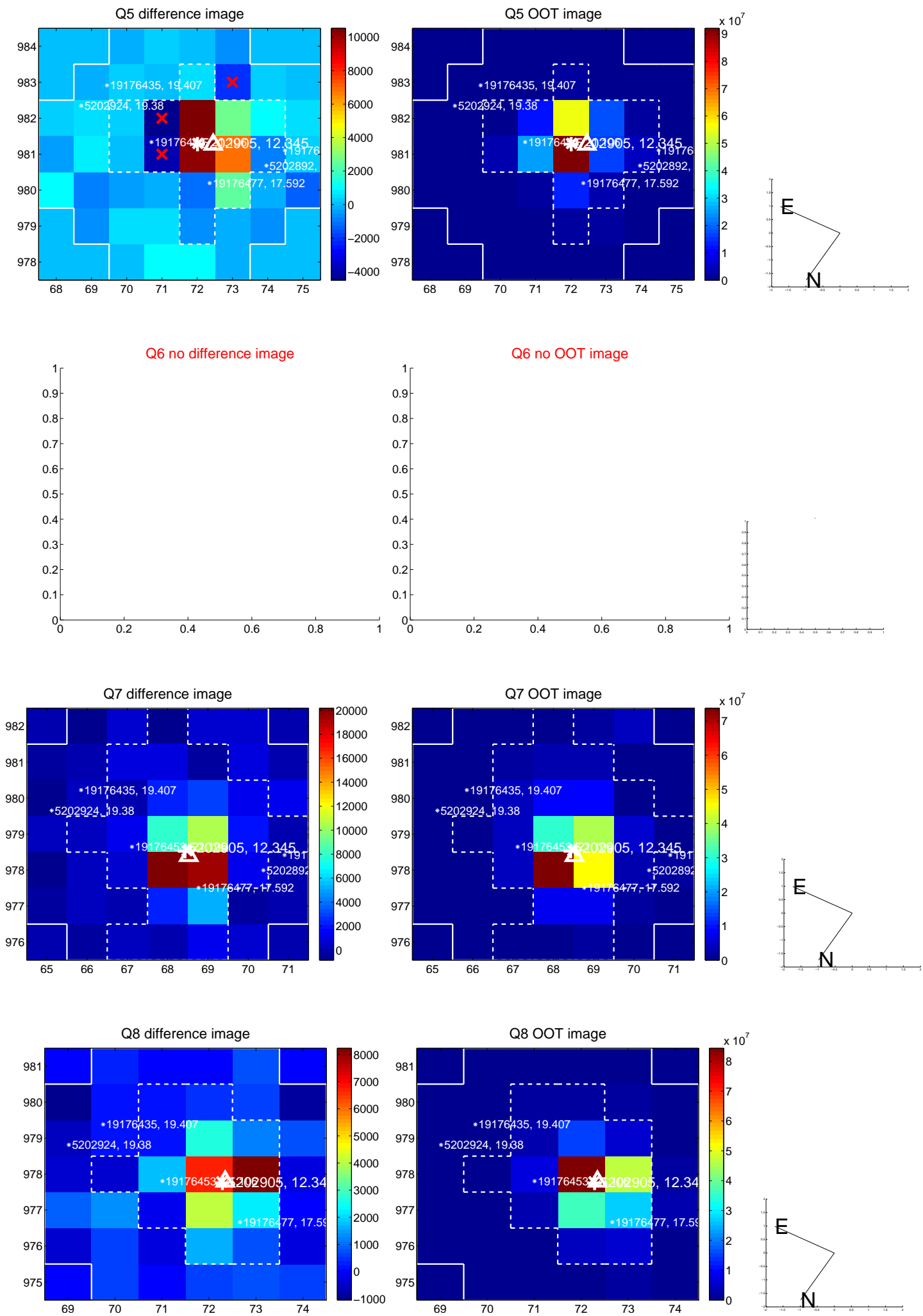


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

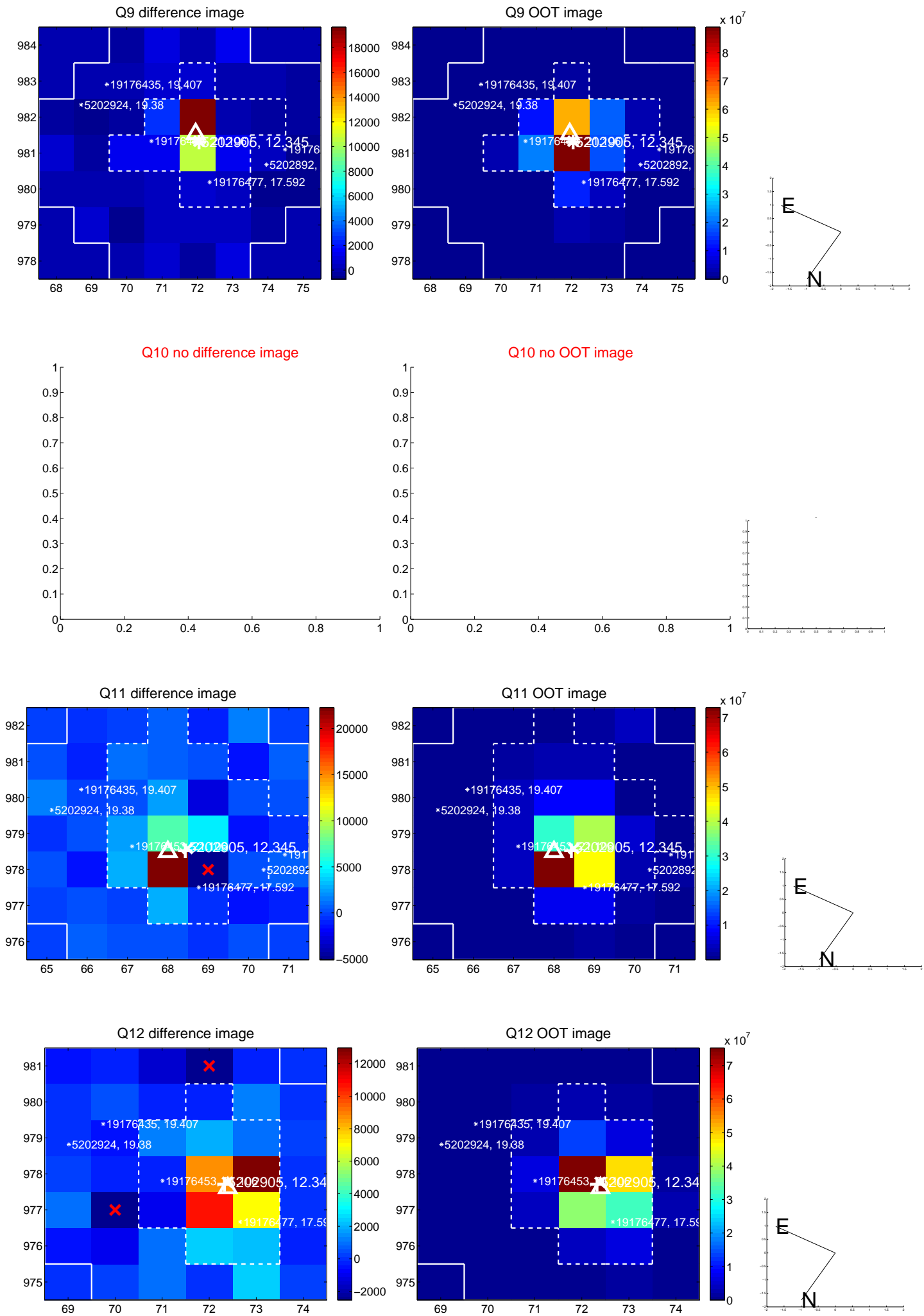
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



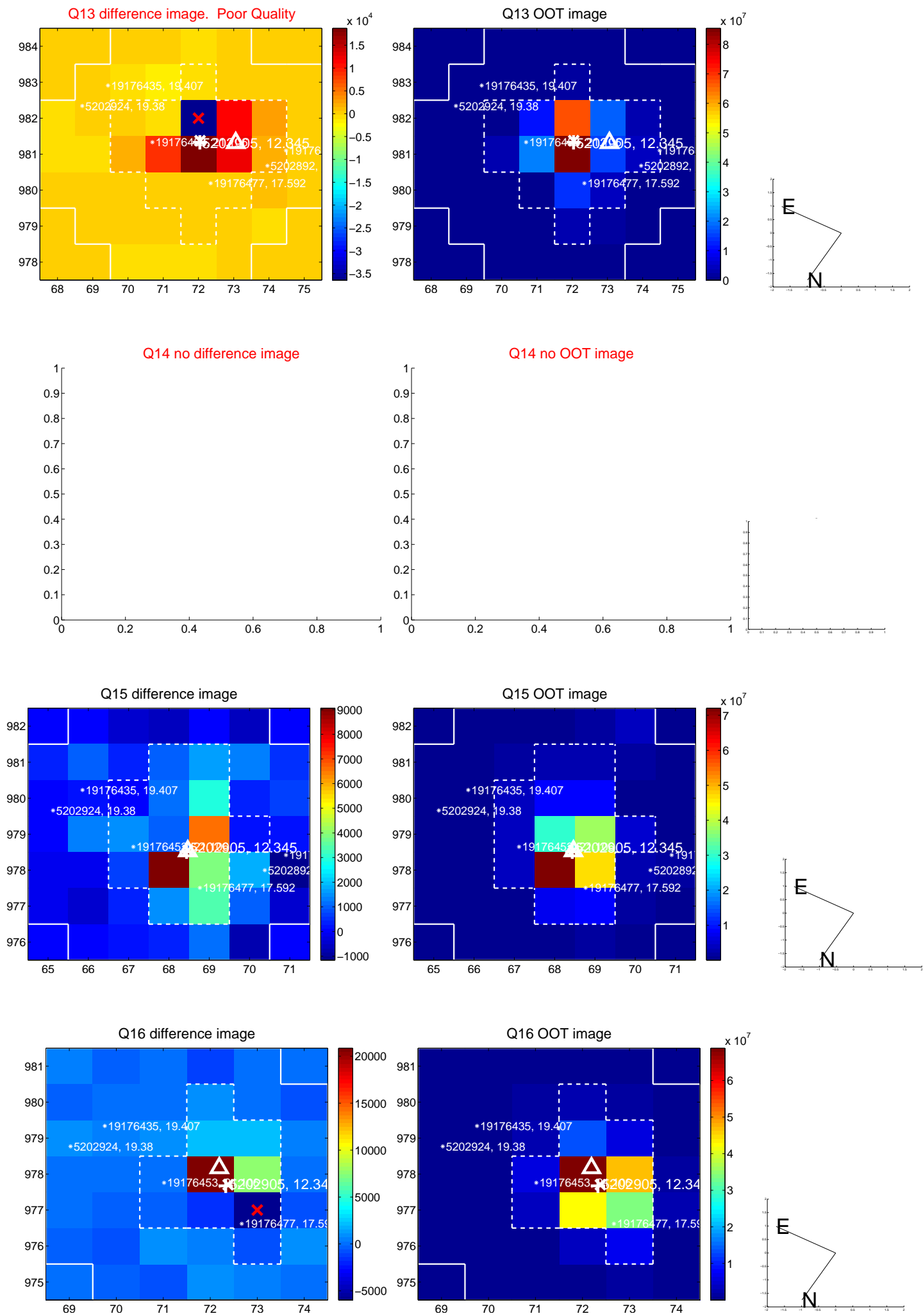
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



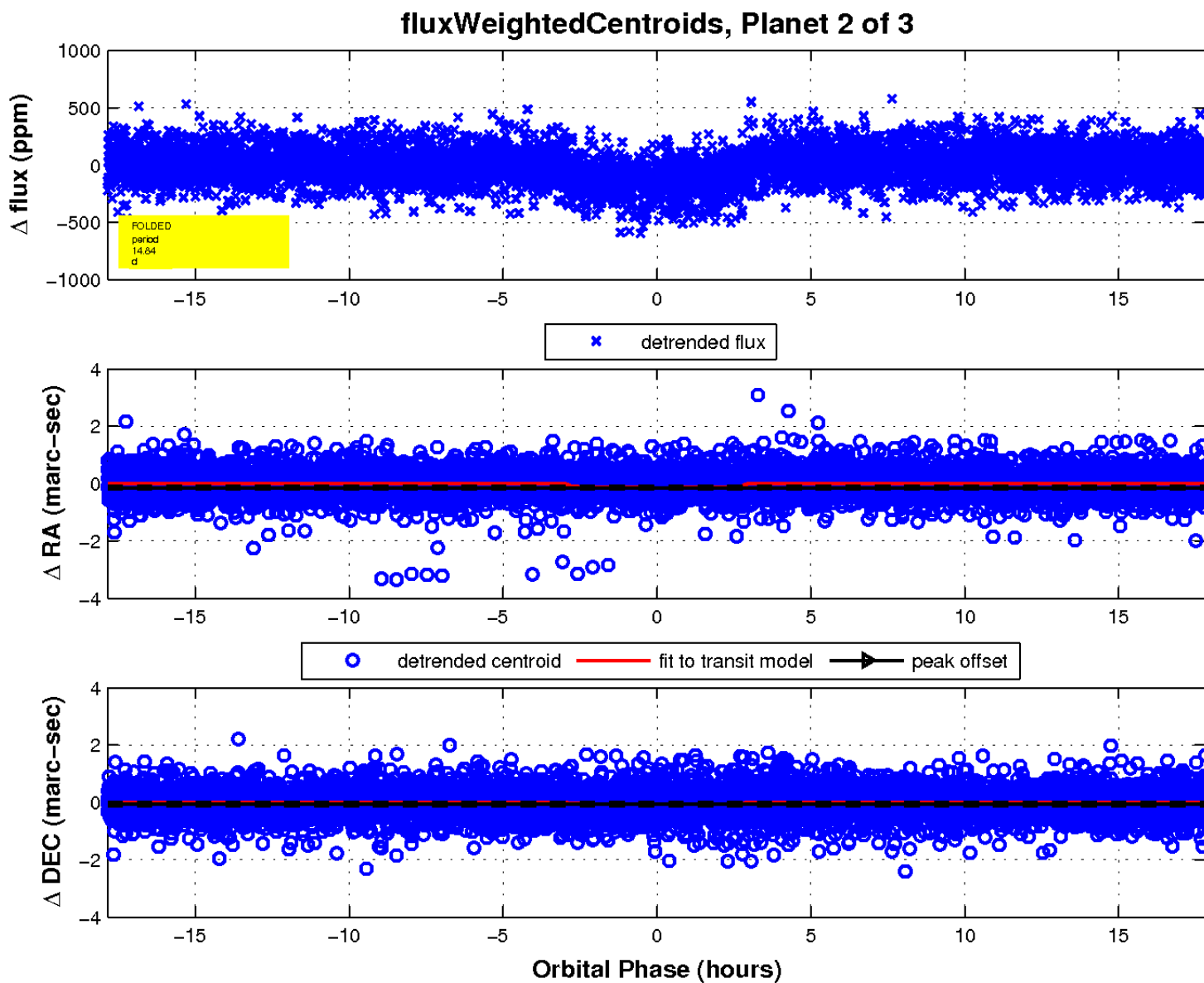
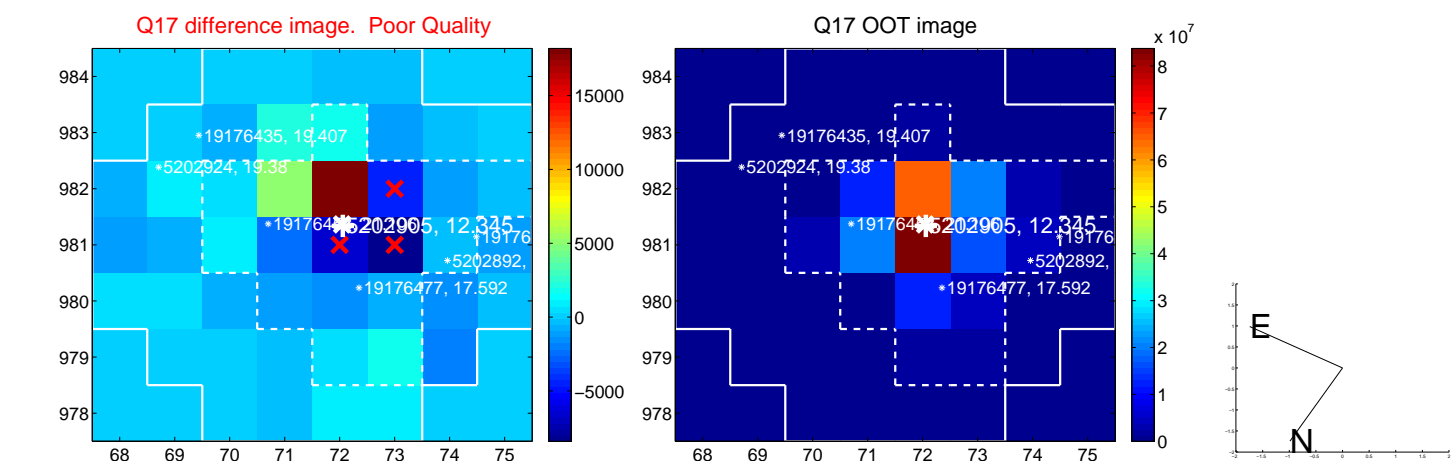
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

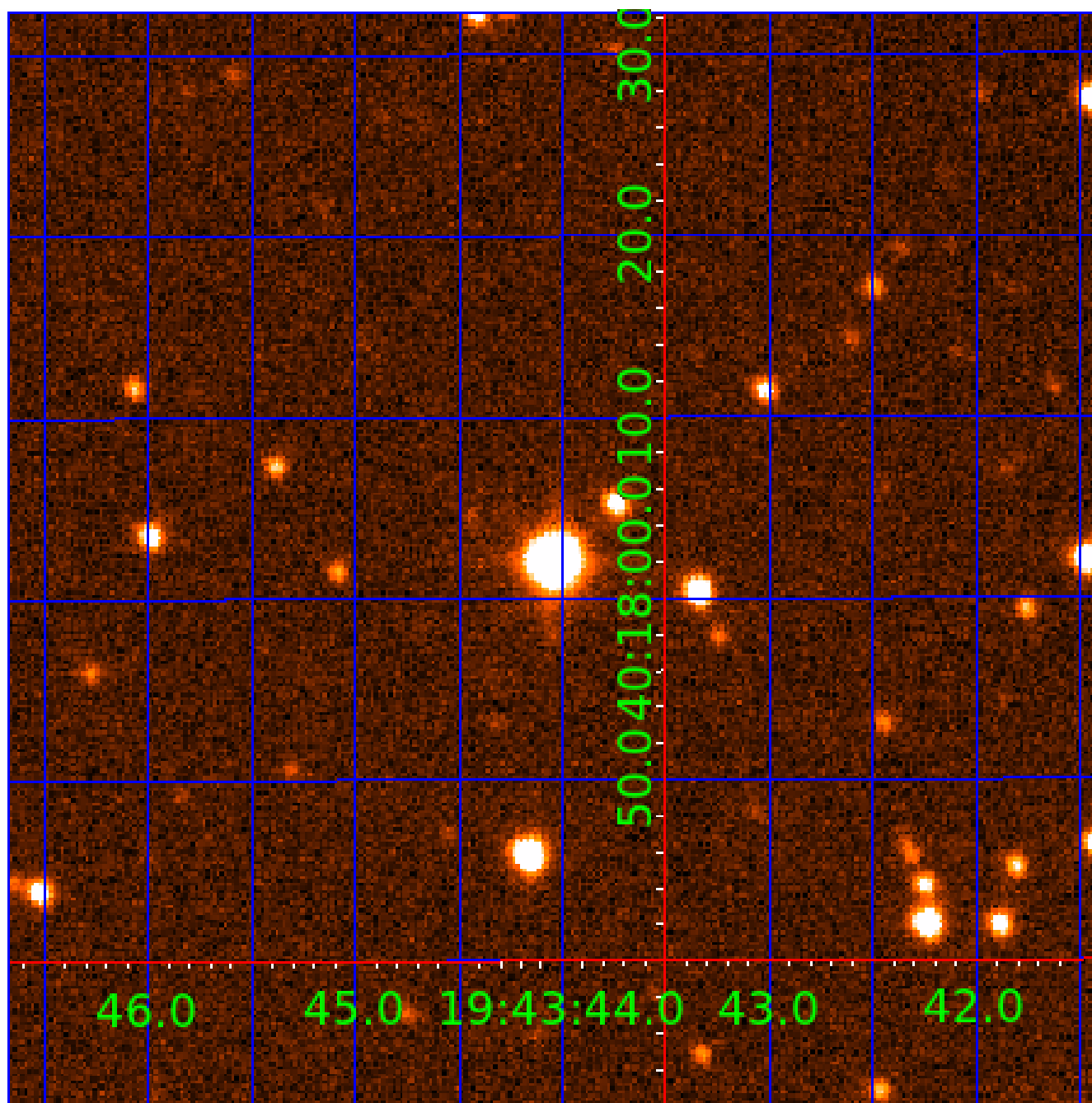


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005202905

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})
005202905-01	OBS	1932.01	22.824317	144.477858	291.9	7.620	35.6	39.2	1.85	6642	3.75	189.84
005202905-02	OBS	1932.02	14.844538	143.581339	164.3	5.949	24.6	26.0	1.85	6642	2.59	336.89
005202905-03	OBS	No	2.063089	133.176249	29.1	2.802	8.2	8.3	1.85	6642	1.16	4679.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005202905-01	OBS	PC	0.94	0	0	0	0	NO_COMMENT
005202905-02	OBS	PC	0.64	0	0	0	0	NO_COMMENT
005202905-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

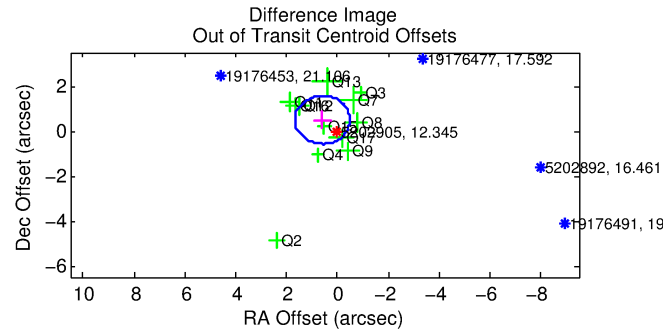
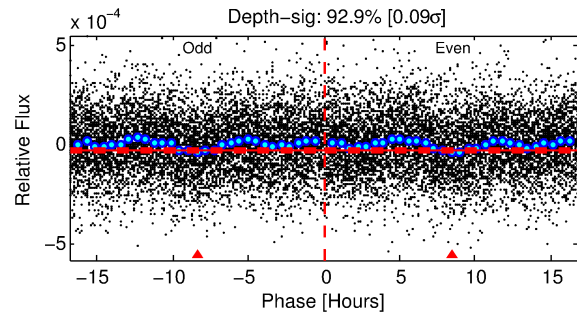
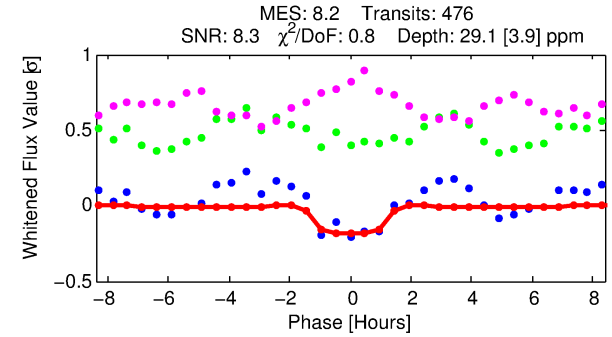
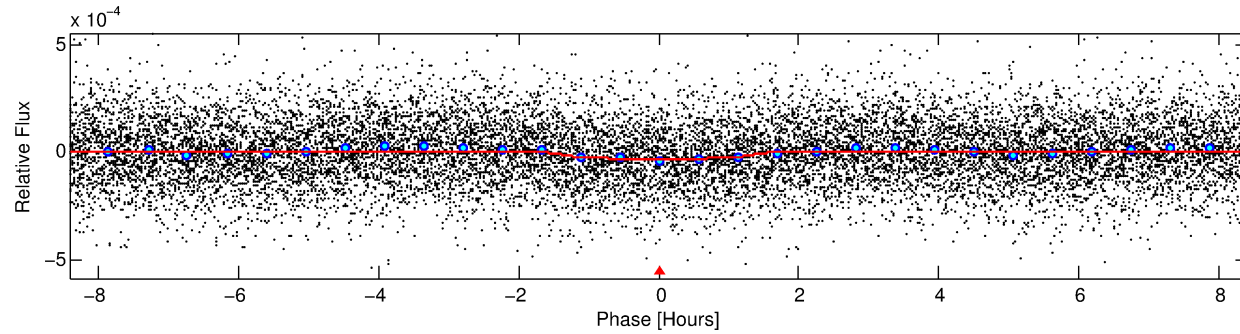
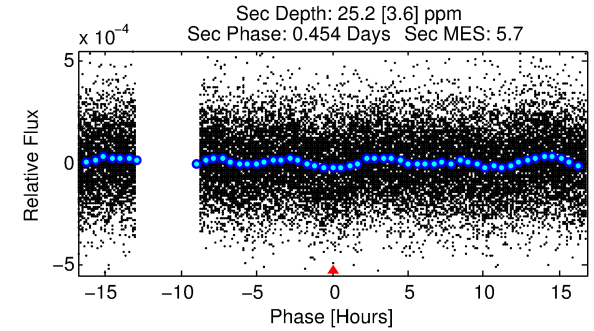
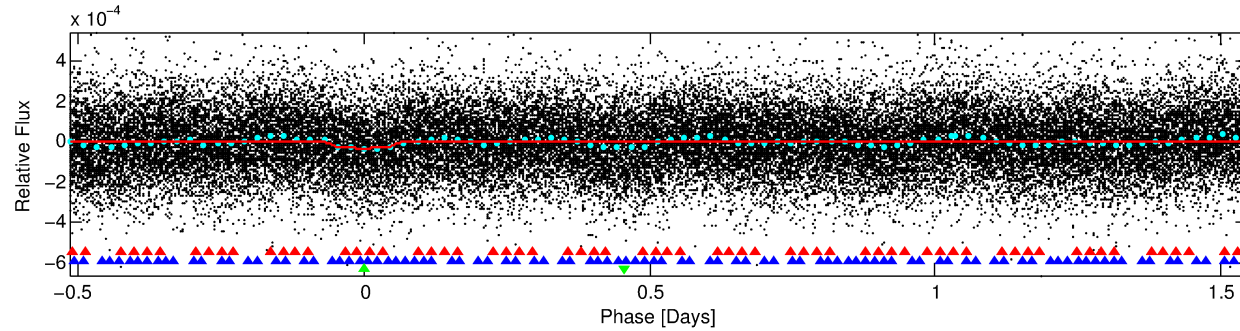
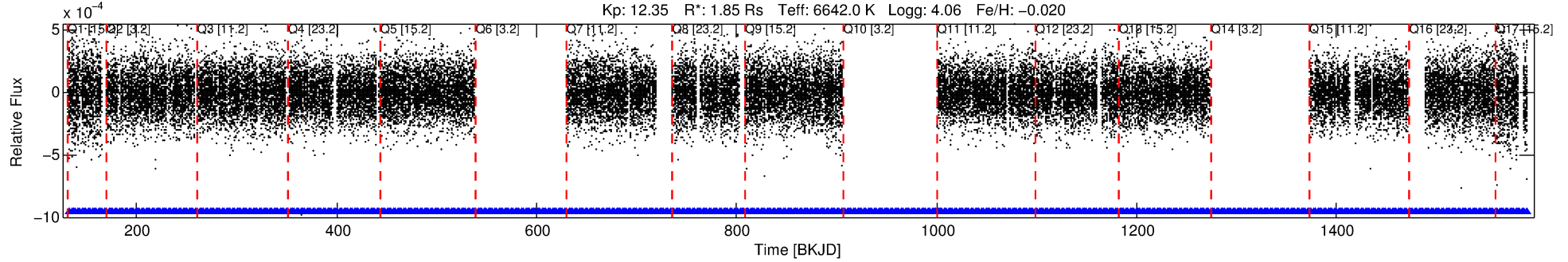
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005202905-03

No Significant Match Found

DV One-Page Summary

KIC: 5202905 Candidate: 3 of 3 Period: 2.063 d
KOI: K01932 Name: Kepler-340 Corr: No Ephemeris Match



DV Fit Results:

Period = 2.06309 [0.00002] d
Epoch = 133.1762 [0.0044] BKJD
Rp/R* = 0.0058 [0.0020]
a/R* = 2.69 [4.75]
b = 0.90 [0.44]
Seff = 4679.72 [1487.57]
Teff = 2109 [168] K
Rp = 1.16 [0.48] Re
a = 0.0356 [0.0070] AU
Ag = 13.02 [10.14] [1.18σ]
Teffp = 6194 [1121] K [3.60σ]

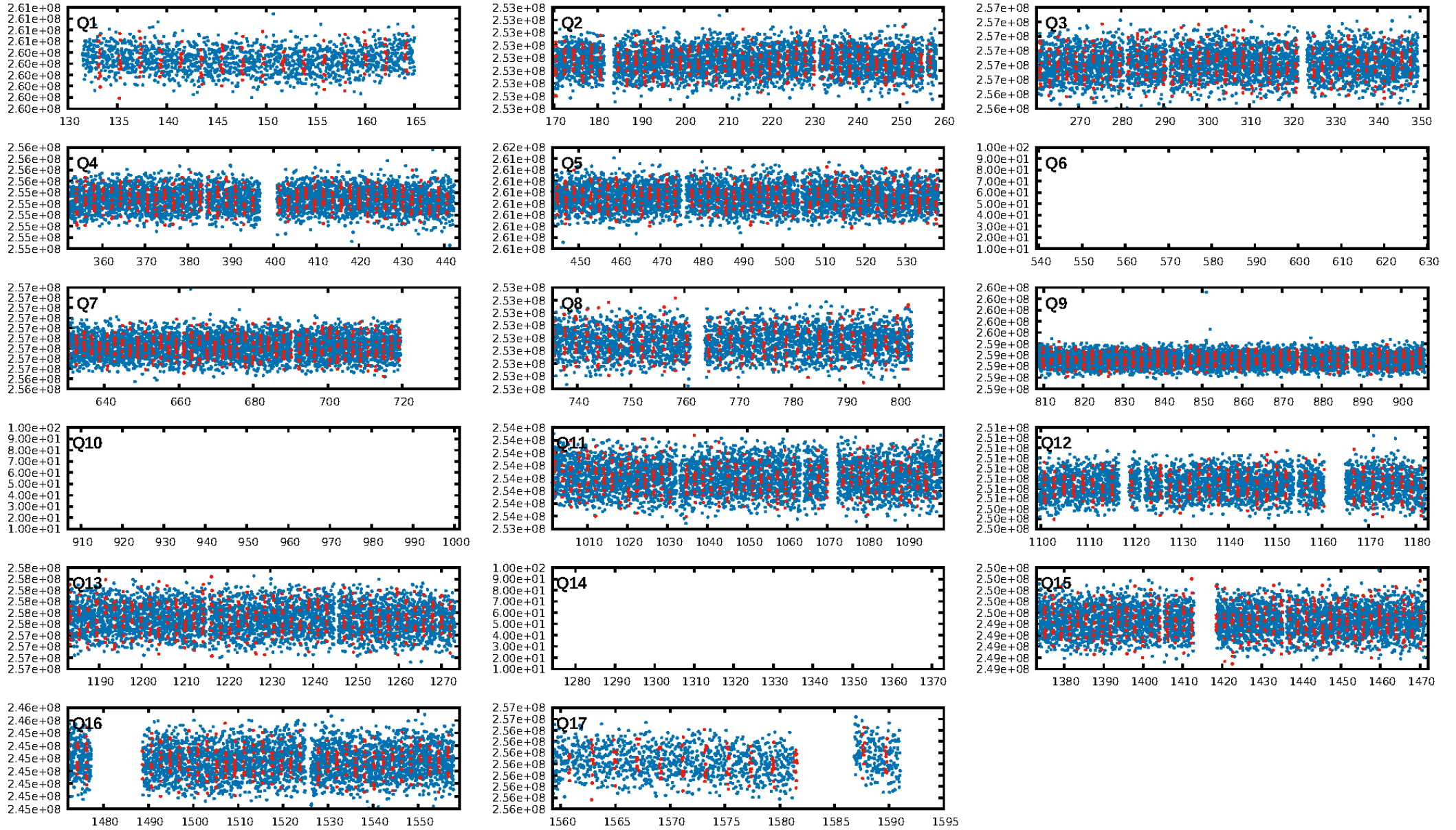
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [46.65σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.39e-16
RollingBand-fgt: 1.00 [448/448]
GhostDiagnostic-chr: -6.039
Centroid-sig: 4.1%
Centroid-so: 1.707 arcsec [1.93σ]
OotOffset-rm: 0.769 arcsec [2.15σ]
KicOffset-rm: 0.900 arcsec [2.24σ]
OotOffset-st: 1/4/4/3 [12]
KicOffset-st: 1/4/4/3 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 1.00 [14/14]

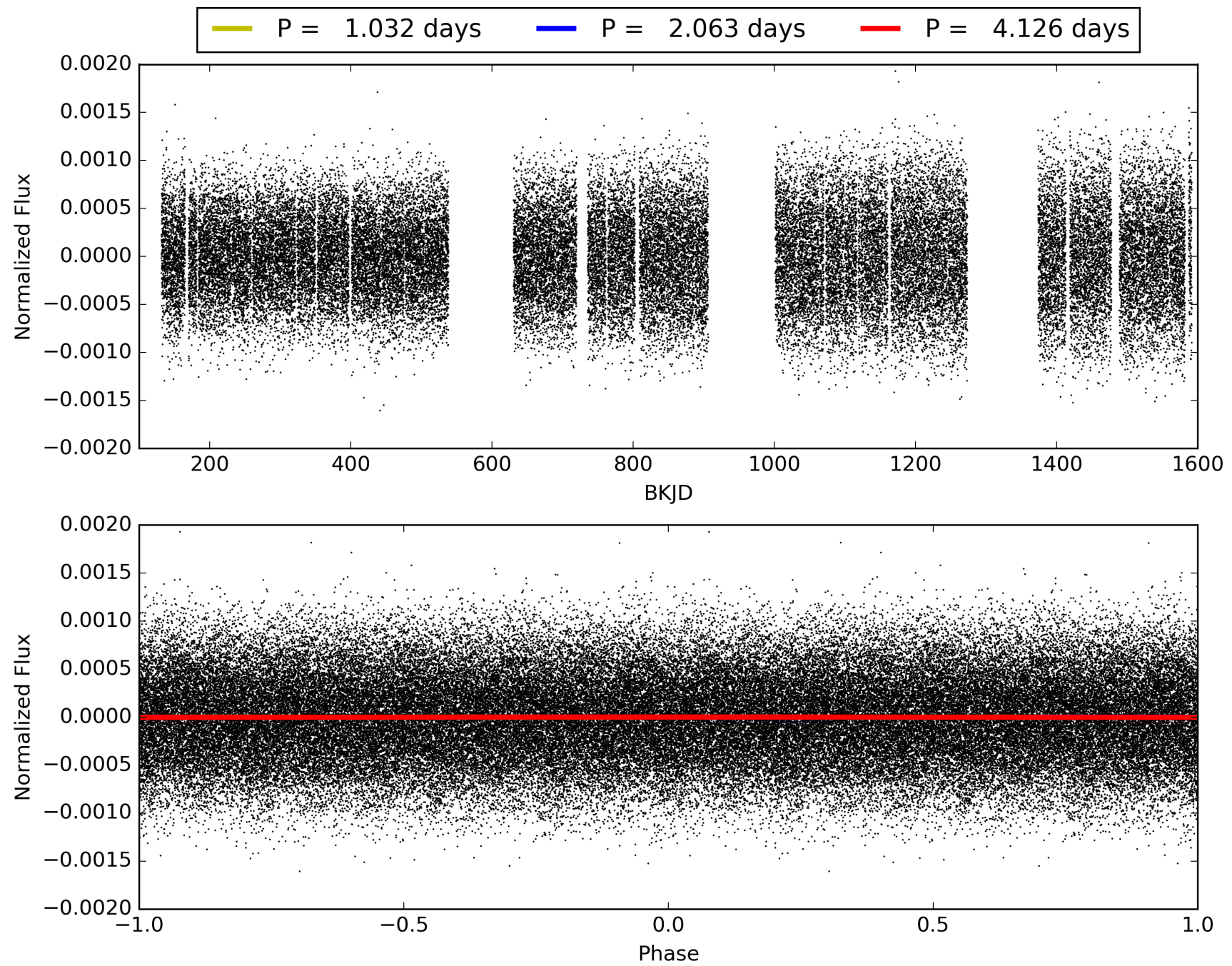
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:06:02 Z

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

TCE 005202905-03, PDC Light Curves

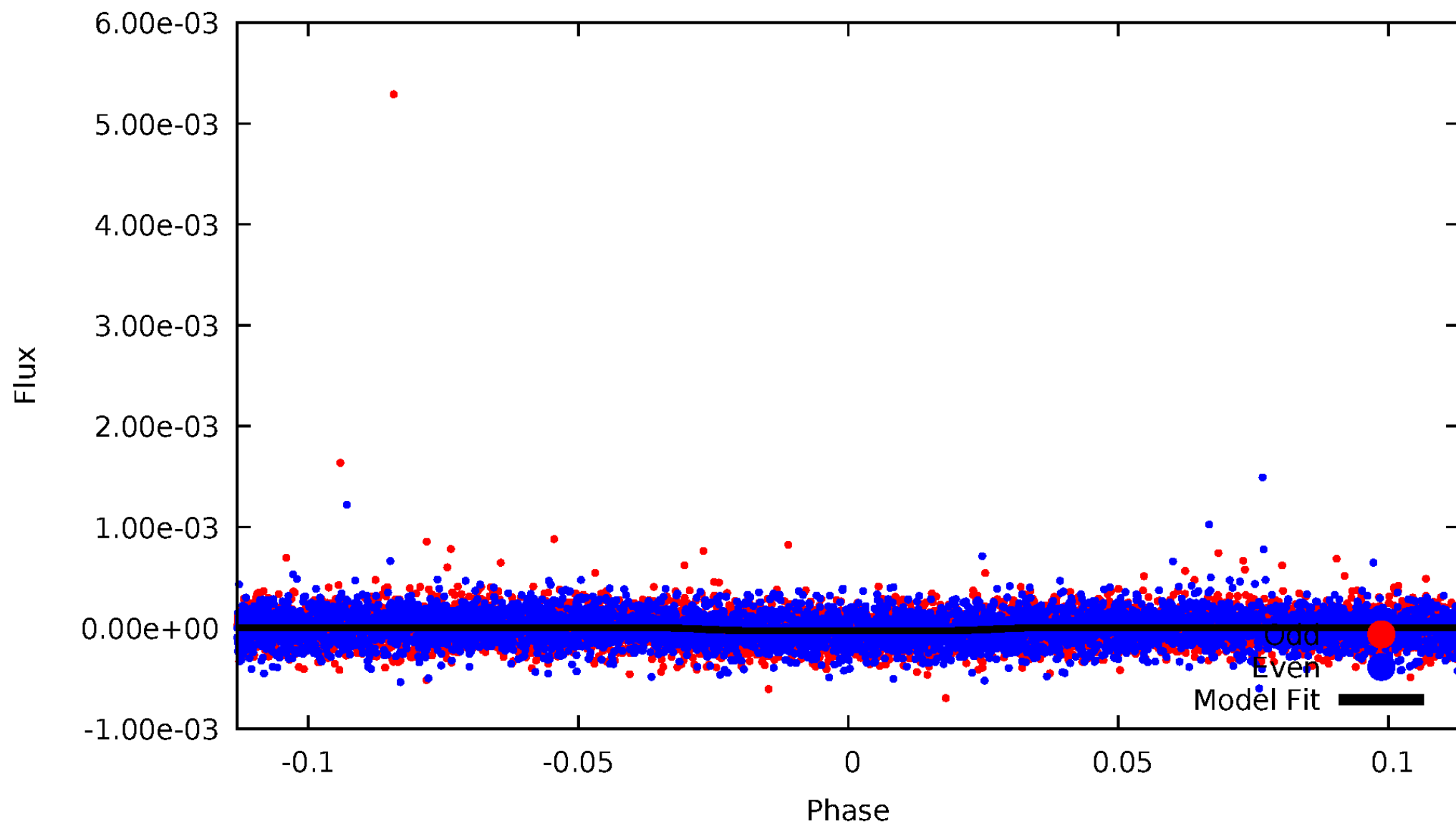


TCE 005202905-03



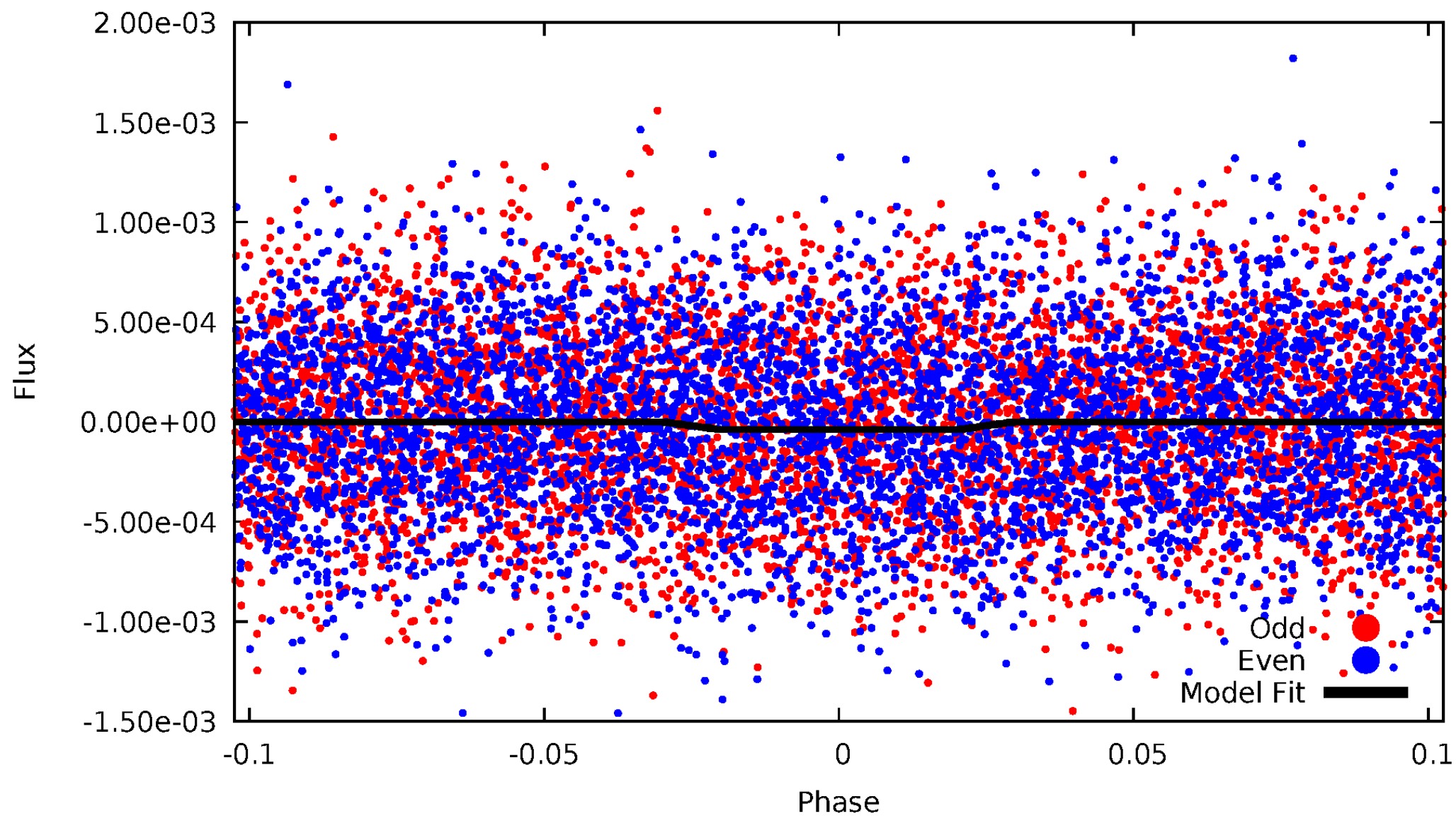
DV Odd/Even

TCE 005202905-03

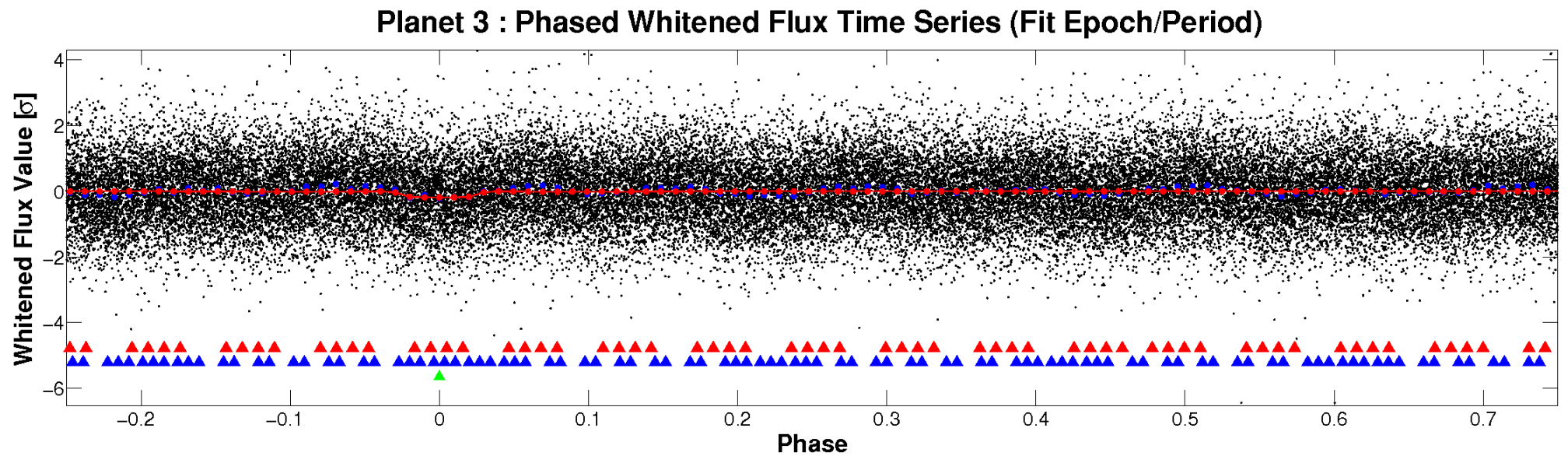
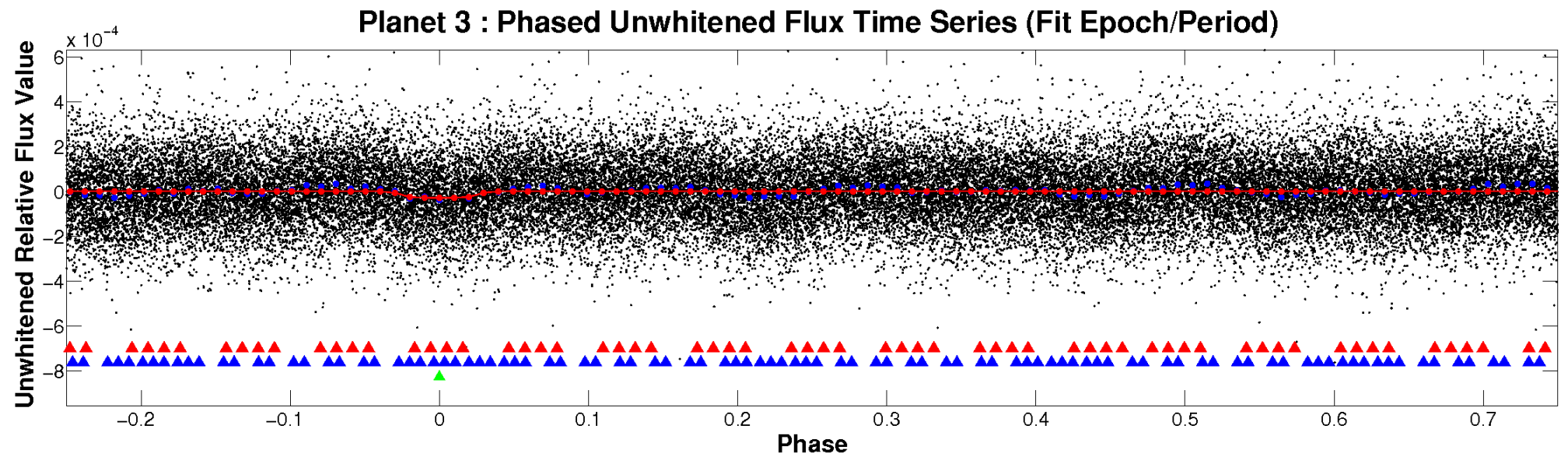


ALT Odd/Even

TCE 005202905-03

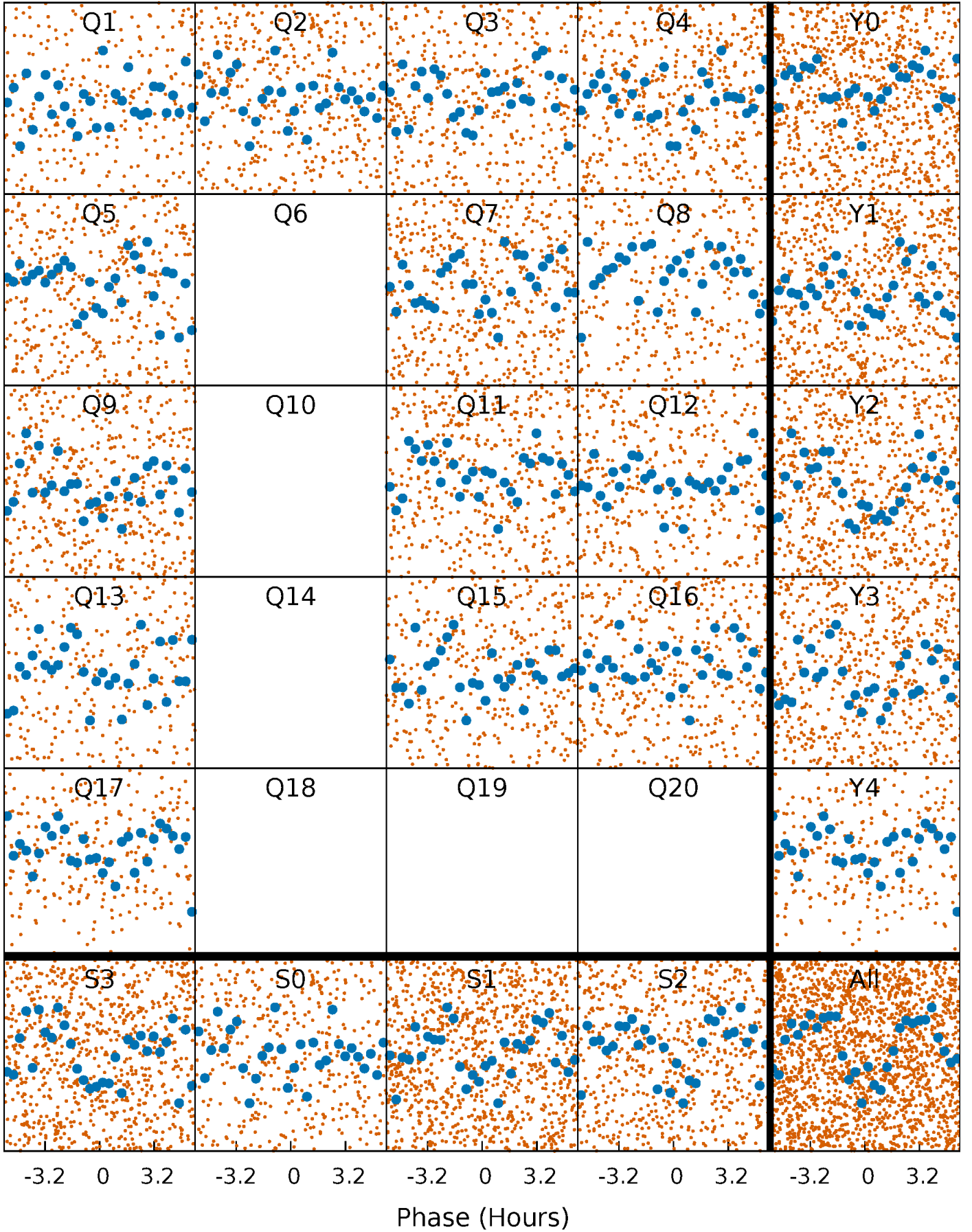


Non-Whitened Vs. Whitened Light Curve



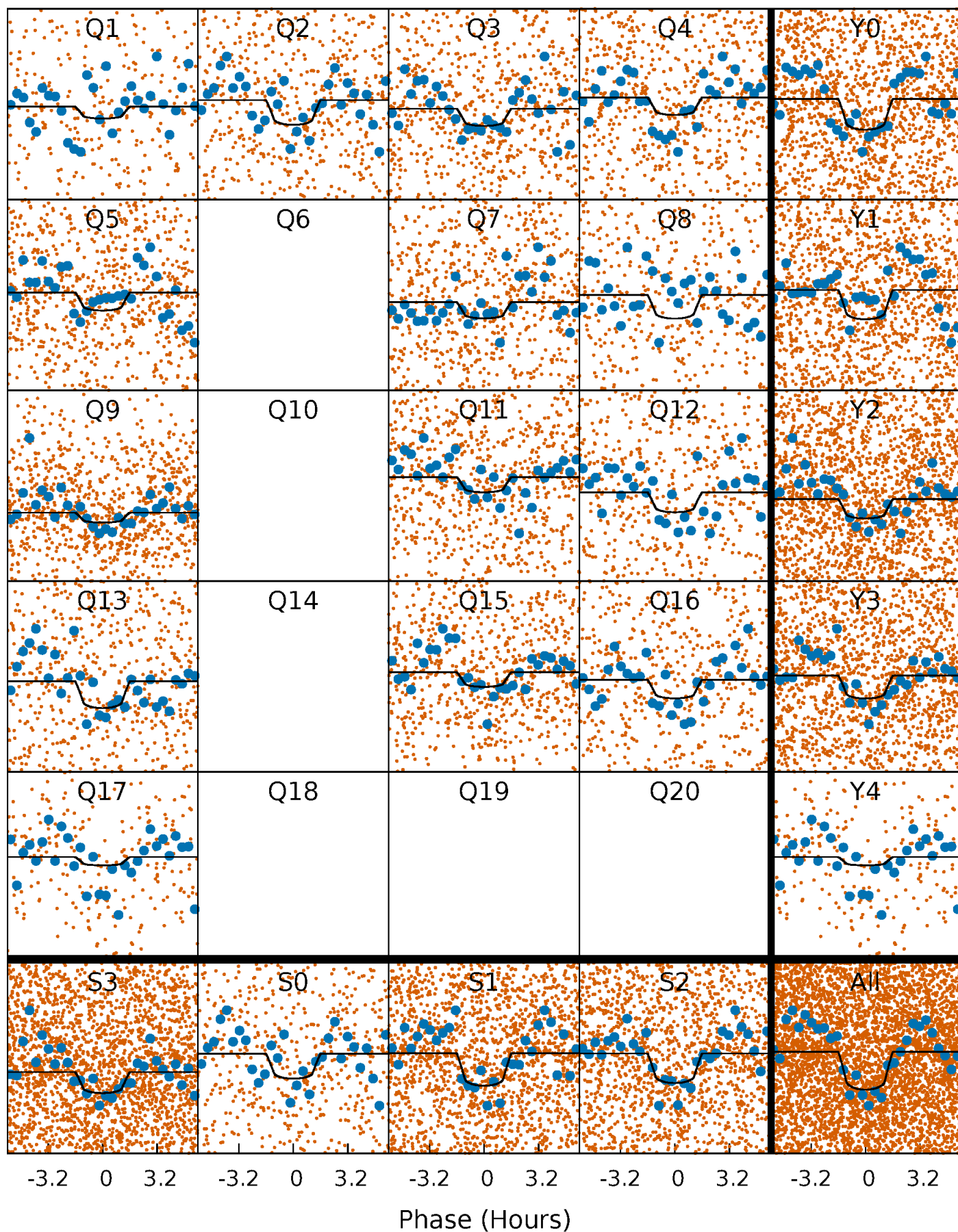
PDC Quarter-Phased Transit Curves

TCE 005202905-03 P= 2.063089 Days $T_0=133.176249$ (BKJD)



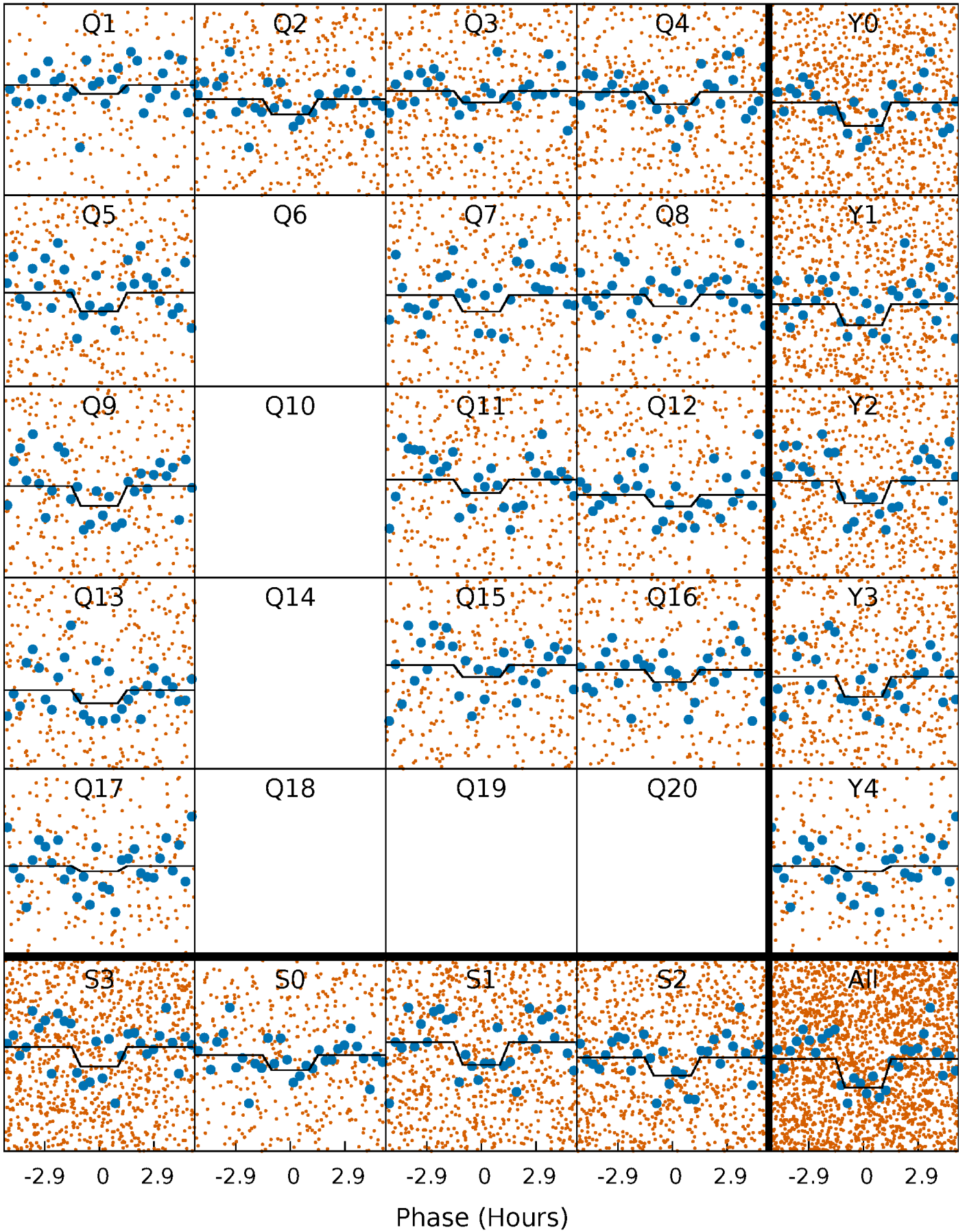
DV Quarter-Phased Transit Curves

TCE 005202905-03 P= 2.063089 Days $T_0=133.176249$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

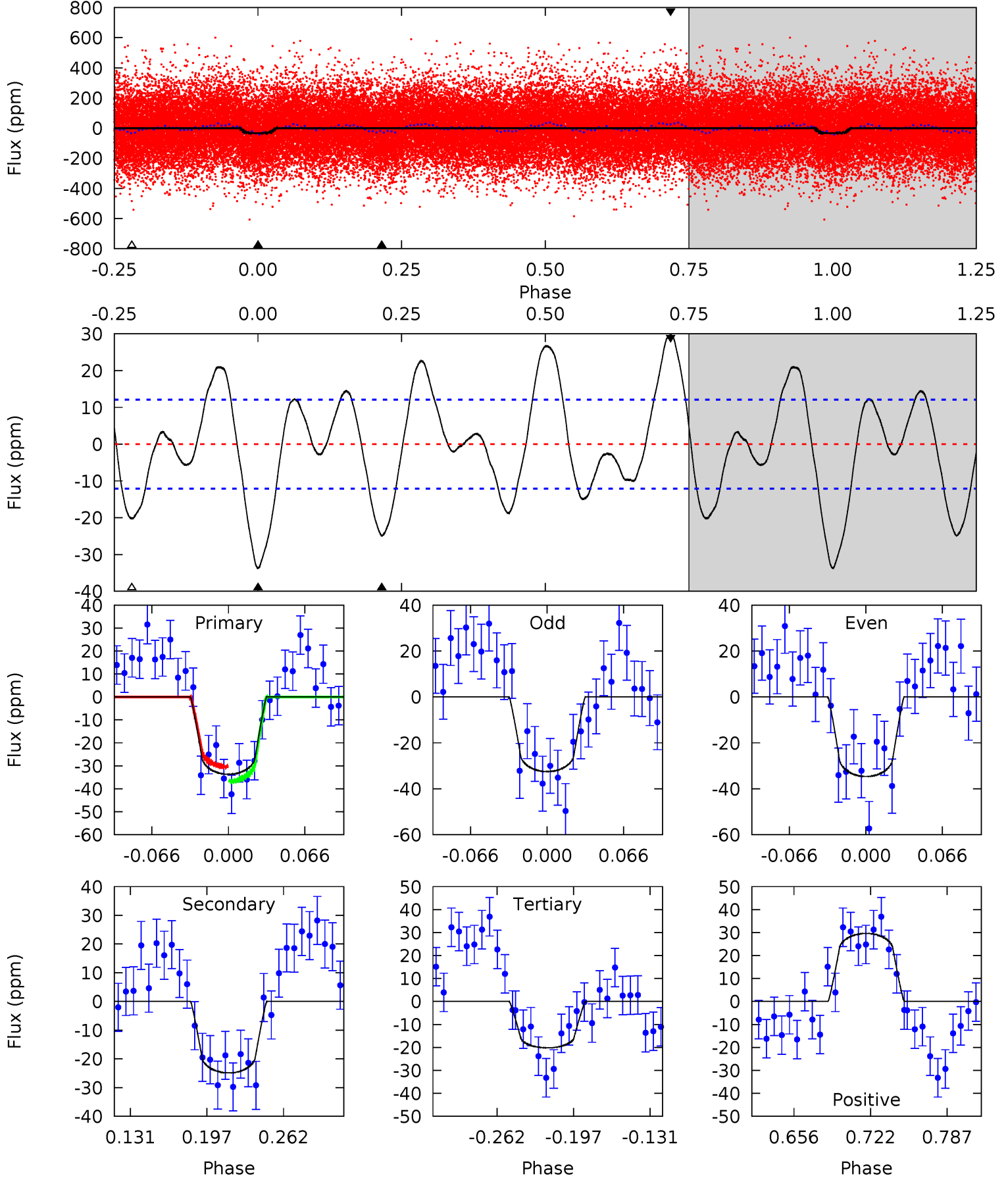
TCE 005202905-03 P= 2.063104 Days $T_0=133.167992$ (BKJD)



DV Model-Shift Uniqueness Test

005202905-03, P = 2.063089 Days, E = 131.113160 Days

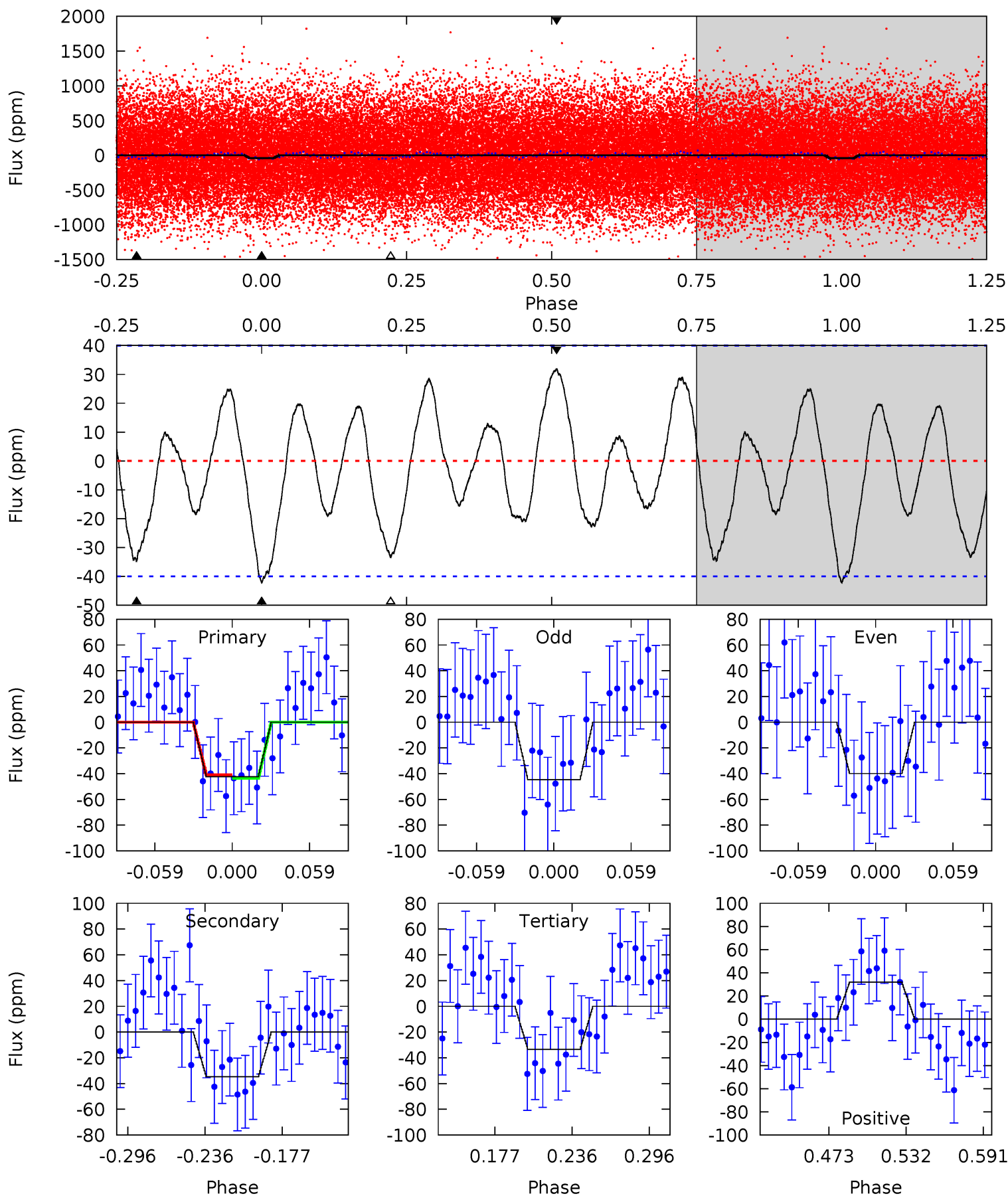
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	9.56	7.75	11.4	4.65	1.84	4.81	5.19	1.57	1.81	-1.82	0.41	1.06	0.47	1.22



Alt Model-Shift Uniqueness Test

005202905-03, P = 2.063104 Days, E = 131.104888 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.94	4.06	3.92	3.74	4.67	1.89	1.86	1.02	1.20	0.15	0.32	0.27	1.27	0.43	0.16



Stellar Parameters For KIC 005202905

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6642^{+105}_{-157}	$4.057^{+0.174}_{-0.116}$	$-0.020^{+0.150}_{-0.150}$	$1.846^{+0.326}_{-0.399}$	$1.421^{+0.109}_{-0.164}$	$0.318^{+0.281}_{-0.109}$
	+2%/-2%	+4%/-3%	+750%/-750%	+18%/-22%	+8%/-12%	+88%/-34%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 005202905-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-25 ± 3	$1.12^{+0.40}_{-0.41}$	2912^{+156}_{-175}	6155^{+1546}_{-839}	14^{+20}_{-7}
Alt.	-35 ± 9	$1.26^{+0.46}_{-0.41}$	2926^{+149}_{-172}	6307^{+1602}_{-911}	15^{+20}_{-7}

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 $A_{obs} \gg 1.0$

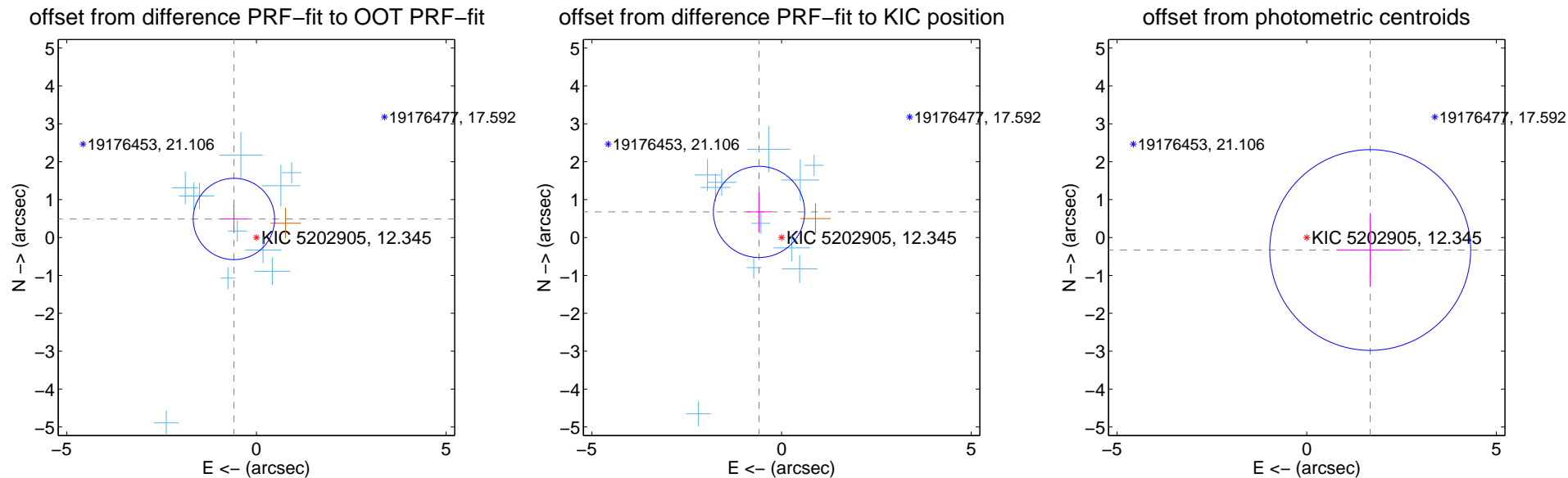
DV Centroid Data

Supplemental centroid analysis for 005202905-03. Kepler magnitude: 12.35. Transit SNR 8.34

There are 11 quarters with good PRF difference image offsets

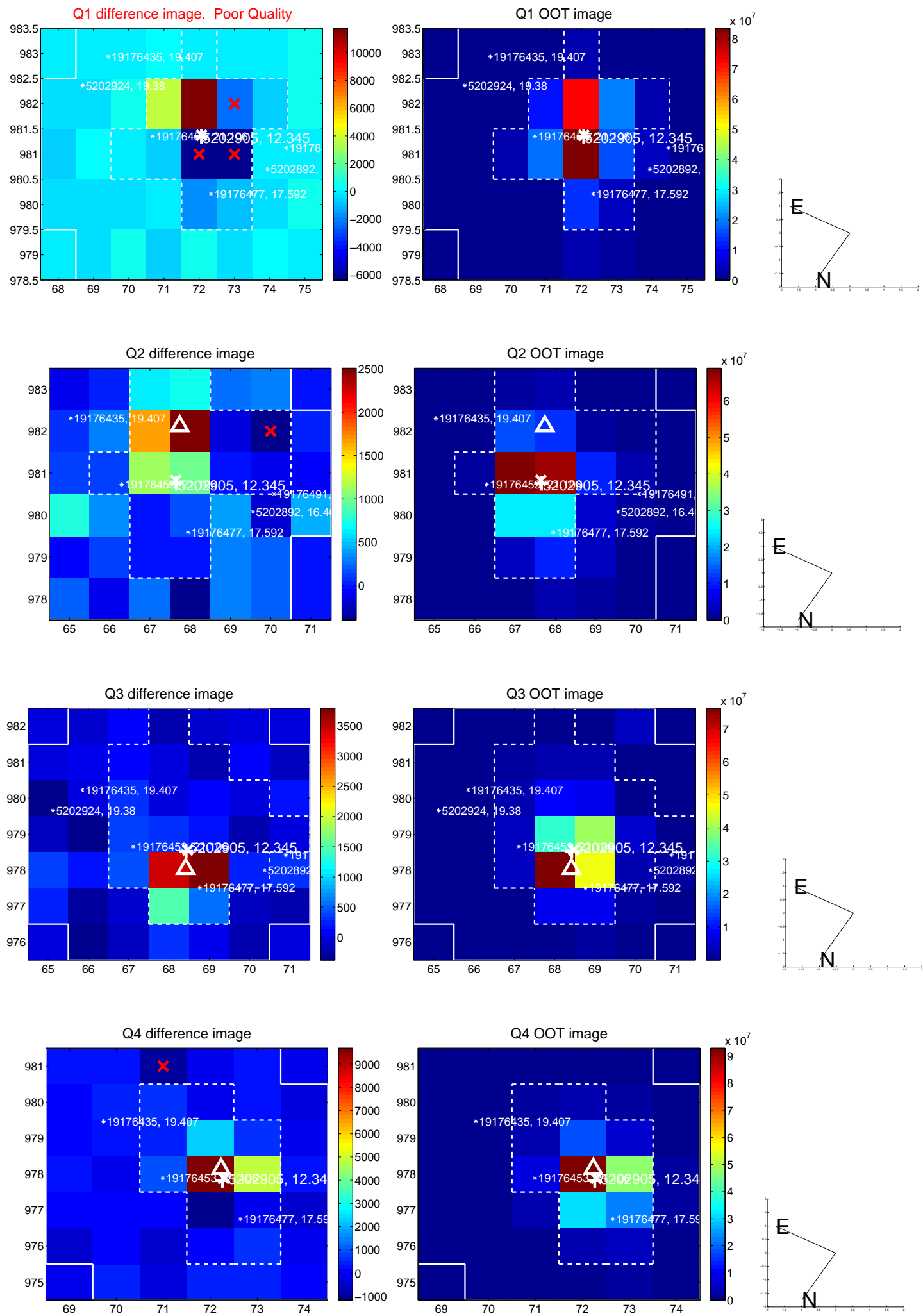
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.769 ± 0.358	2.15	0.593 ± 0.344	0.489 ± 0.377
PRF-fit source offset from KIC position	0.900 ± 0.401	2.24	0.595 ± 0.314	0.675 ± 0.531
photometric centroid source offset	1.71 ± 0.88	1.93	-1.67 ± 0.88	-0.33 ± 0.95

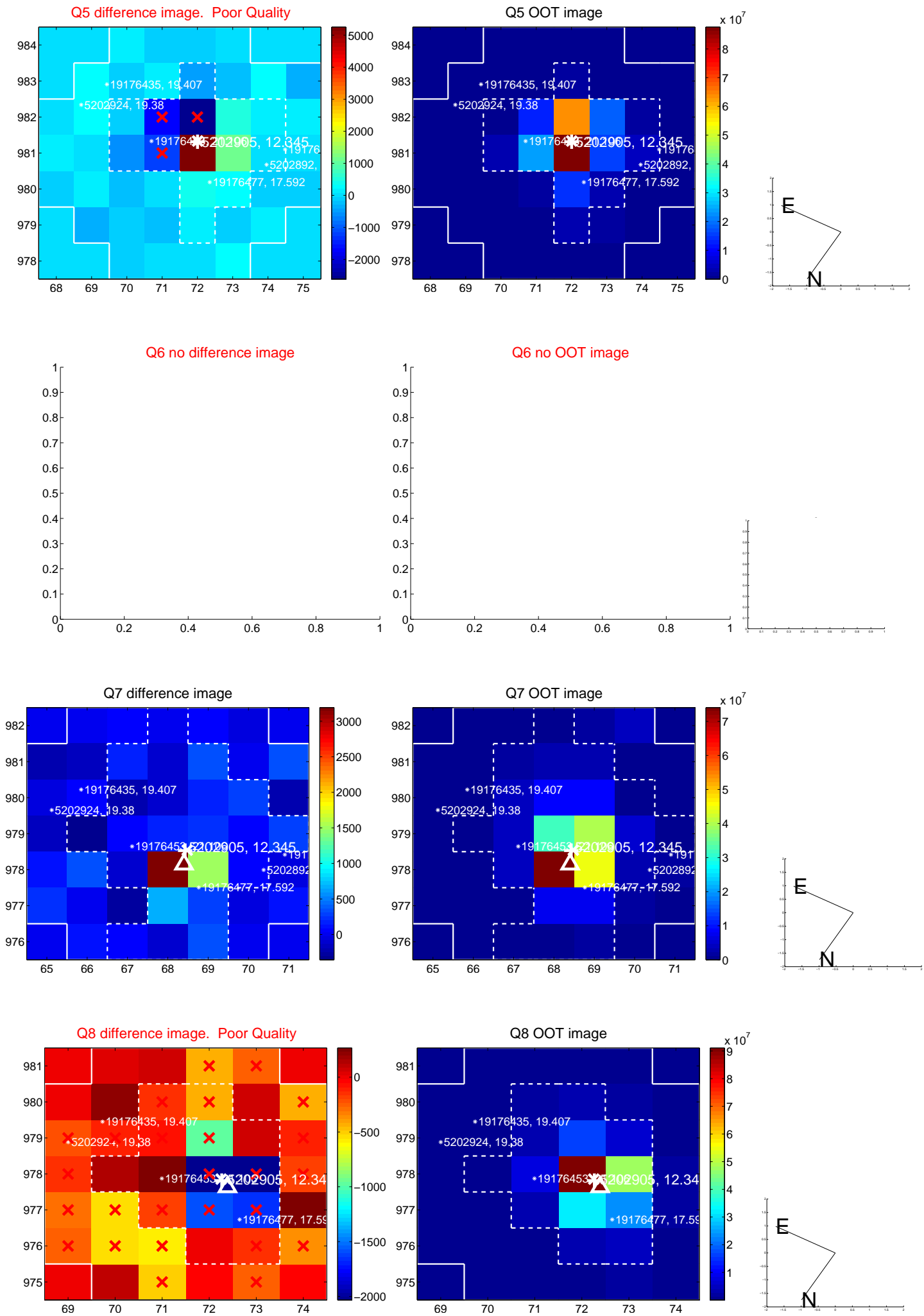


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

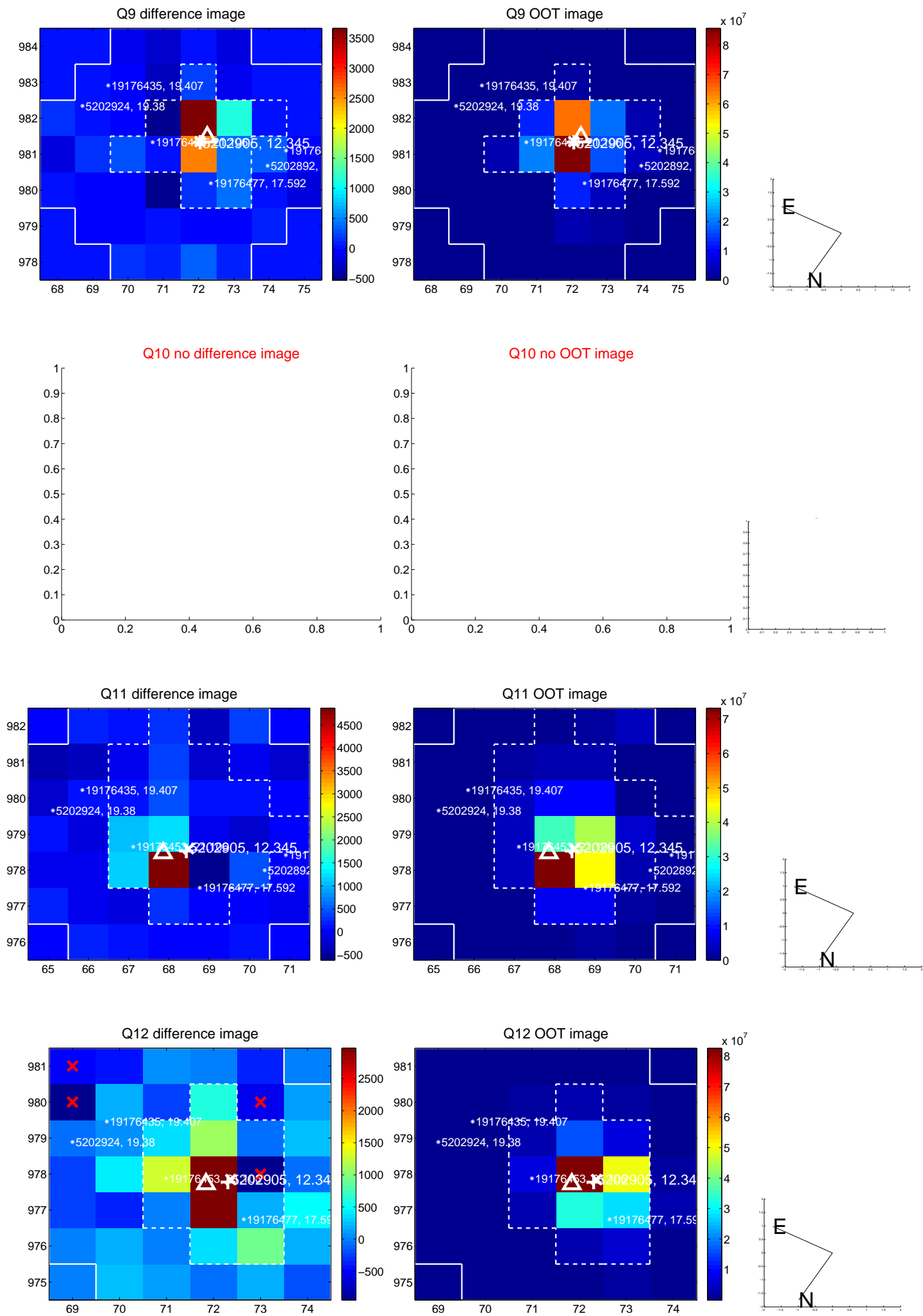
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



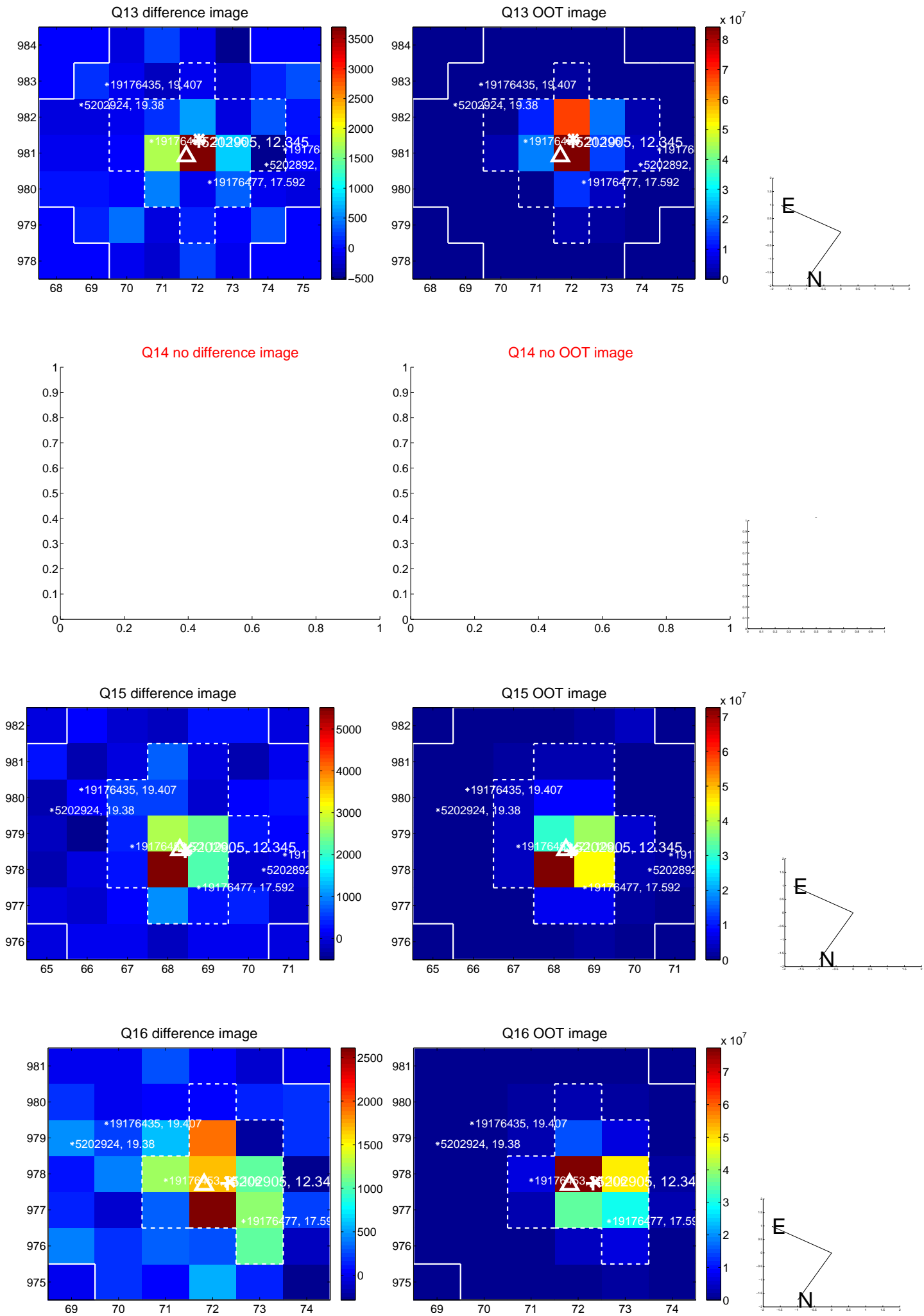
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



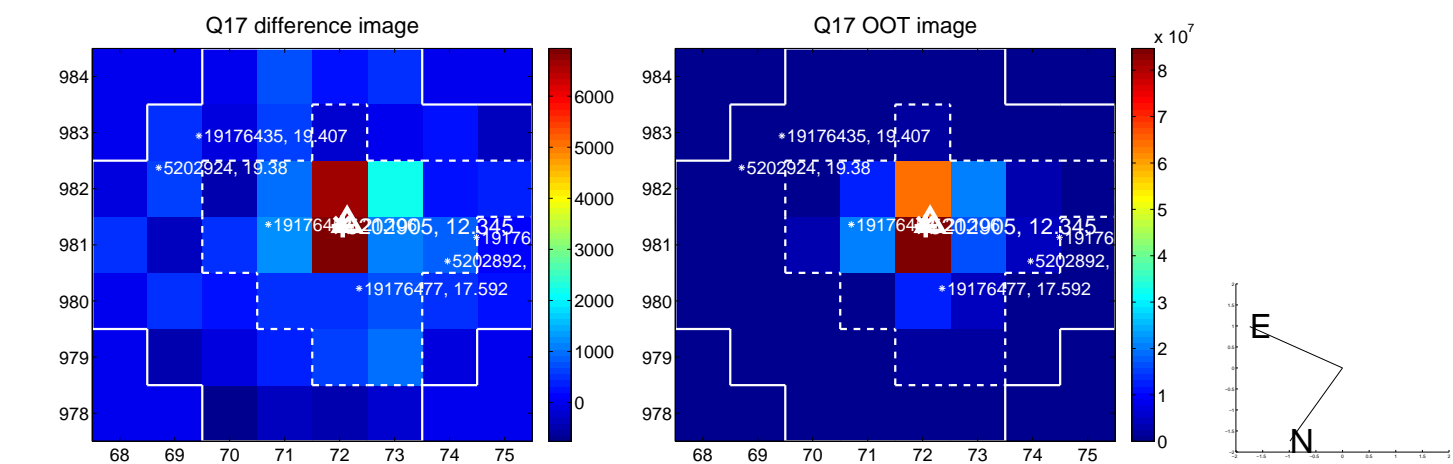
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



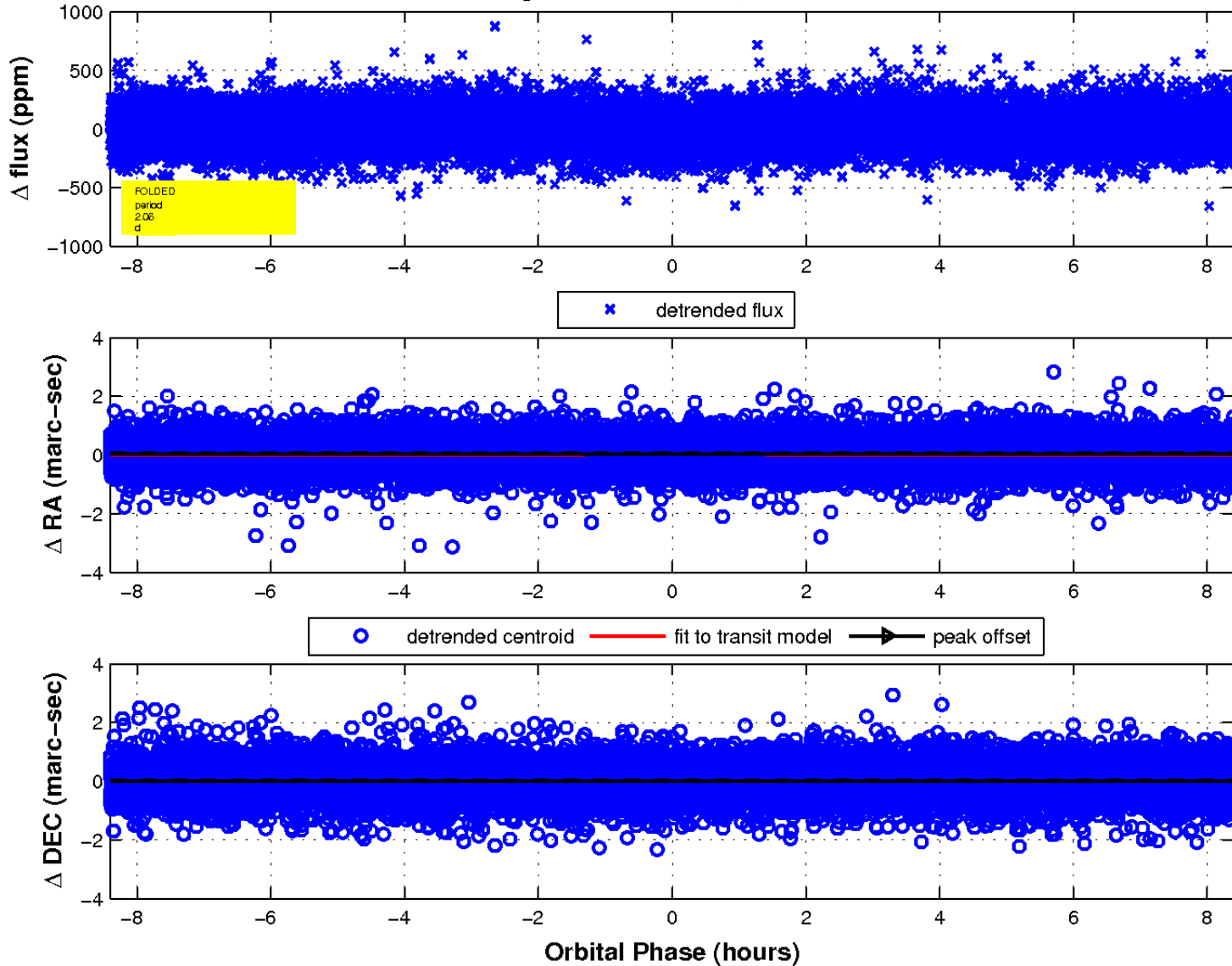
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

