

KIC 010275887

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})
010275887-01	OBS	7304.01	9.726937	139.459649	386763.4	12.500	4479.4	-1.0	1.41	5618	17.22	234.01
010275887-02	OBS	No	9.726760	134.614228	59221.8	18.992	614.9	764.9	1.41	5618	58.69	234.02
010275887-03	OBS	No	9.726602	140.593054	10297.7	18.241	490.4	146.5	1.41	5618	25.82	234.03
010275887-04	OBS	No	9.726877	138.608250	166.1	15.000	27.7	-1.0	1.41	5618	1.79	234.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010275887-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
010275887-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010275887-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—RESIDUAL_TCE—CENT_FEW_DIFFS
010275887-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—RESIDUAL_TCE—CENT_NOFITS—HALO_GHOST

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.

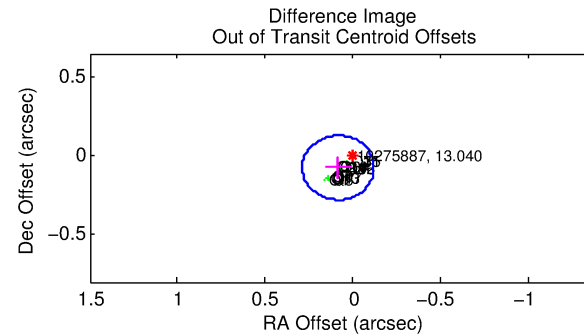
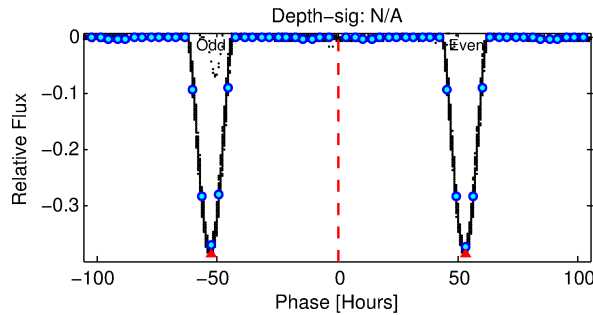
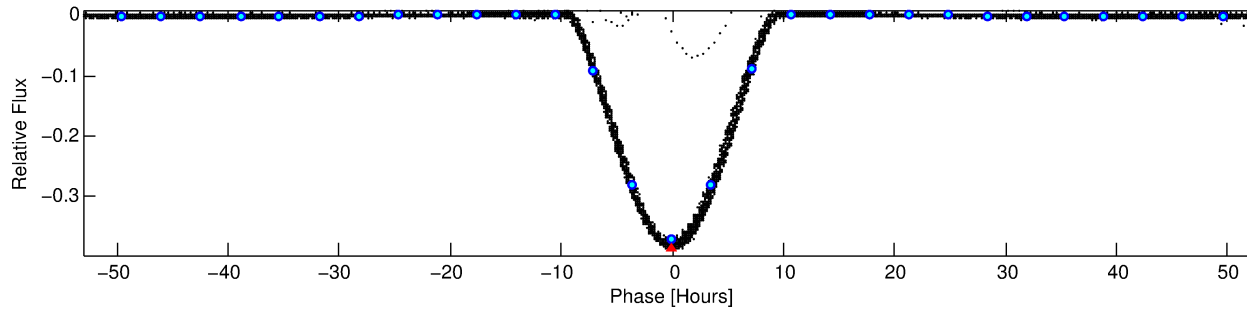
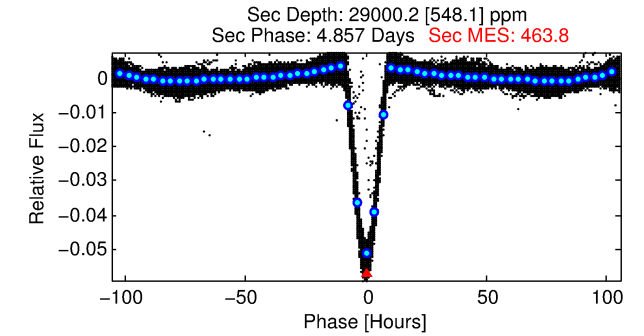
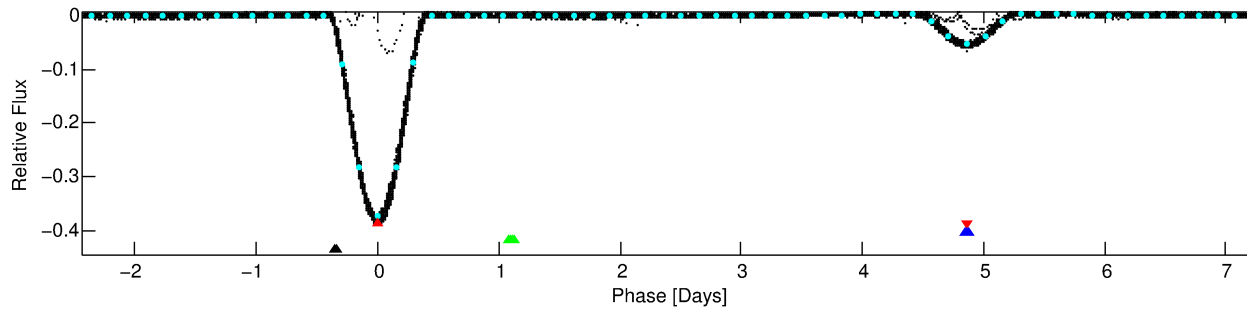
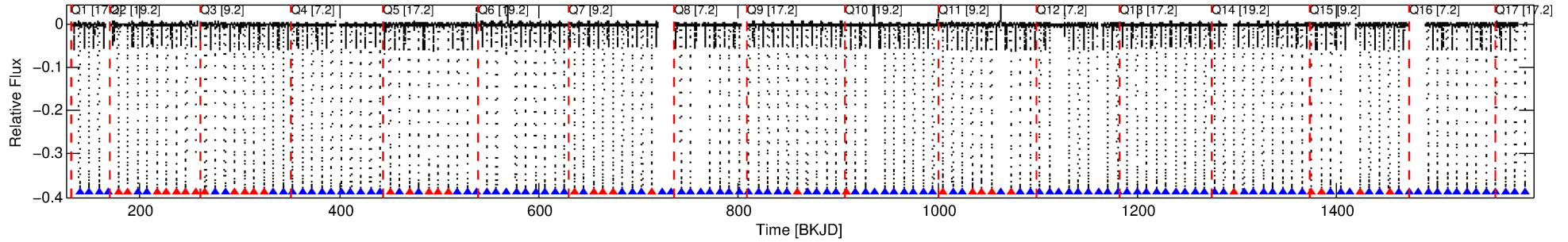
Ephemeris Match Information For 010275887-01

No Significant Match Found

DV One-Page Summary

KIC: 10275887 Candidate: 1 of 4 Period: 9.727 d
KOI: K07304.01 Corr: 0.807

Kp: 13.04 R*: 1.41 Rs Teff: 5618.0 K Logg: 4.11 Fe/H: -0.080



TPS TCE Results:

Period = 9.72694 d
Epoch = 139.4596 BKJD

DV fit results are unavailable

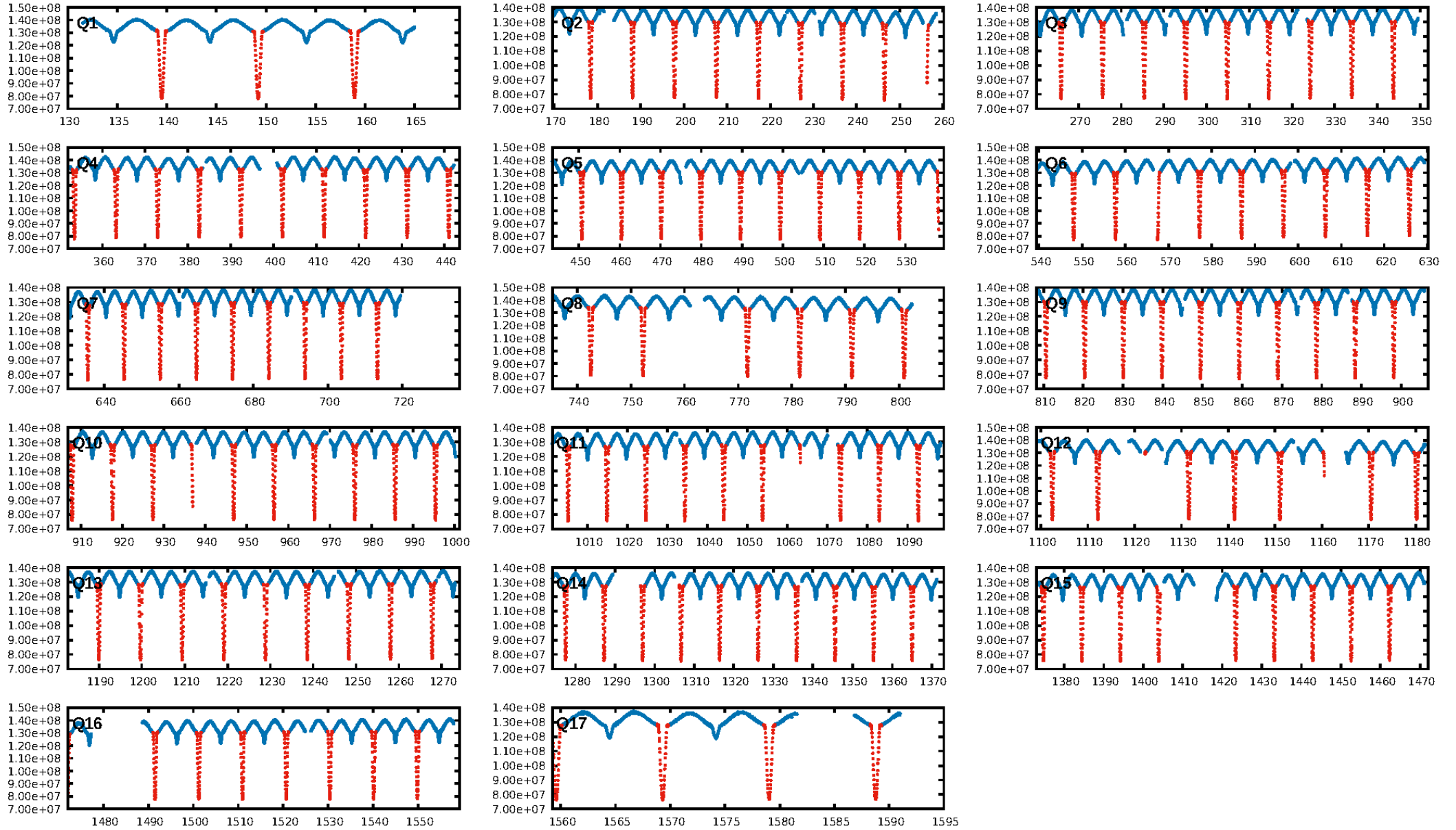
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.75 [102/136]
GhostDiagnostic-chr: 1.496
Centroid-sig: N/A
Centroid-so: 1.024 arcsec [356.59σ]
OotOffset-rm: 0.113 arcsec [1.66σ]
KicOffset-rm: 0.033 arcsec [0.47σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

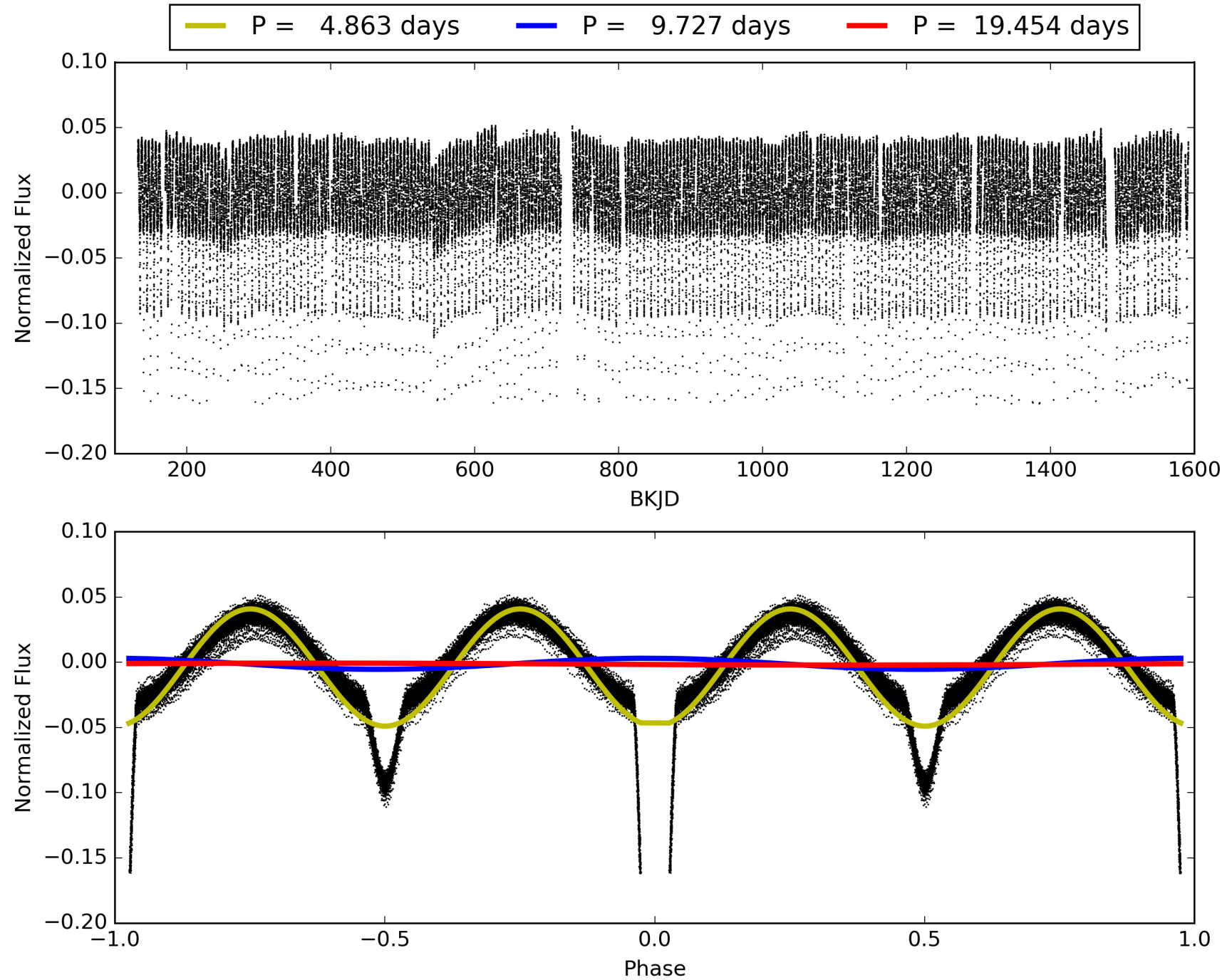
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:33:15 Z

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

TCE 010275887-01, PDC Light Curves

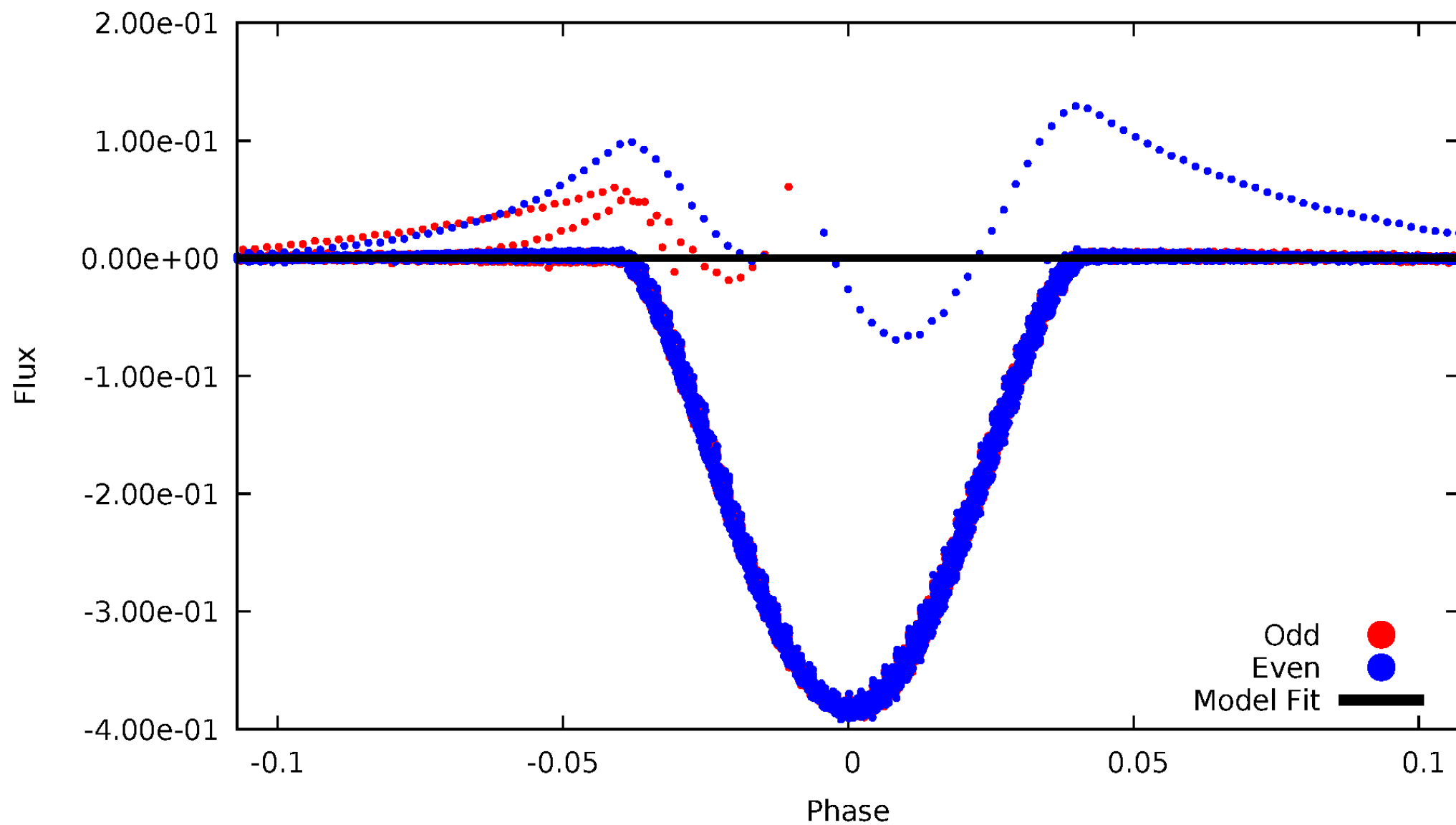


TCE 010275887-01



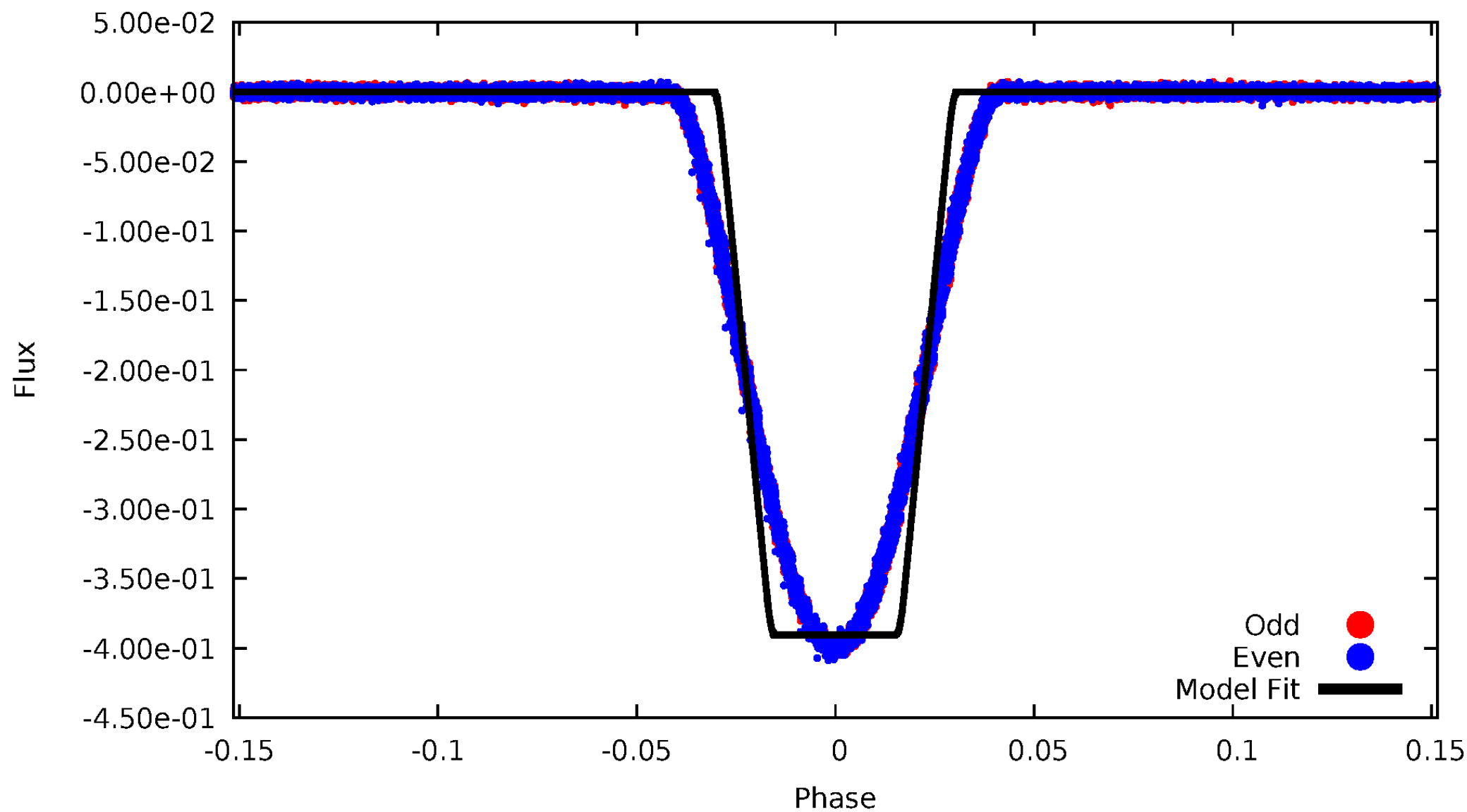
DV Odd/Even

TCE 010275887-01



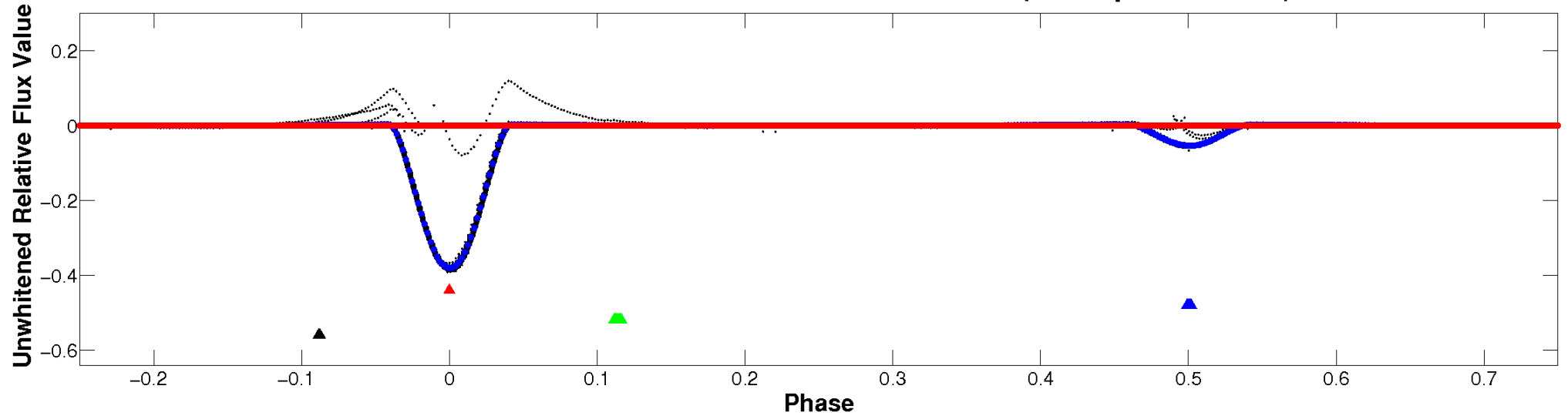
ALT Odd/Even

TCE 010275887-01

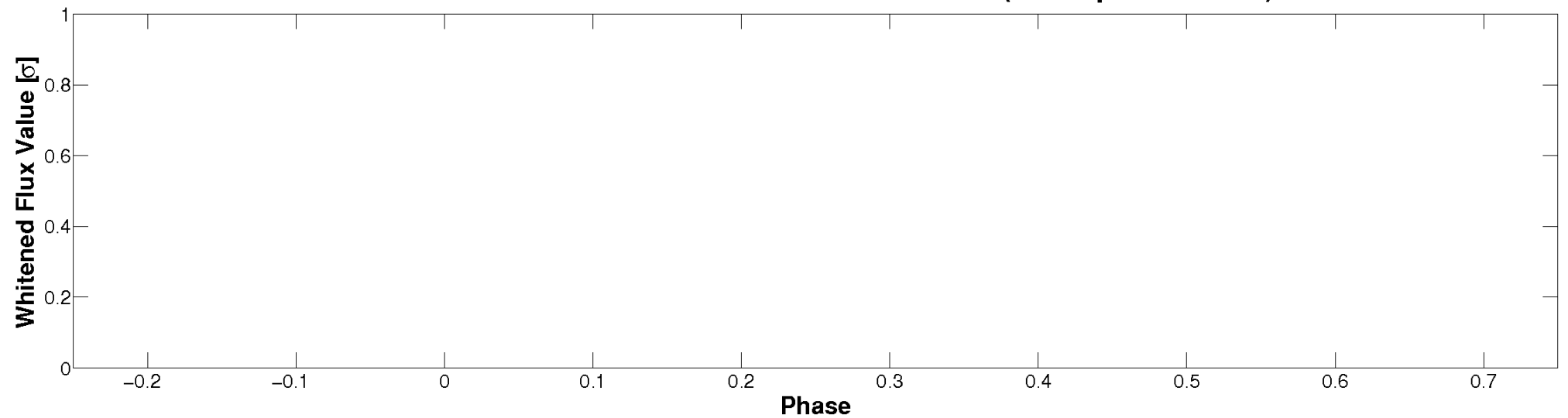


Non-Whitened Vs. Whitened Light Curve

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

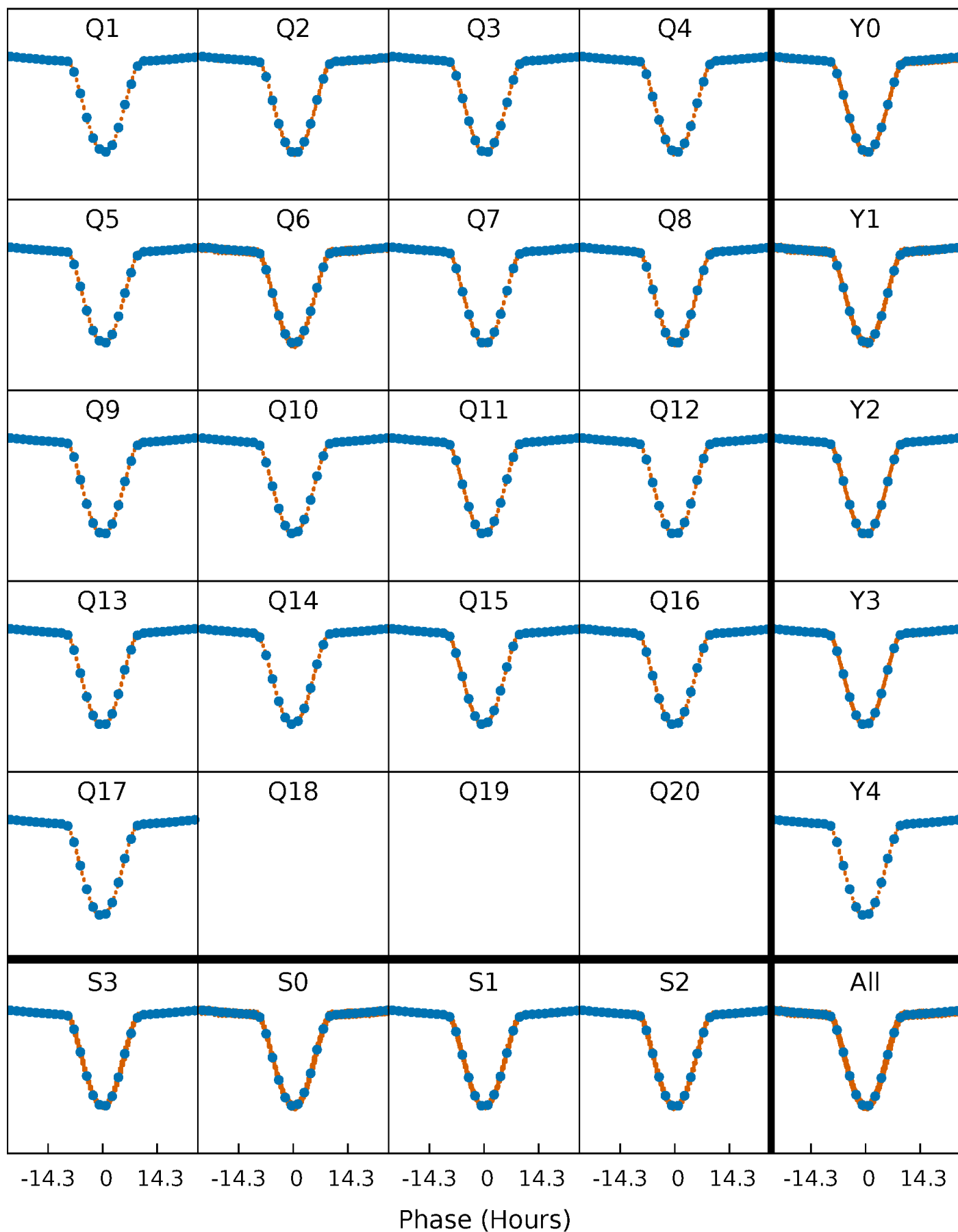


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



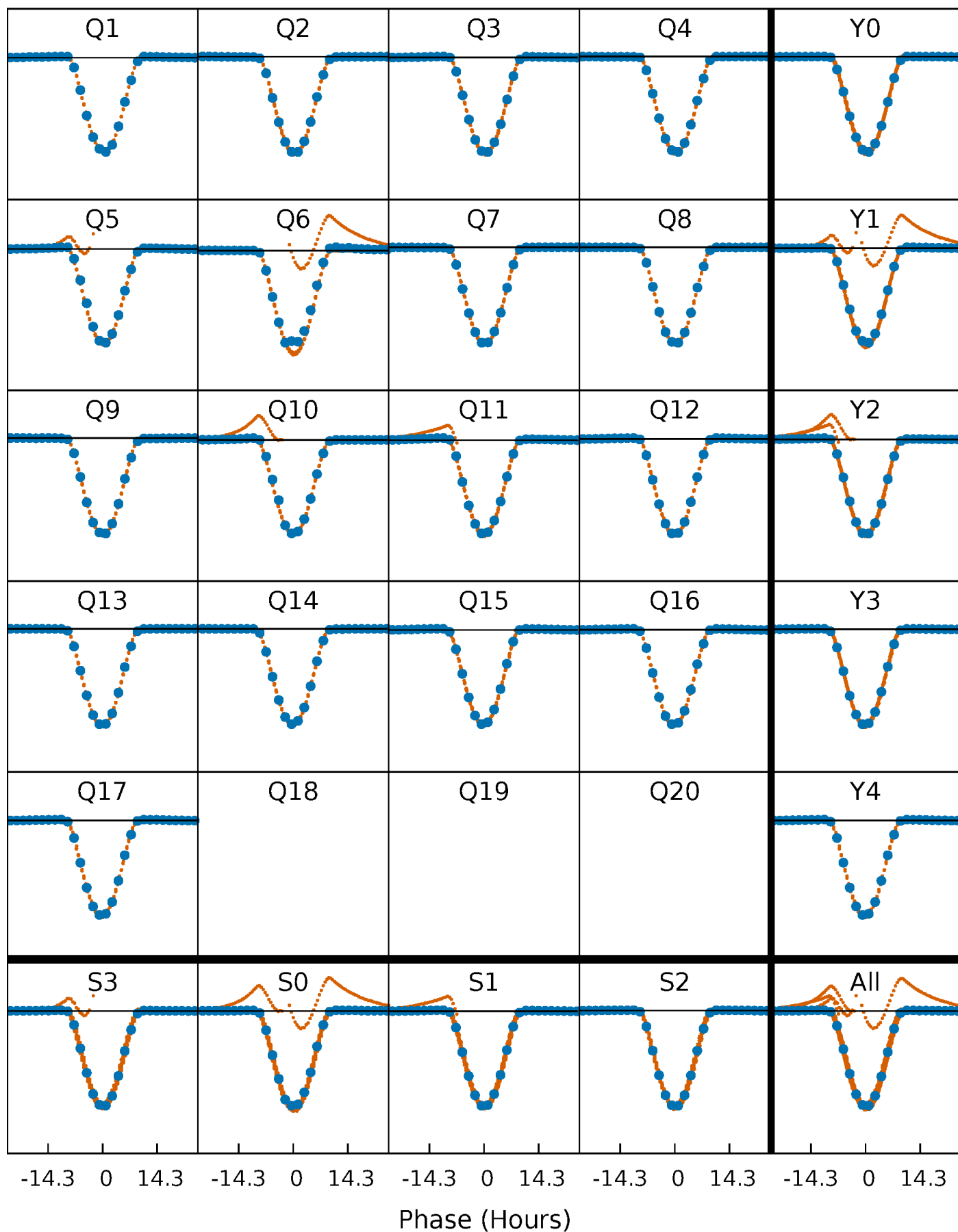
PDC Quarter-Phased Transit Curves

TCE 010275887-01 P= 9.726937 Days $T_0=139.459649$ (BKJD)



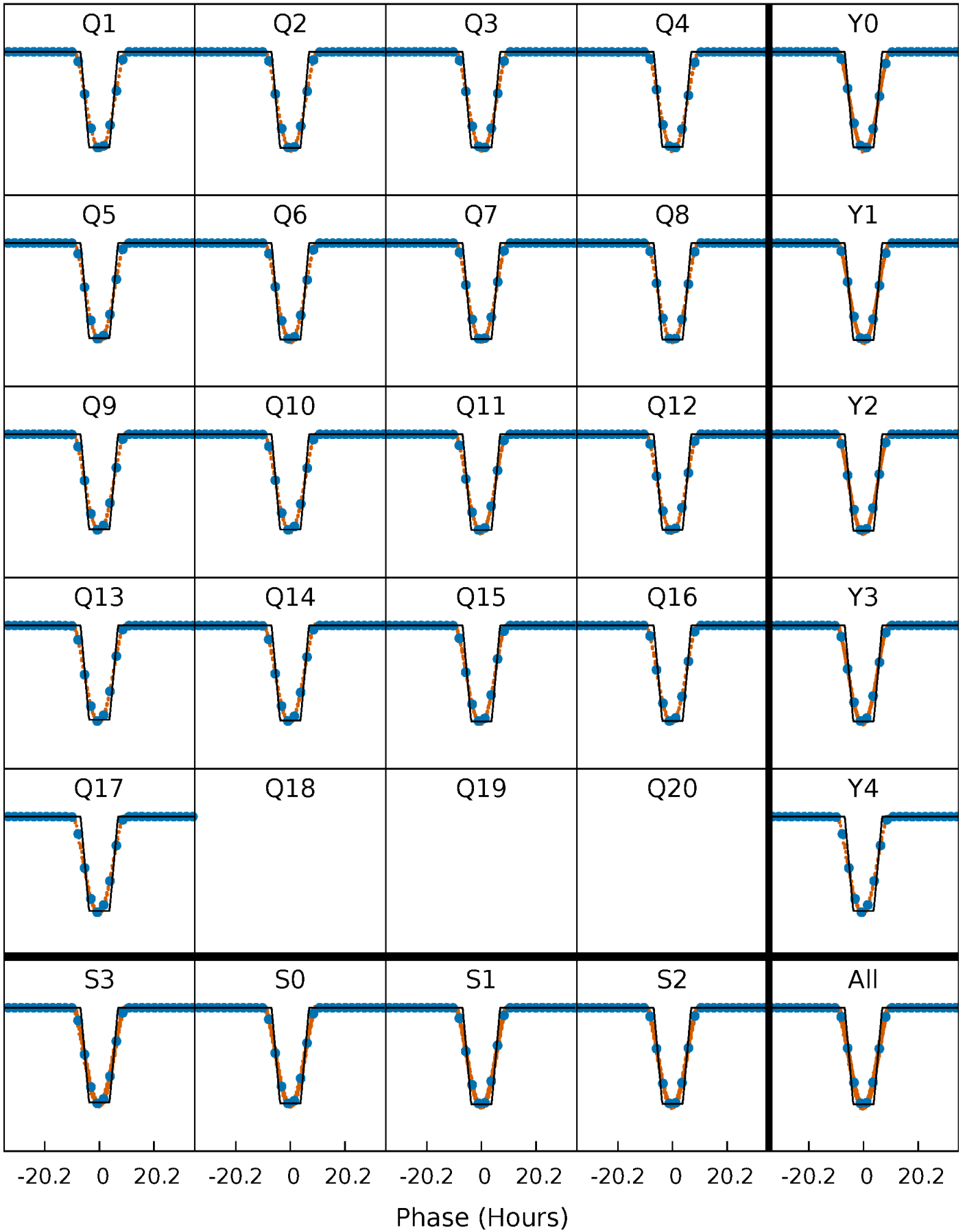
DV Quarter-Phased Transit Curves

TCE 010275887-01 P= 9.726937 Days $T_0=139.459649$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

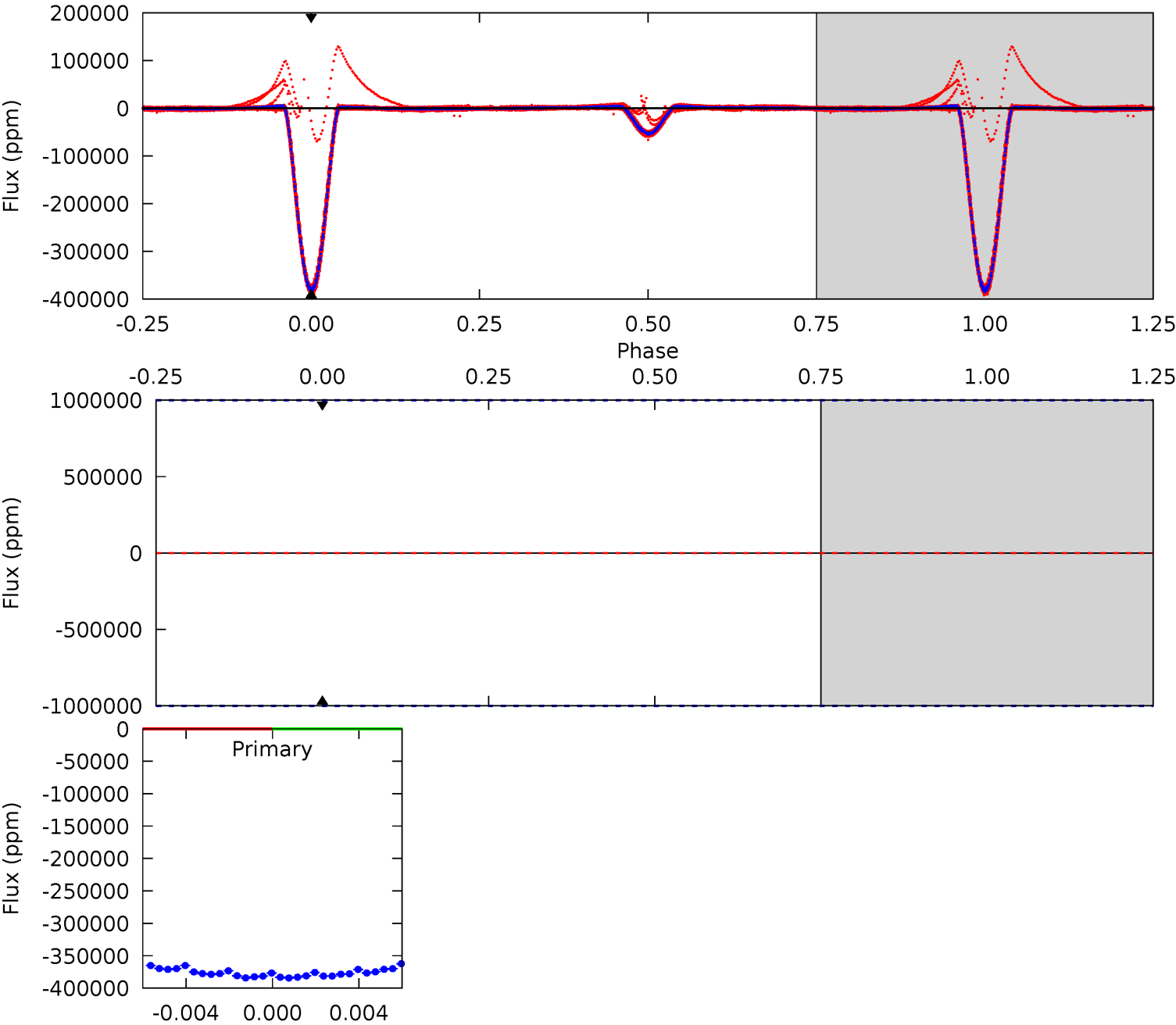
TCE 010275887-01 $P = 9.726937$ Days $T_0 = 139.464354$ (BKJD)



DV Model-Shift Uniqueness Test

010275887-01, P = 9.726937 Days, E = 129.732712 Days

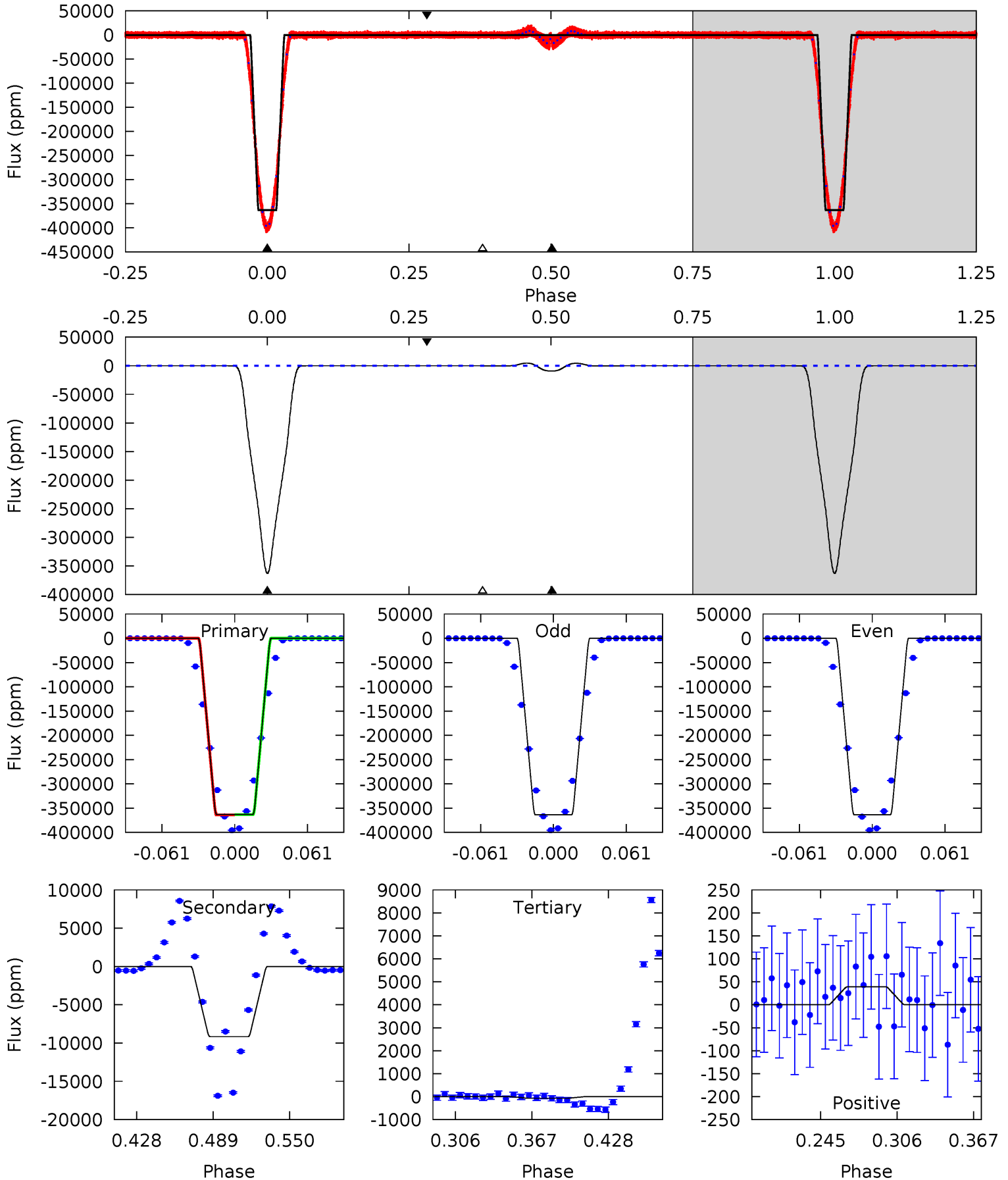
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010275887-01, P = 9.726937 Days, E = 129.737417 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9180	231.7	1.78	0.99	4.67	1.87	4.15	9179	9180	230.0	230.7	4.23	1.01	0.01	4.88



Stellar Parameters For KIC 010275887

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5618^{+186}_{-169}	$4.107^{+0.378}_{-0.162}$	$-0.080^{+0.300}_{-0.250}$	$1.406^{+0.404}_{-0.538}$	$0.922^{+0.125}_{-0.094}$	$0.468^{+1.222}_{-0.239}$
	+3%/-3%	+9%/-4%	+375%/-312%	+29%/-38%	+14%/-10%	+261%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010275887-01 / KOI 7304.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$18.28^{+14.74}_{-11.42}$	1374^{+111}_{-145}	4047^{+7490}_{-14316}	38^{+2036}_{-1575}
Alt.	-9165 ± 40	$91.35^{+23.59}_{-20.65}$	1366^{+114}_{-144}	2870^{+157}_{-131}	$4.661^{+3.006}_{-1.725}$

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

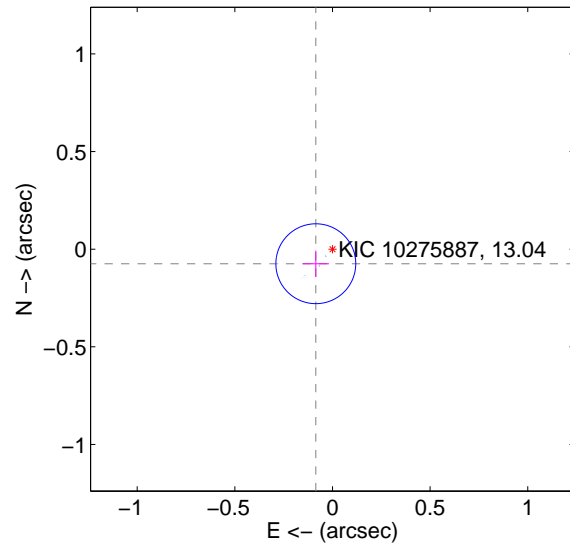
Supplemental centroid analysis for 010275887-01. Kepler magnitude: 13.04. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

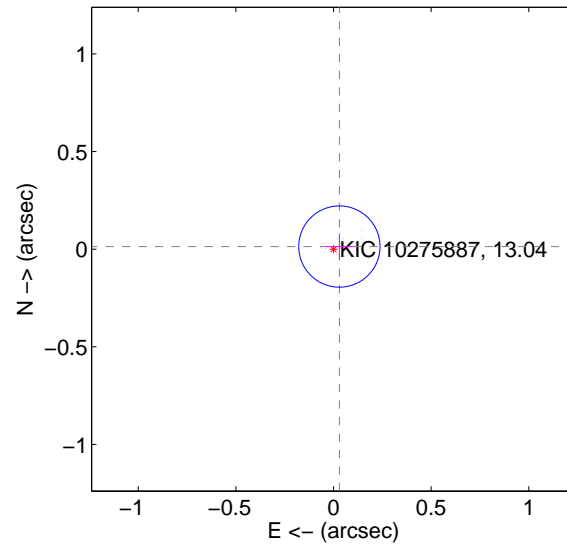
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.113 ± 0.068	1.66	0.085 ± 0.068	-0.075 ± 0.067
PRF-fit source offset from KIC position	0.033 ± 0.069	0.47	-0.030 ± 0.070	0.013 ± 0.068
photometric centroid source offset	1.02 ± 0.00	356.59	-1.01 ± 0.00	0.16 ± 0.00

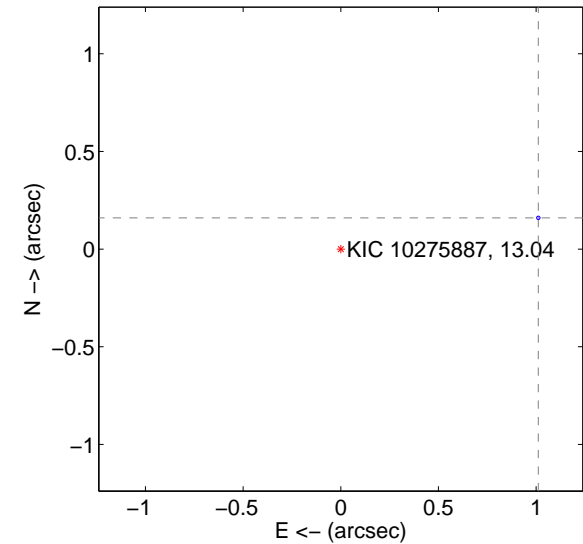
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

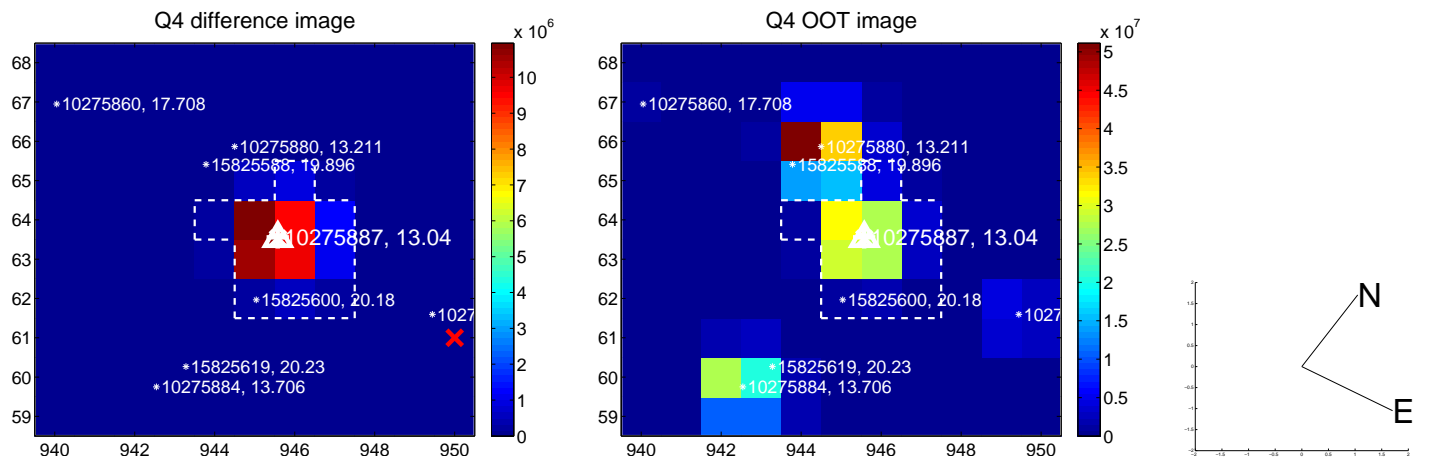
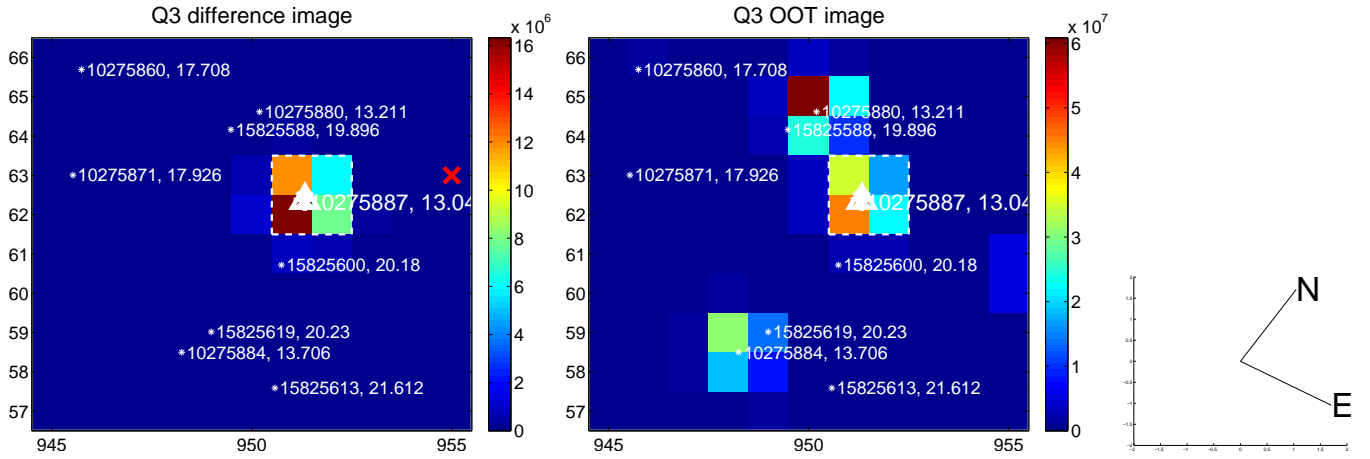
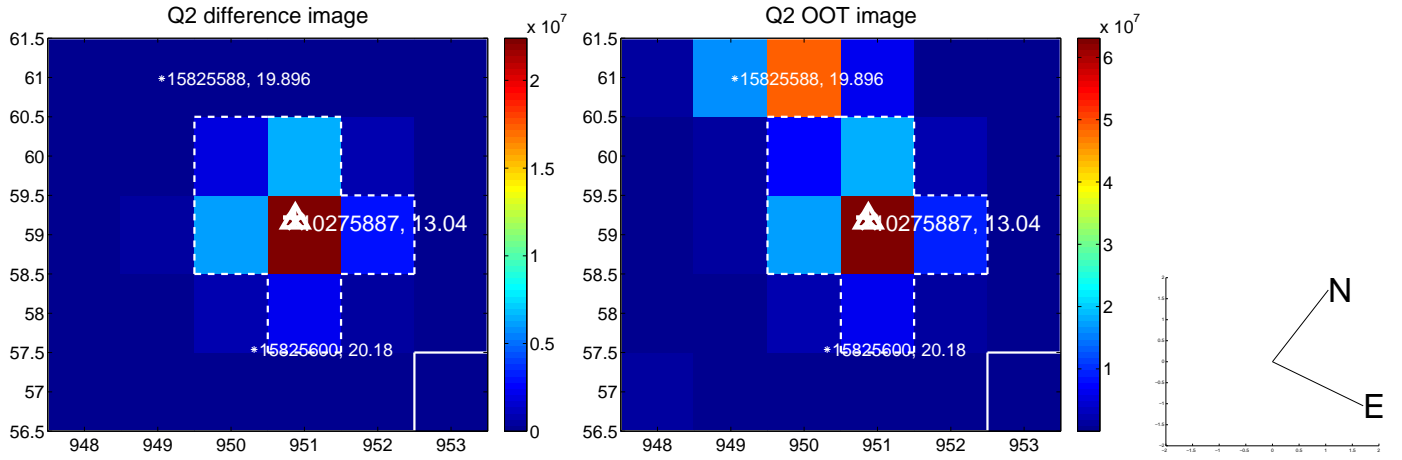
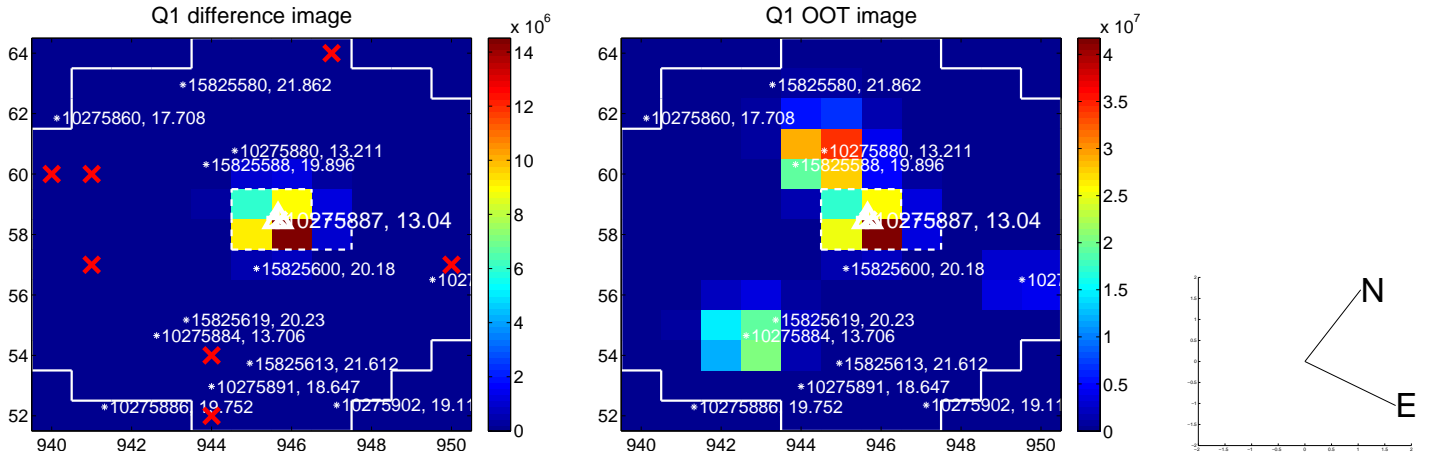


offset from photometric centroids

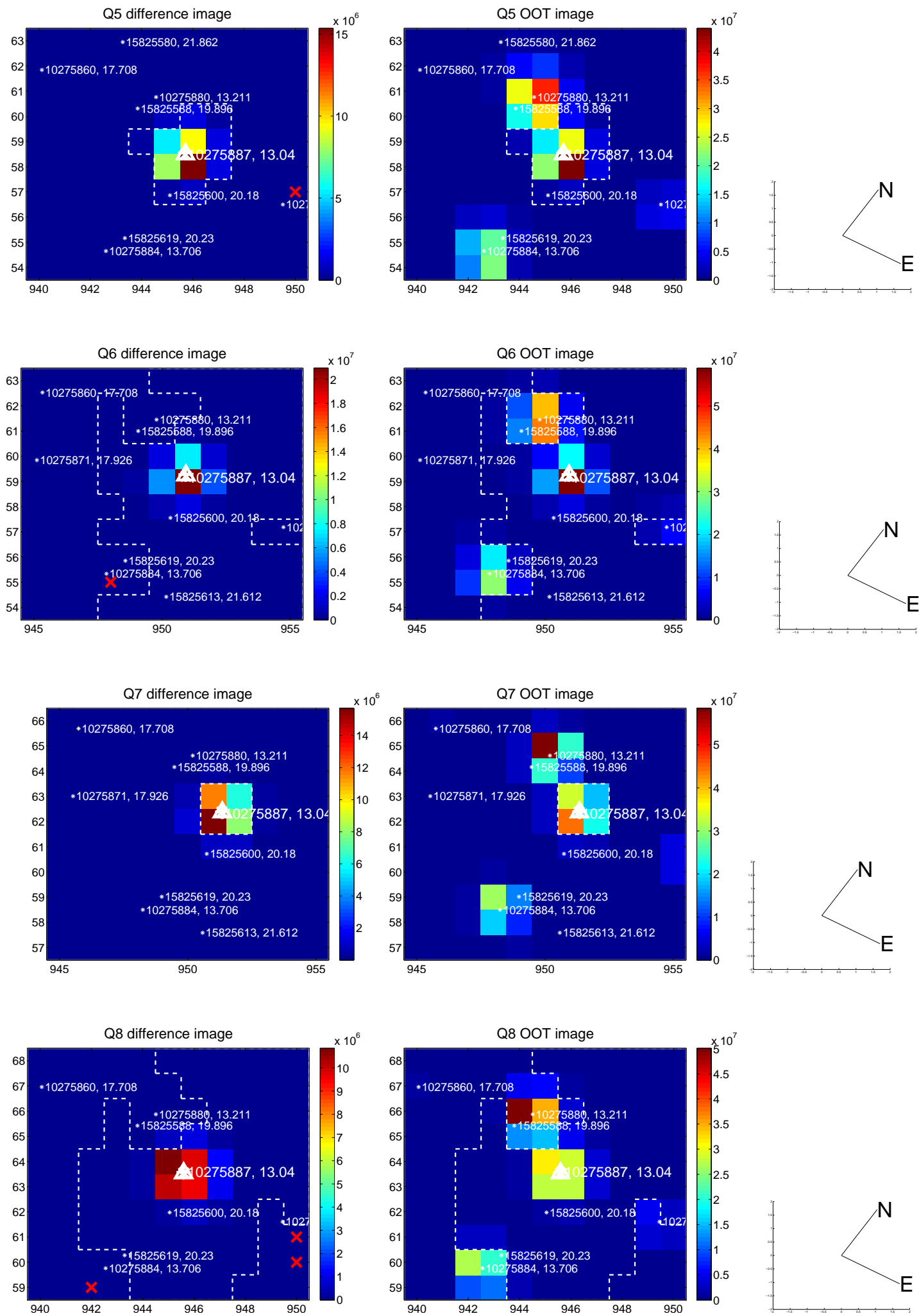


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

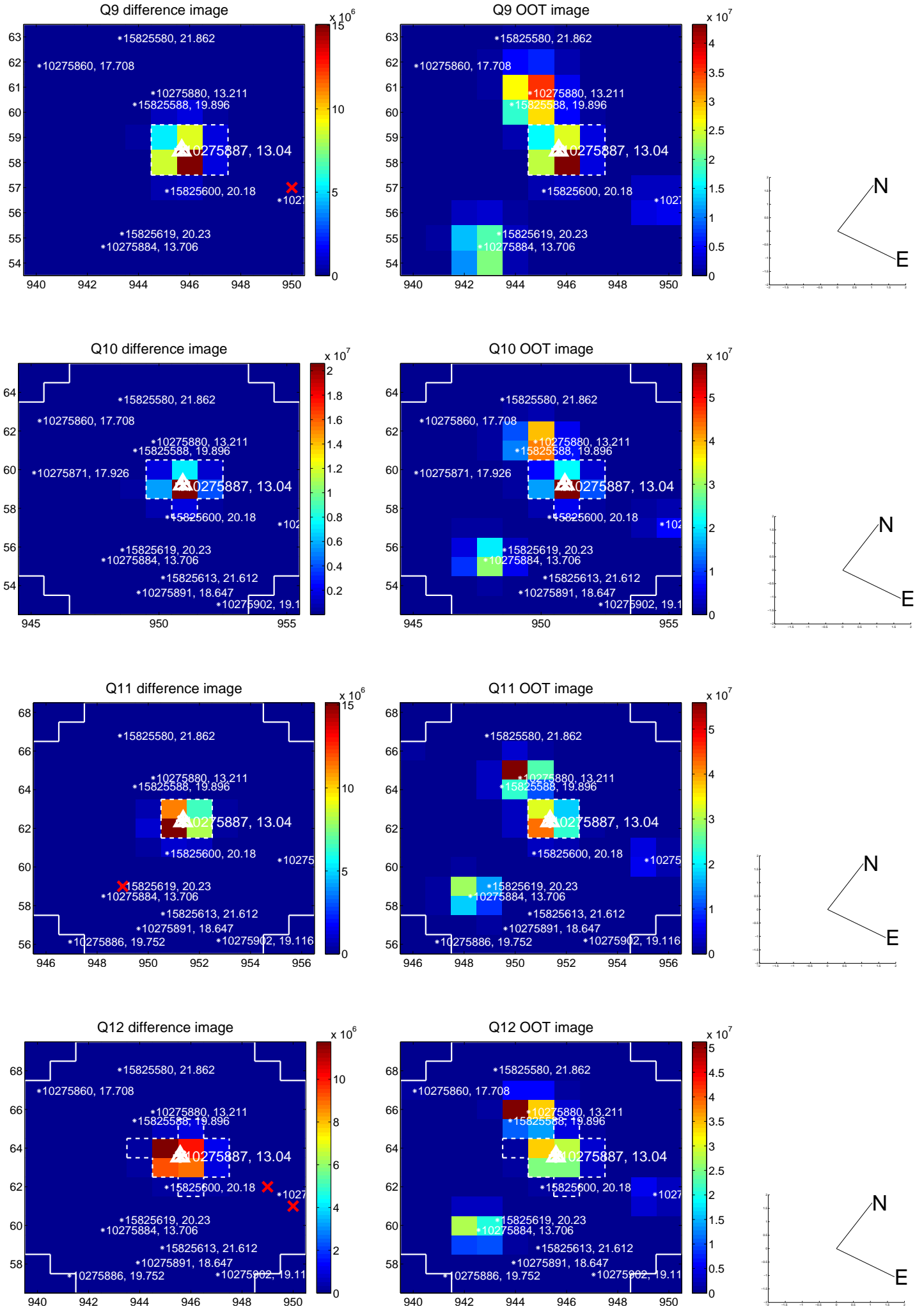
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



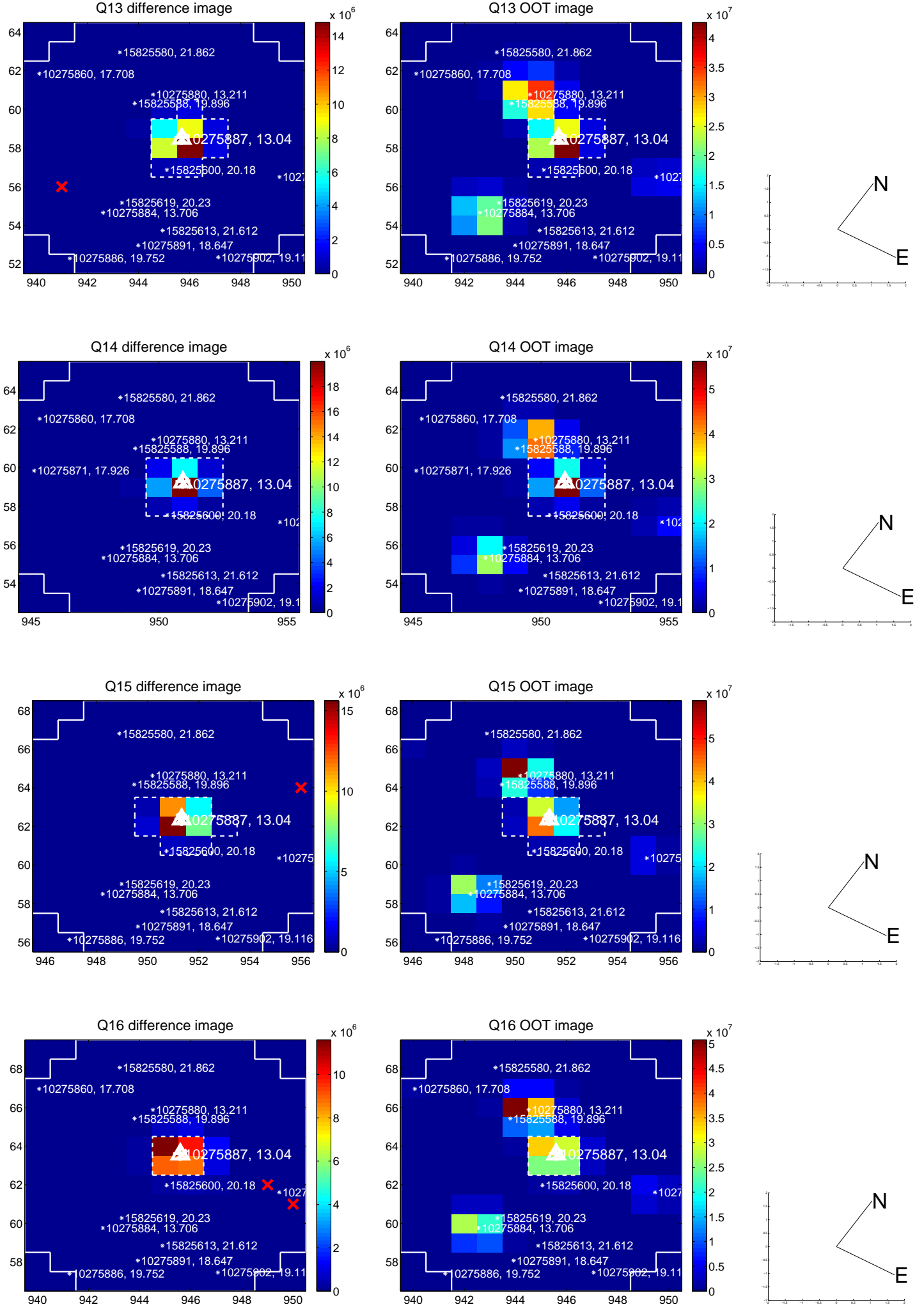
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



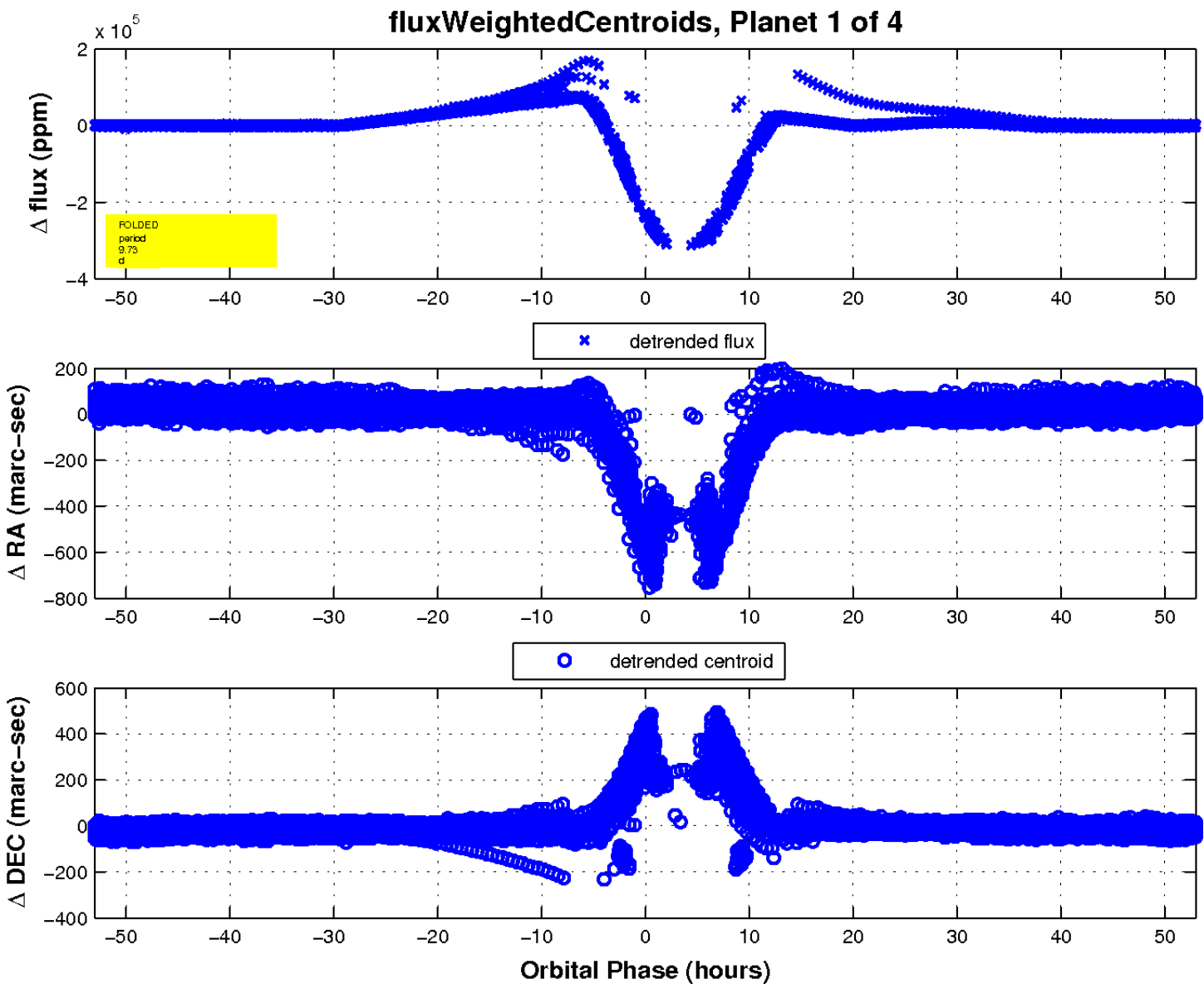
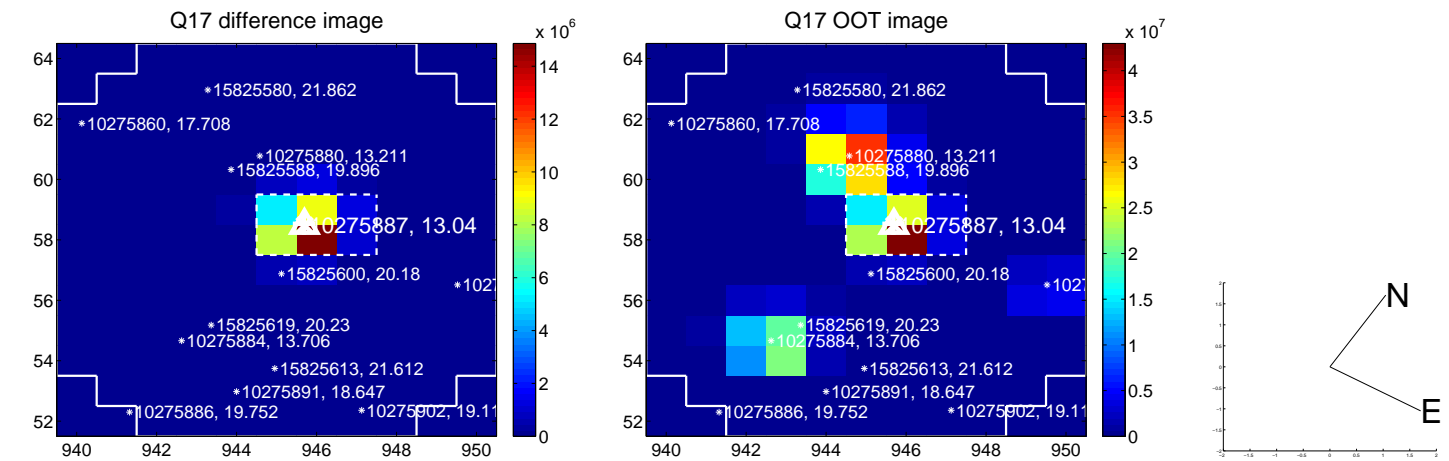
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

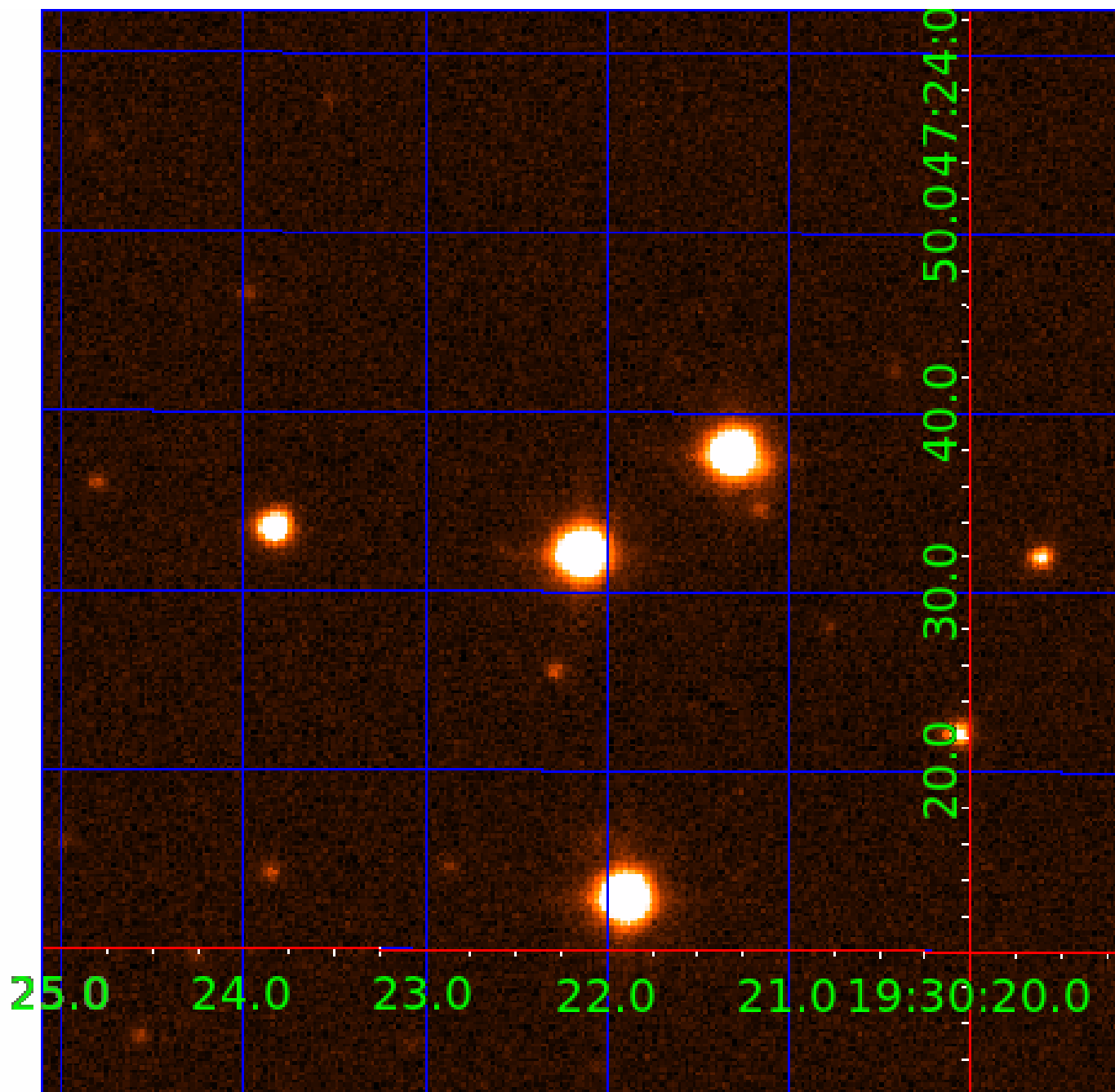


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010275887

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})
010275887-01	OBS	7304.01	9.726937	139.459649	386763.4	12.500	4479.4	-1.0	1.41	5618	17.22	234.01
010275887-02	OBS	No	9.726760	134.614228	59221.8	18.992	614.9	764.9	1.41	5618	58.69	234.02
010275887-03	OBS	No	9.726602	140.593054	10297.7	18.241	490.4	146.5	1.41	5618	25.82	234.03
010275887-04	OBS	No	9.726877	138.608250	166.1	15.000	27.7	-1.0	1.41	5618	1.79	234.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010275887-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
010275887-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010275887-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—RESIDUAL_TCE—CENT_FEW_DIFFS
010275887-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—RESIDUAL_TCE—CENT_NOFITS—HALO_GHOST

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.

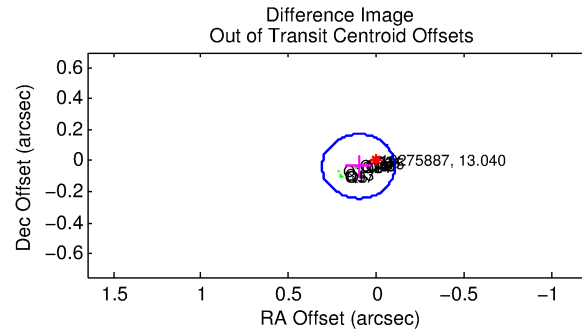
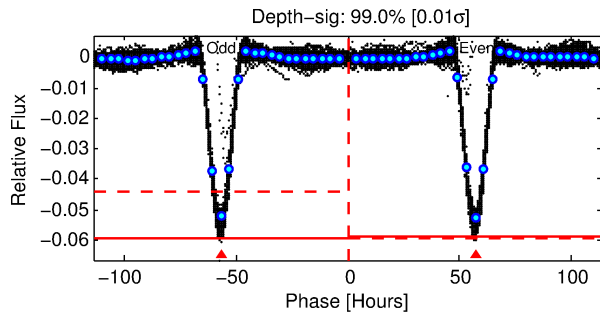
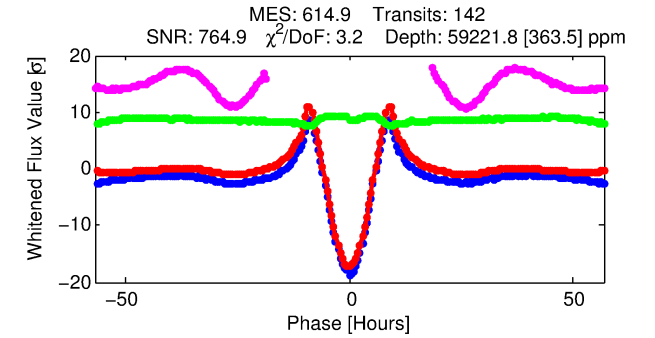
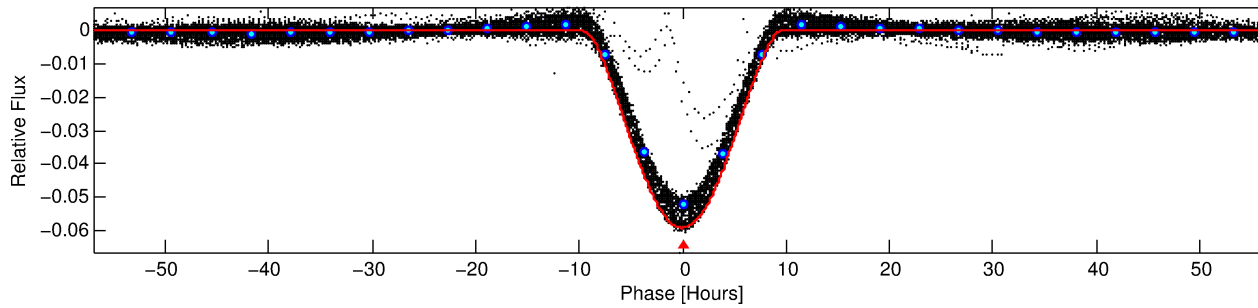
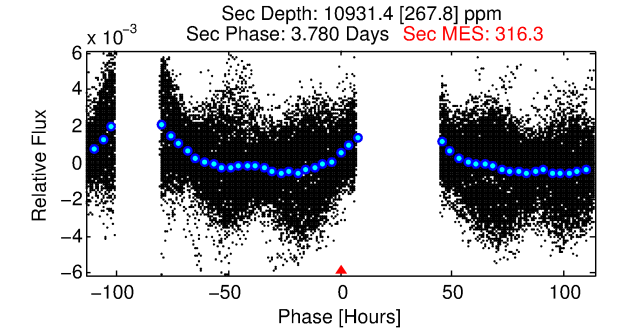
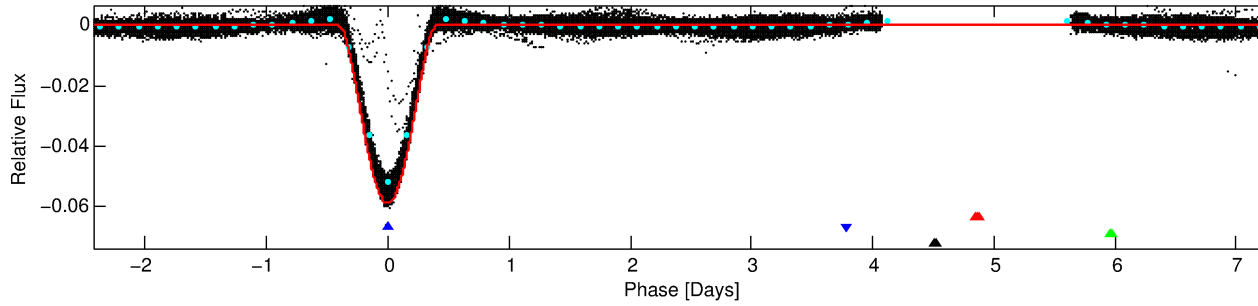
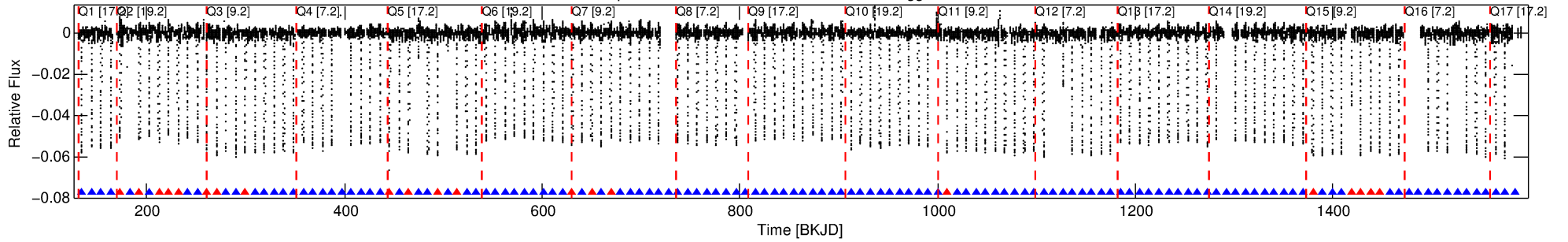
Ephemeris Match Information For 010275887-02

No Significant Match Found

DV One-Page Summary

KIC: 10275887 Candidate: 2 of 4 Period: 9.727 d
KOI: K07304 Corr: No Ephemeris Match

Kp: 13.04 R*: 1.41 Rs Teff: 5618.0 K Logg: 4.11 Fe/H: -0.080



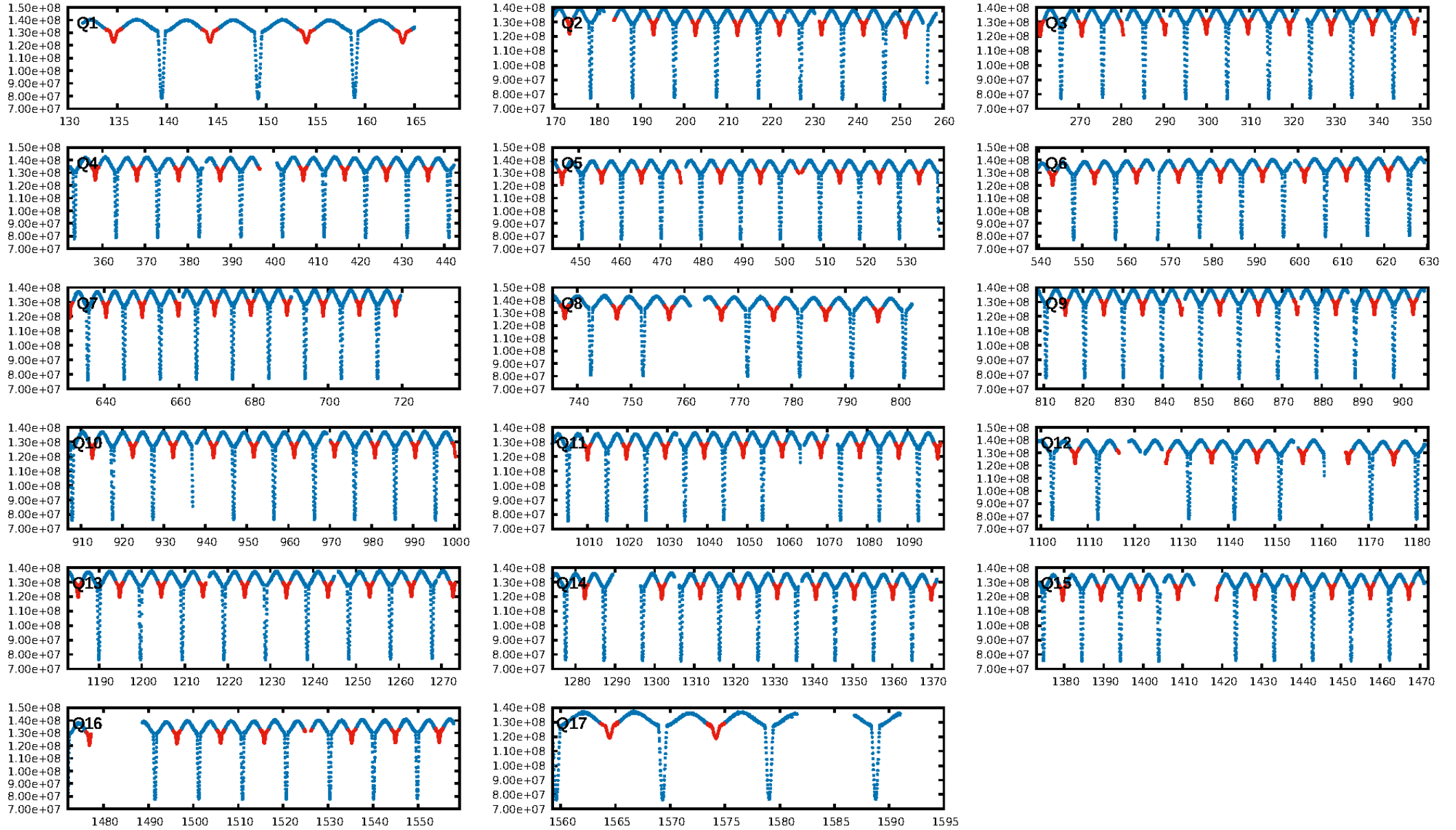
DV Fit Results:

Period = 9.72676 [0.00001] d
Epoch = 134.6142 [0.0007] BKJD
Rp/R* = 0.3825 [0.0446]
a/R* = 3.91 [0.02]
b = 1.00 [0.06]
Seff = 234.02 [151.54]
Teq = 997 [161] K
Rp = 58.69 [23.47] Re
a = 0.0868 [0.0335] AU
Ag = 13.16 [8.90] [1.37σ]
Teffp = 2937 [198] K [7.60σ]

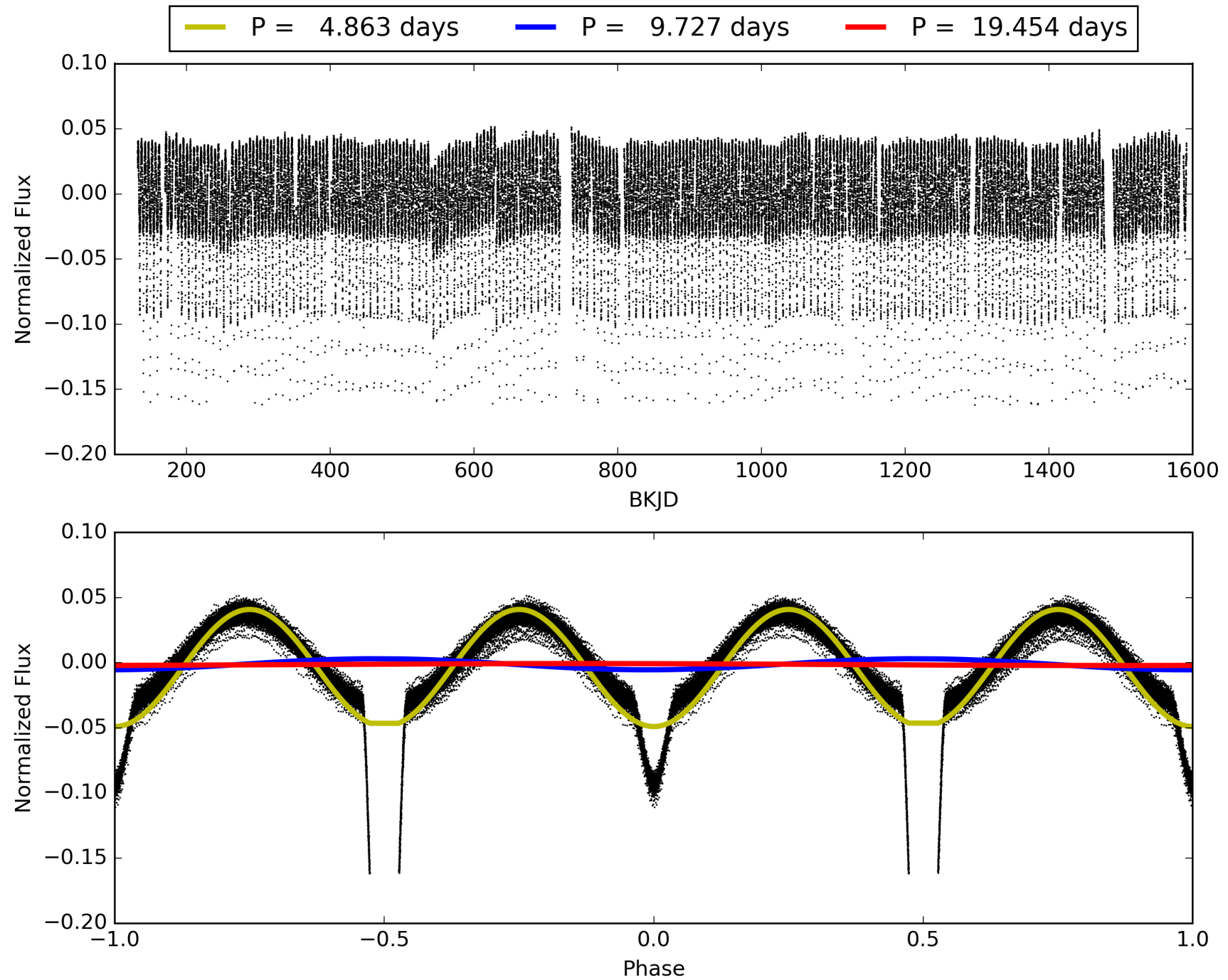
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.85 [115/136]
GhostDiagnostic-chr: 1.638
Centroid-sig: N/A
Centroid-so: 0.936 arcsec [31.20σ]
OotOffset-rm: 0.109 arcsec [1.58σ]
KicOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010275887-02, PDC Light Curves

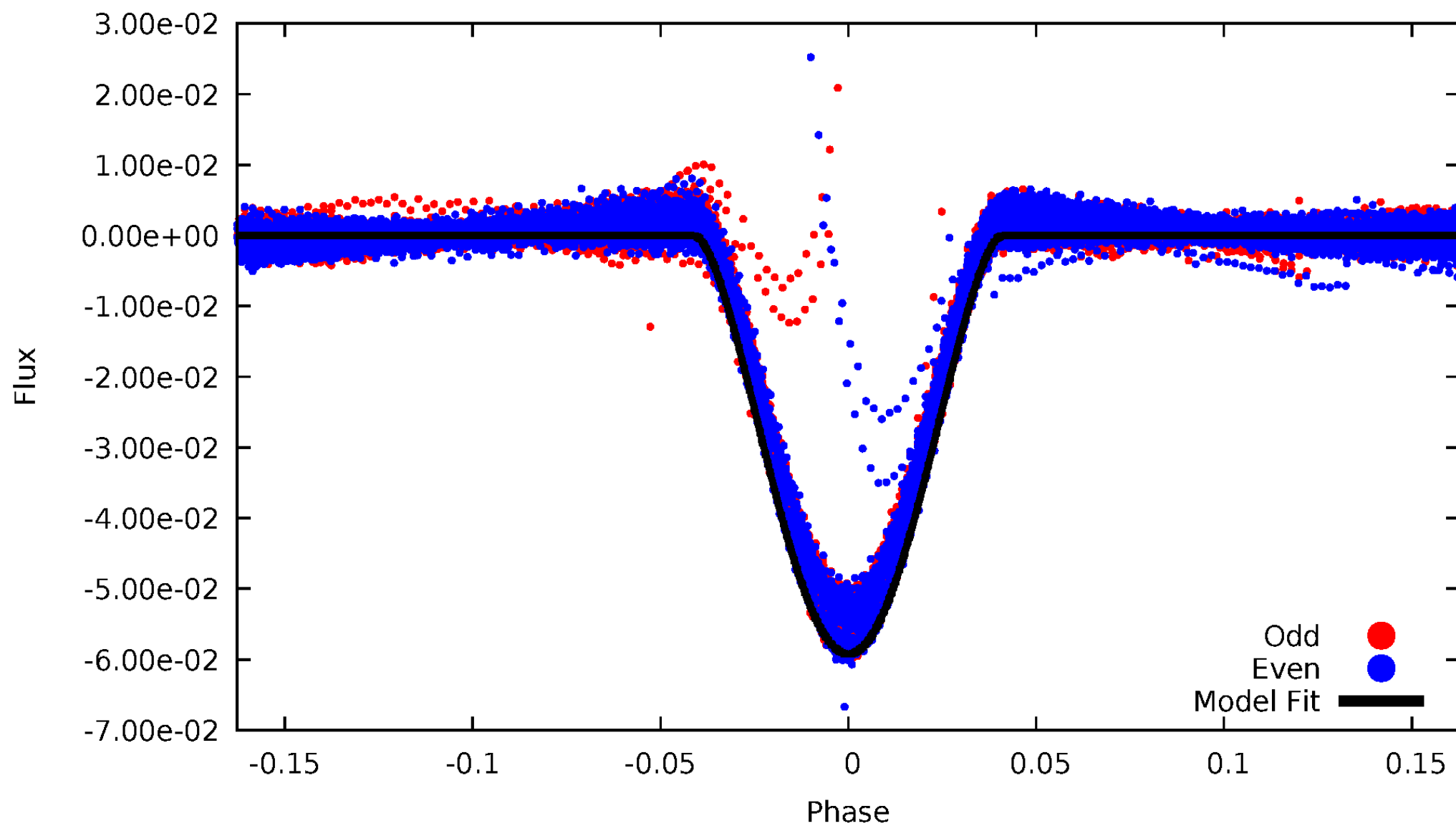


TCE 010275887-02



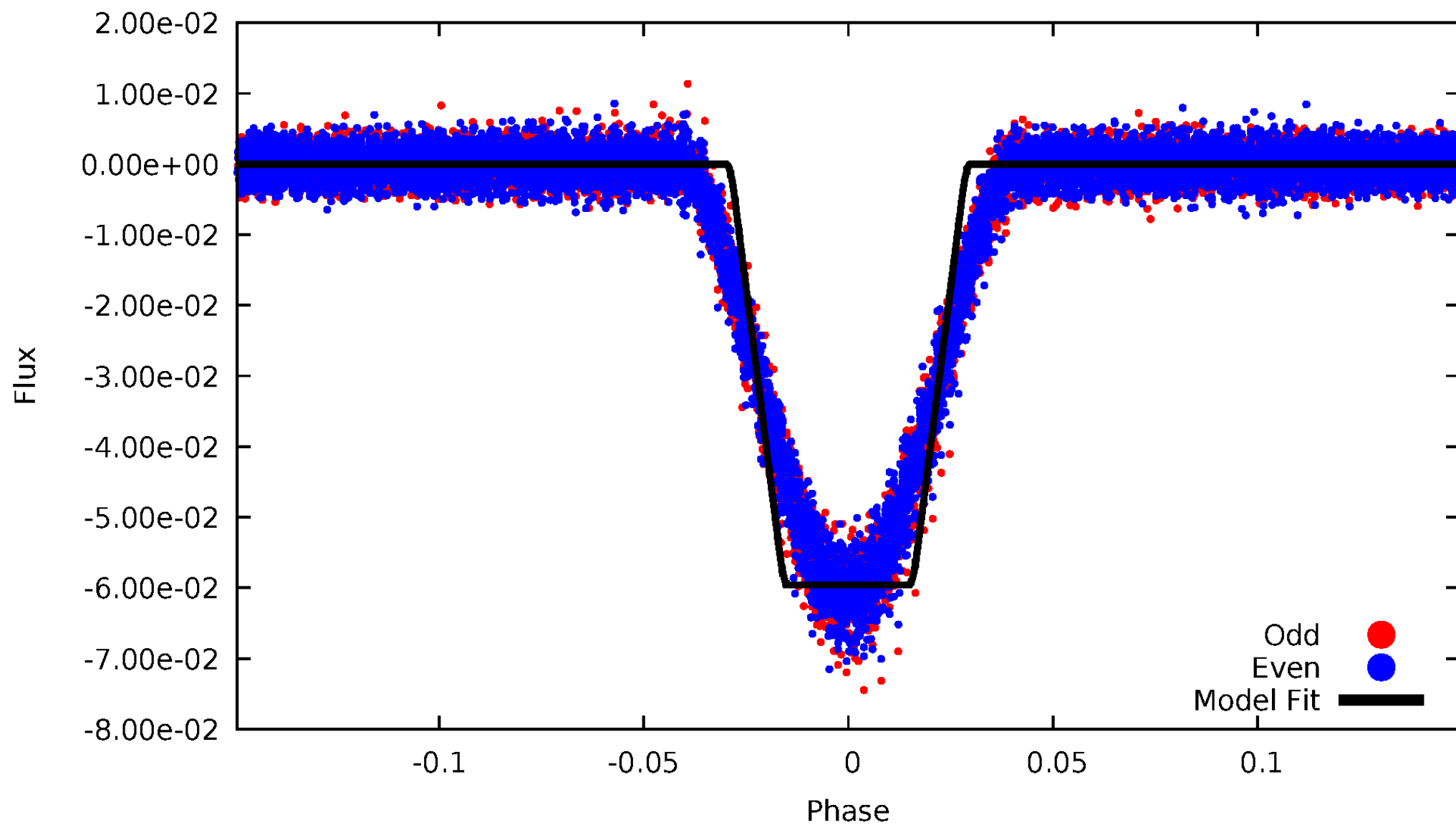
DV Odd/Even

TCE 010275887-02

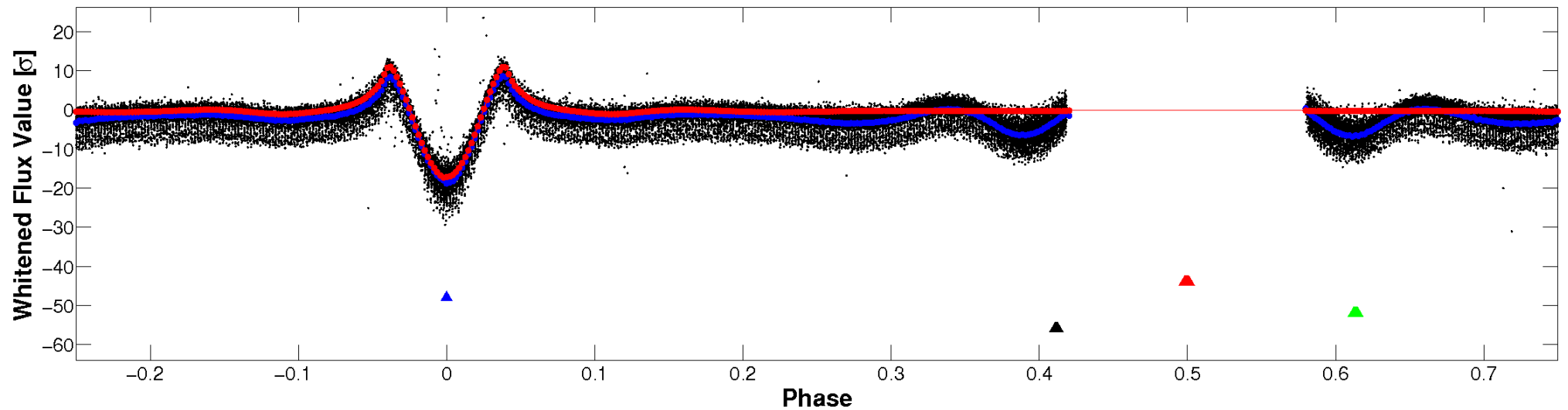


ALT Odd/Even

TCE 010275887-02

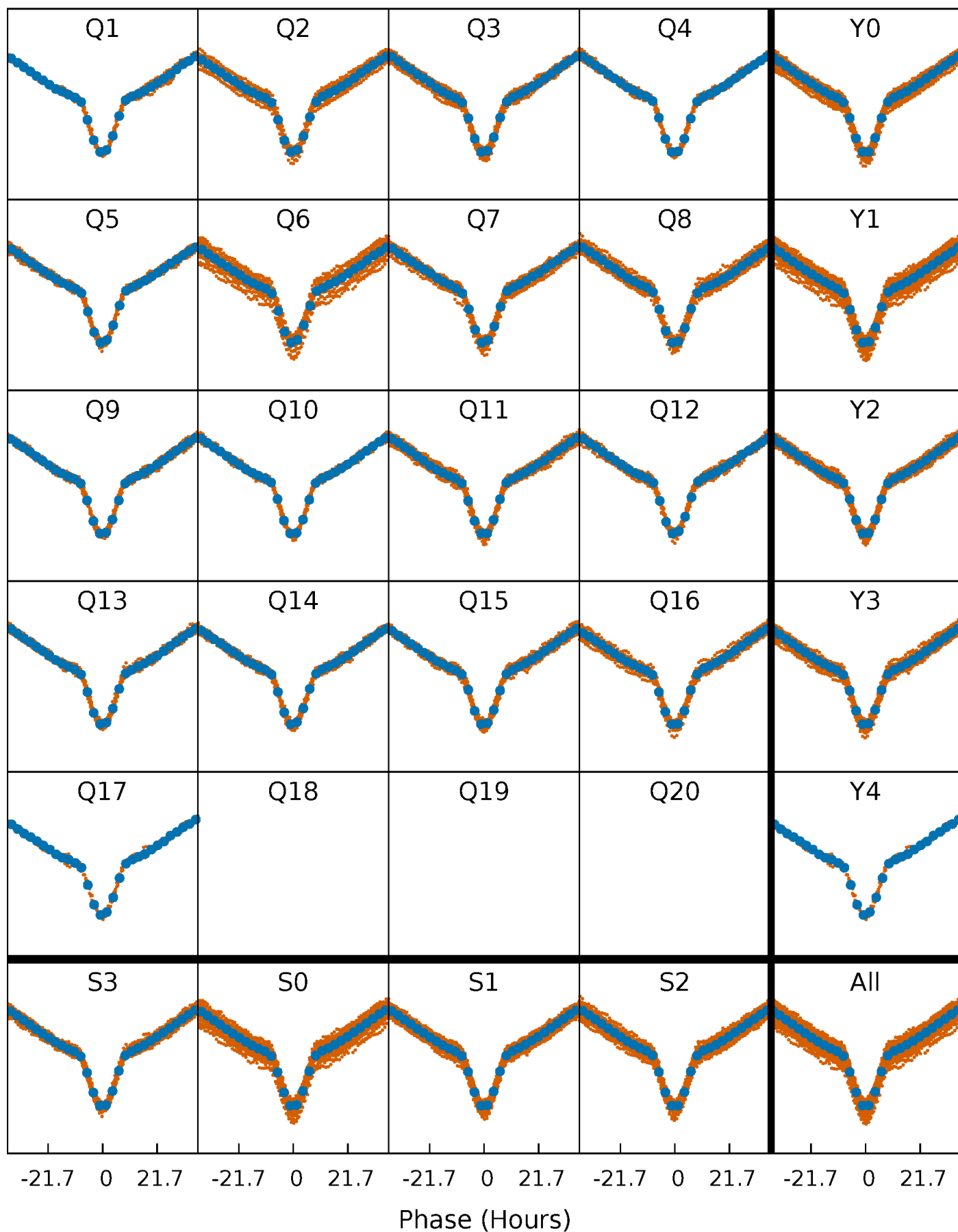


Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)



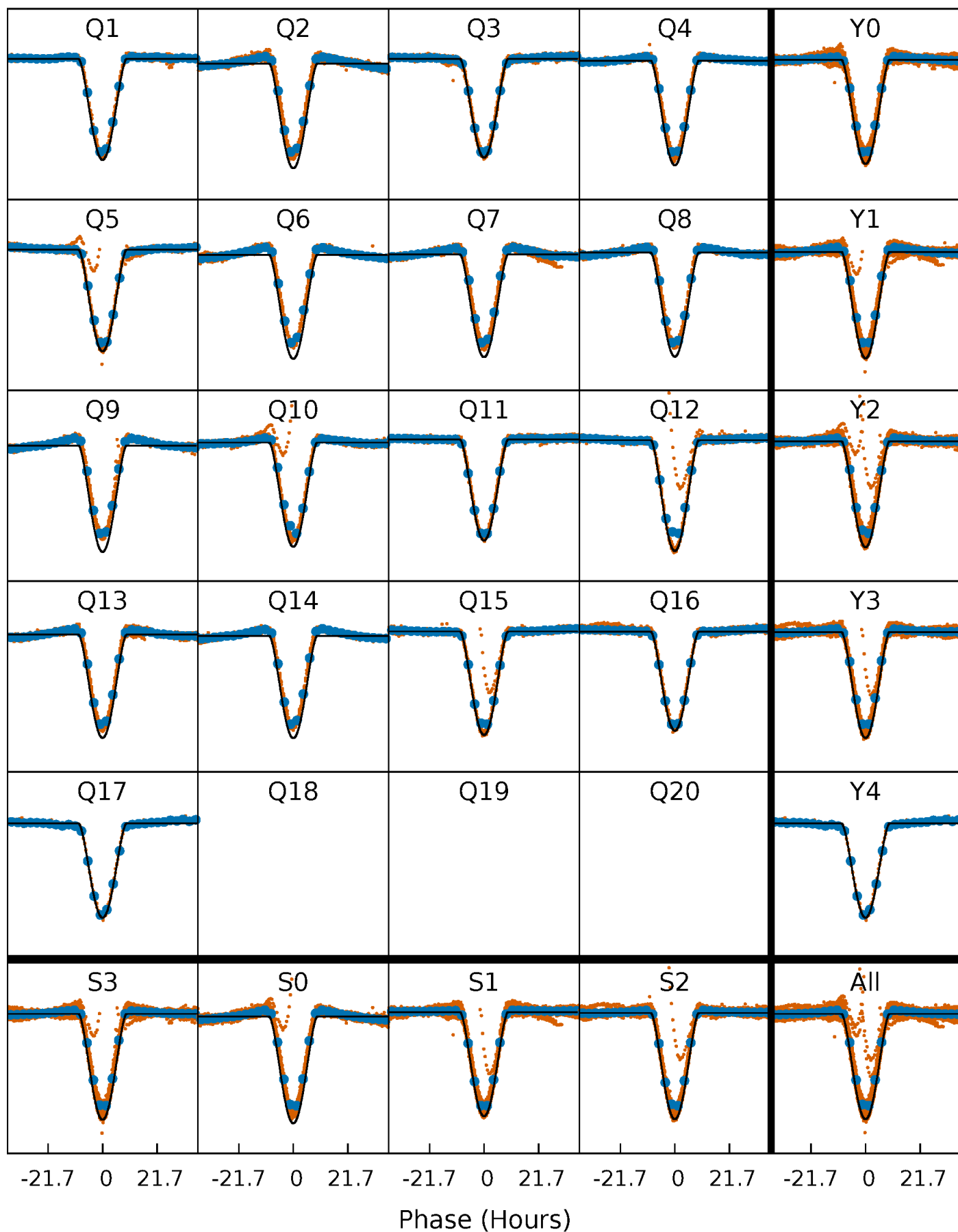
PDC Quarter-Phased Transit Curves

TCE 010275887-02 $P = 9.726760$ Days $T_0 = 134.614228$ (BKJD)



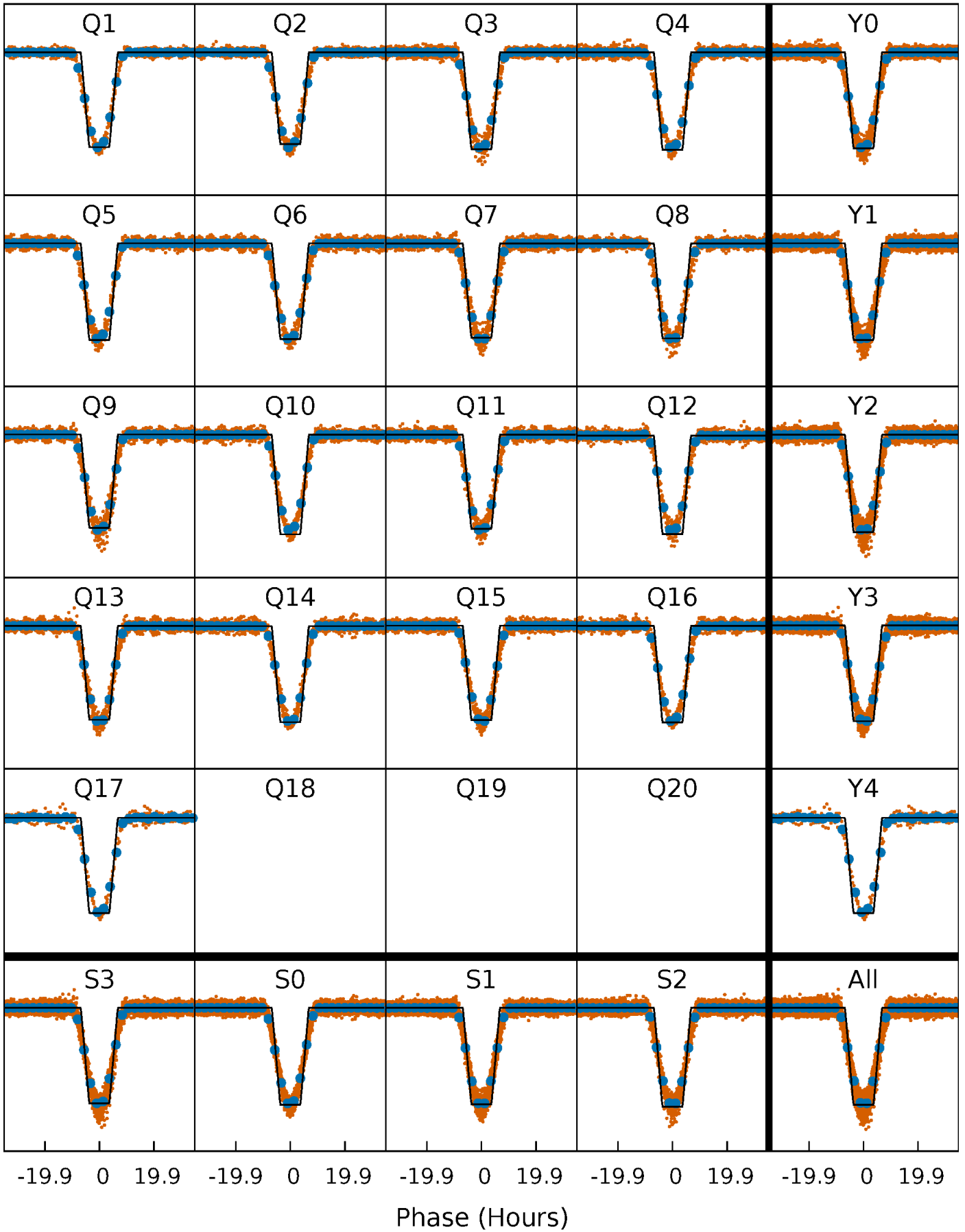
DV Quarter-Phased Transit Curves

TCE 010275887-02 $P = 9.726760$ Days $T_0 = 134.614228$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

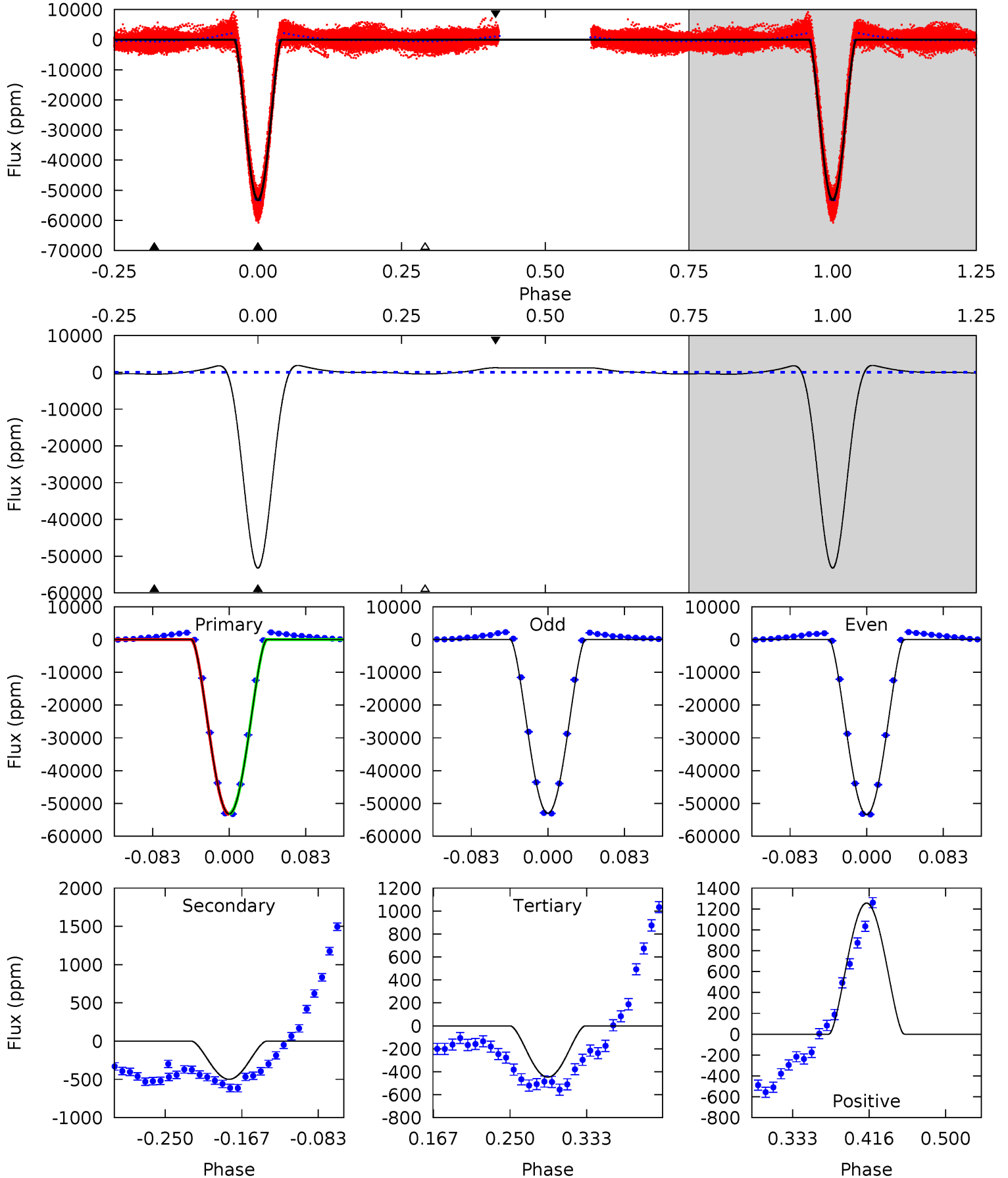
TCE 010275887-02 $P = 9.726664$ Days $T_0 = 134.621542$ (BKJD)



DV Model-Shift Uniqueness Test

010275887-02, P = 9.726760 Days, E = 124.887468 Days

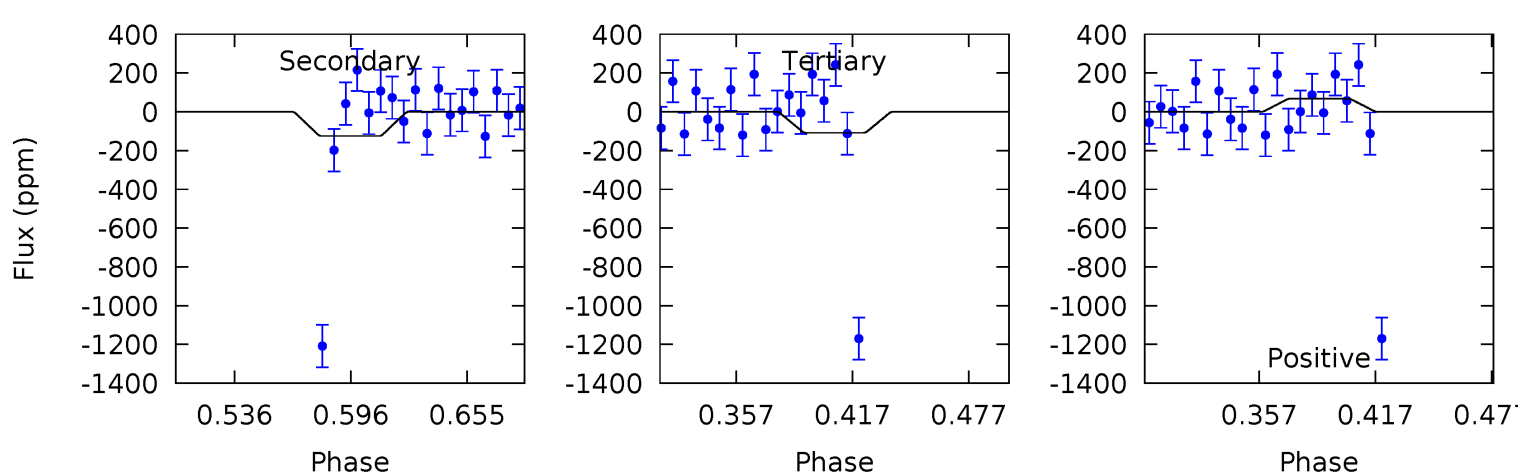
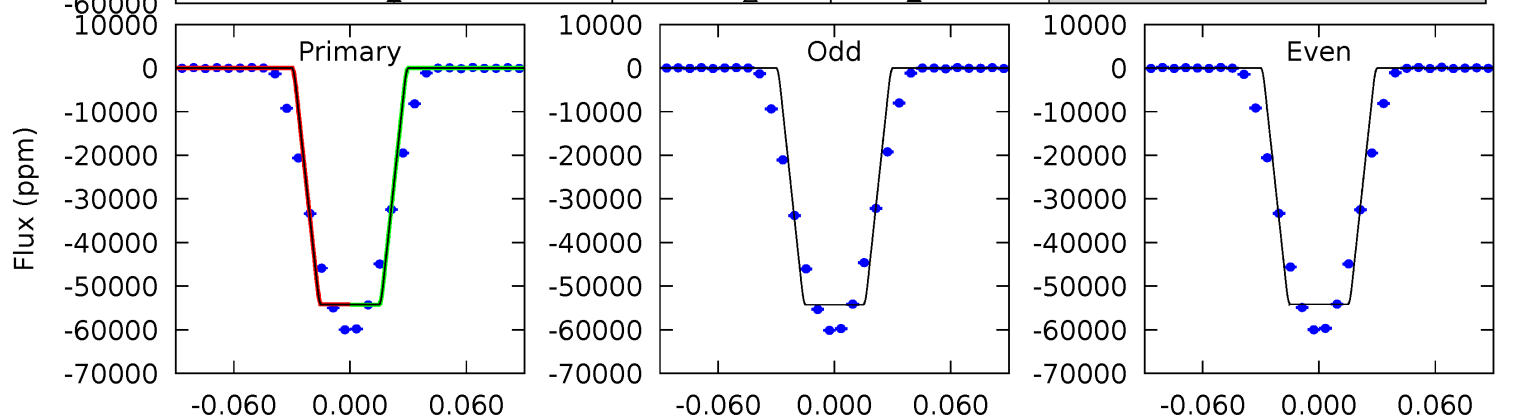
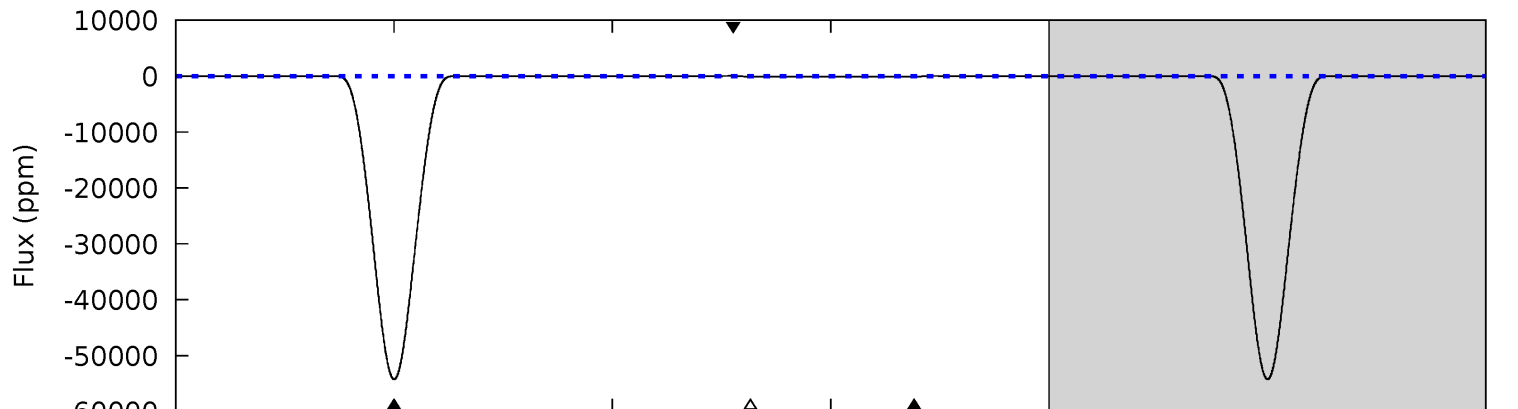
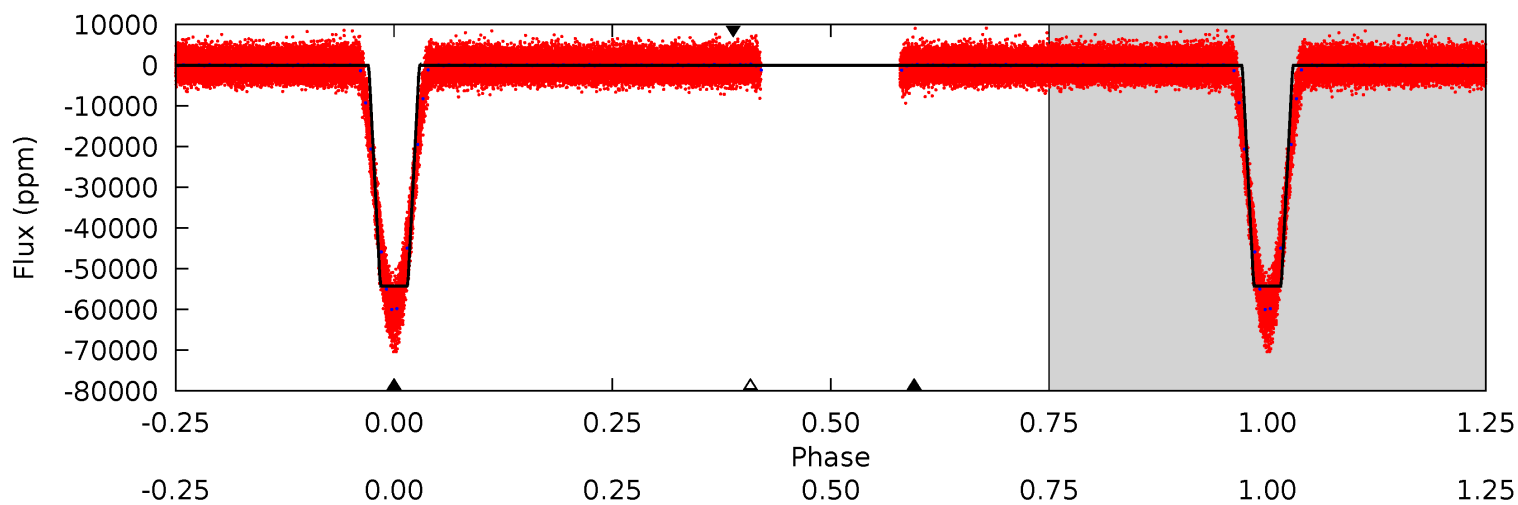
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2497	23.4	21.0	58.9	4.60	1.73	24.1	2476	2438	2.41	-35.5	9.40	0.99	0.03	3.68



Alt Model-Shift Uniqueness Test

010275887-02, P = 9.726664 Days, E = 124.894878 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1579	3.64	3.16	1.96	4.67	1.88	0.74	1576	1577	0.49	1.68	1.36	1.01	0.00	1.23



Stellar Parameters For KIC 010275887

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5618^{+186}_{-169}	$4.107^{+0.378}_{-0.162}$	$-0.080^{+0.300}_{-0.250}$	$1.406^{+0.404}_{-0.538}$	$0.922^{+0.125}_{-0.094}$	$0.468^{+1.222}_{-0.239}$
	+3%/-3%	+9%/-4%	+375%/-312%	+29%/-38%	+14%/-10%	+261%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010275887-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-499 ± 21	$57.18^{+12.96}_{-13.24}$	1378^{+119}_{-148}	2131^{+124}_{-162}	$0.647^{+0.425}_{-0.213}$
Alt.	-125 ± 34	$35.56^{+10.18}_{-8.87}$	1380^{+111}_{-145}	1889^{+257}_{-3739}	$0.405^{+0.357}_{-0.180}$

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

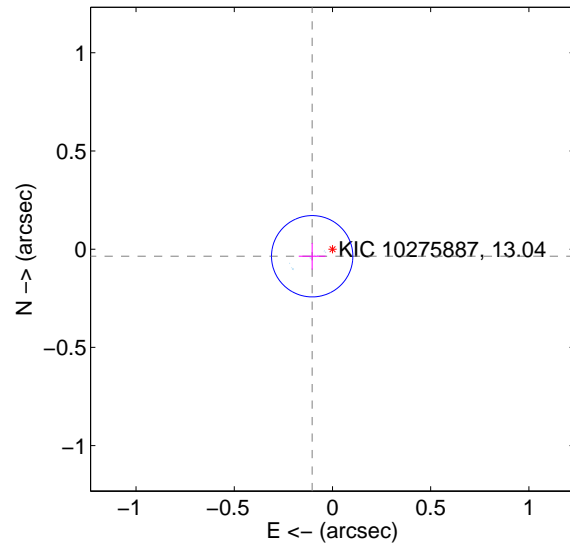
Supplemental centroid analysis for 010275887-02. Kepler magnitude: 13.04. Transit SNR 764.88

There are 17 quarters with good PRF difference image offsets

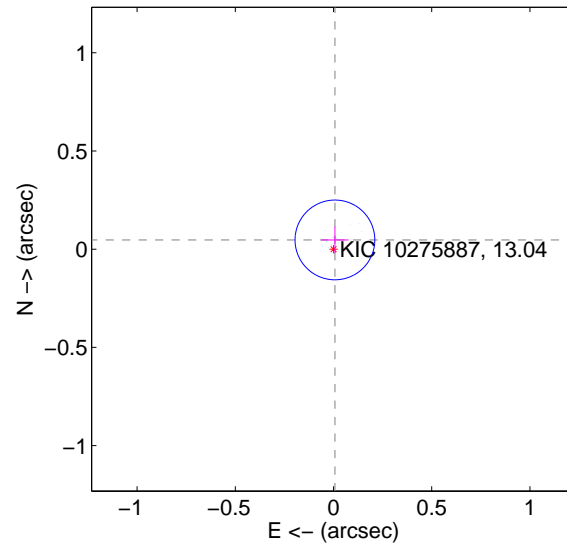
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.109 ± 0.069	1.58	0.103 ± 0.069	-0.036 ± 0.067
PRF-fit source offset from KIC position	0.048 ± 0.068	0.70	-0.007 ± 0.069	0.047 ± 0.068
photometric centroid source offset	0.94 ± 0.03	31.20	-0.92 ± 0.03	0.16 ± 0.01

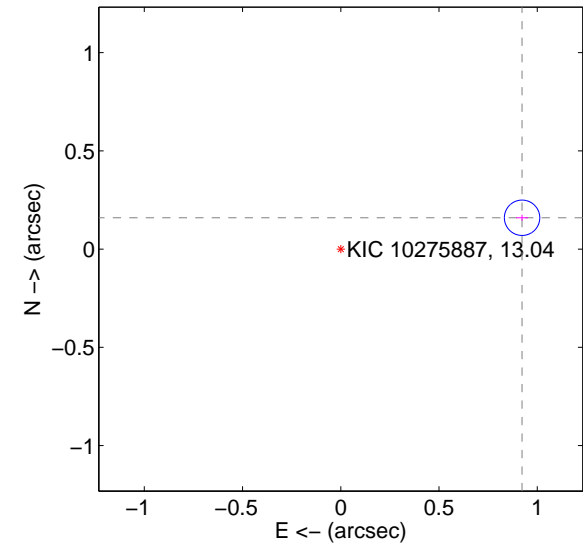
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

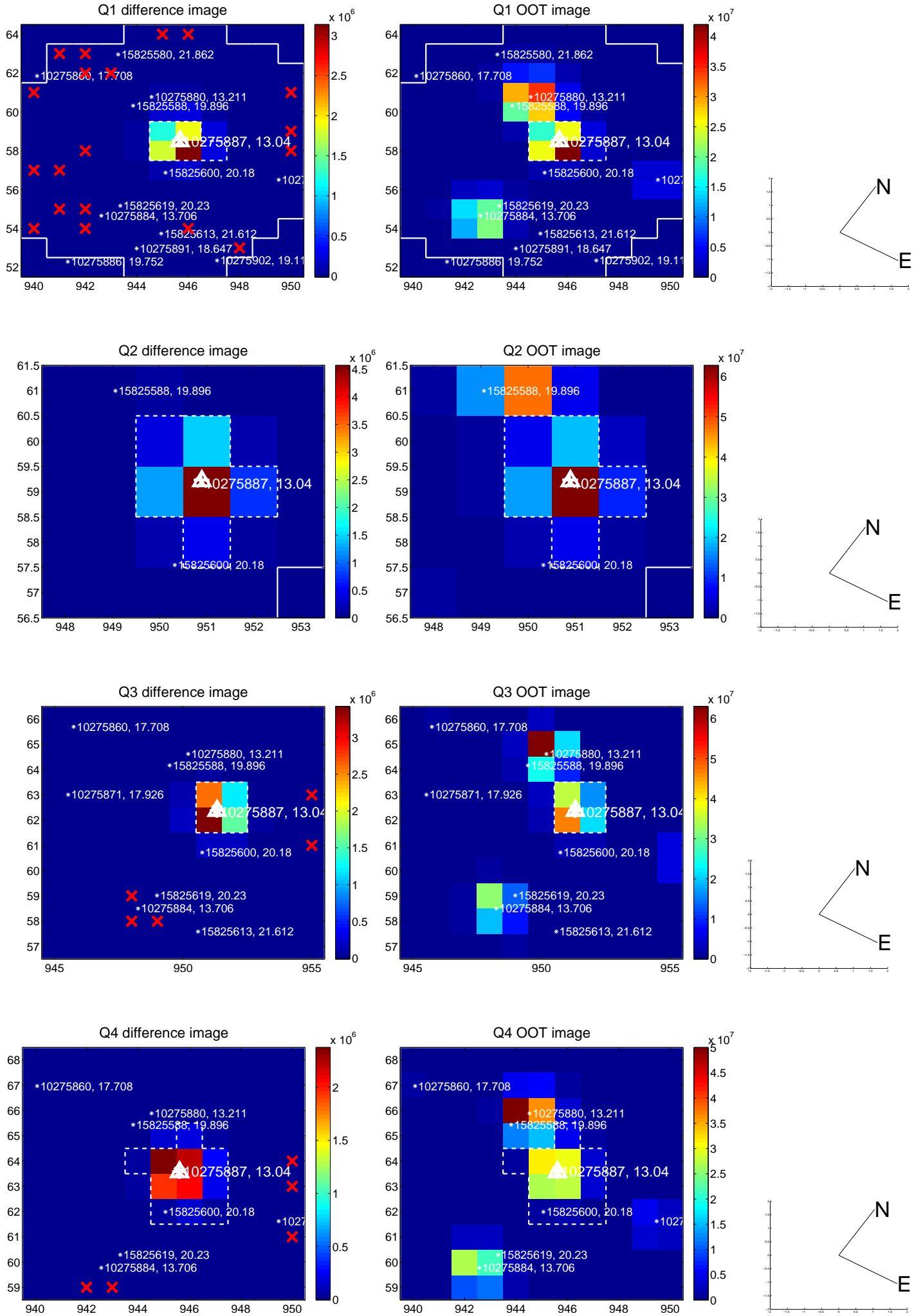


offset from photometric centroids

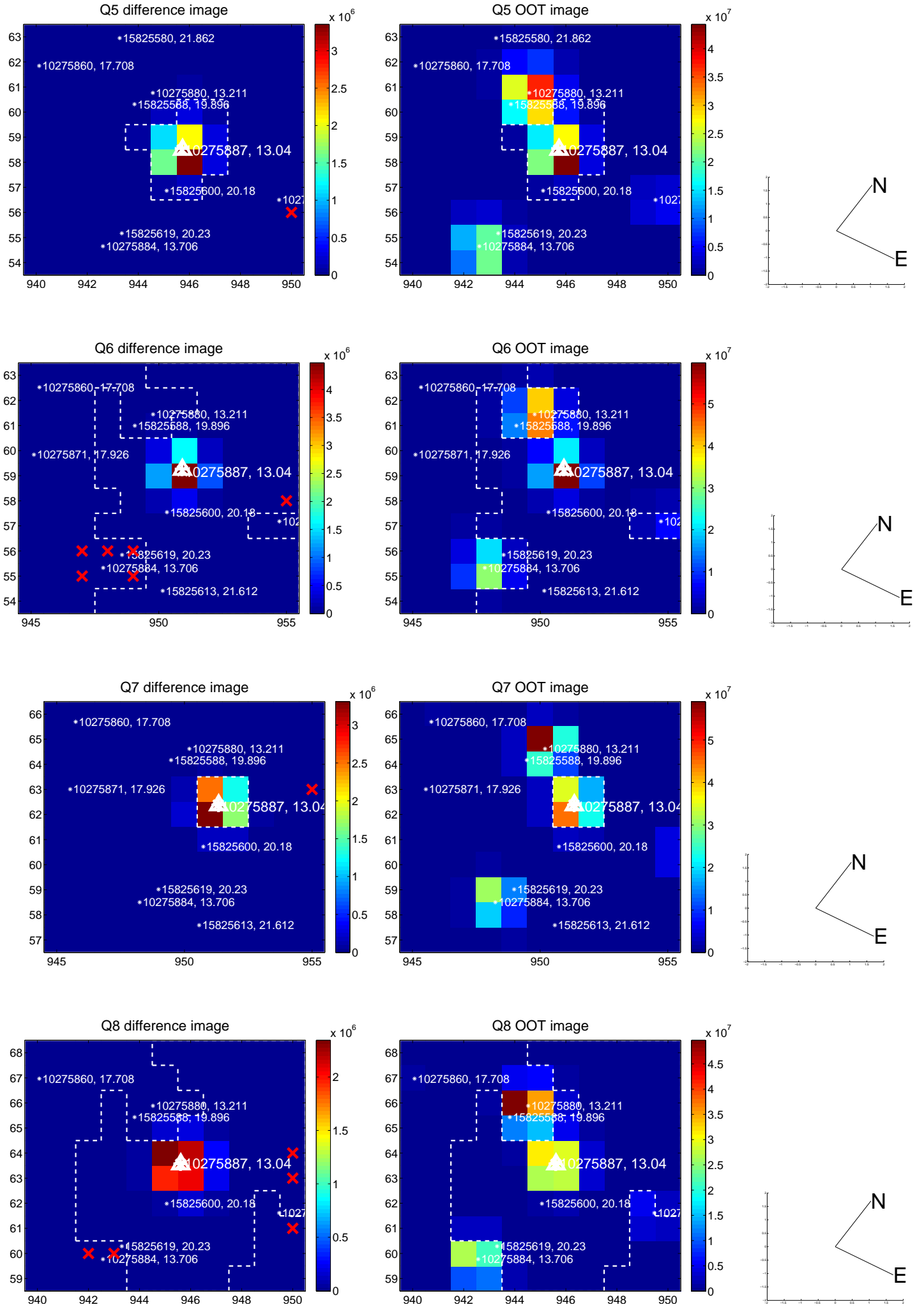


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

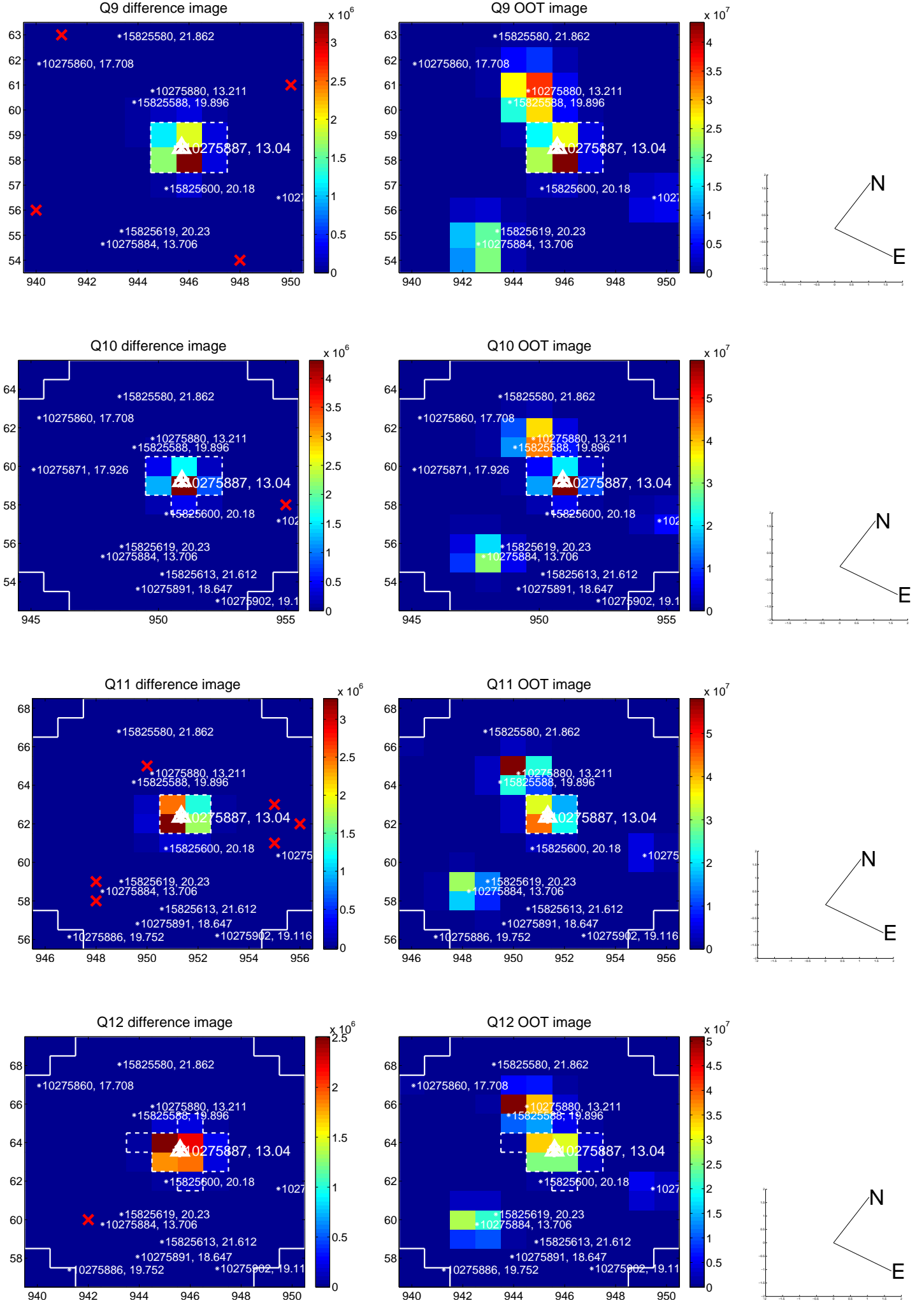
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



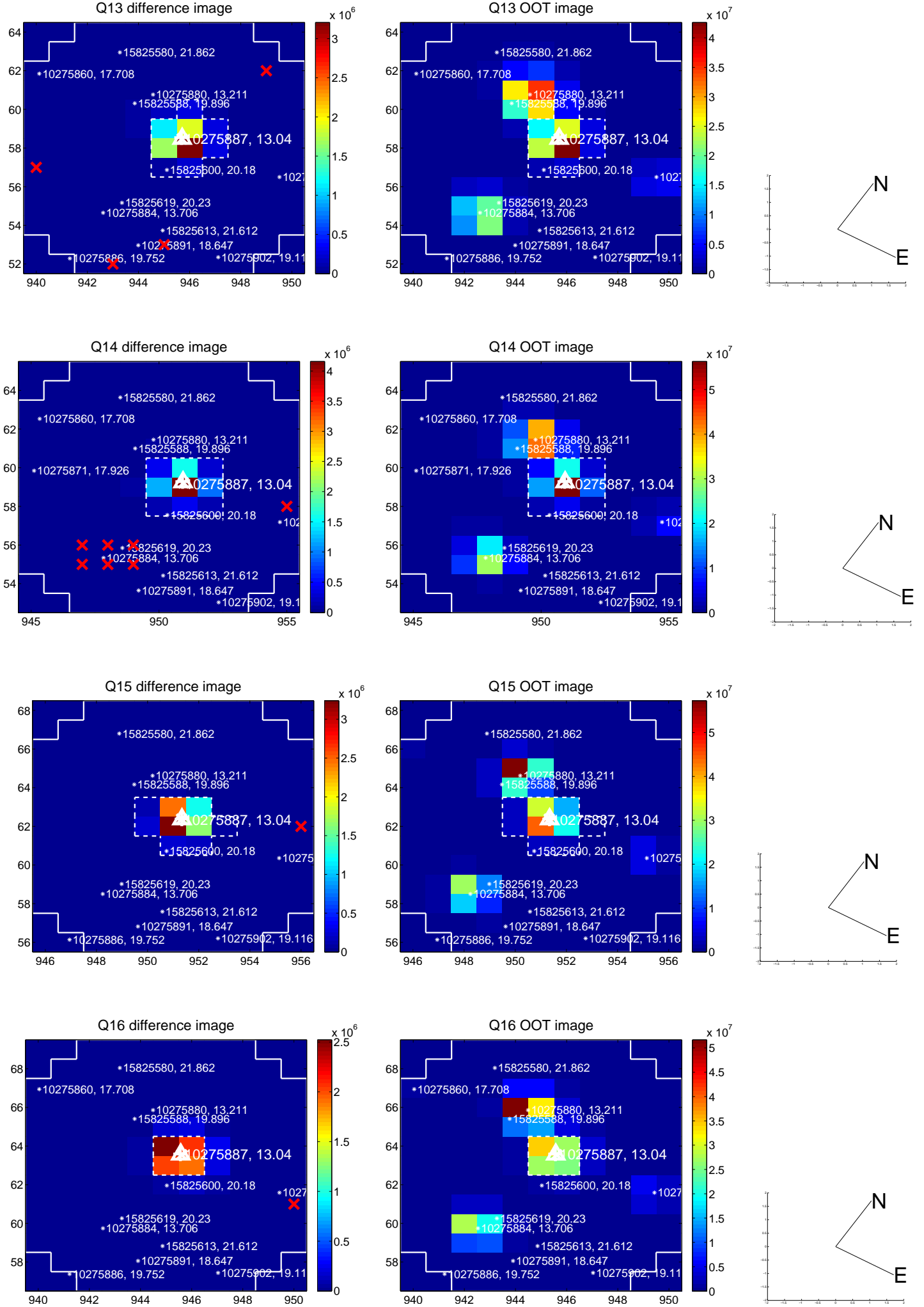
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



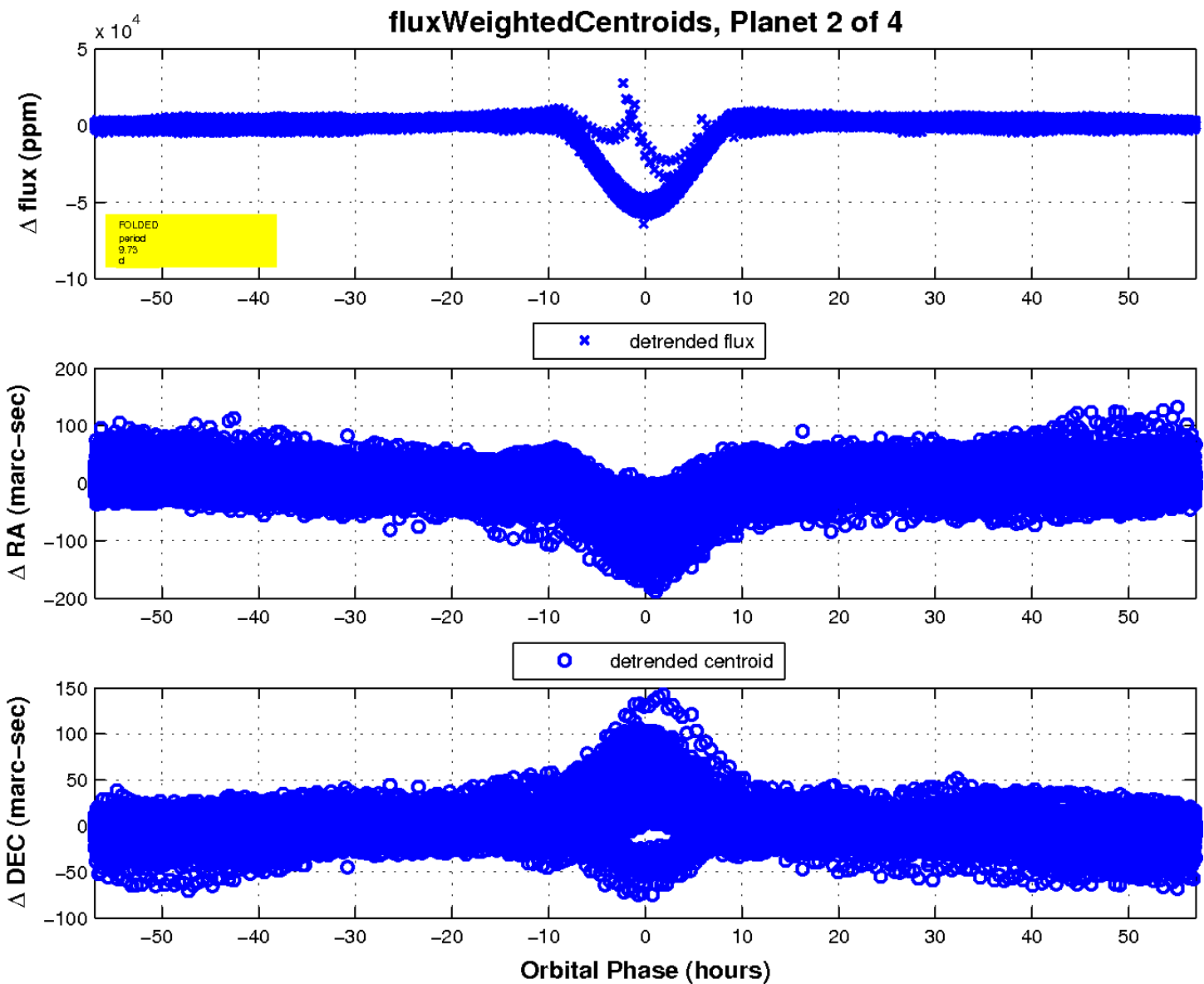
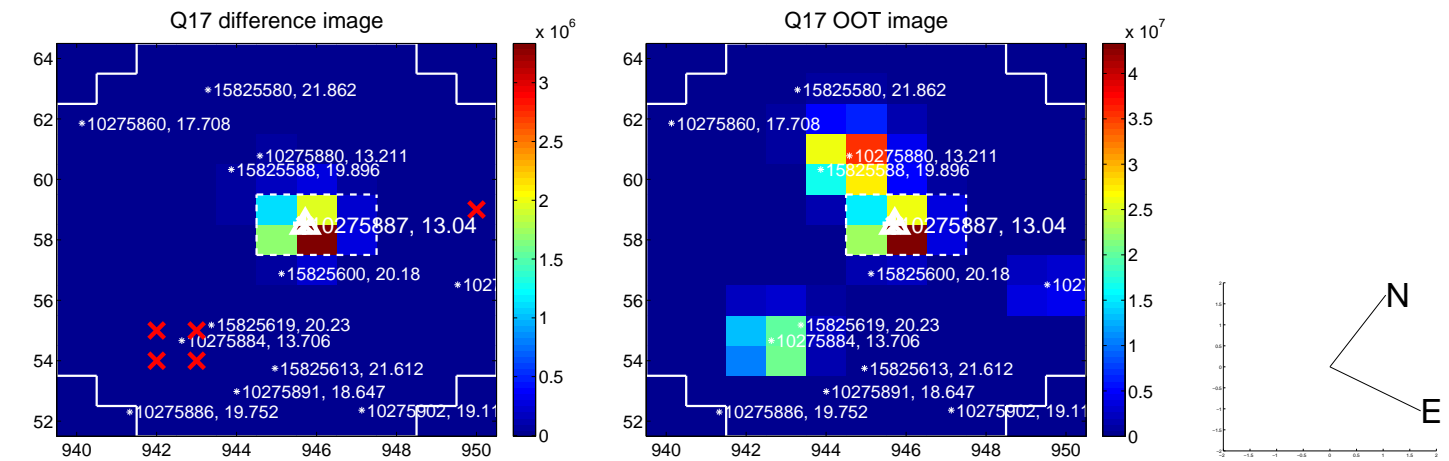
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

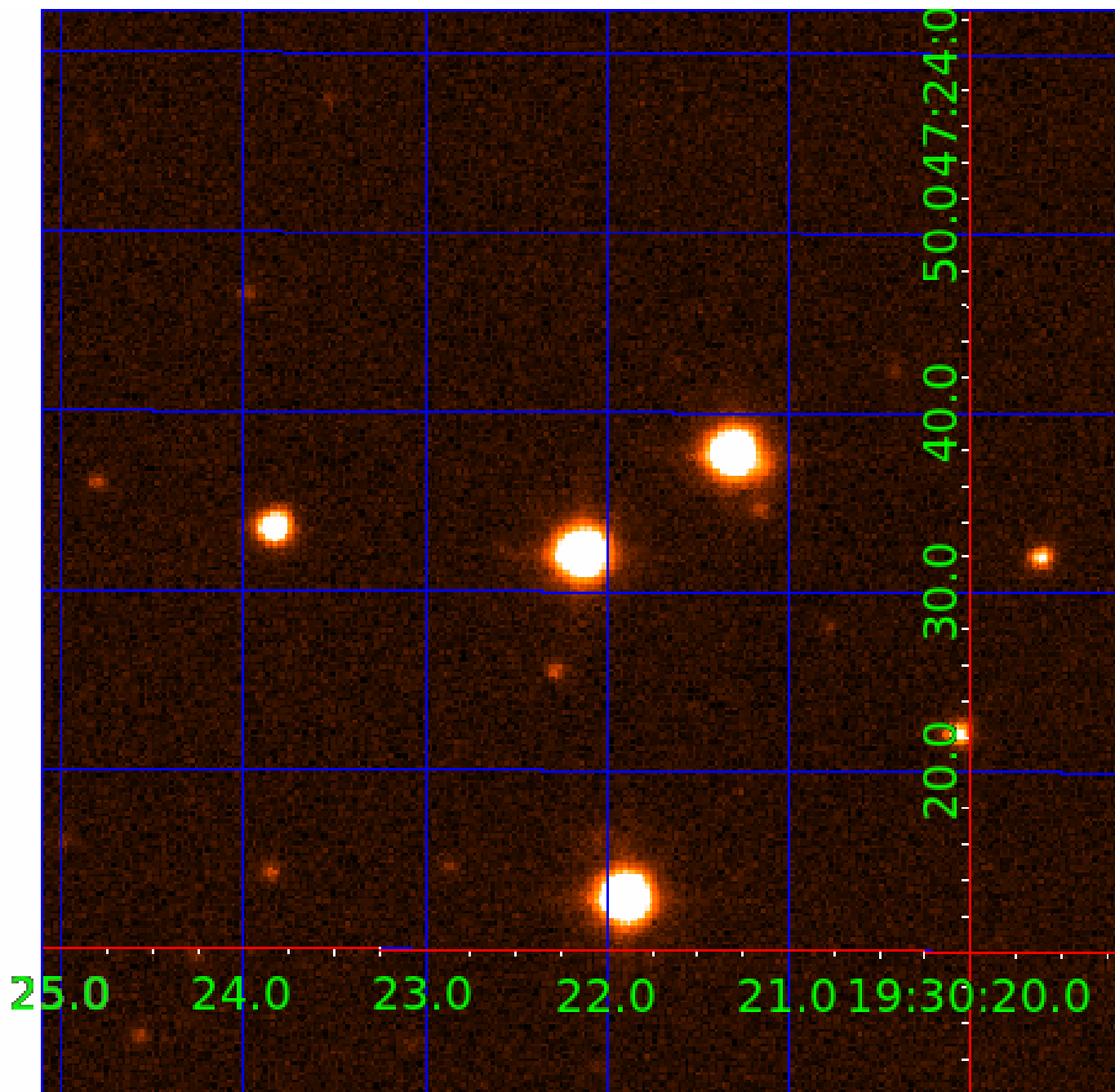


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010275887

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})
010275887-01	OBS	7304.01	9.726937	139.459649	386763.4	12.500	4479.4	-1.0	1.41	5618	17.22	234.01
010275887-02	OBS	No	9.726760	134.614228	59221.8	18.992	614.9	764.9	1.41	5618	58.69	234.02
010275887-03	OBS	No	9.726602	140.593054	10297.7	18.241	490.4	146.5	1.41	5618	25.82	234.03
010275887-04	OBS	No	9.726877	138.608250	166.1	15.000	27.7	-1.0	1.41	5618	1.79	234.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010275887-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
010275887-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010275887-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—RESIDUAL_TCE—CENT_FEW_DIFFS
010275887-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—RESIDUAL_TCE—CENT_NOFITS—HALO_GHOST

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.

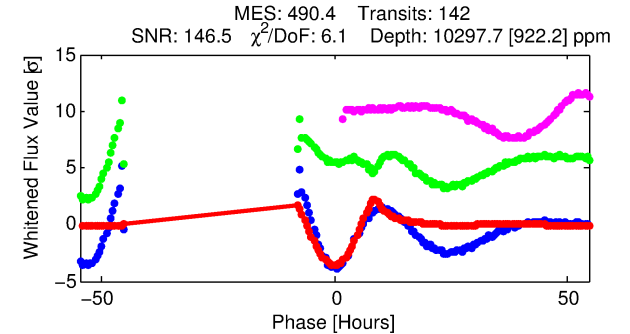
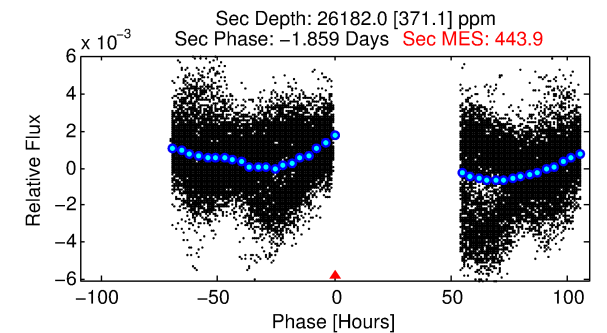
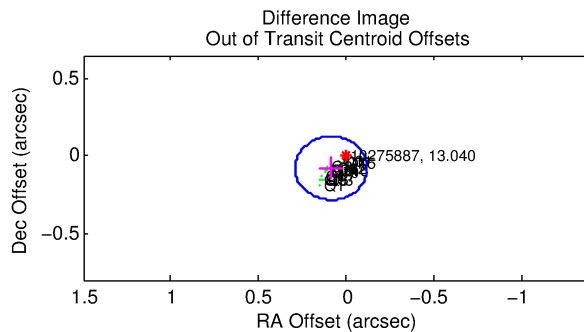
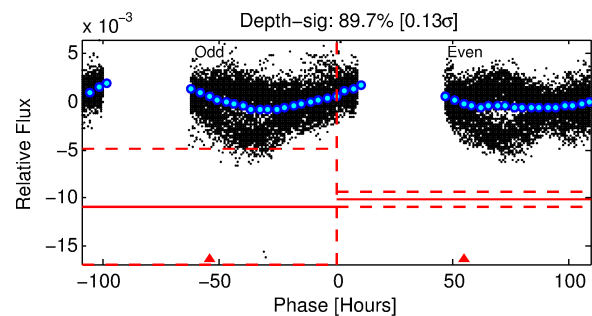
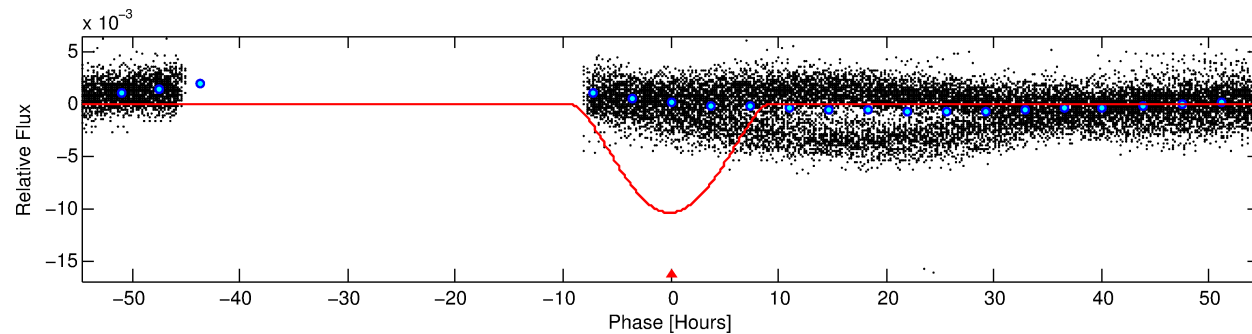
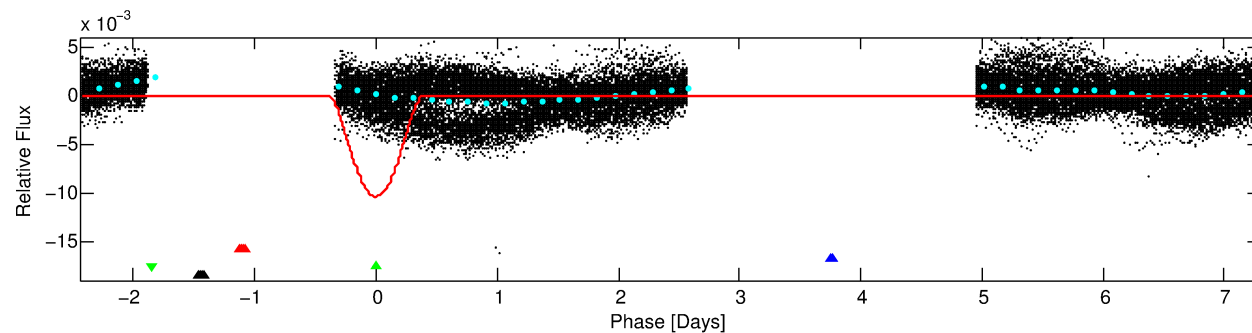
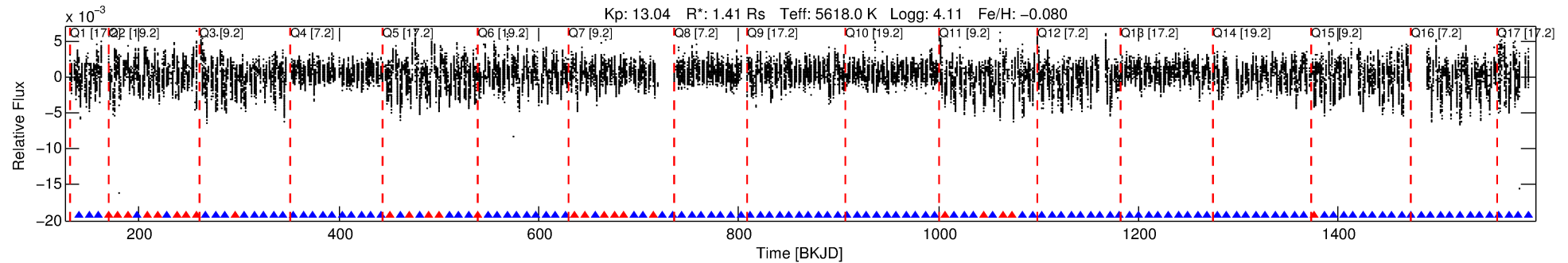
Ephemeris Match Information For 010275887-03

No Significant Match Found

DV One-Page Summary

KIC: 10275887 Candidate: 3 of 4 Period: 9.727 d
KOI: K07304 Corr: No Ephemeris Match

Kp: 13.04 R*: 1.41 Rs Teff: 5618.0 K Logg: 4.11 Fe/H: -0.080



DV Fit Results:

Period = 9.72660 [0.00005] d
Epoch = 140.5931 [0.0046] BKJD
Rp/R* = 0.1683 [0.0535]
a/R* = 2.68 [0.08]
b = 1.00 [0.06]
Seff = 234.03 [151.54]
Teq = 997 [161] K
Rp = 25.82 [12.84] Re
a = 0.0868 [0.0335] AU
Ag = 162.94 [146.27] [1.11σ]
Teffp = 5509 [894] K [4.96σ]

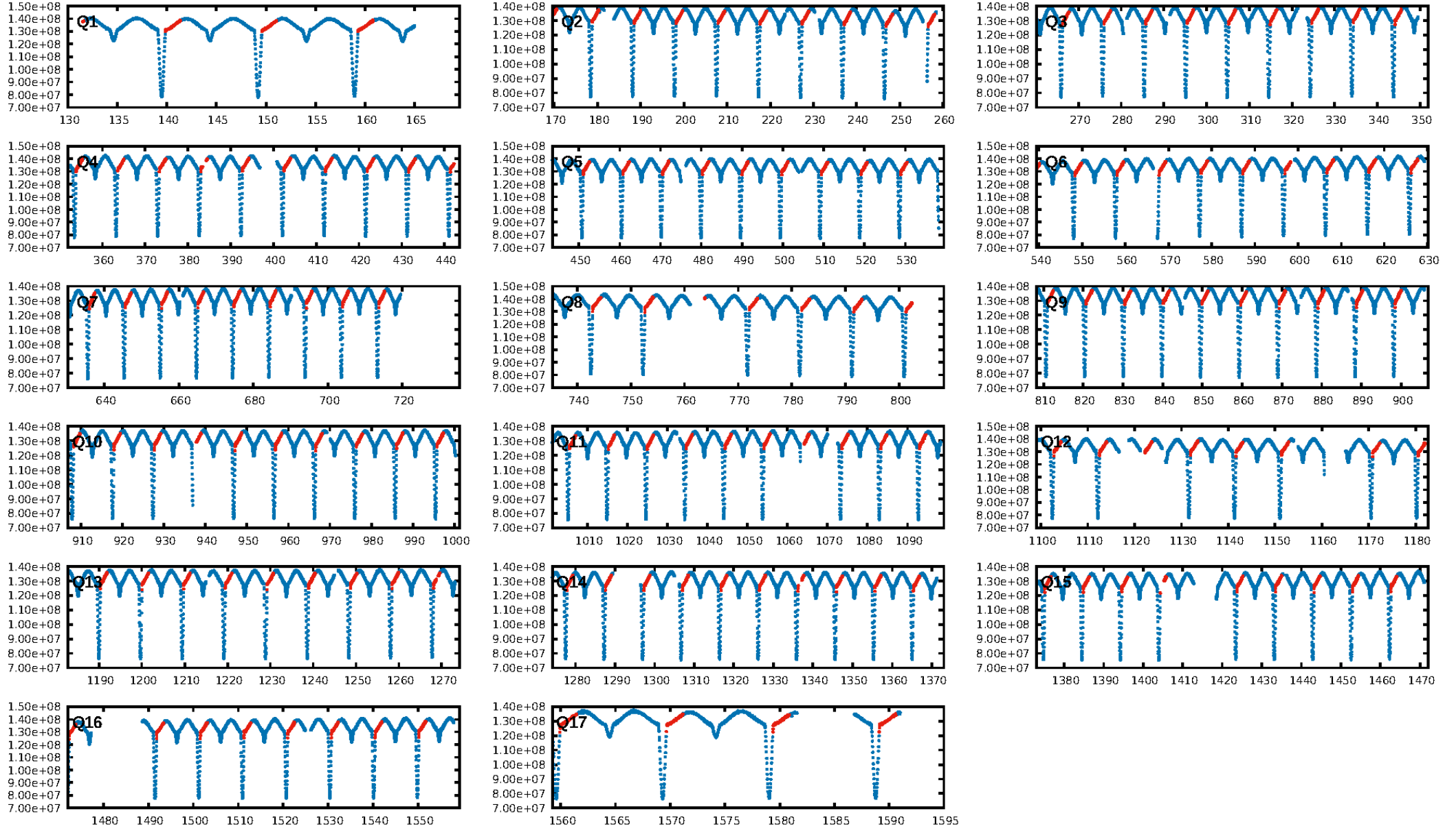
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.81 [110/135]
GhostDiagnostic-chr: 0.6053
Centroid-sig: N/A
Centroid-so: 1.464 arcsec [8.69σ]
OotOffset-rm: 0.118 arcsec [1.73σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.035 arcsec [0.49σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

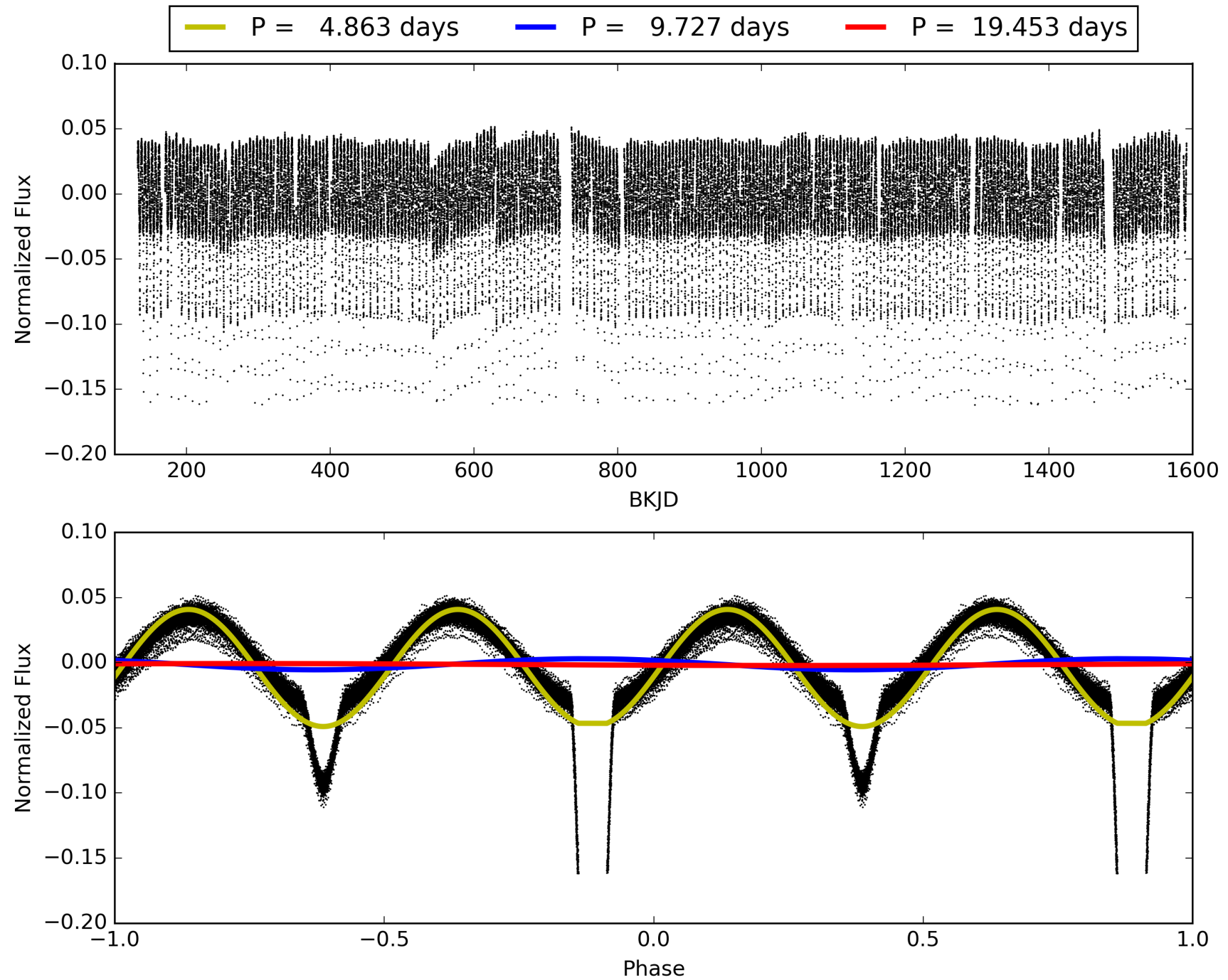
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:33:31 Z

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

TCE 010275887-03, PDC Light Curves

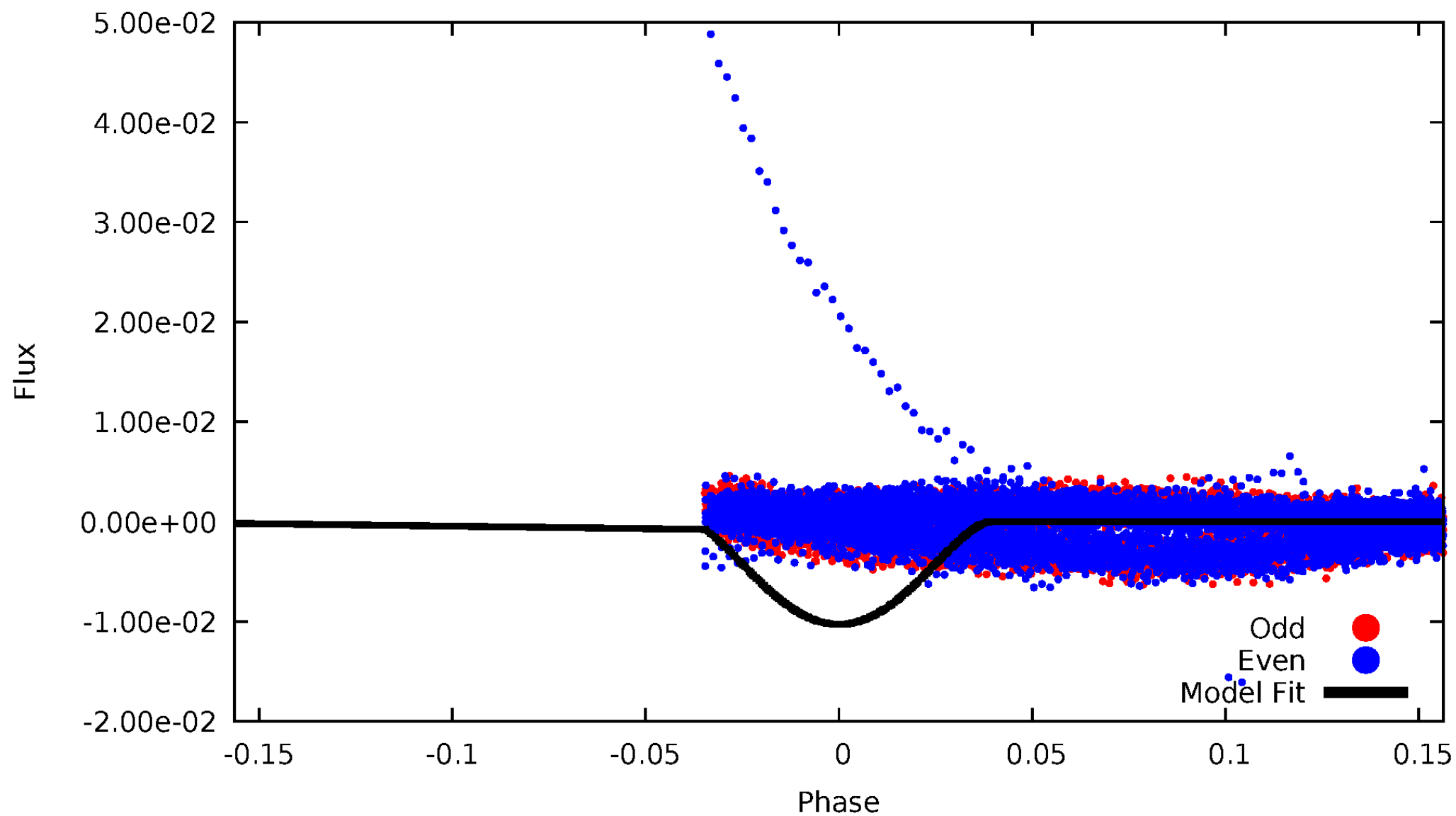


TCE 010275887-03



DV Odd/Even

TCE 010275887-03

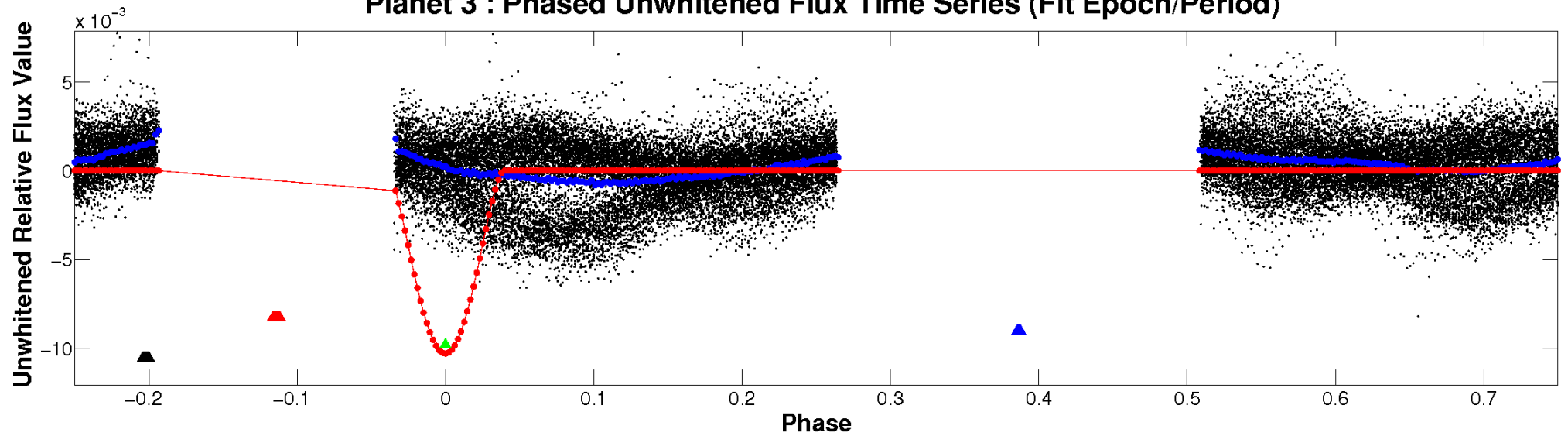


ALT Odd/Even

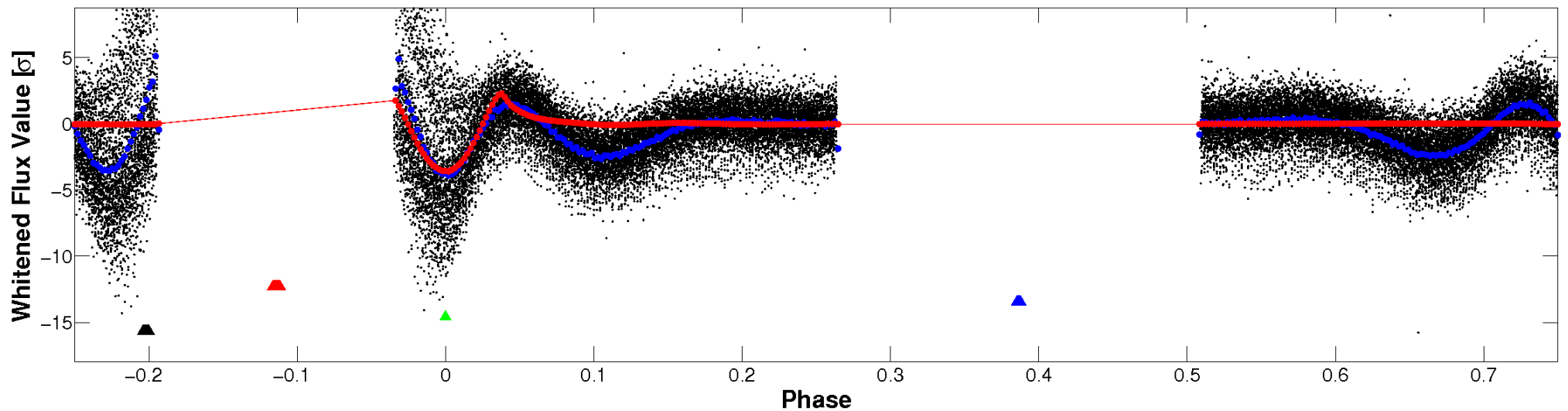
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

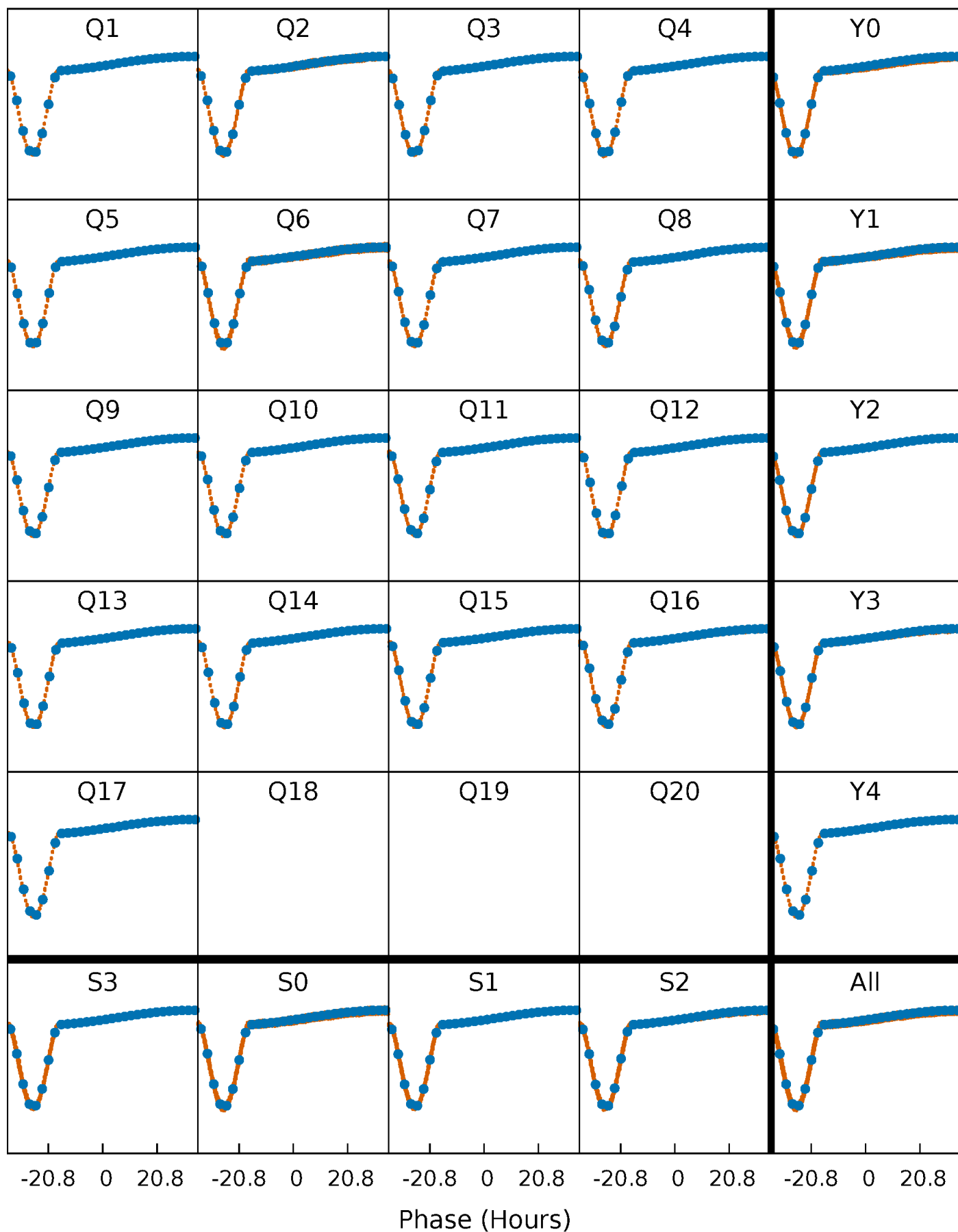


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



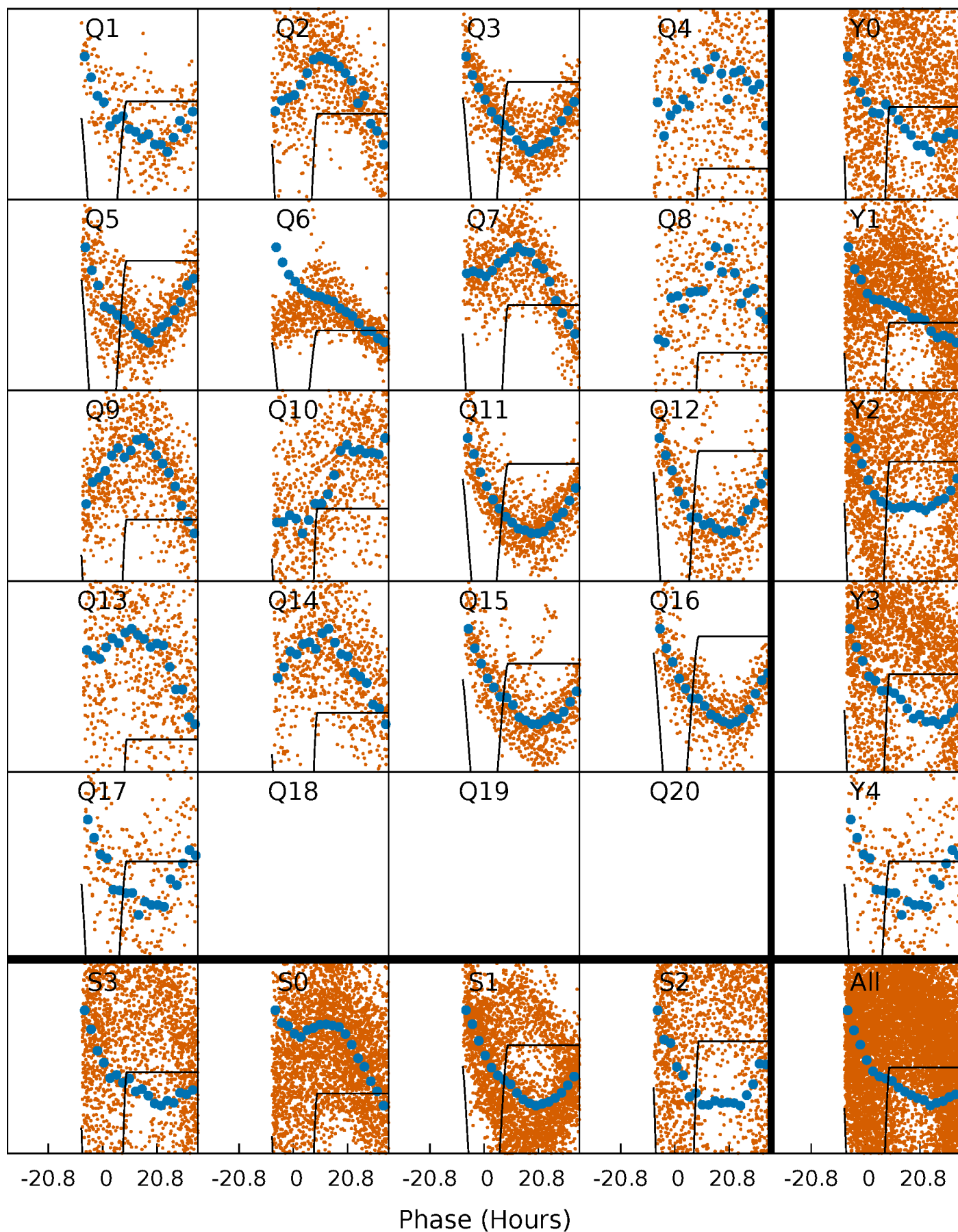
PDC Quarter-Phased Transit Curves

TCE 010275887-03 P= 9.726602 Days $T_0=140.593054$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010275887-03 $P = 9.726602$ Days $T_0 = 140.593054$ (BKJD)

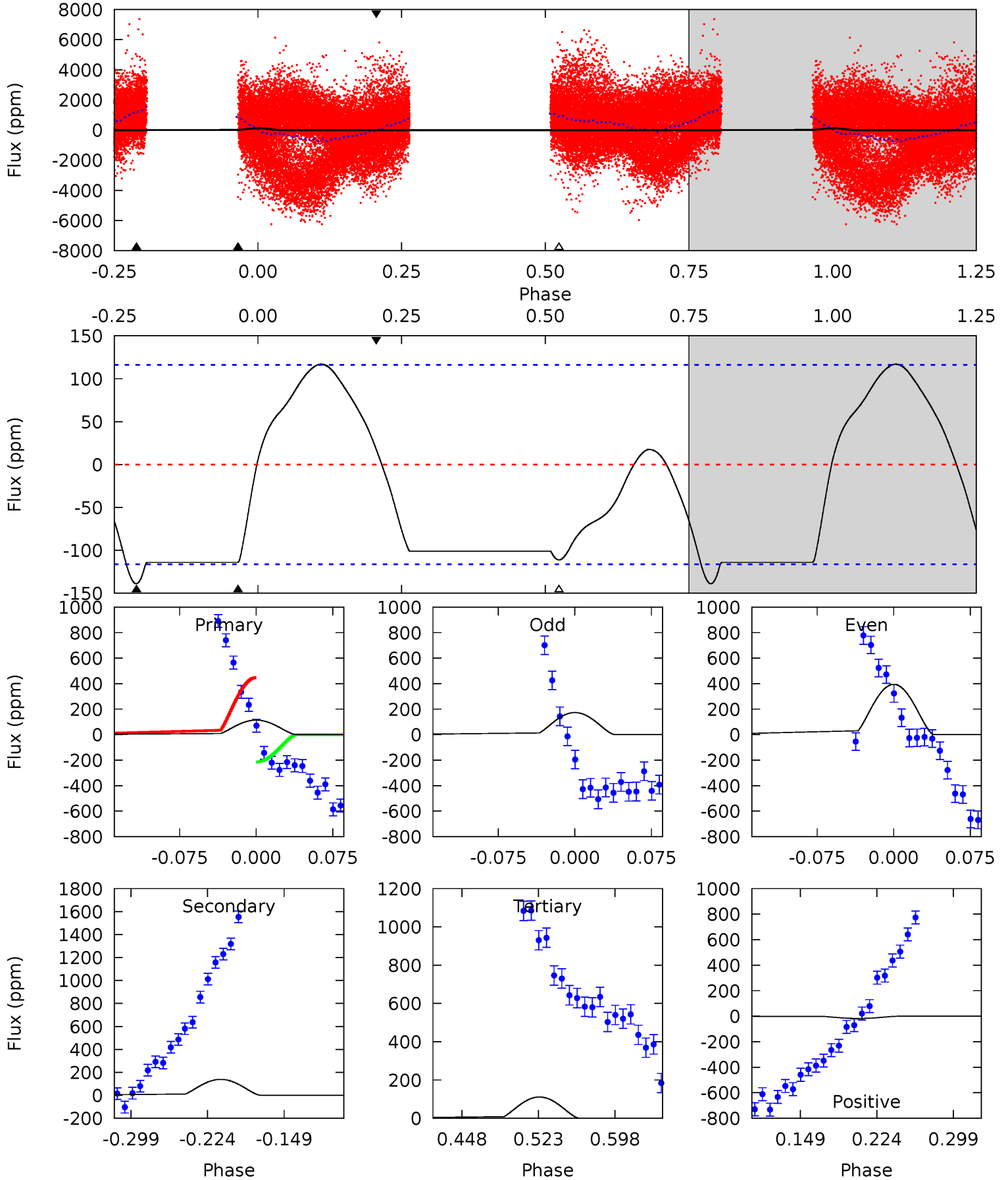


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

010275887-03, P = 9.726602 Days, E = 130.866452 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.54	5.53	4.43	0.70	4.63	1.78	2.83	0.11	3.83	1.10	4.82	4.46	1.00	0.46	4.92



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 010275887

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5618^{+186}_{-169}	$4.107^{+0.378}_{-0.162}$	$-0.080^{+0.300}_{-0.250}$	$1.406^{+0.404}_{-0.538}$	$0.922^{+0.125}_{-0.094}$	$0.468^{+1.222}_{-0.239}$
	+3%/-3%	+9%/-4%	+375%/-312%	+29%/-38%	+14%/-10%	+261%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010275887-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-139 ± 25	$24.34^{+9.69}_{-8.68}$	1386^{+105}_{-147}	2276^{+295}_{-274}	$0.988^{+1.296}_{-0.507}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

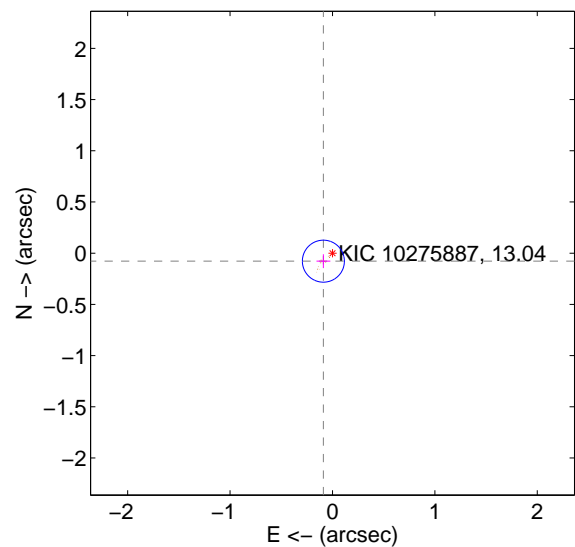
Supplemental centroid analysis for 010275887-03. Kepler magnitude: 13.04. Transit SNR 146.53

There are 0 quarters with good PRF difference image offsets

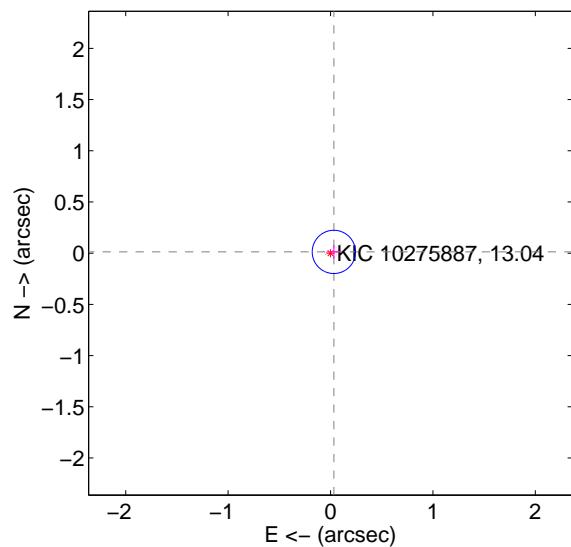
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.118 ± 0.068	1.73	0.089 ± 0.068	-0.078 ± 0.068
PRF-fit source offset from KIC position	0.035 ± 0.070	0.49	-0.032 ± 0.071	0.012 ± 0.067
photometric centroid source offset	1.46 ± 0.17	8.69	-1.43 ± 0.17	0.33 ± 0.09

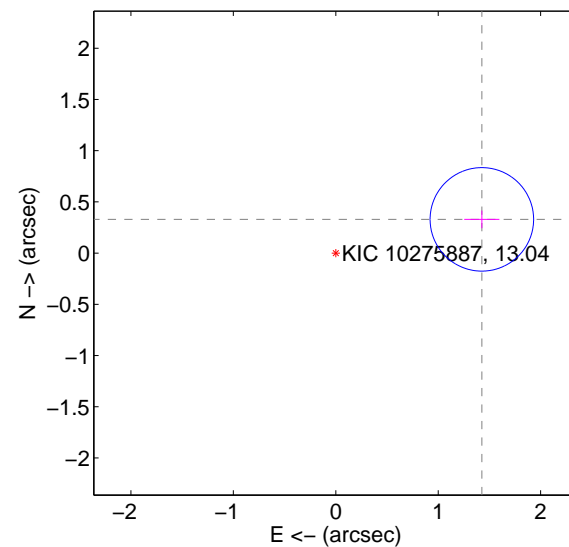
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

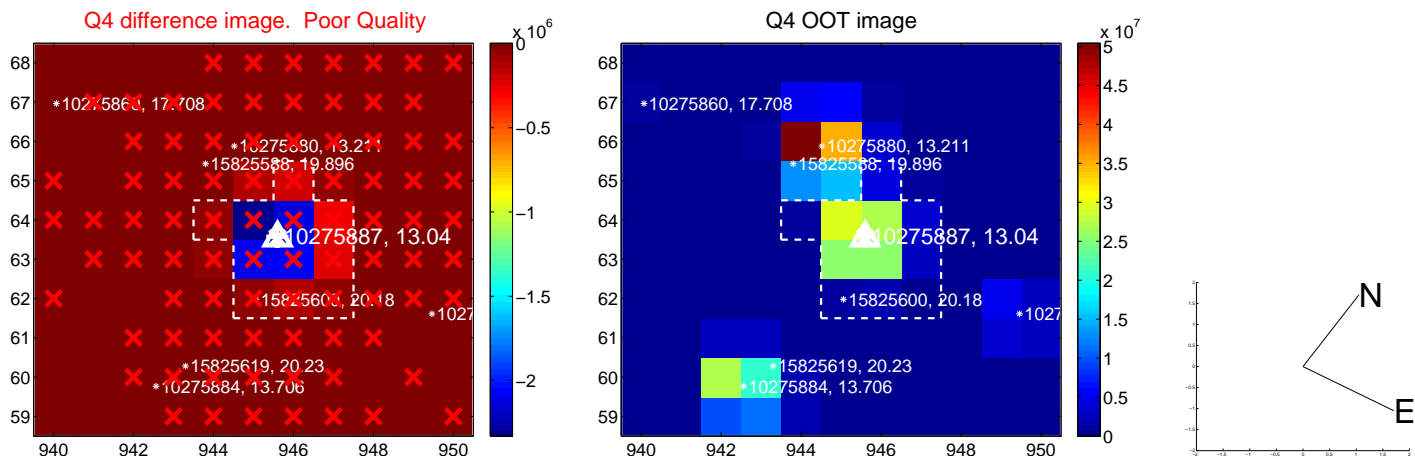
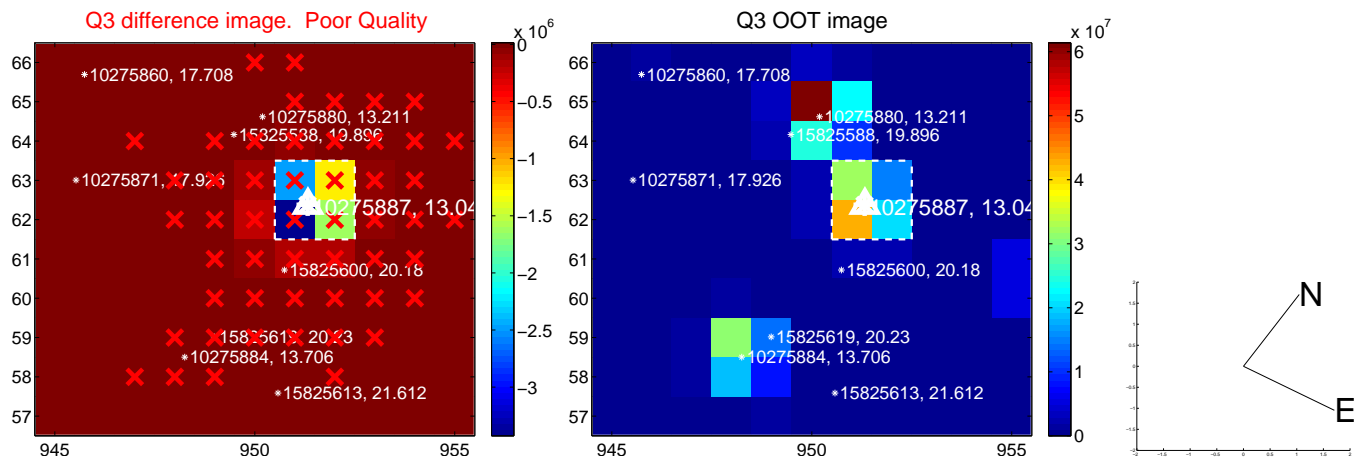
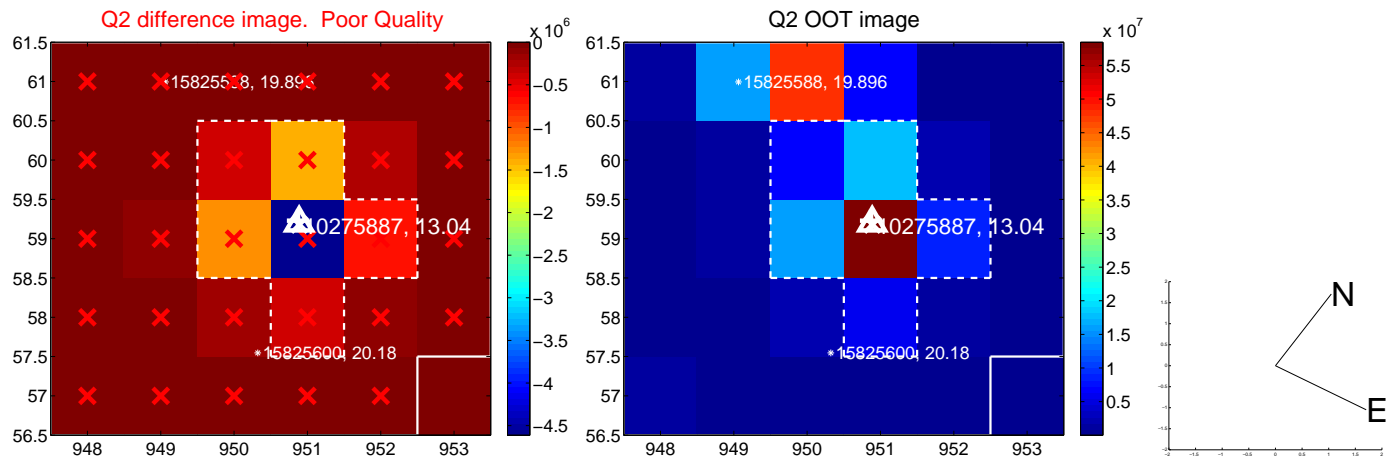
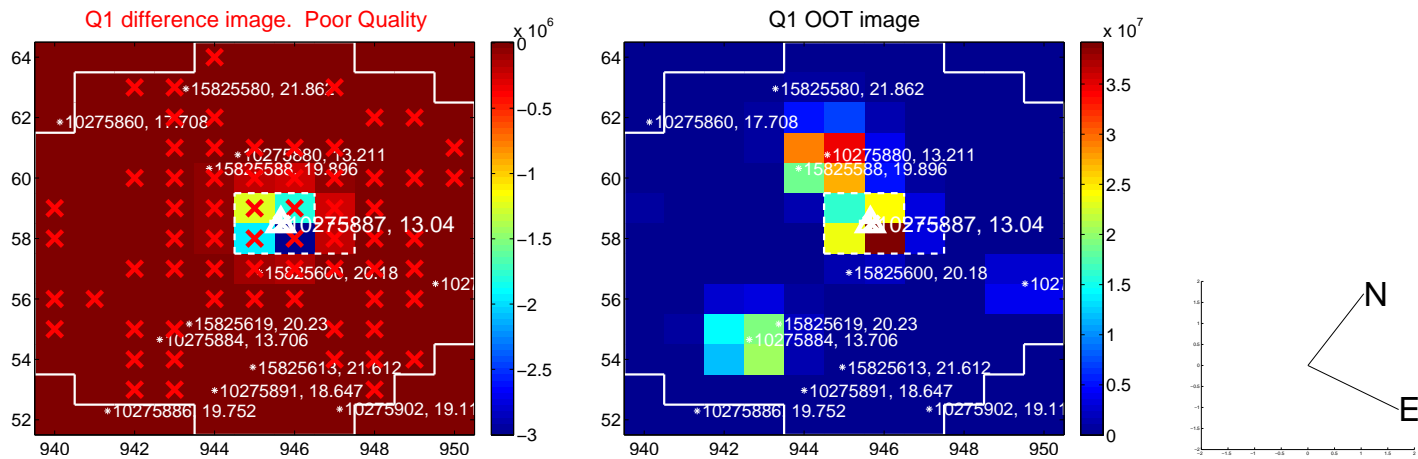


offset from photometric centroids

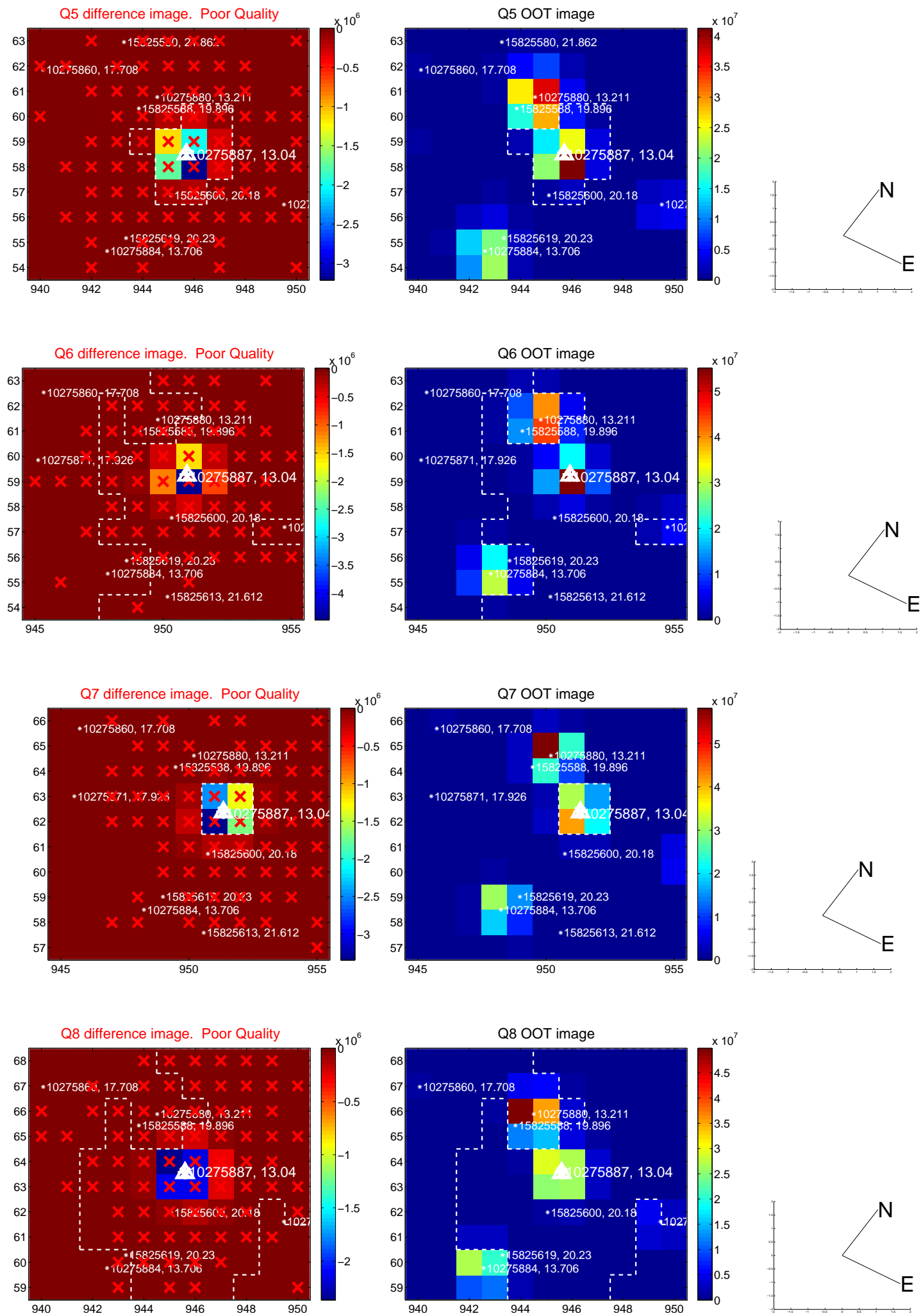


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

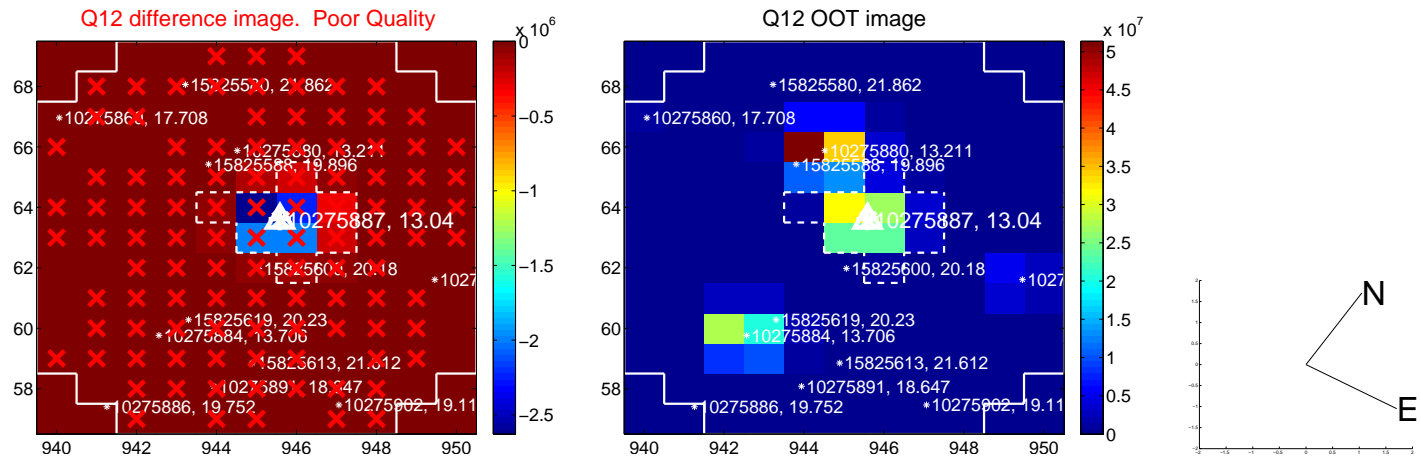
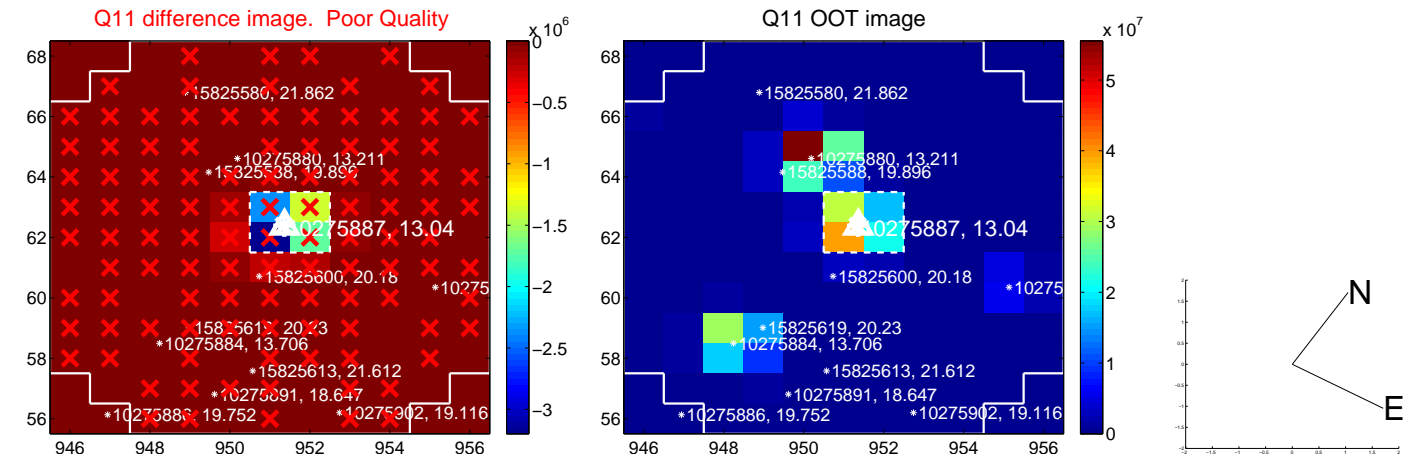
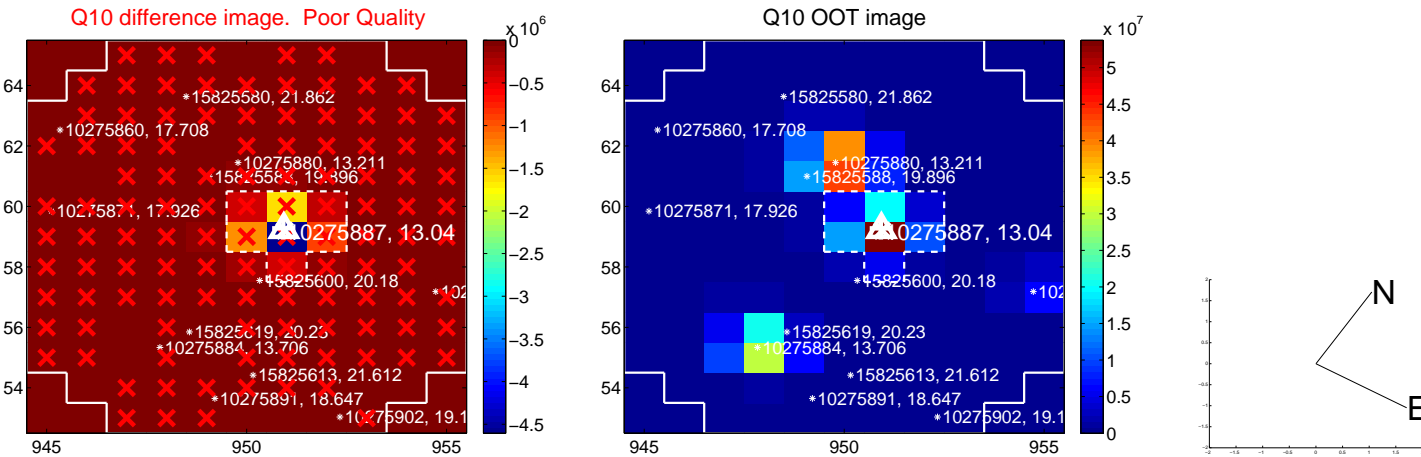
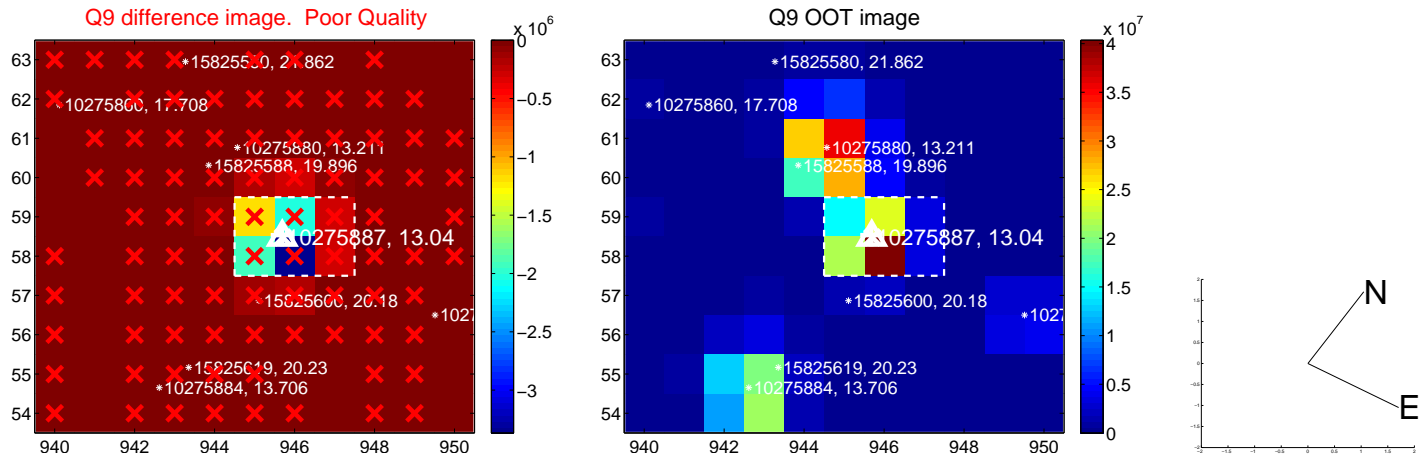
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



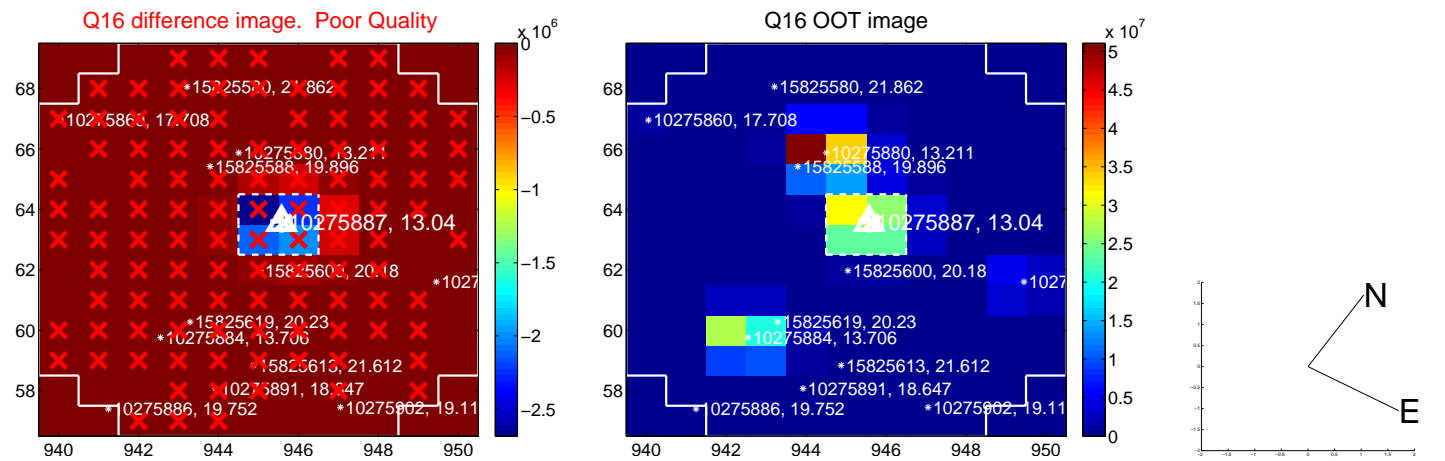
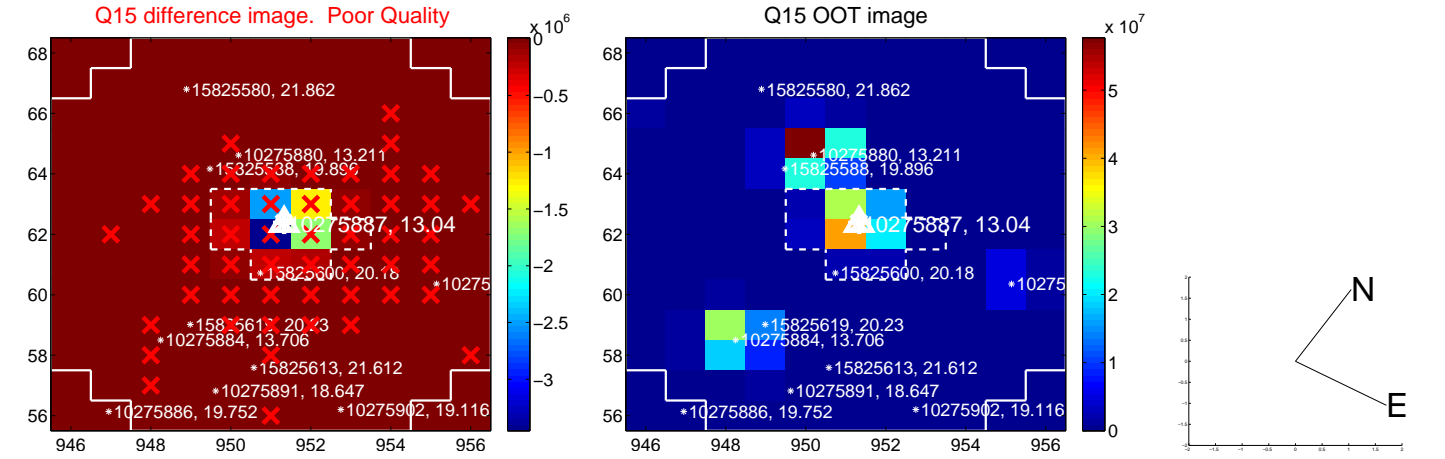
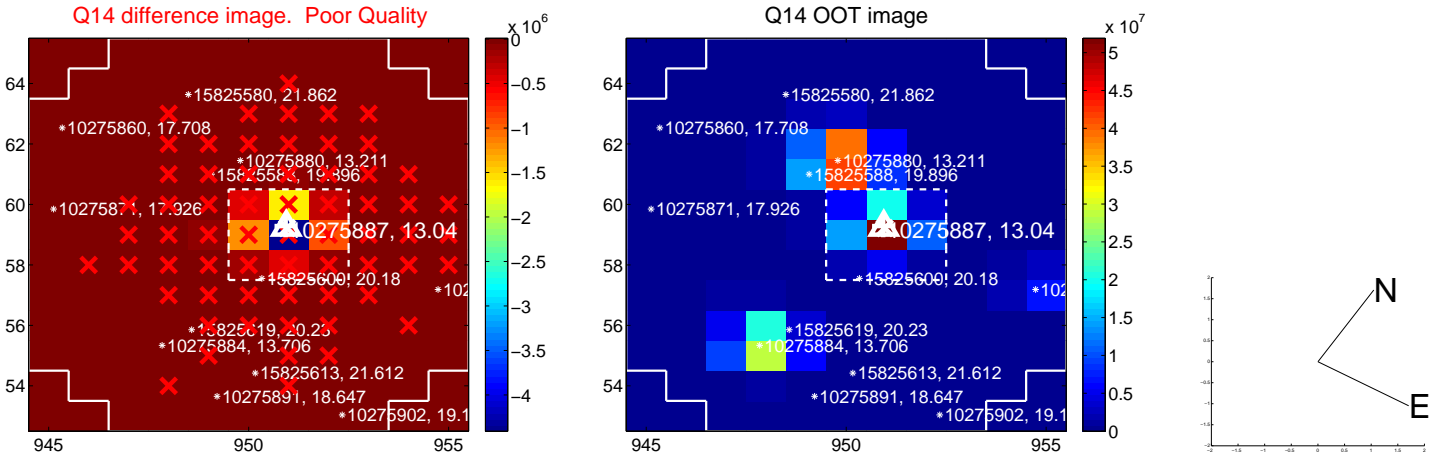
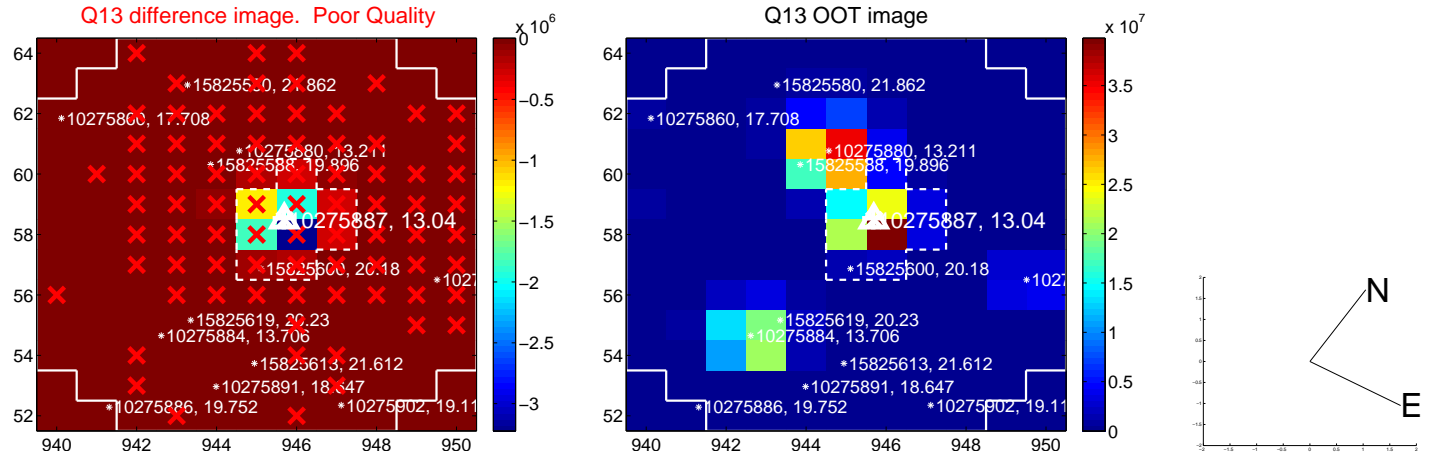
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



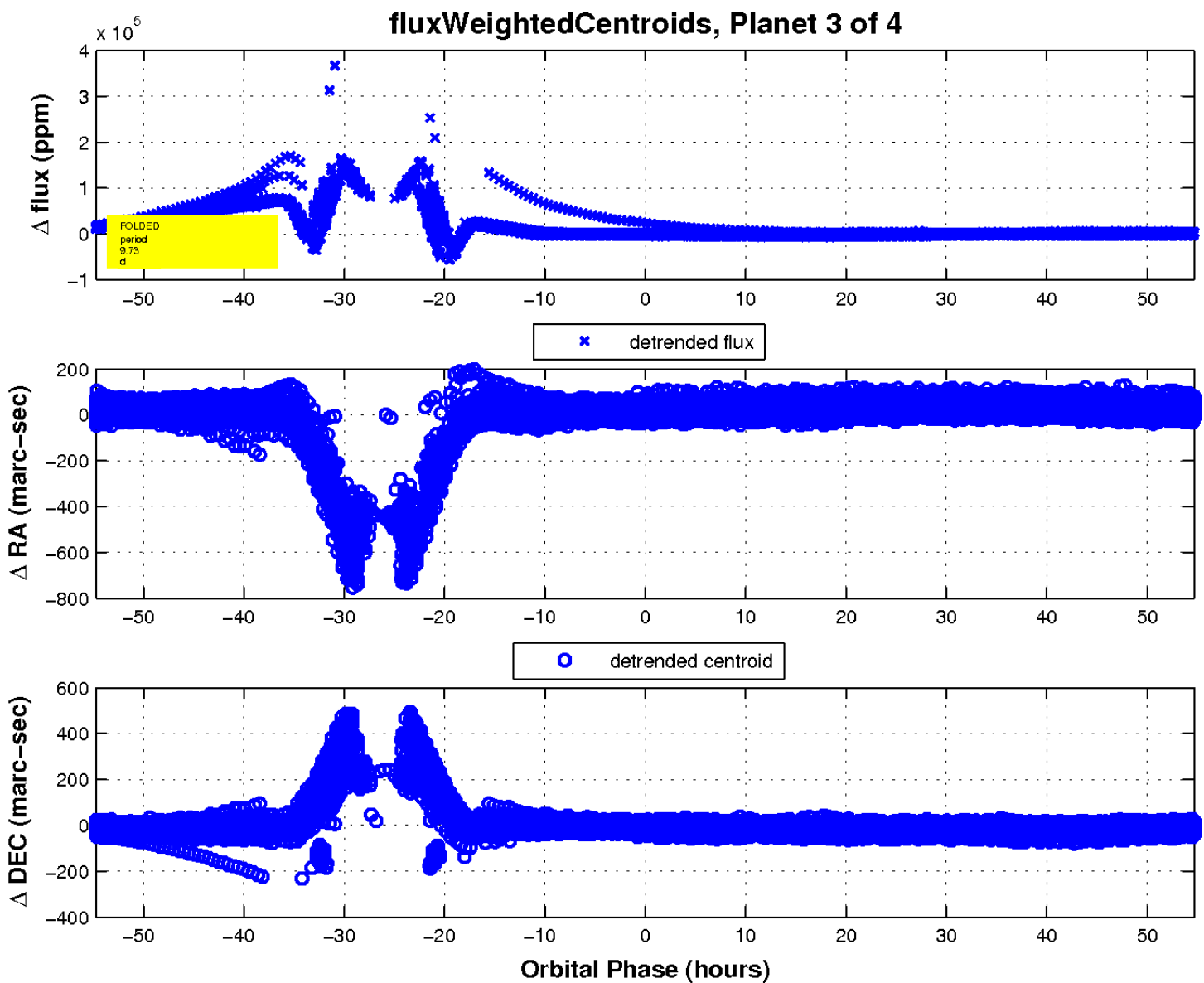
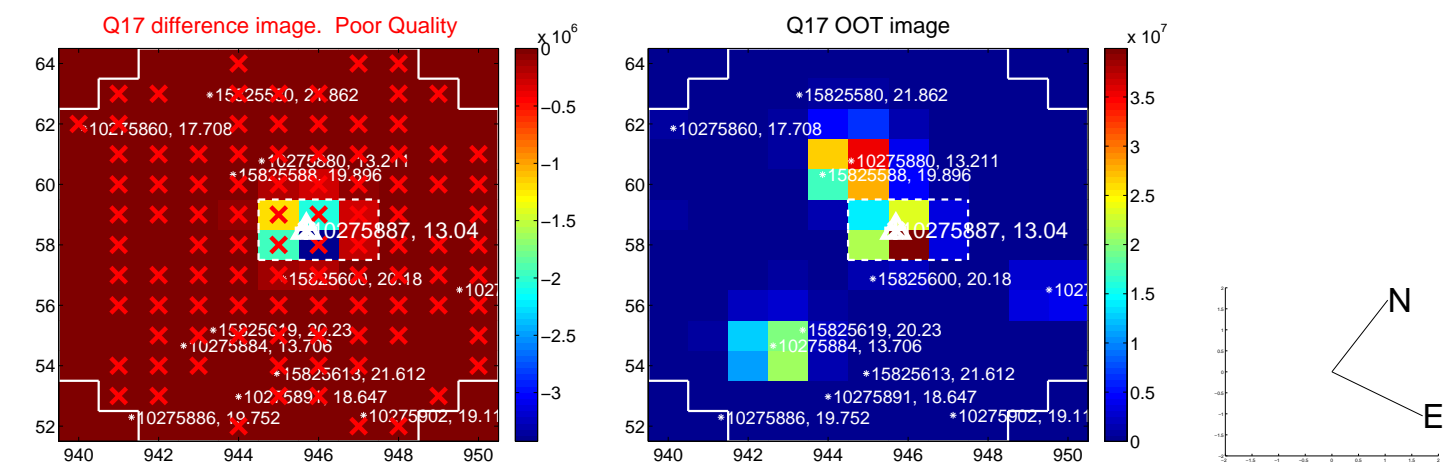
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

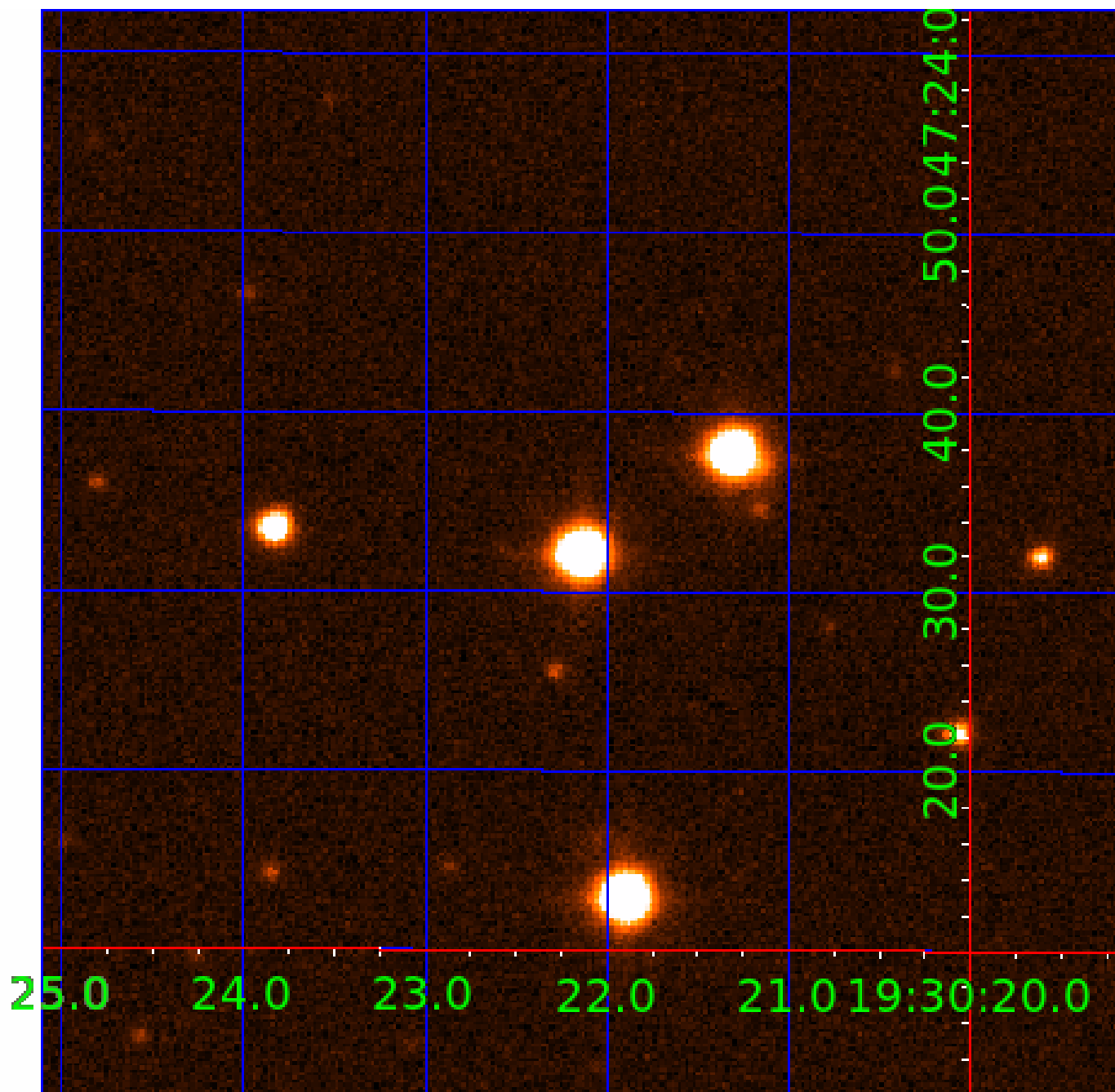


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



UKIRT Image

Declination



KIC 010275887

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})
010275887-01	OBS	7304.01	9.726937	139.459649	386763.4	12.500	4479.4	-1.0	1.41	5618	17.22	234.01
010275887-02	OBS	No	9.726760	134.614228	59221.8	18.992	614.9	764.9	1.41	5618	58.69	234.02
010275887-03	OBS	No	9.726602	140.593054	10297.7	18.241	490.4	146.5	1.41	5618	25.82	234.03
010275887-04	OBS	No	9.726877	138.608250	166.1	15.000	27.7	-1.0	1.41	5618	1.79	234.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010275887-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—HAS_SEC_TCE—CENT_NOFITS
010275887-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
010275887-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—MOD_NONUNIQ_DV—RESIDUAL_TCE—CENT_FEW_DIFFS
010275887-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—RESIDUAL_TCE—CENT_NOFITS—HALO_GHOST

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 010275887-04

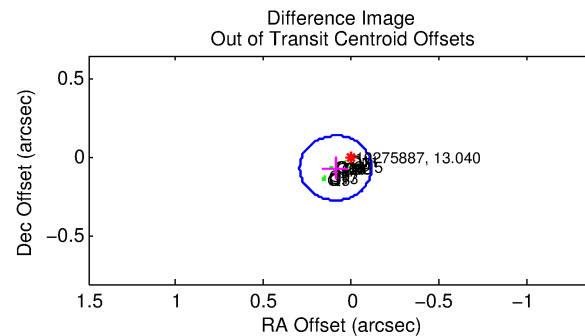
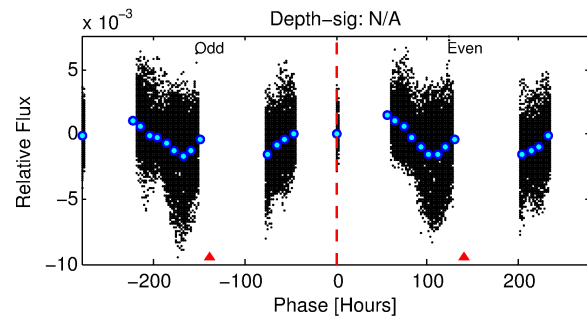
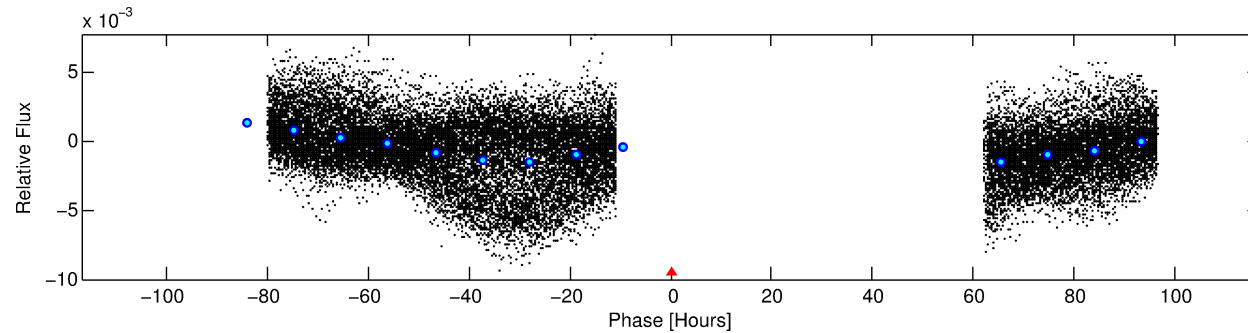
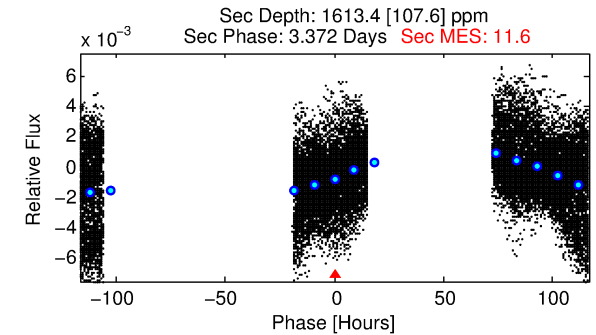
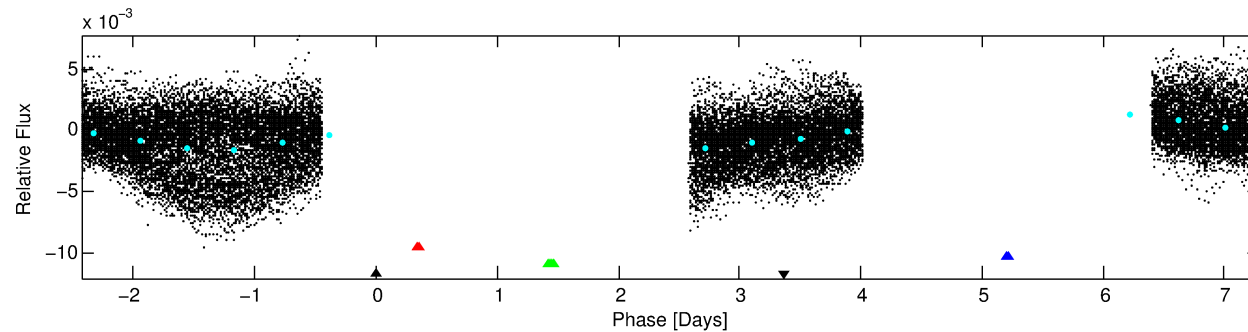
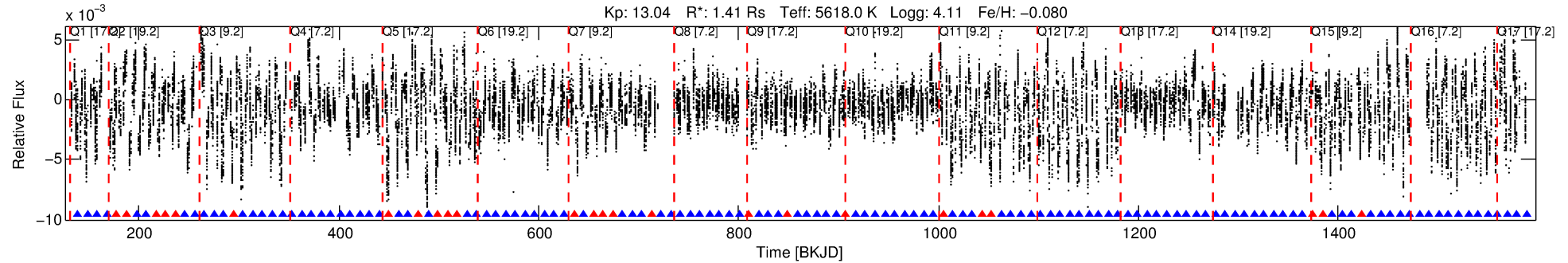
No Significant Match Found

DV One-Page Summary

KIC: 10275887 Candidate: 4 of 4 Period: 9.727 d

KOI: K07304 Corr: No Ephemeris Match

Kp: 13.04 R*: 1.41 Rs Teff: 5618.0 K Logg: 4.11 Fe/H: -0.080



TPS TCE Results:

Period = 9.72688 d
Epoch = 138.6083 BKJD

DV fit results are unavailable

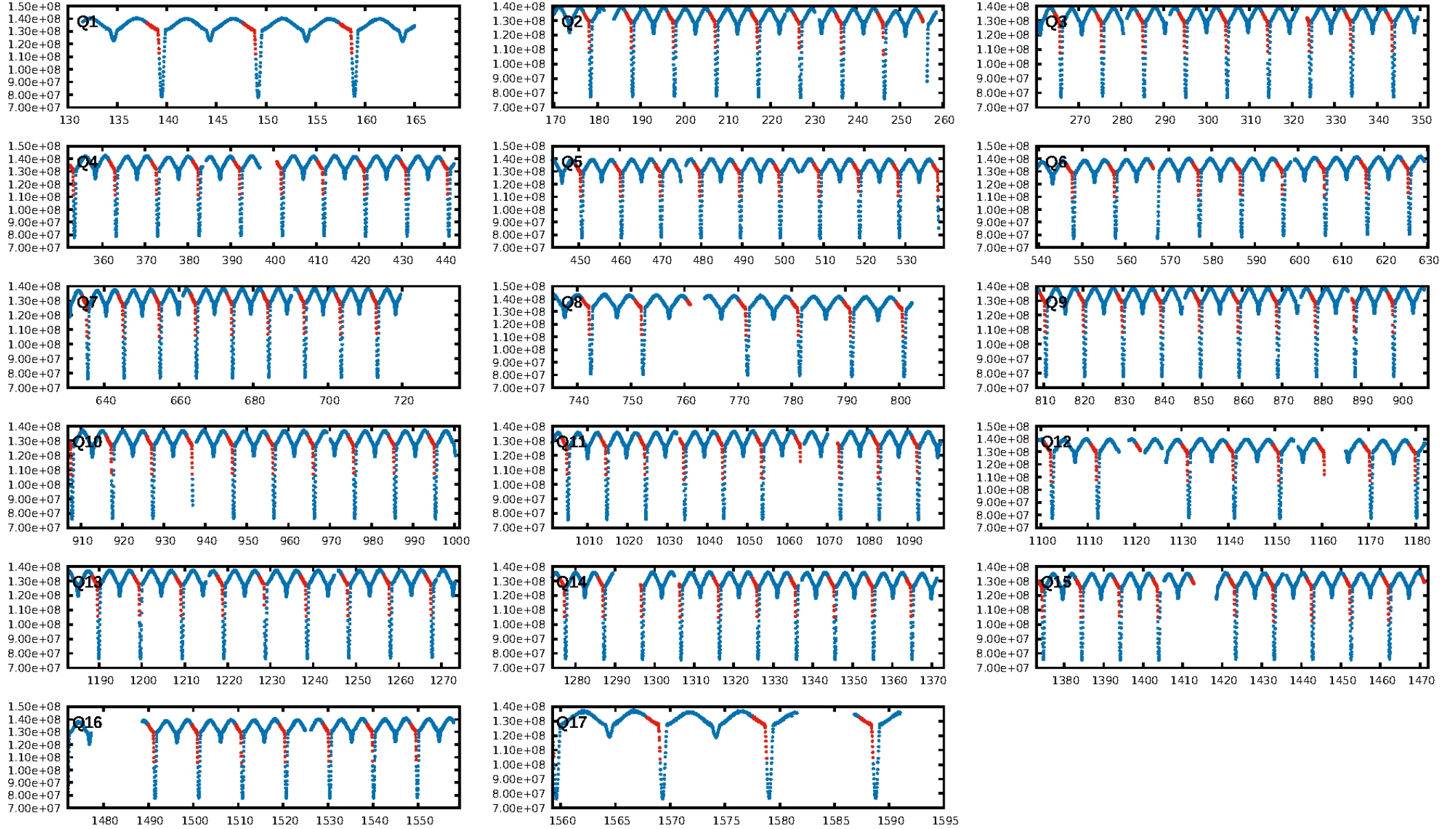
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.81 [110/135]
GhostDiagnostic-chr: -0.1565
Centroid-sig: N/A
Centroid-so: 1.692 arcsec [53.75 σ]
OotOffset-rm: 0.111 arcsec [1.62 σ]
KicOffset-rm: 0.039 arcsec [0.56 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

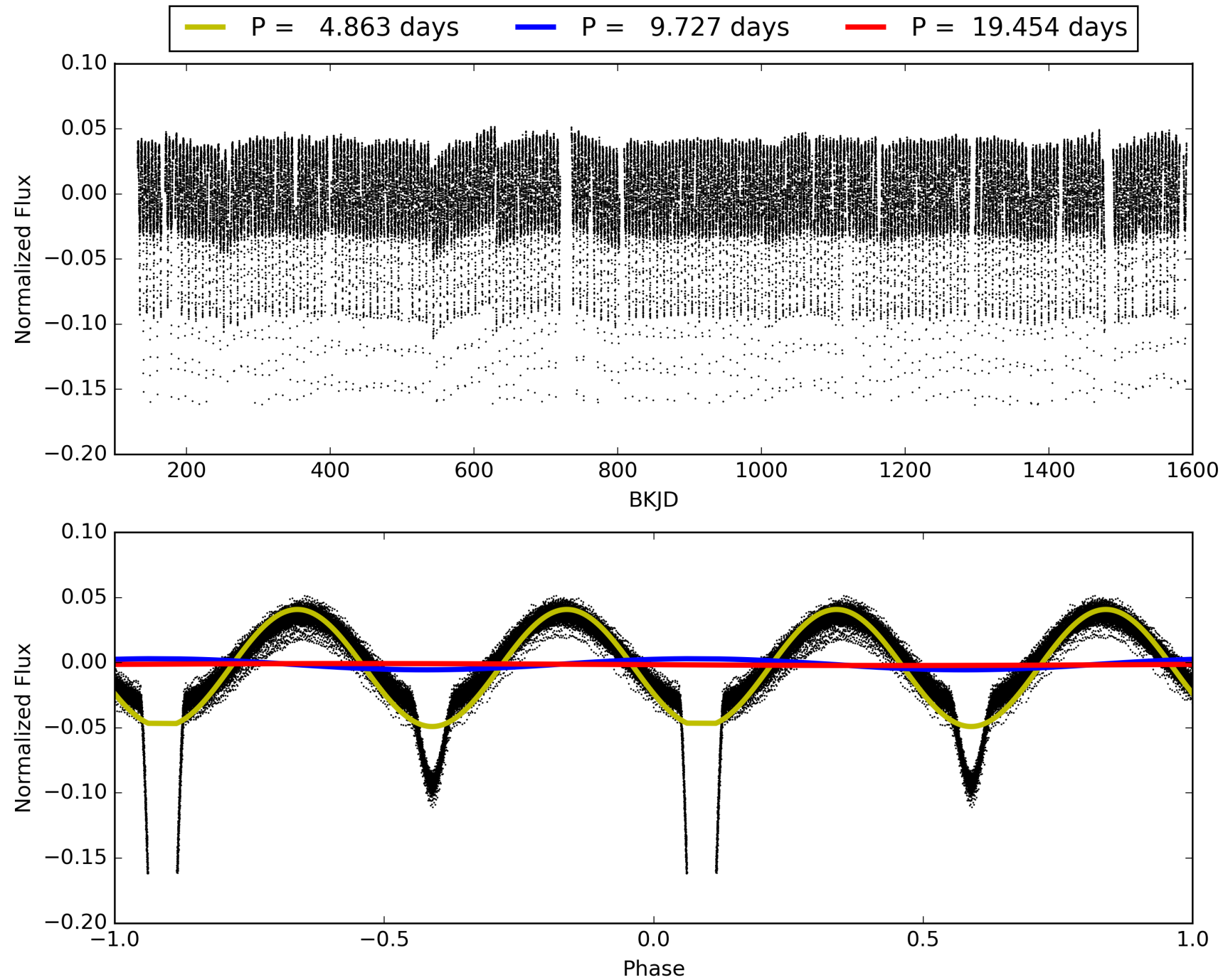
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:33:41 Z

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

TCE 010275887-04, PDC Light Curves

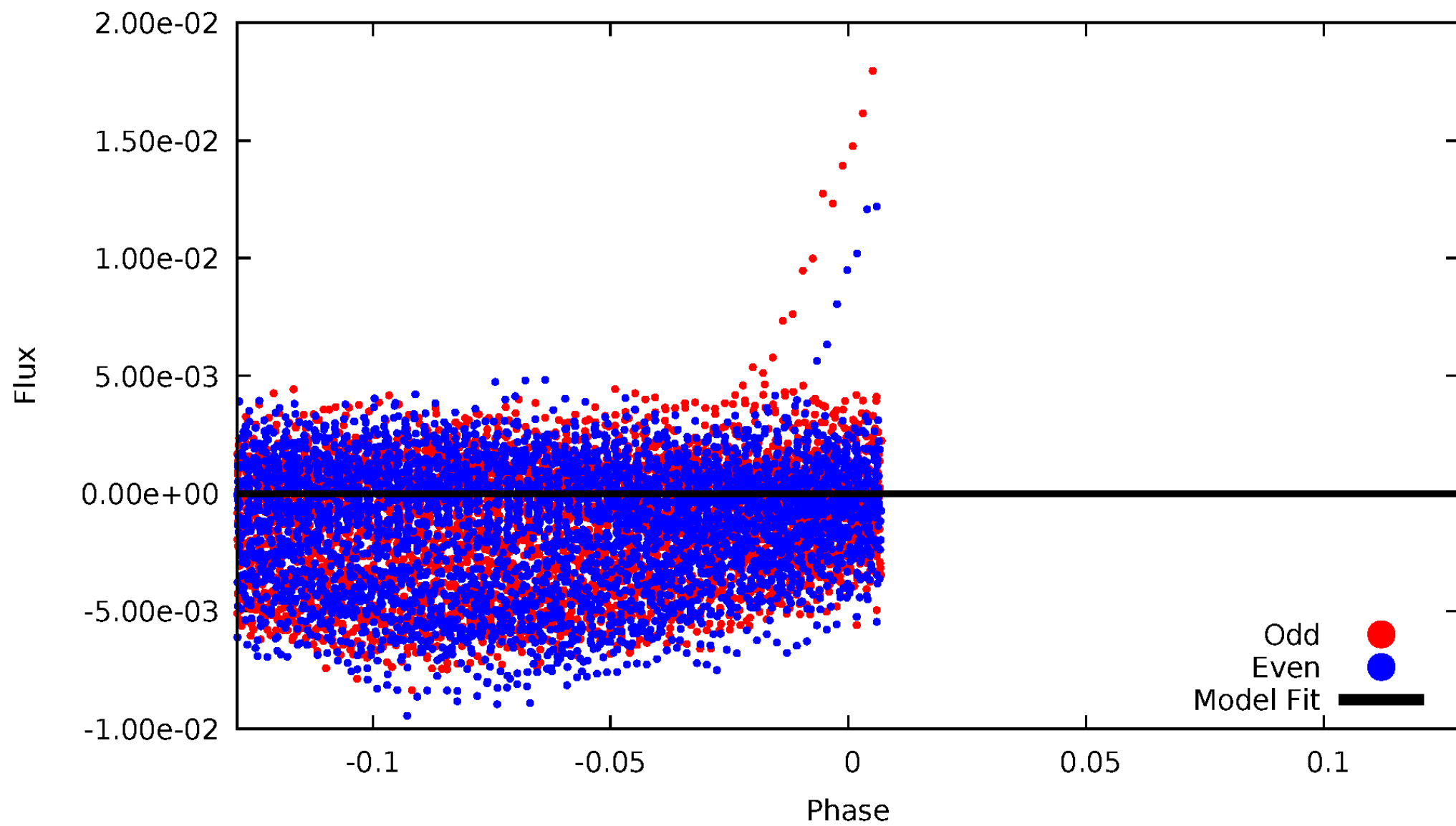


TCE 010275887-04



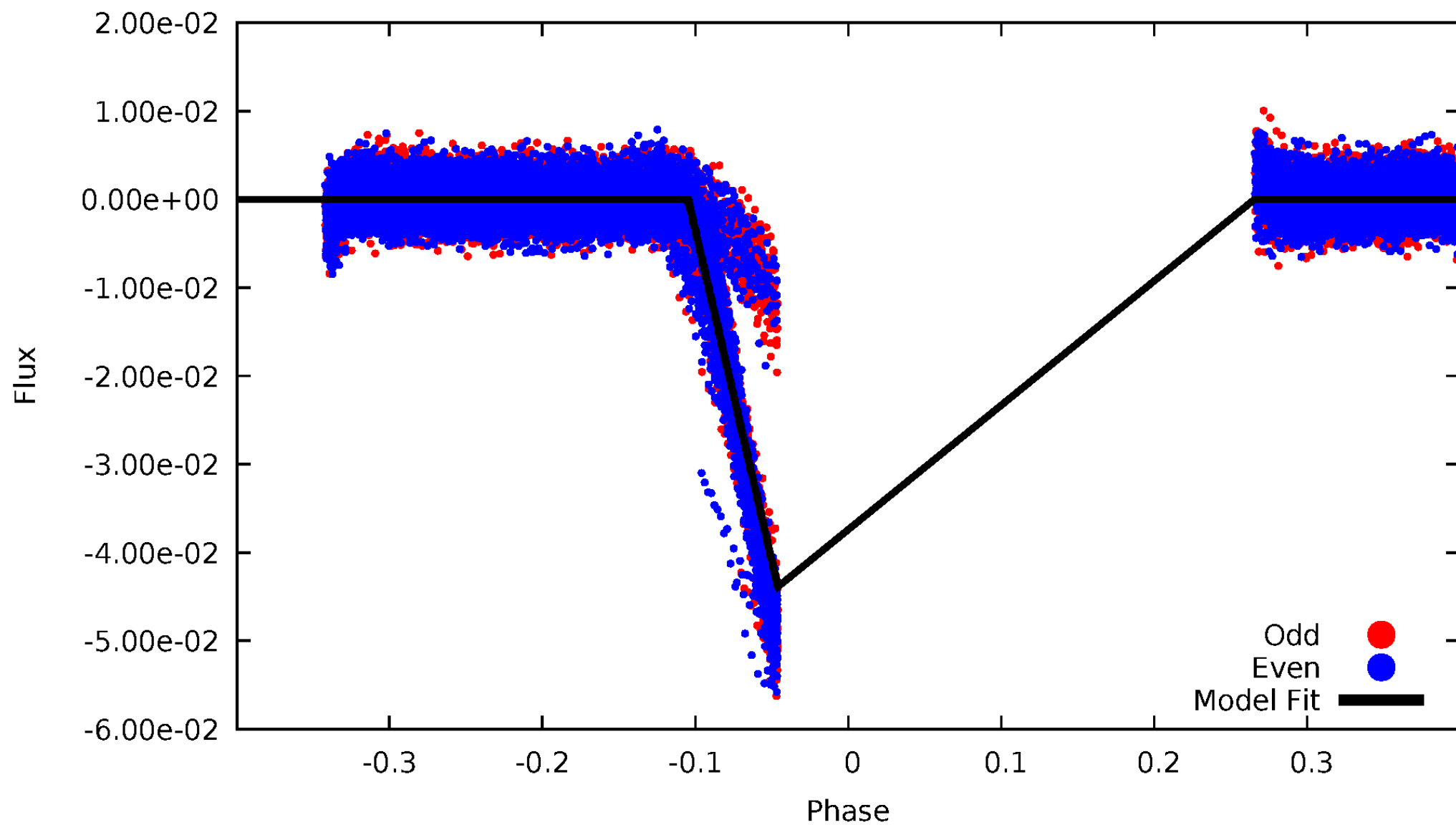
DV Odd/Even

TCE 010275887-04



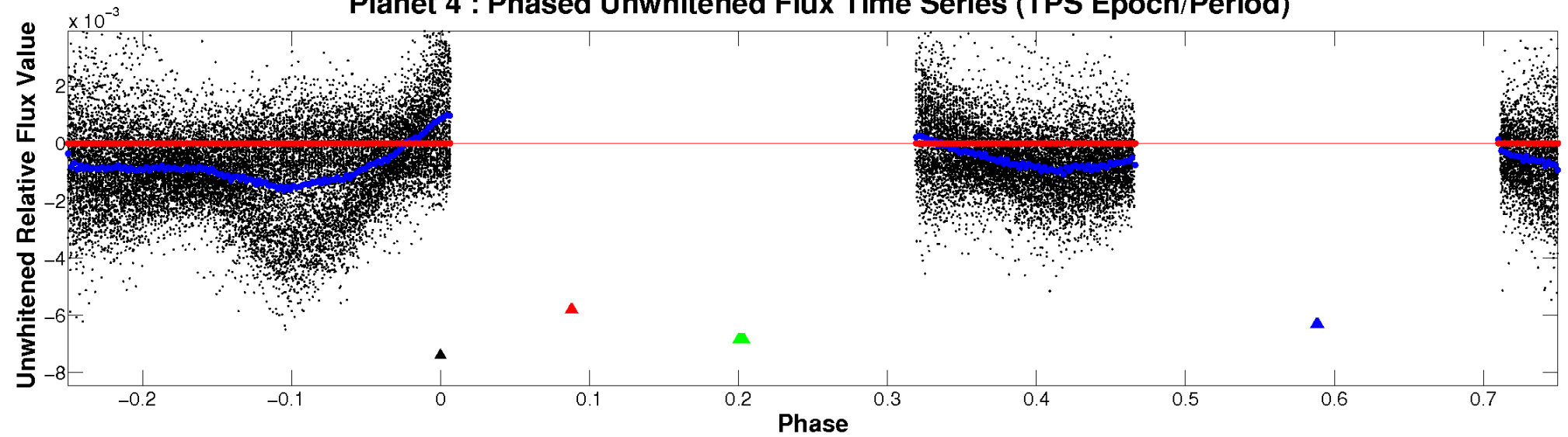
ALT Odd/Even

TCE 010275887-04

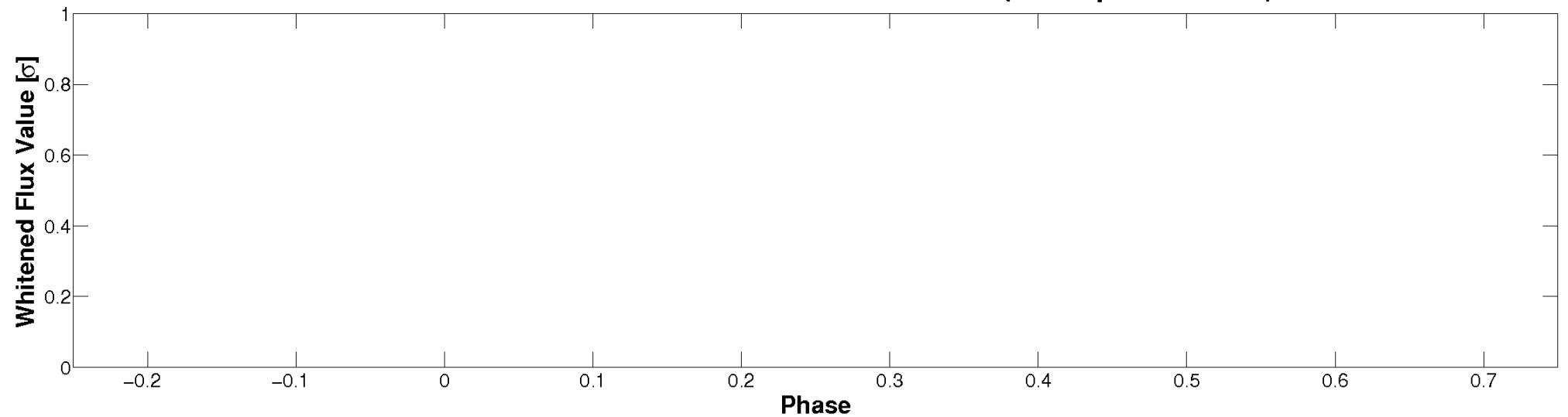


Non-Whitened Vs. Whitened Light Curve

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

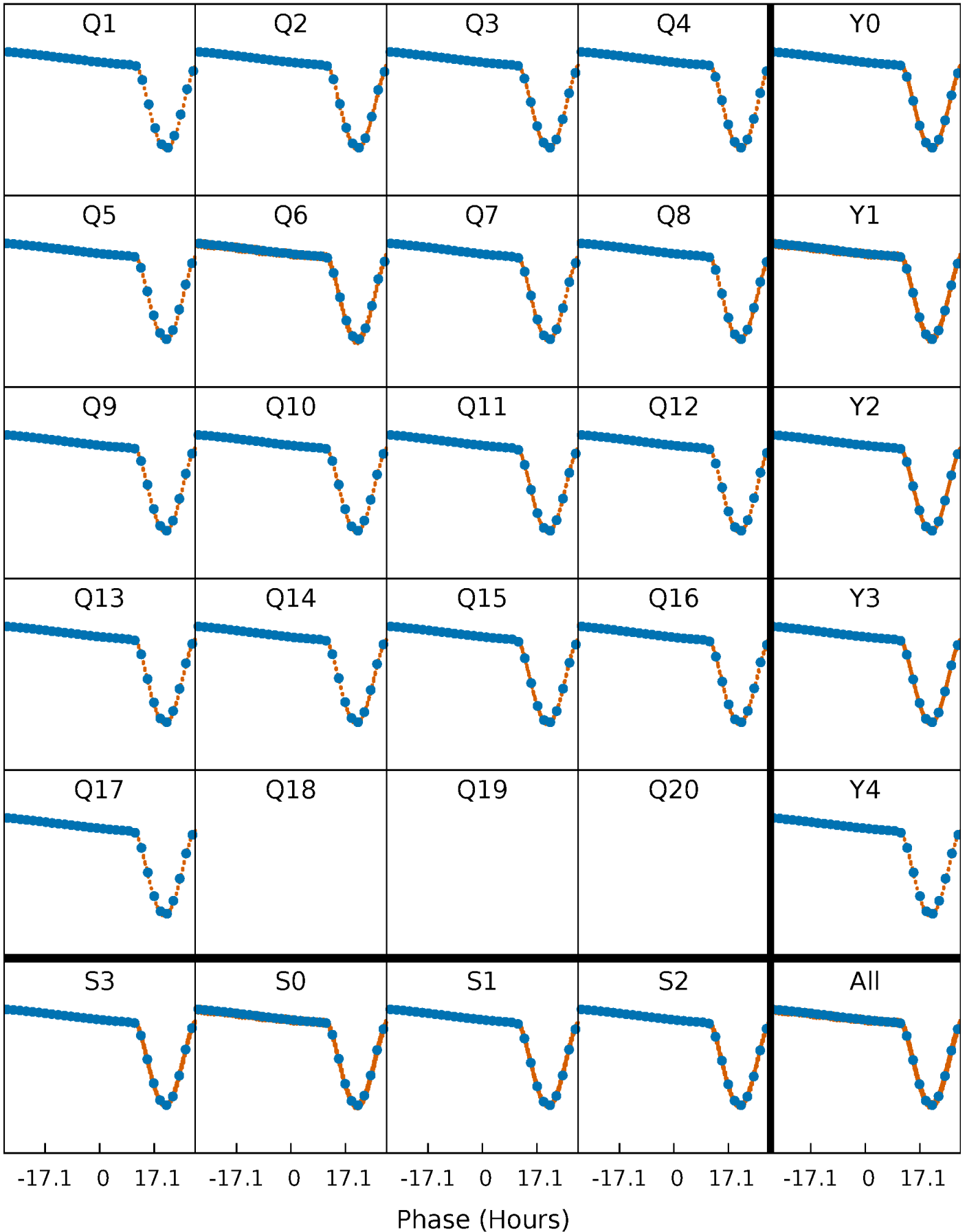


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



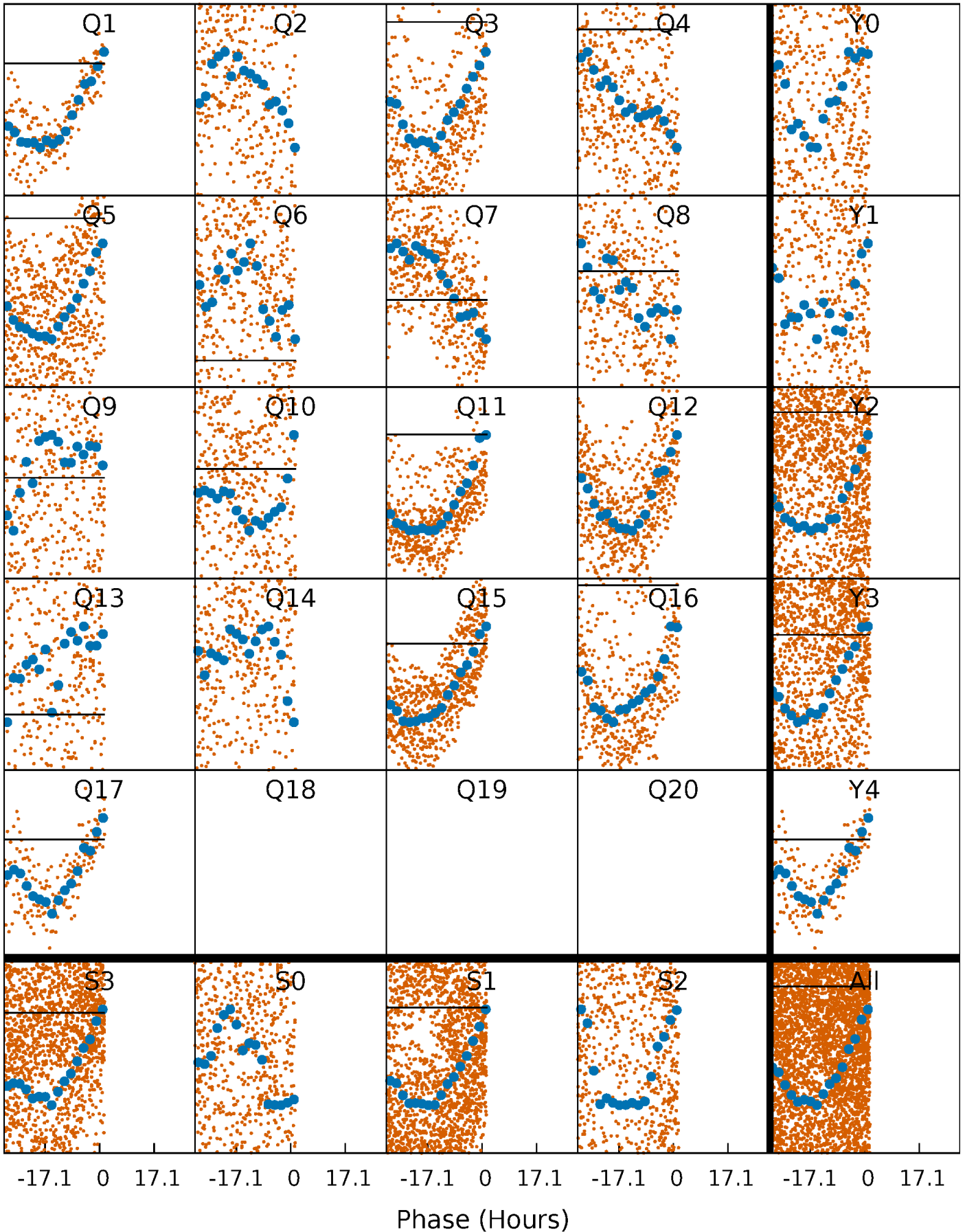
PDC Quarter-Phased Transit Curves

TCE 010275887-04 $P = 9.726877$ Days $T_0 = 138.608250$ (BKJD)



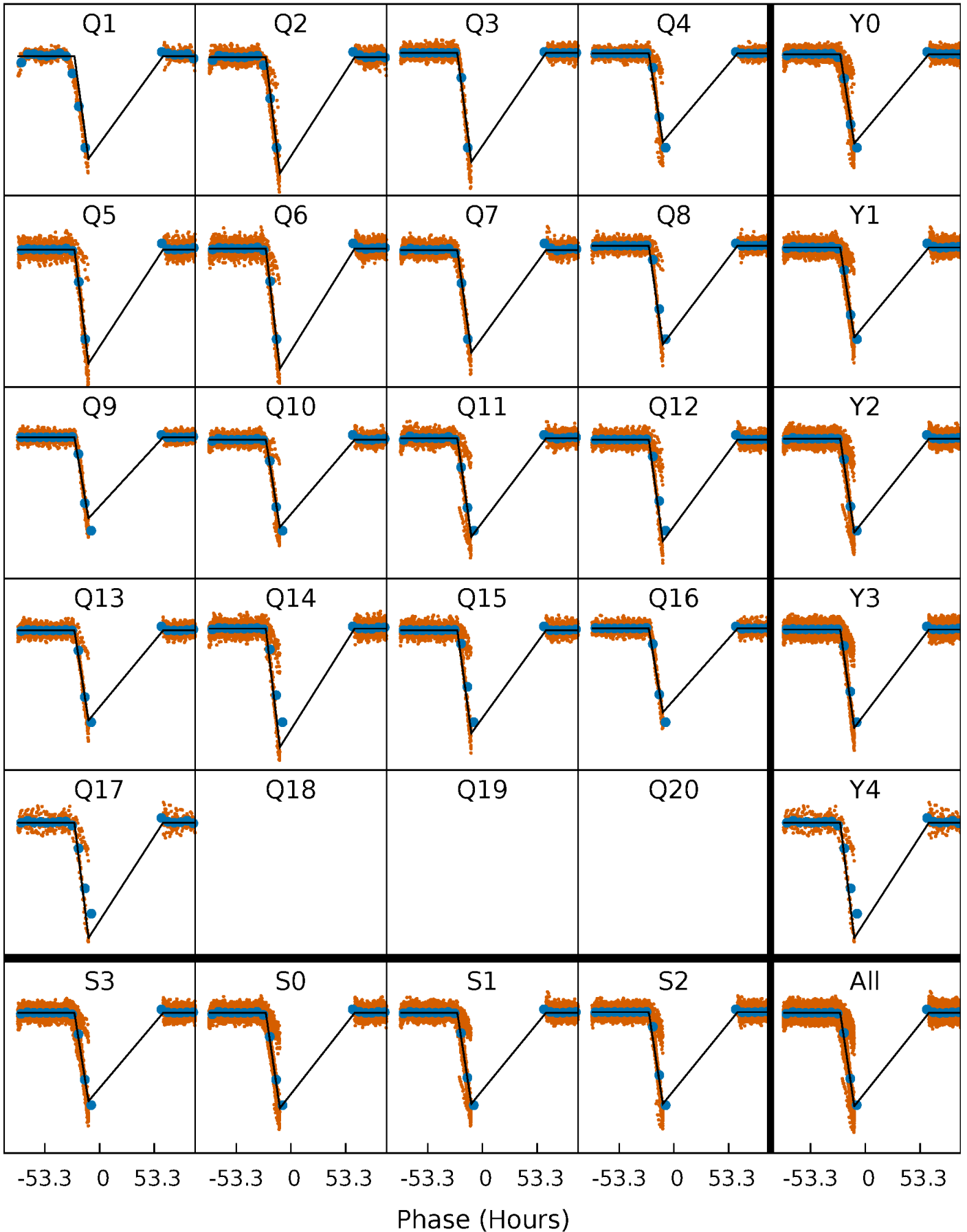
DV Quarter-Phased Transit Curves

TCE 010275887-04 $P = 9.726877$ Days $T_0 = 138.608250$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

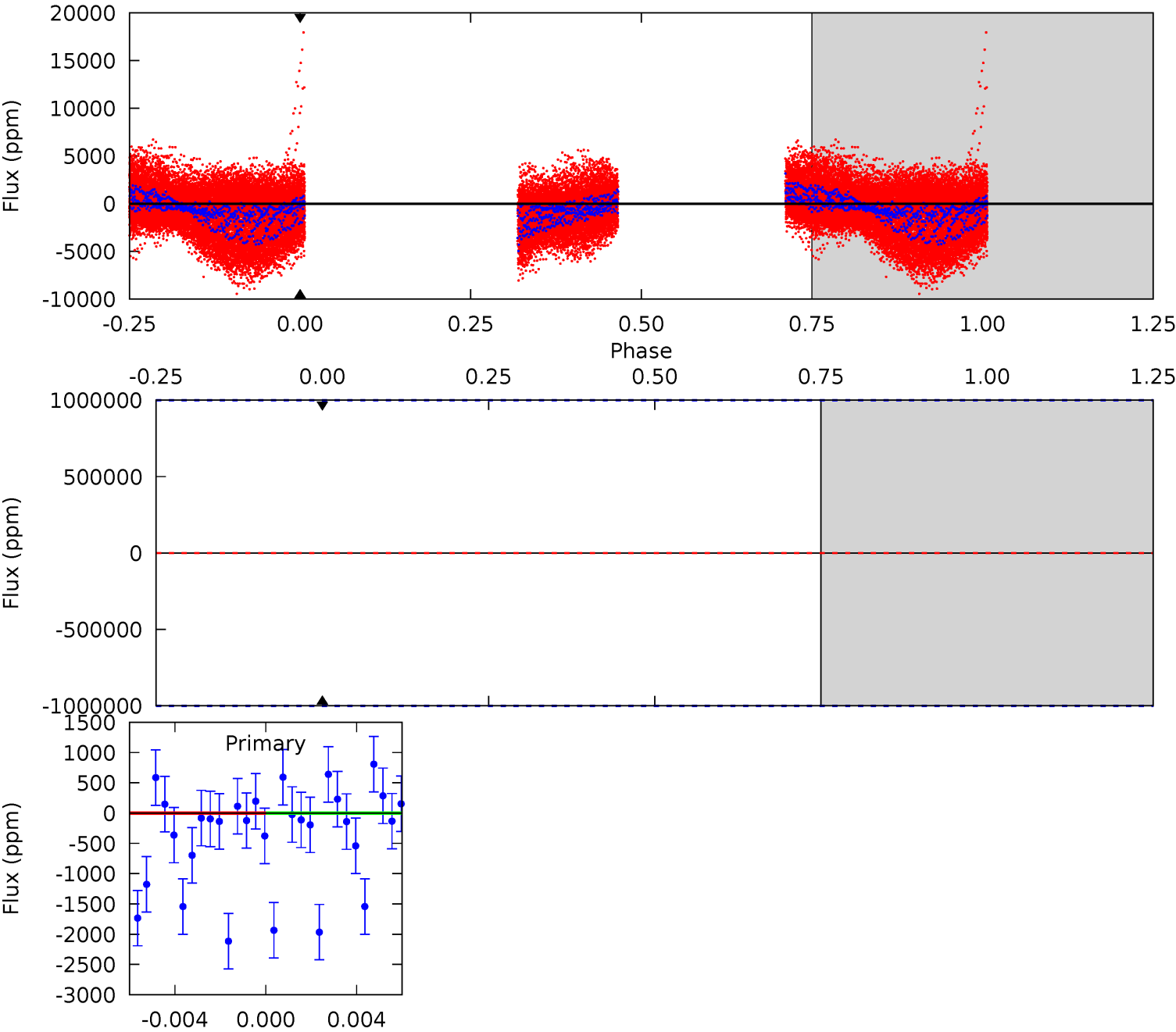
TCE 010275887-04 $P = 9.726877$ Days $T_0 = 139.124124$ (BKJD)



DV Model-Shift Uniqueness Test

010275887-04, P = 9.726877 Days, E = 128.881373 Days

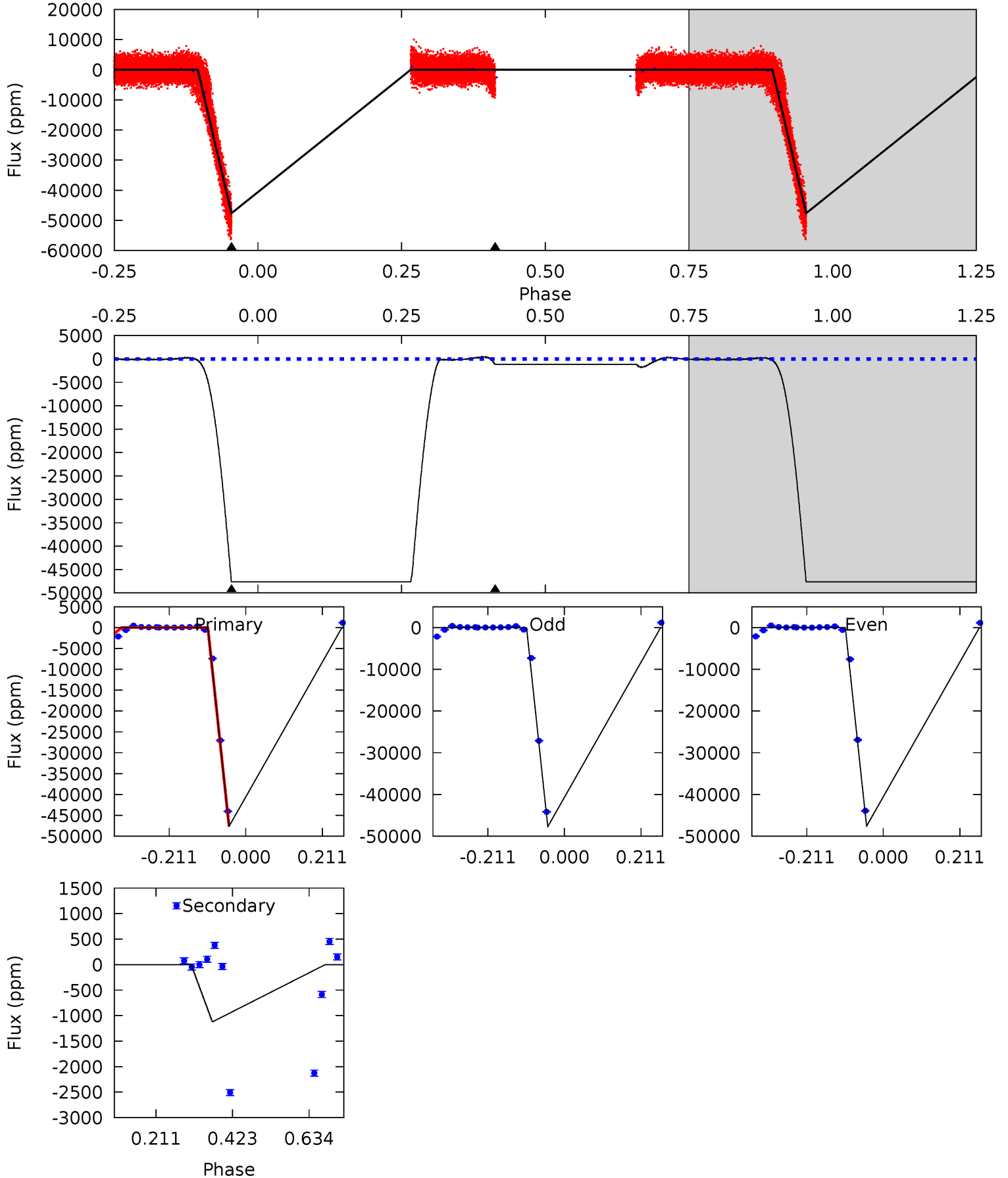
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010275887-04, P = 9.726877 Days, E = 129.397247 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1230	29.0	0	0	4.41	1.25	19.0	1230	1230	29.0	29.0	1.81	0	0.01	0



Stellar Parameters For KIC 010275887

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5618^{+186}_{-169}	$4.107^{+0.378}_{-0.162}$	$-0.080^{+0.300}_{-0.250}$	$1.406^{+0.404}_{-0.538}$	$0.922^{+0.125}_{-0.094}$	$0.468^{+1.222}_{-0.239}$
	+3%/-3%	+9%/-4%	+375%/-312%	+29%/-38%	+14%/-10%	+261%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 010275887-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$10.12^{+10.70}_{-6.84}$	1369^{+125}_{-133}	-4568^{+25110}_{-16314}	$-80.632^{+7108.266}_{-6867.867}$
Alt.	-1122 ± 39	$39.08^{+18.47}_{-16.05}$	1375^{+110}_{-142}	2712^{+401}_{-249}	$3.094^{+5.642}_{-1.648}$

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

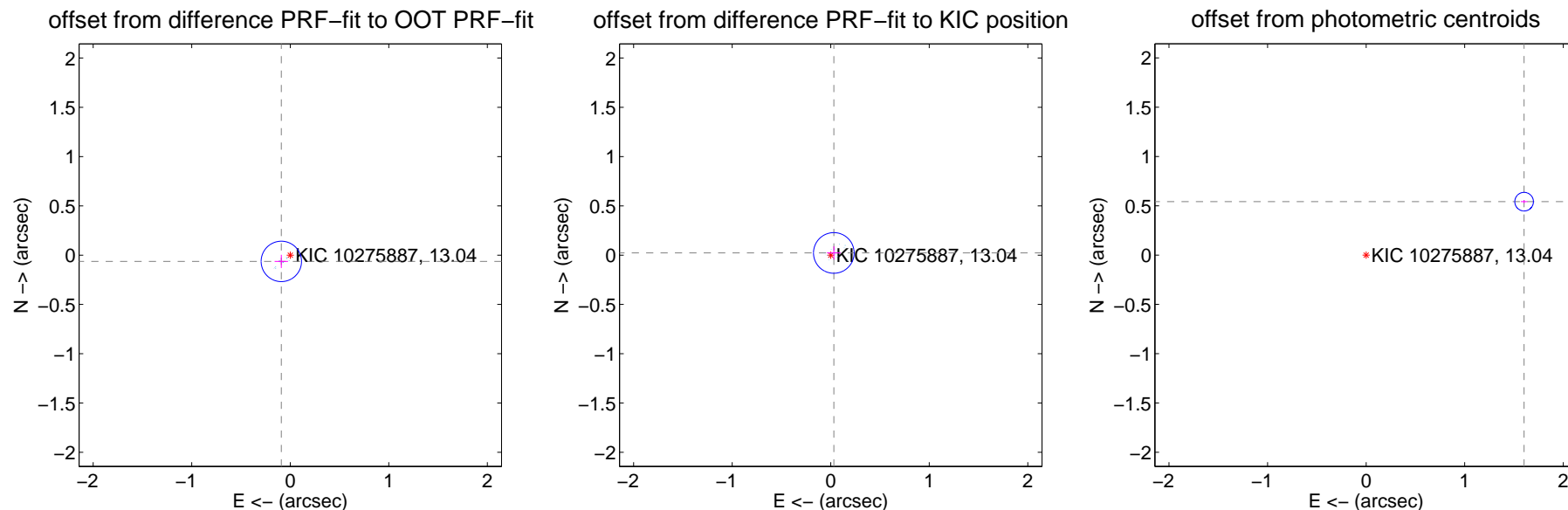
DV Centroid Data

Supplemental centroid analysis for 010275887-04. Kepler magnitude: 13.04. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

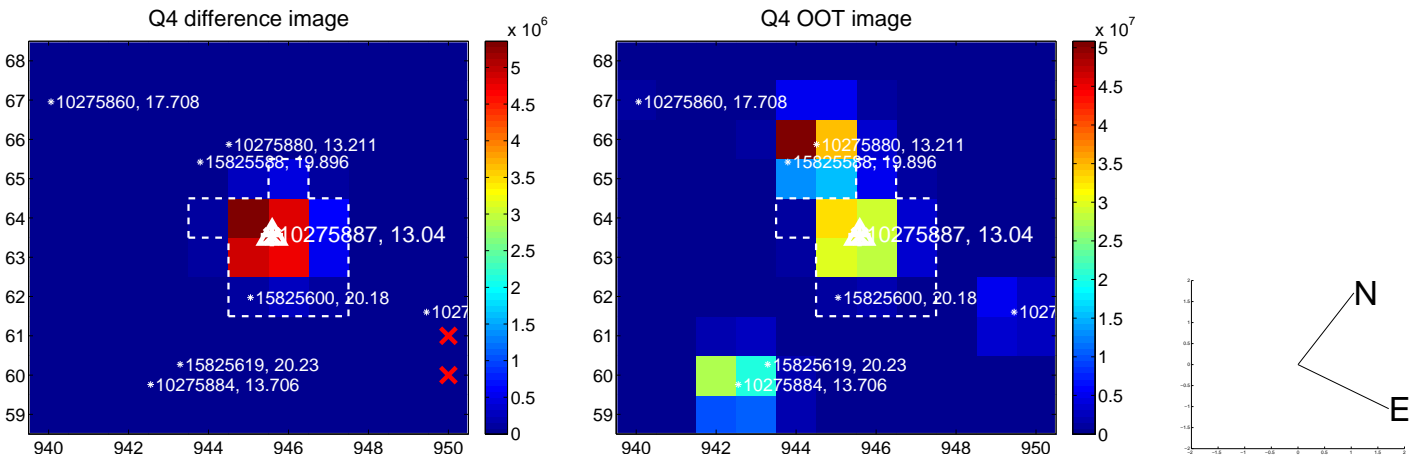
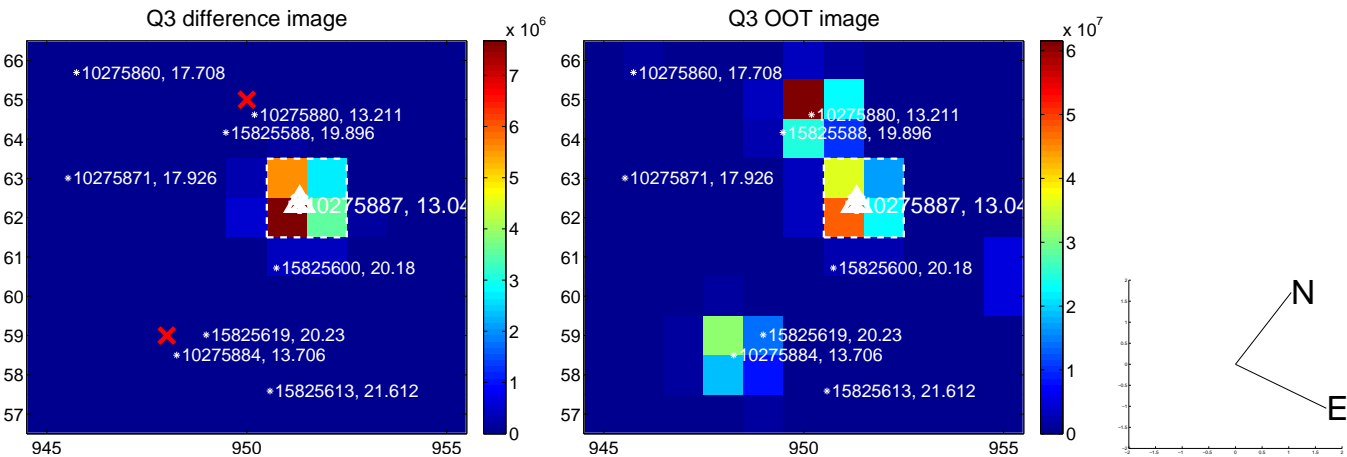
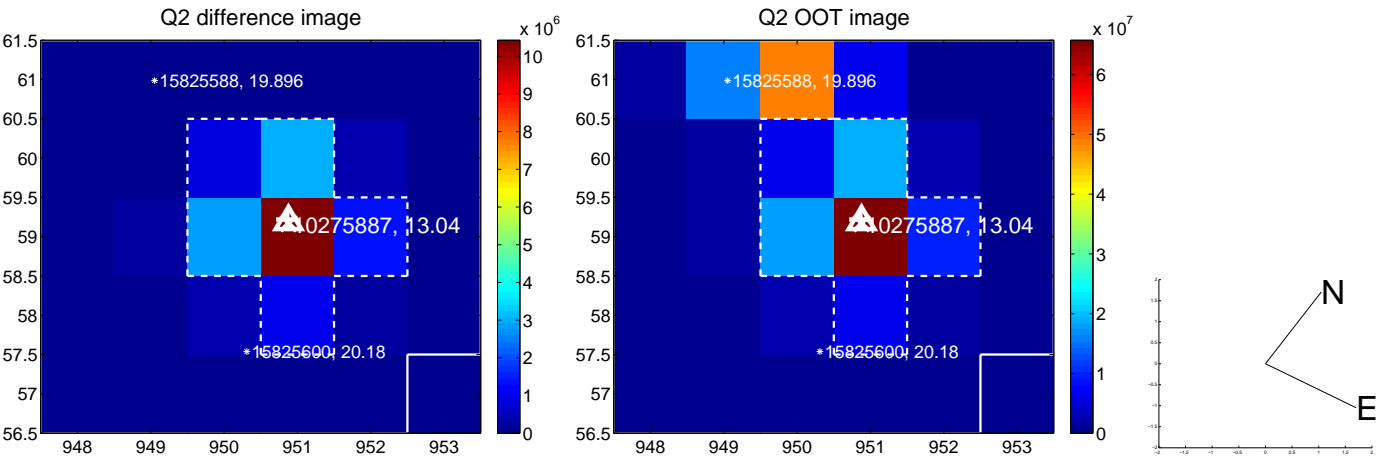
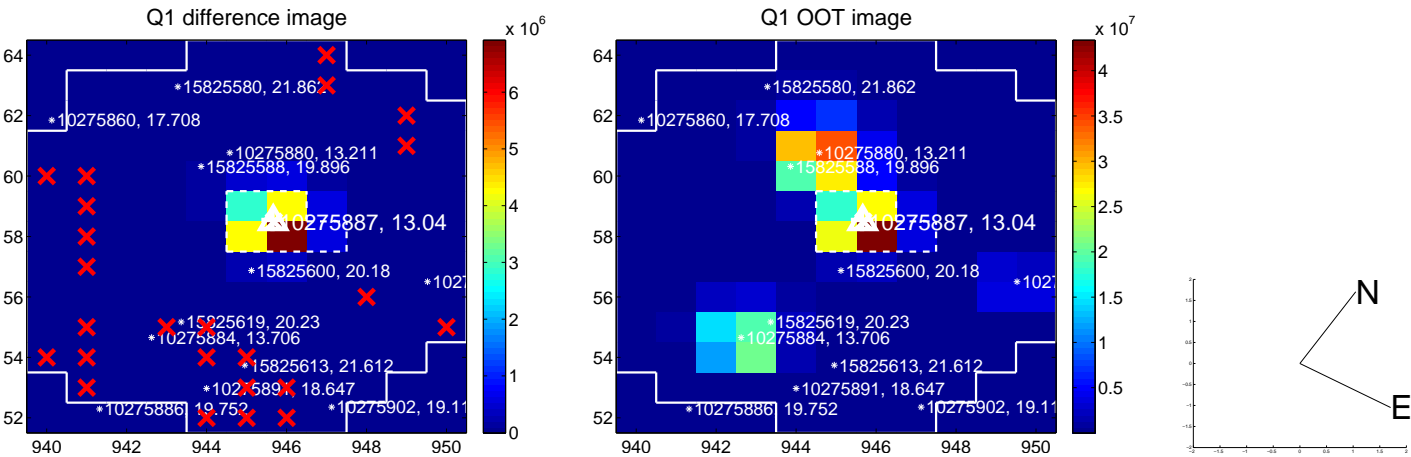
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.111 ± 0.068	1.62	0.091 ± 0.068	-0.063 ± 0.067
PRF-fit source offset from KIC position	0.039 ± 0.069	0.56	-0.031 ± 0.069	0.022 ± 0.068
photometric centroid source offset	1.69 ± 0.03	53.75	-1.60 ± 0.03	0.54 ± 0.01

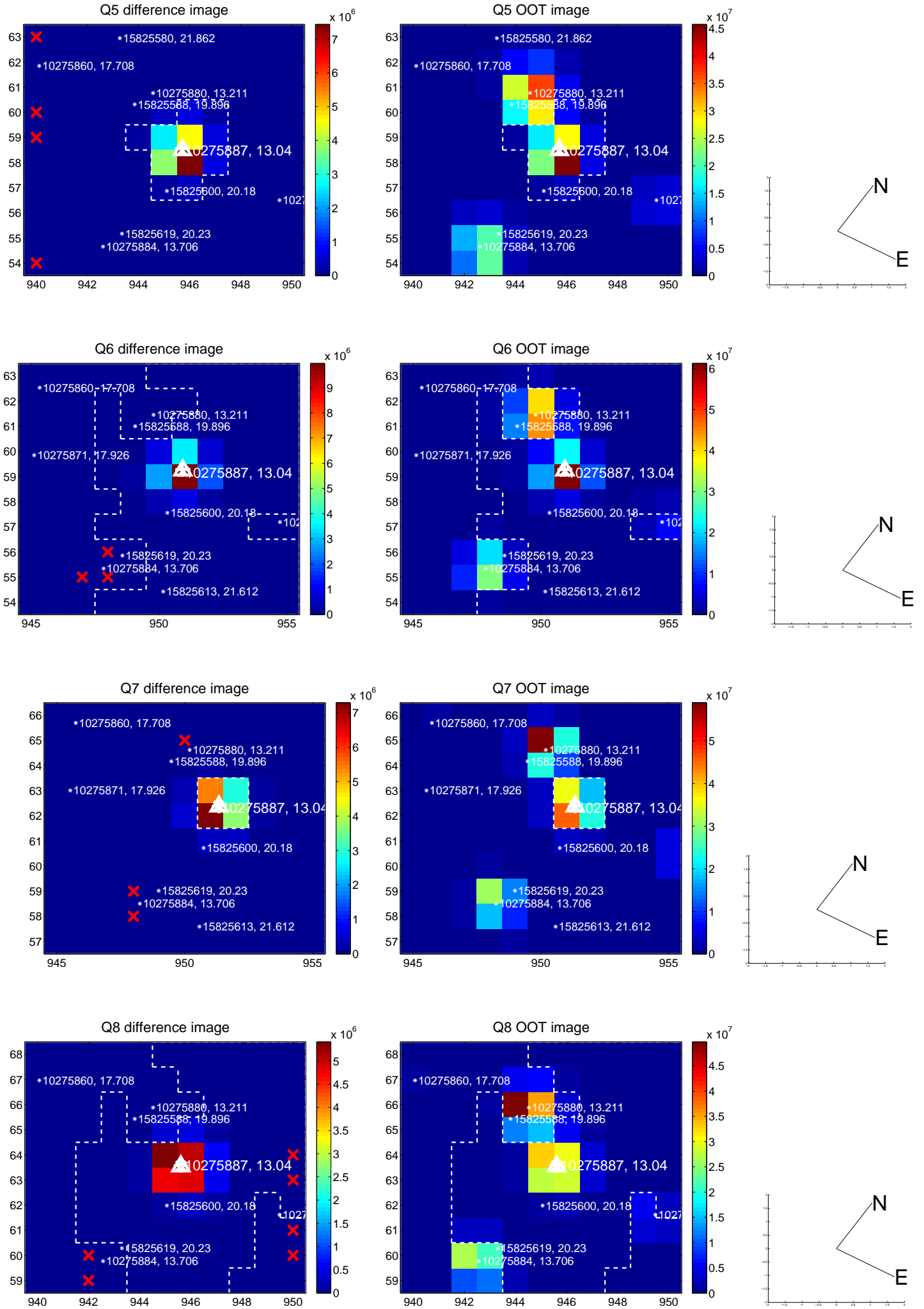


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

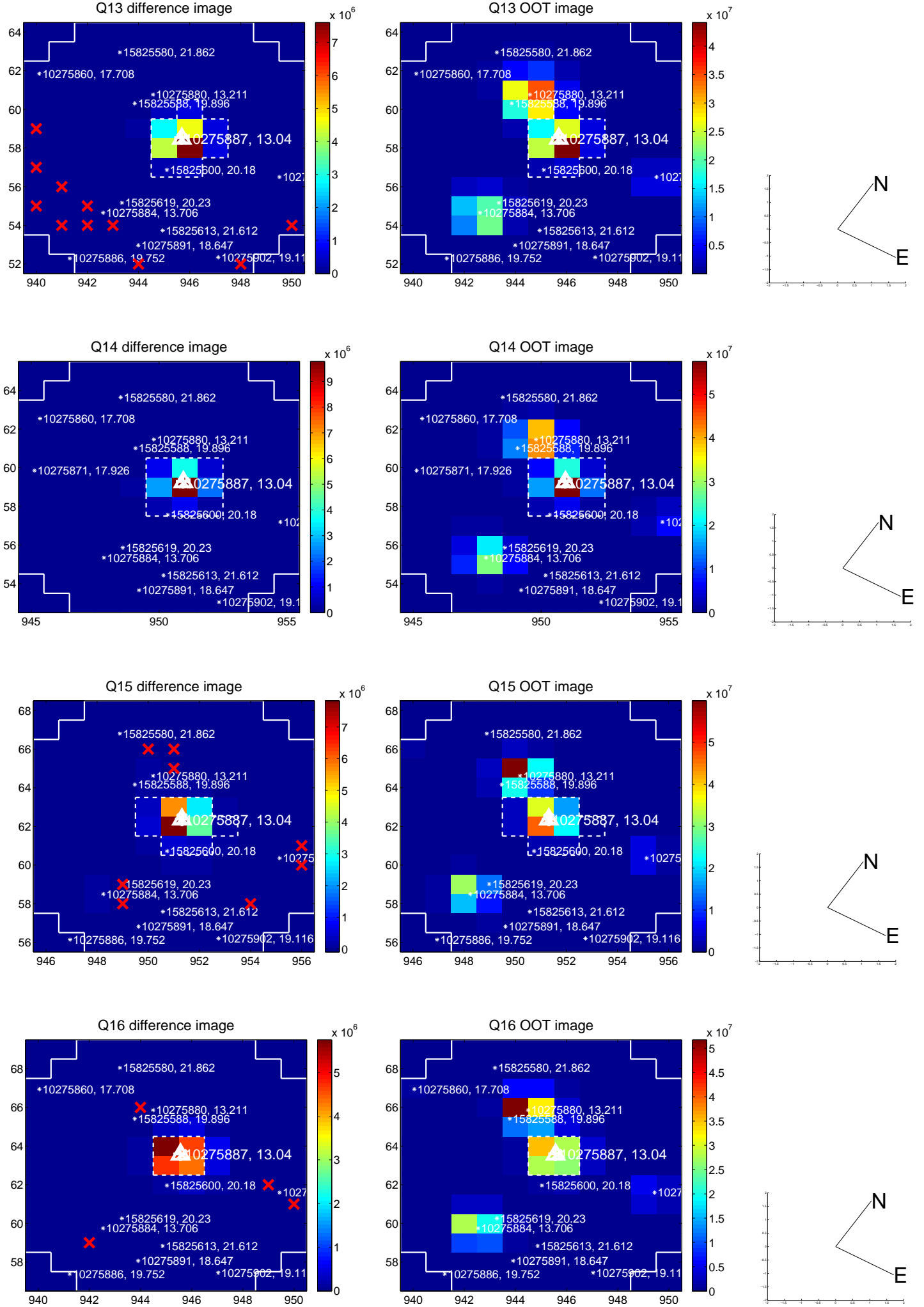
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



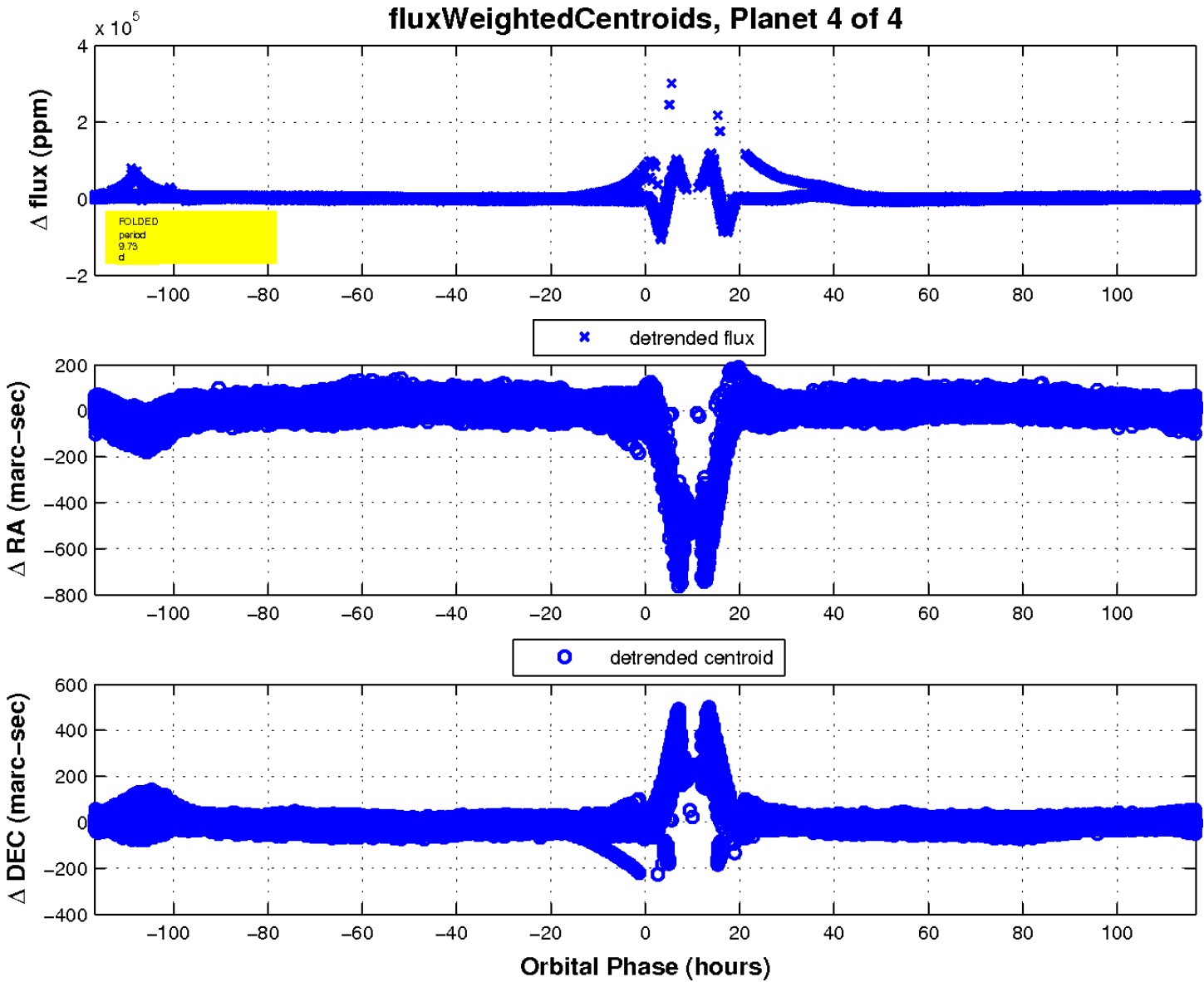
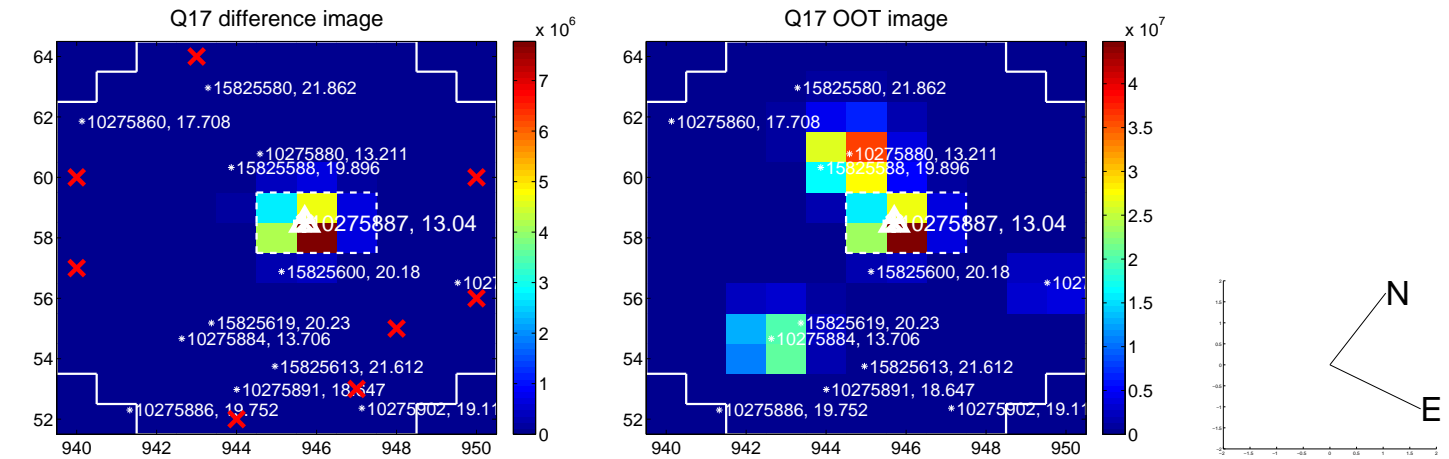
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

