

KIC 004929092

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})
004929092-01	OBS	No	0.578061	131.773381	21.3	4.153	7.7	10.3	0.62	4423	0.28	946.37
004929092-02	OBS	No	19.179796	134.804235	1668.6	1.416	15.2	10.7	0.62	4423	2.91	8.88
004929092-03	OBS	No	9.405644	136.814412	1722.3	0.927	13.0	12.2	0.62	4423	2.51	22.95
004929092-05	OBS	No	16.738756	138.168652	324.4	2.653	9.3	4.2	0.62	4423	1.31	10.64
004929092-06	OBS	No	19.697526	140.130677	1416.3	1.037	10.6	9.5	0.62	4423	2.26	8.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004929092-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS
004929092-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004929092-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED
004929092-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST
004929092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_MEAS

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

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

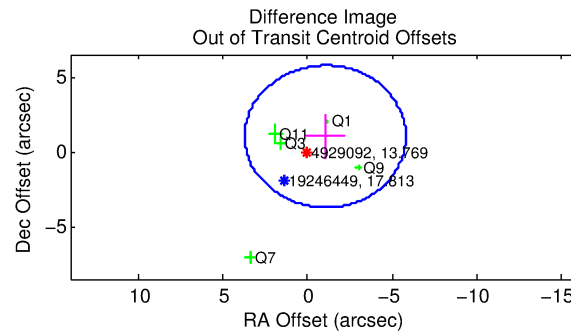
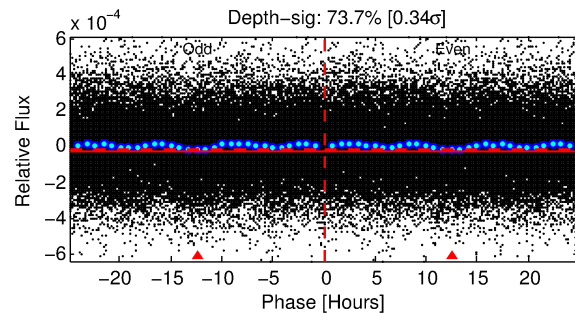
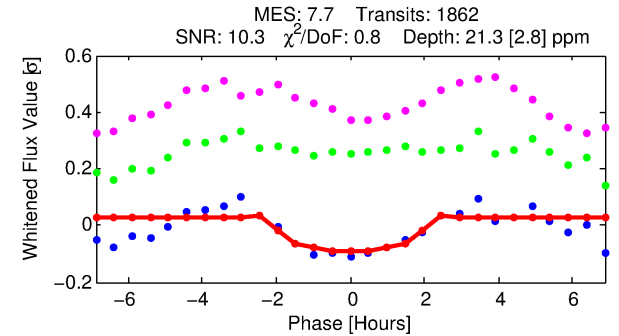
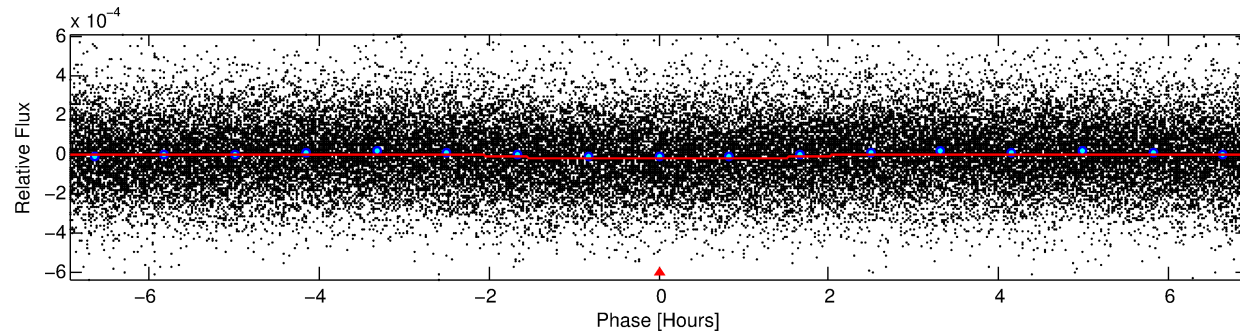
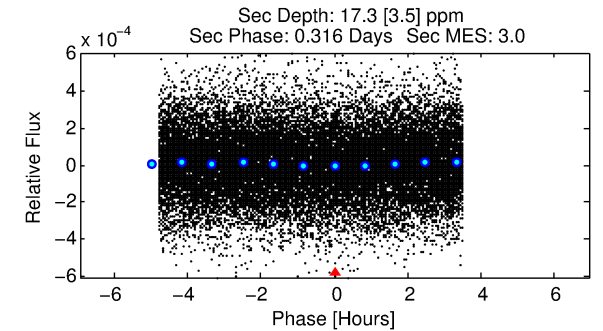
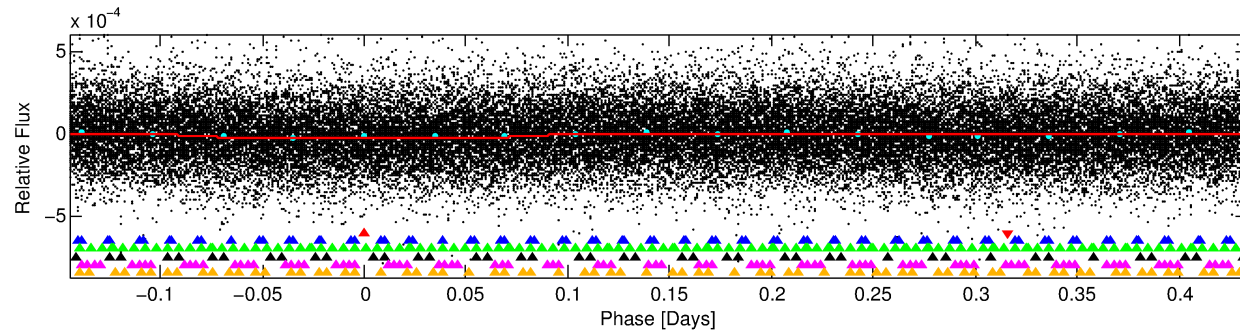
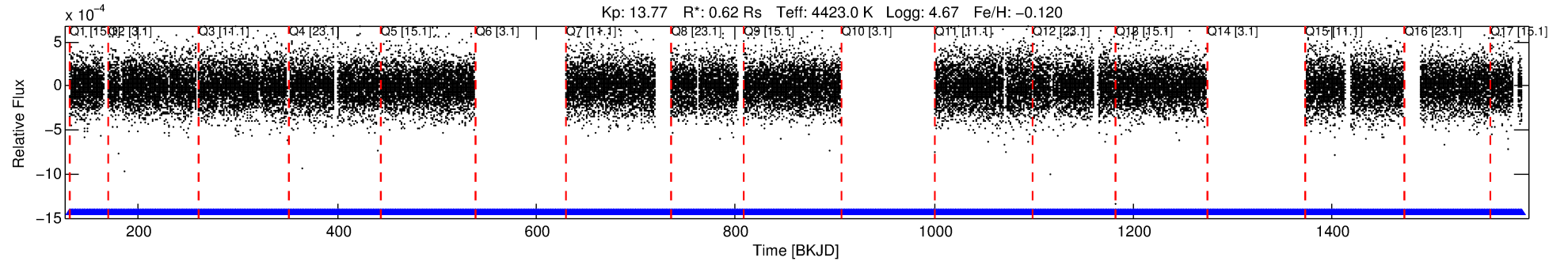
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004929092-01

No Significant Match Found

DV One-Page Summary

KIC: 4929092 Candidate: 1 of 6 Period: 0.578 d



DV Fit Results:

Period = 0.57806 [0.00001] d
Epoch = 131.7734 [0.0042] BKJD
Rp/R* = 0.0041 [0.0028]
a/R* = 1.23 [0.83]
b = 0.25 [7.93]
Seff = 946.37 [98.00]
Teq = 1414 [37] K
Rp = 0.28 [0.19] Re
a = 0.0118 [0.0006] AU
Ag = 17.35 [23.91] [0.68σ]
Teffp = 4463 [1537] K [1.98σ]

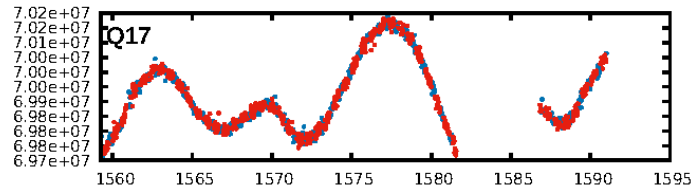
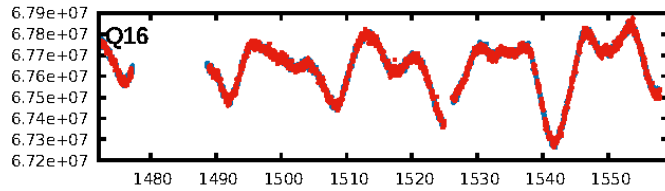
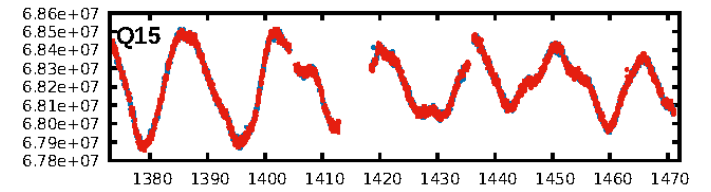
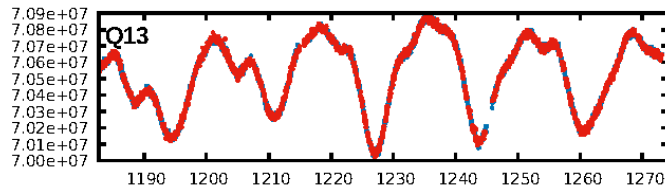
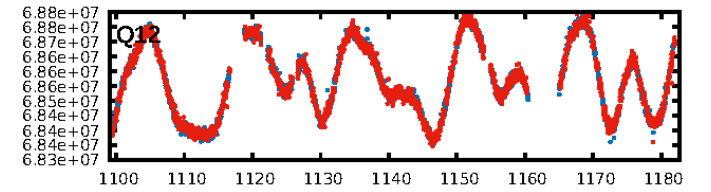
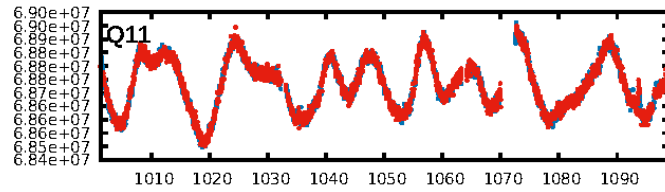
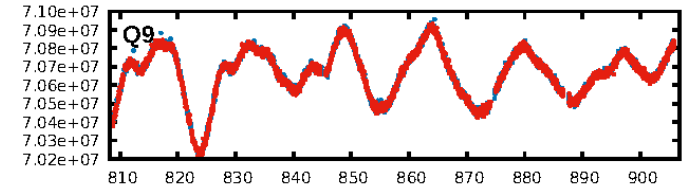
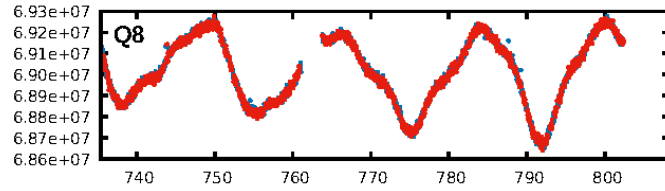
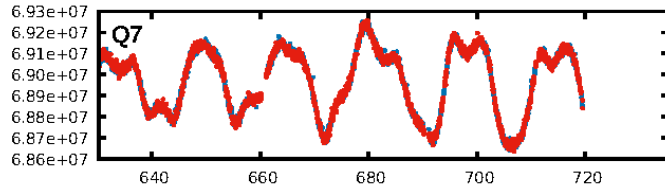
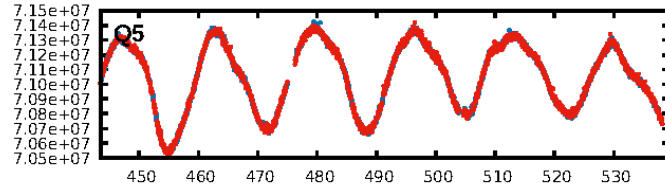
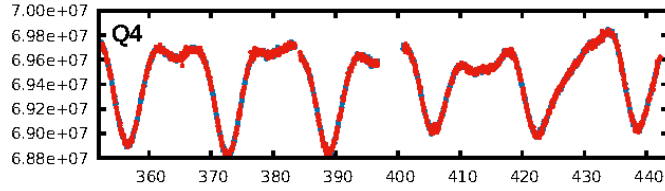
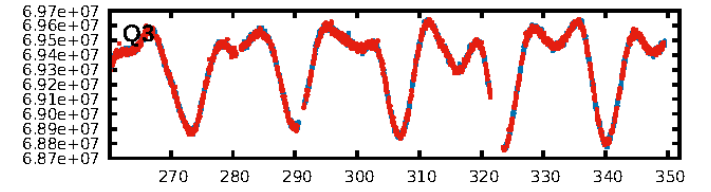
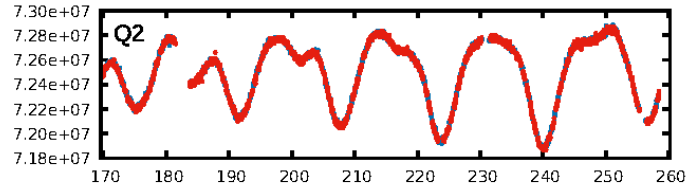
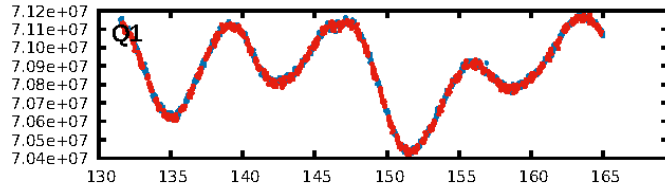
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [49.79σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.03e-23
RollingBand-fgt: 1.00 [1757/1757]
GhostDiagnostic-chr: 6.007
Centroid-sig: 36.8%
Centroid-so: 0.599 arcsec [0.58σ]
OotOffset-rm: 1.451 arcsec [0.92σ]
OotOffset-st: 0.3/0/2 [5]
KicOffset-rm: 1.335 arcsec [0.93σ]
KicOffset-st: 0.3/0/2 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 1.00 [14/14]

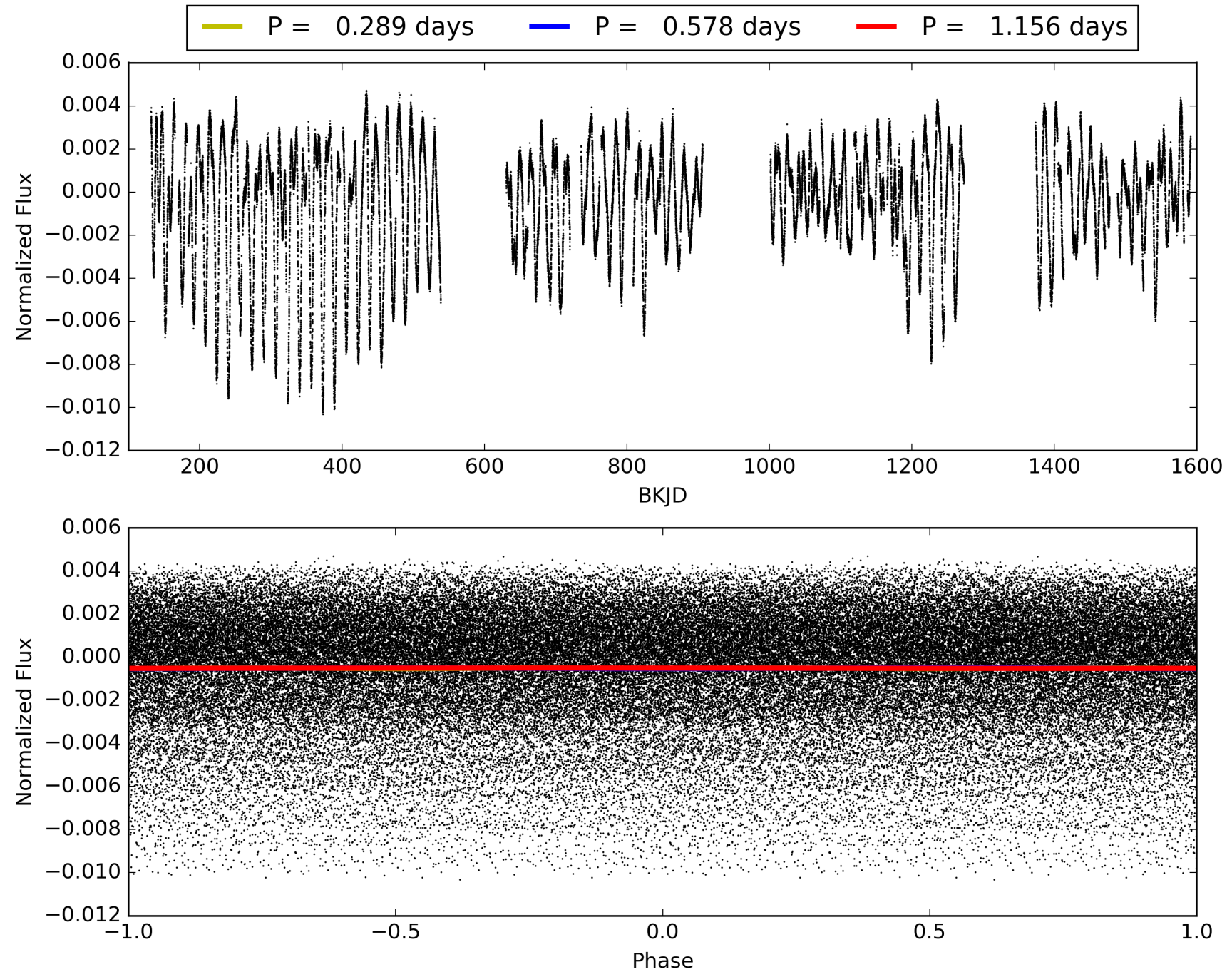
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004929092-01, PDC Light Curves

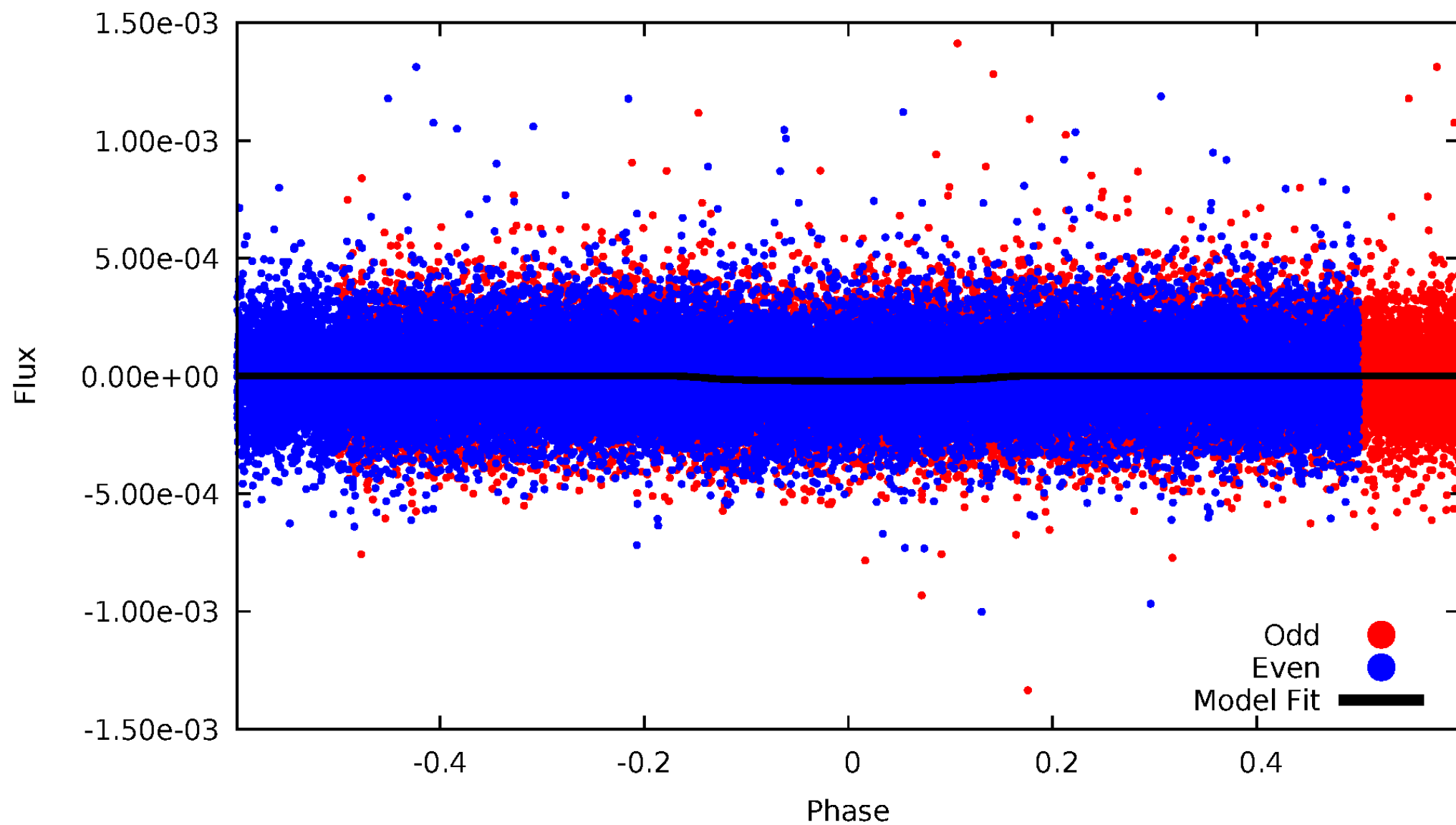


TCE 004929092-01



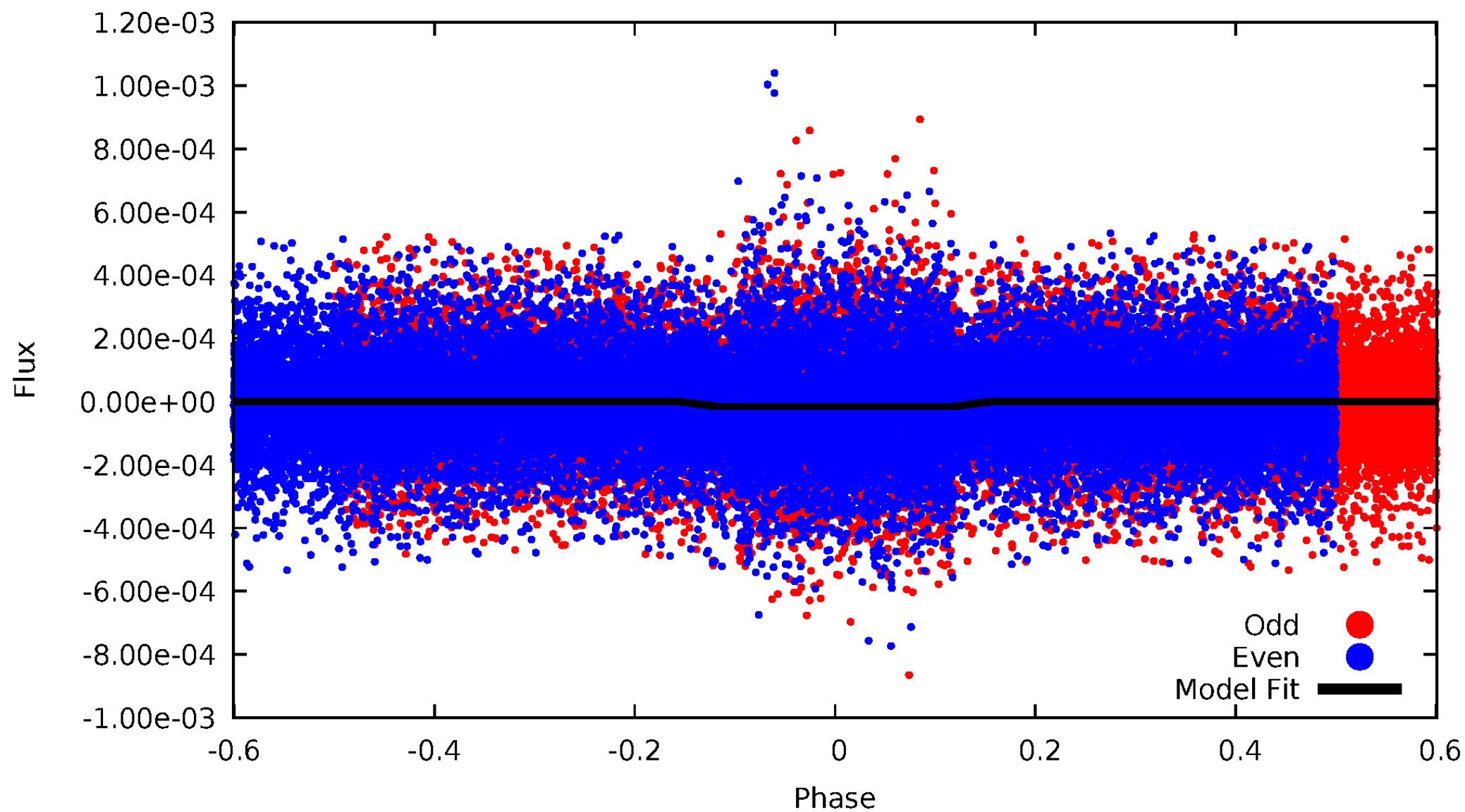
DV Odd/Even

TCE 004929092-01

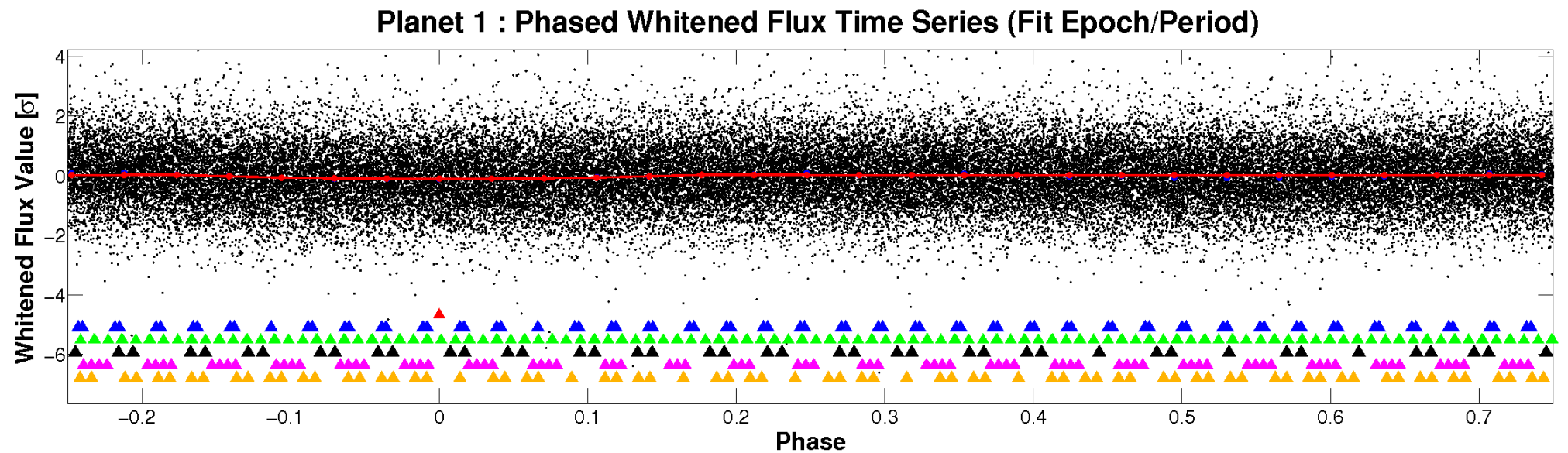
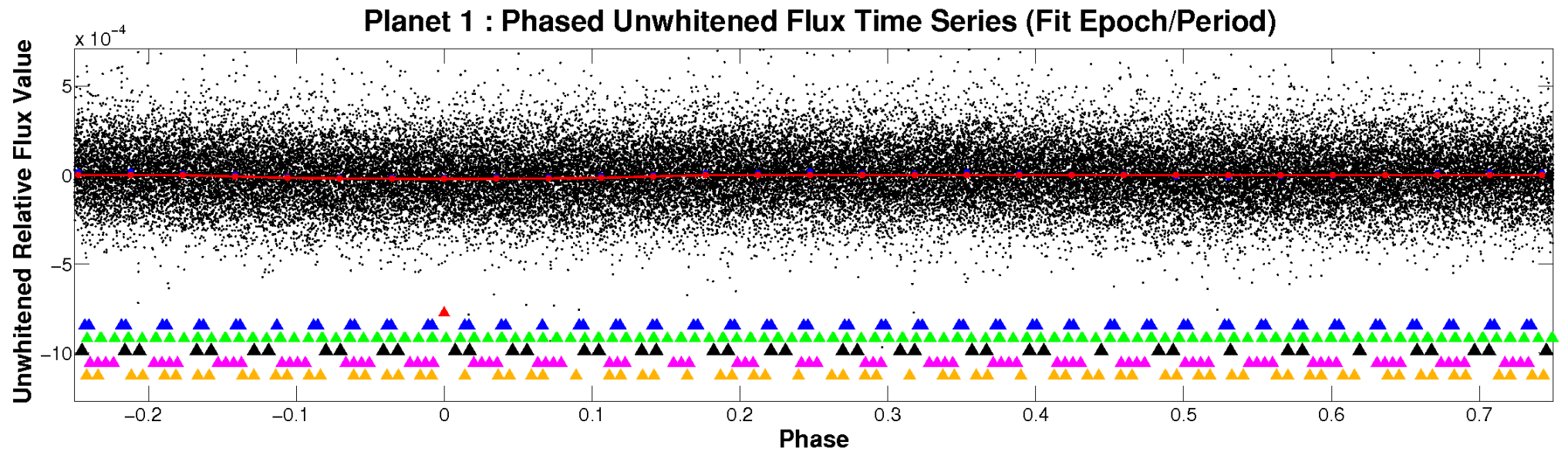


ALT Odd/Even

TCE 004929092-01

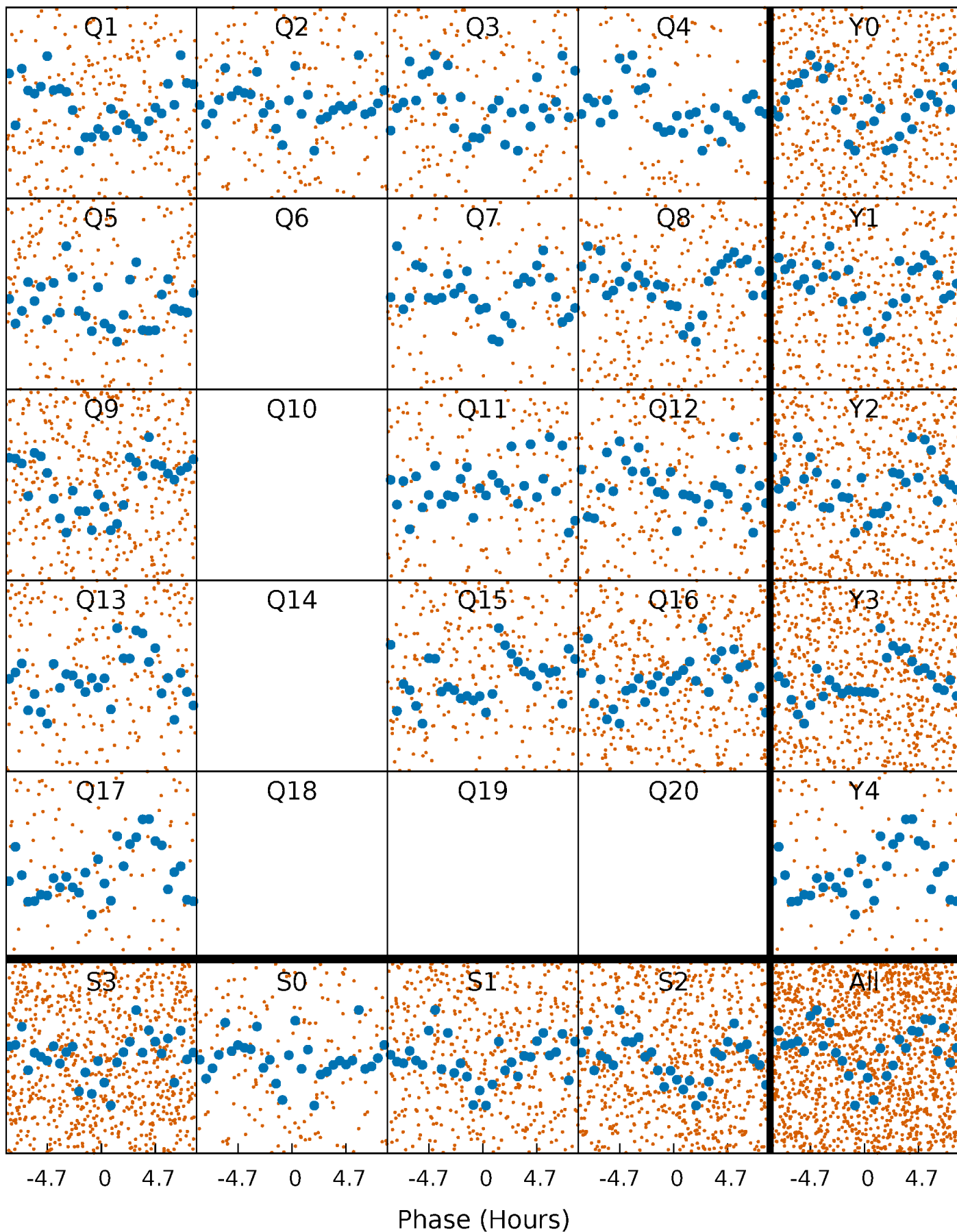


Non-Whitened Vs. Whitened Light Curve



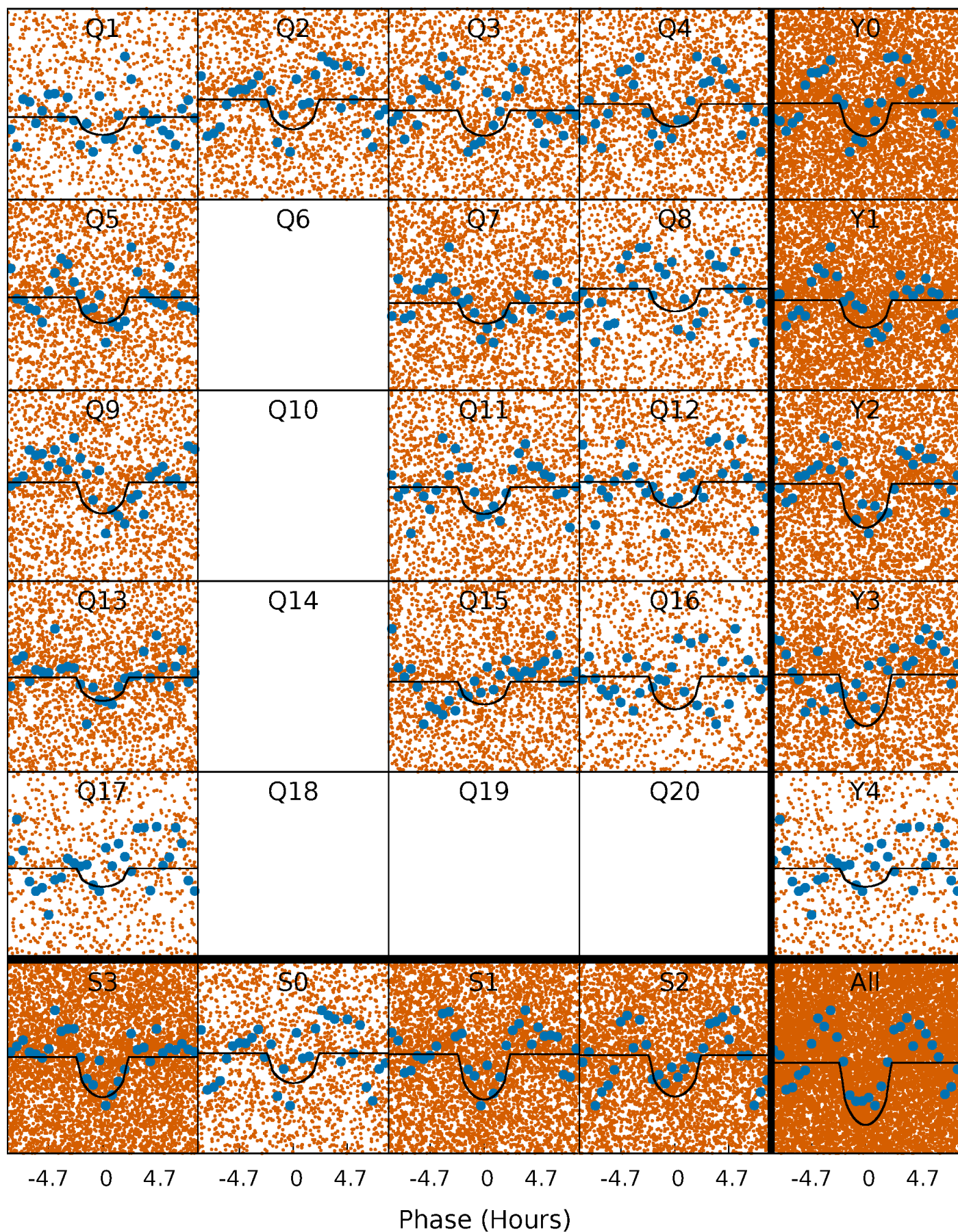
PDC Quarter-Phased Transit Curves

TCE 004929092-01 P= 0.578061 Days $T_0=131.773381$ (BKJD)



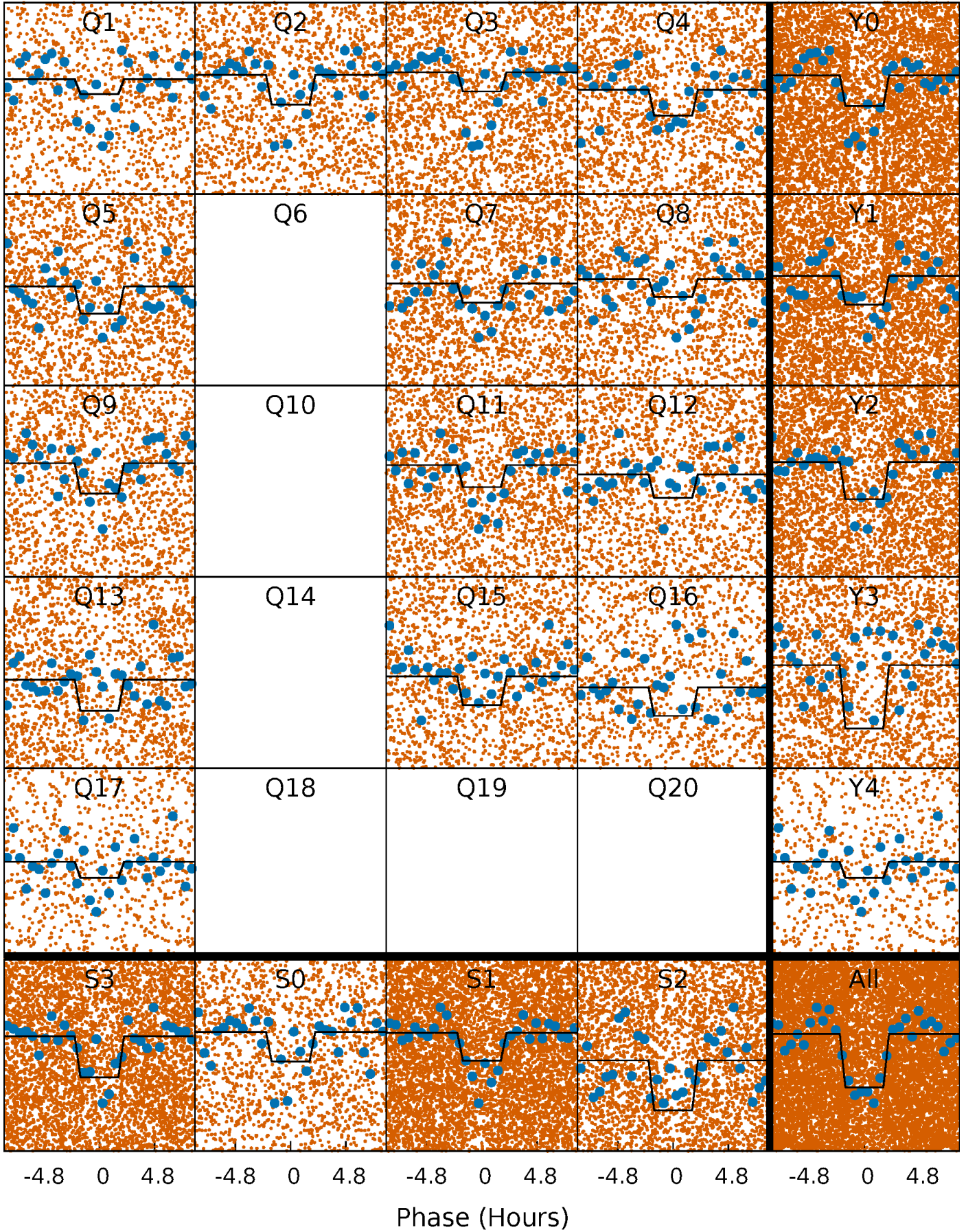
DV Quarter-Phased Transit Curves

TCE 004929092-01 P= 0.578061 Days $T_0=131.773381$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

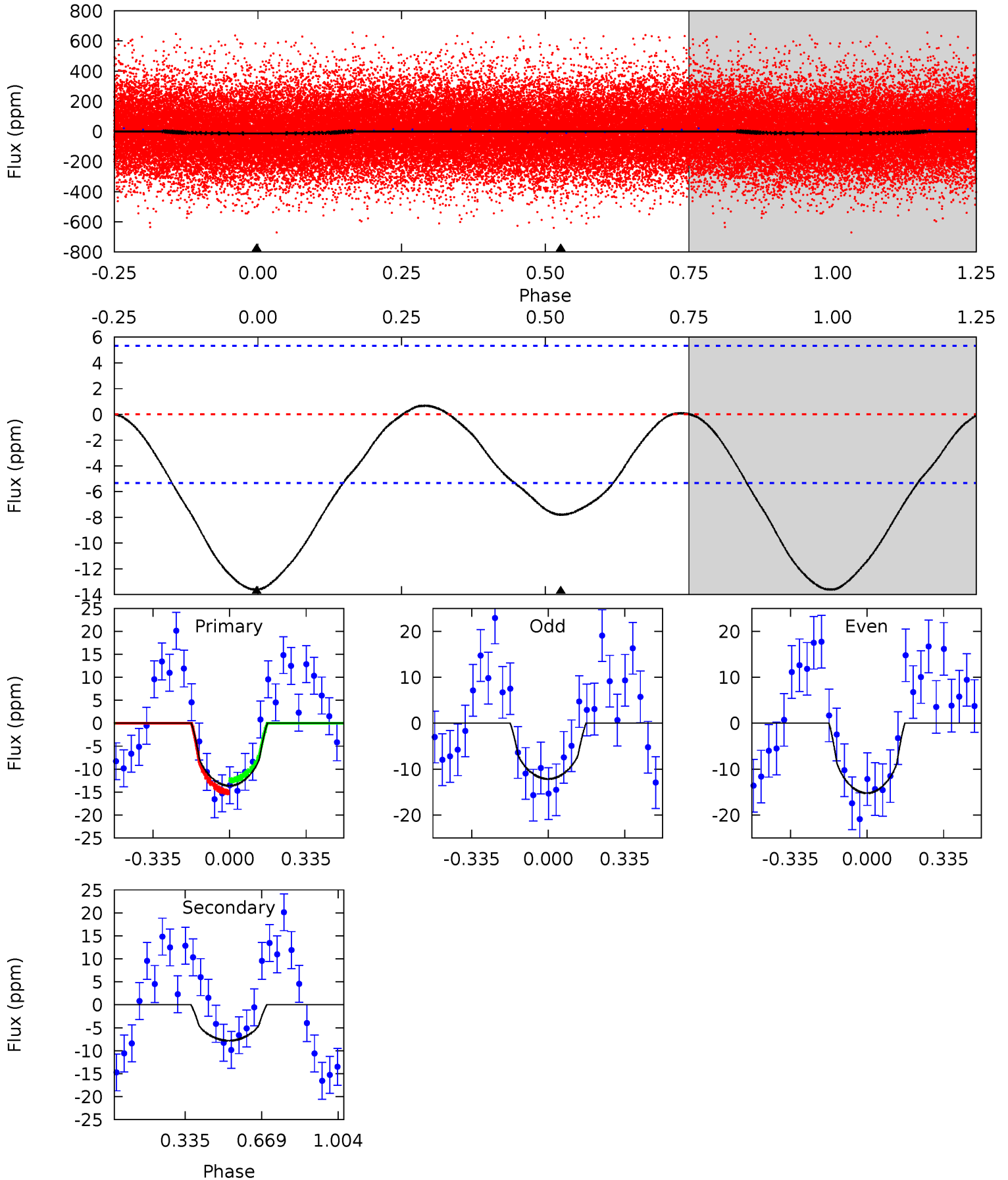
TCE 004929092-01 P= 0.578061 Days $T_0=131.771950$ (BKJD)



DV Model-Shift Uniqueness Test

004929092-01, P = 0.578061 Days, E = 131.195320 Days

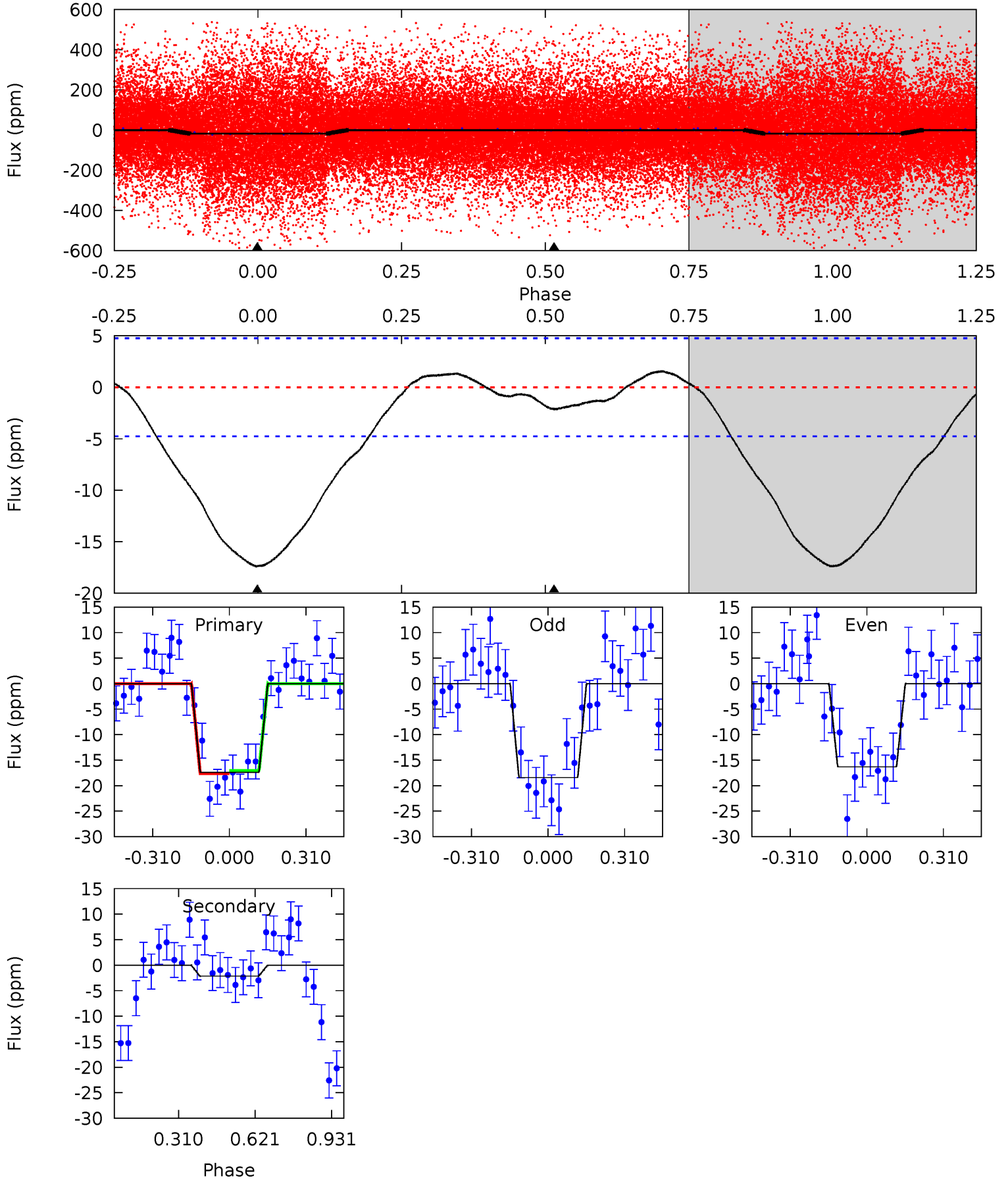
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	6.31	0	0	4.30	0.96	0.40	11.0	11.0	6.31	6.31	1.25	0.85	0.05	1.03



Alt Model-Shift Uniqueness Test

004929092-01, P = 0.578061 Days, E = 131.193889 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	1.95	0	0	4.32	1.01	0.81	15.8	15.8	1.95	1.95	0.96	0.86	0.08	0.24



Stellar Parameters For KIC 004929092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4423^{+79}_{-79}	$4.670^{+0.012}_{-0.040}$	$-0.120^{+0.150}_{-0.150}$	$0.620^{+0.040}_{-0.019}$	$0.675^{+0.027}_{-0.043}$	$3.984^{+0.211}_{-0.607}$
	+2%/-2%	+0%/-1%	+125%/-125%	+6%/-3%	+4%/-6%	+5%/-15%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004929092-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 1	$0.30^{+0.20}_{-0.17}$	1991^{+45}_{-40}	3726^{+1339}_{-595}	$6.604^{+24.806}_{-4.265}$
Alt.	-2 ± 1	$0.28^{+0.20}_{-0.16}$	1992^{+43}_{-42}	3000^{+1022}_{-606}	$1.777^{+8.041}_{-1.213}$

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

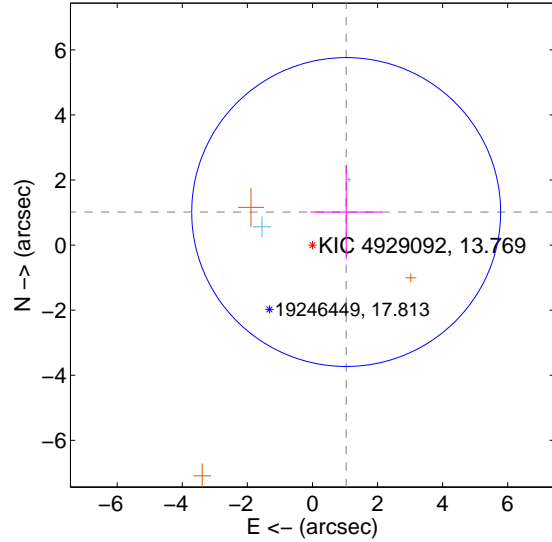
Supplemental centroid analysis for 004929092-01. Kepler magnitude: 13.77. Transit SNR 10.27

There are 2 quarters with good PRF difference image offsets

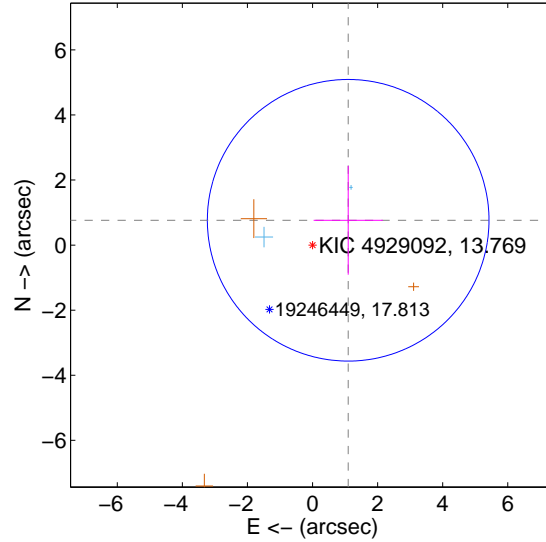
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.451 ± 1.582	0.92	-1.036 ± 1.099	1.016 ± 1.447
PRF-fit source offset from KIC position	1.335 ± 1.442	0.93	-1.095 ± 1.064	0.763 ± 1.673
photometric centroid source offset	0.60 ± 1.04	0.58	0.39 ± 1.09	0.46 ± 1.00

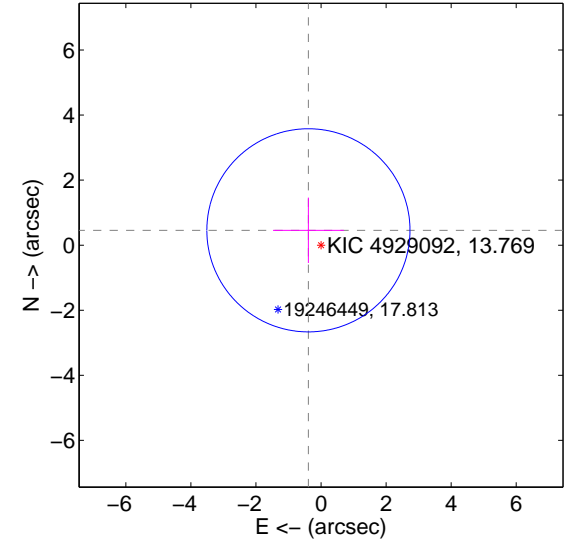
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

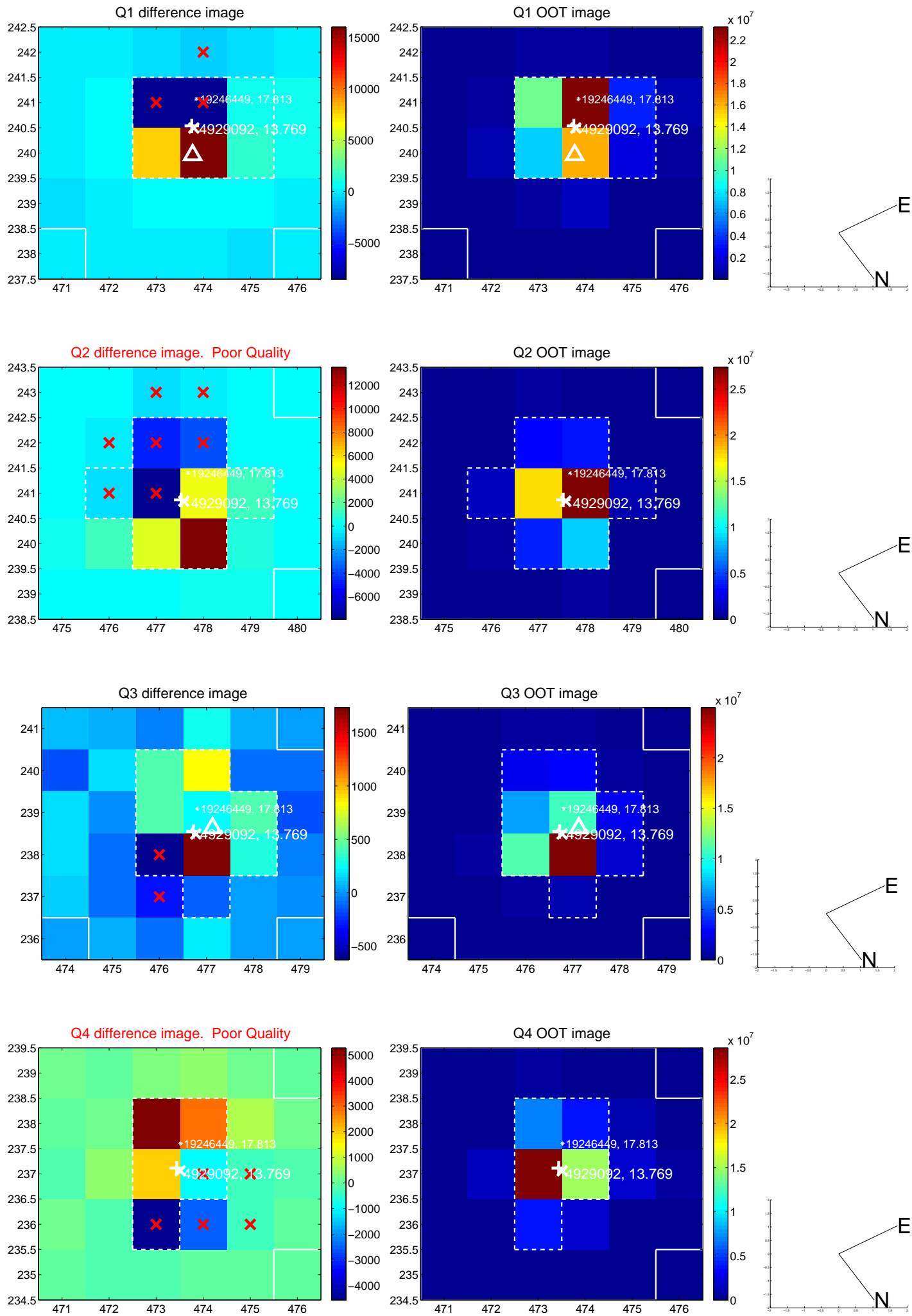


offset from photometric centroids

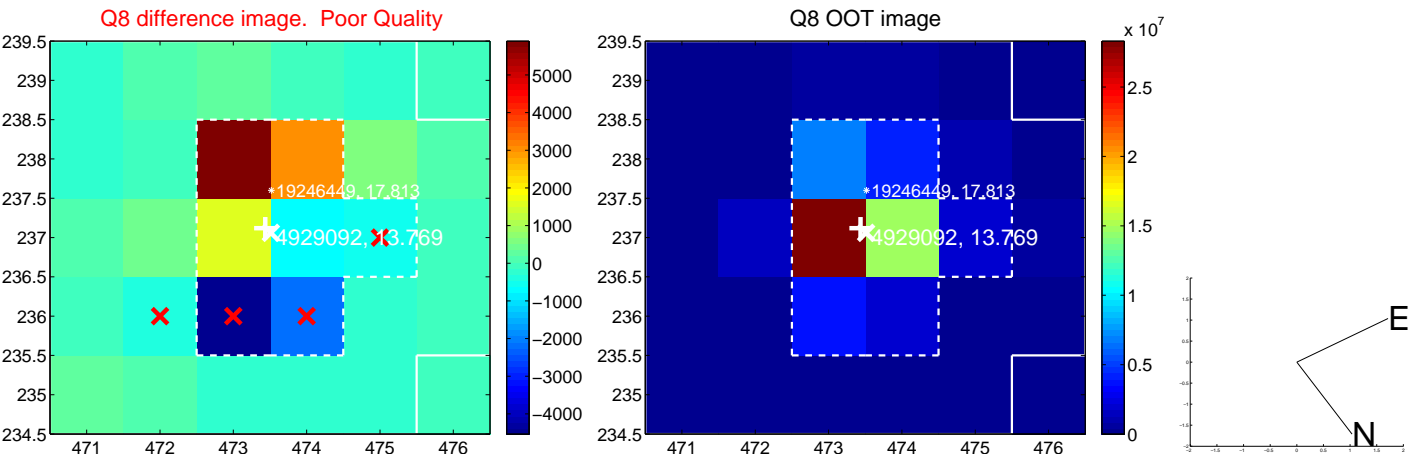
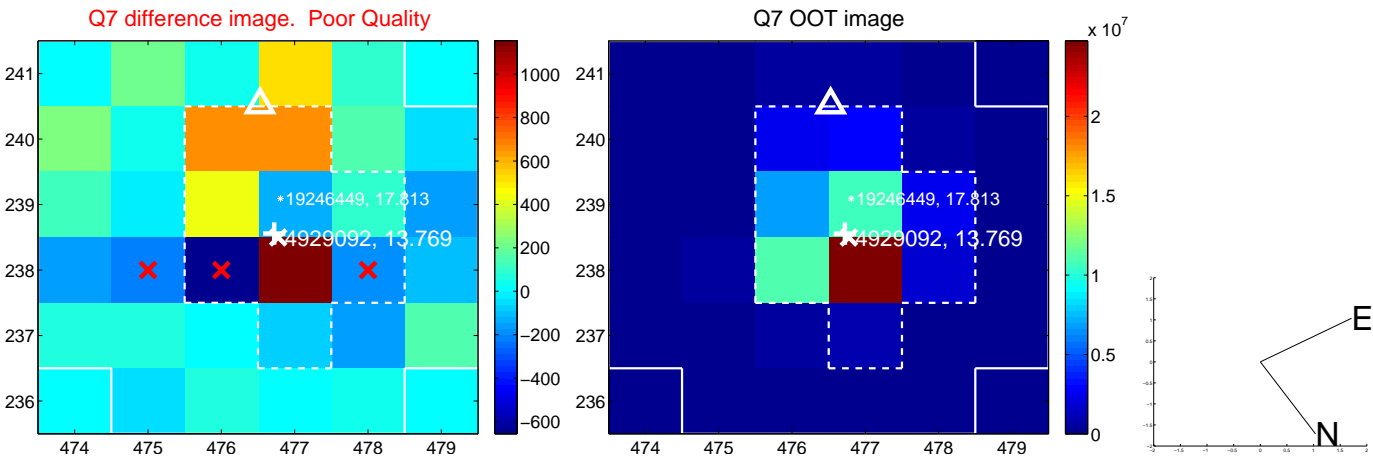
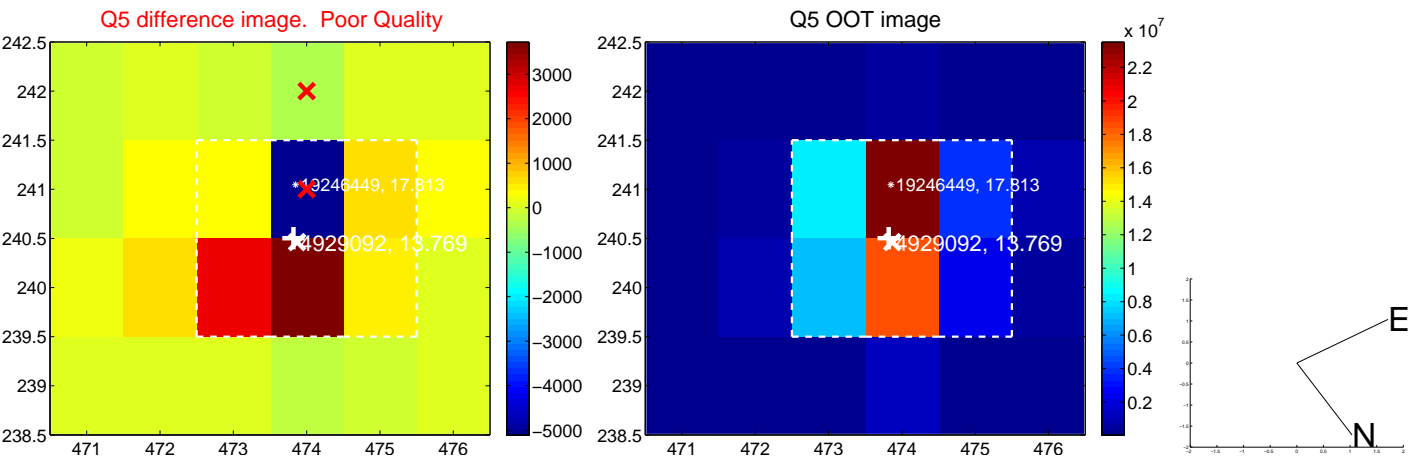


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

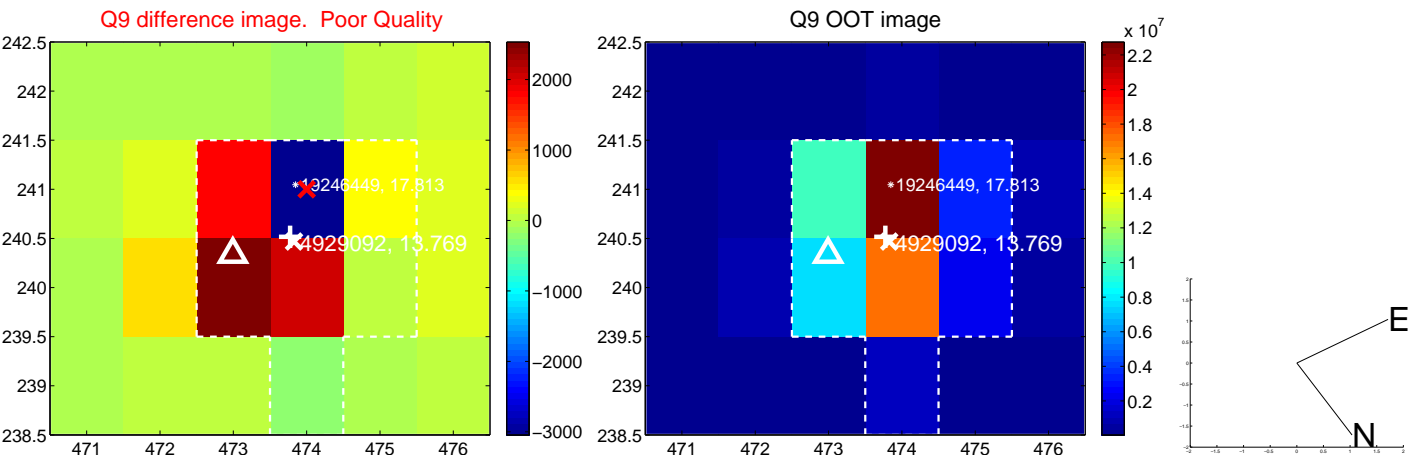
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



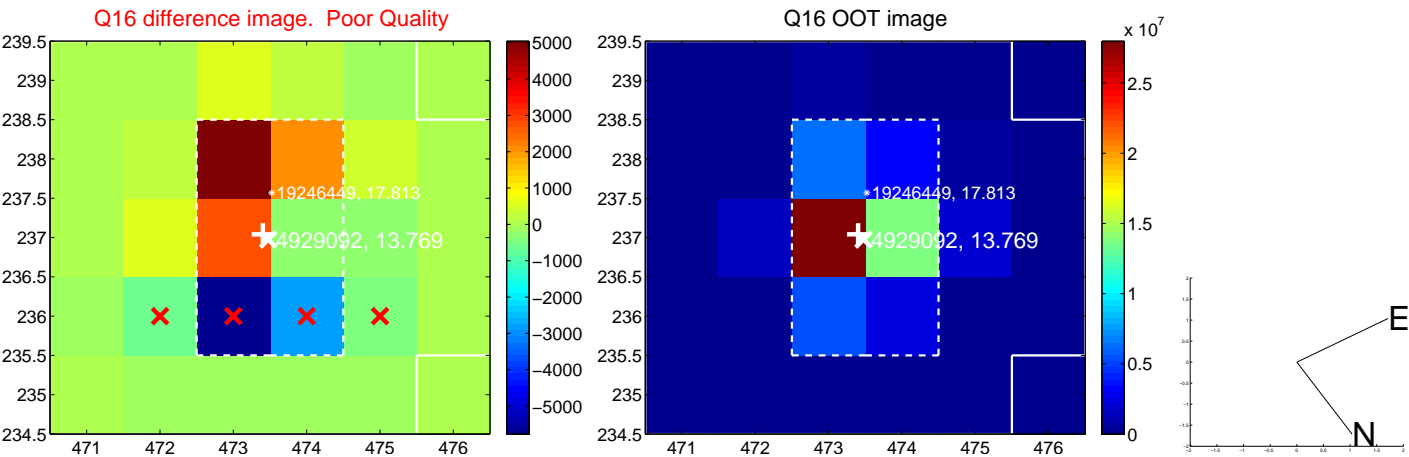
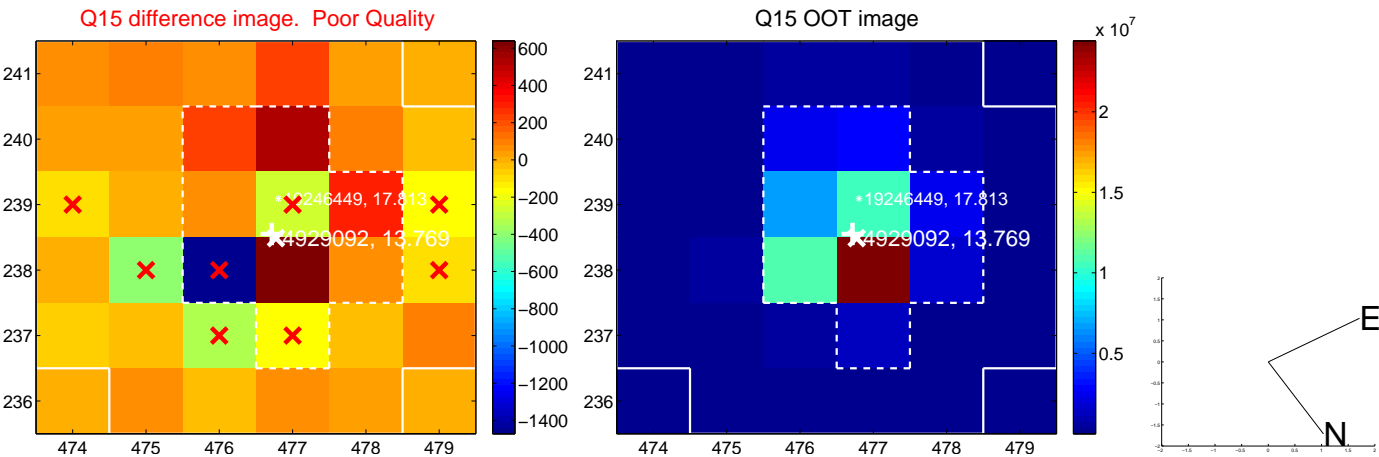
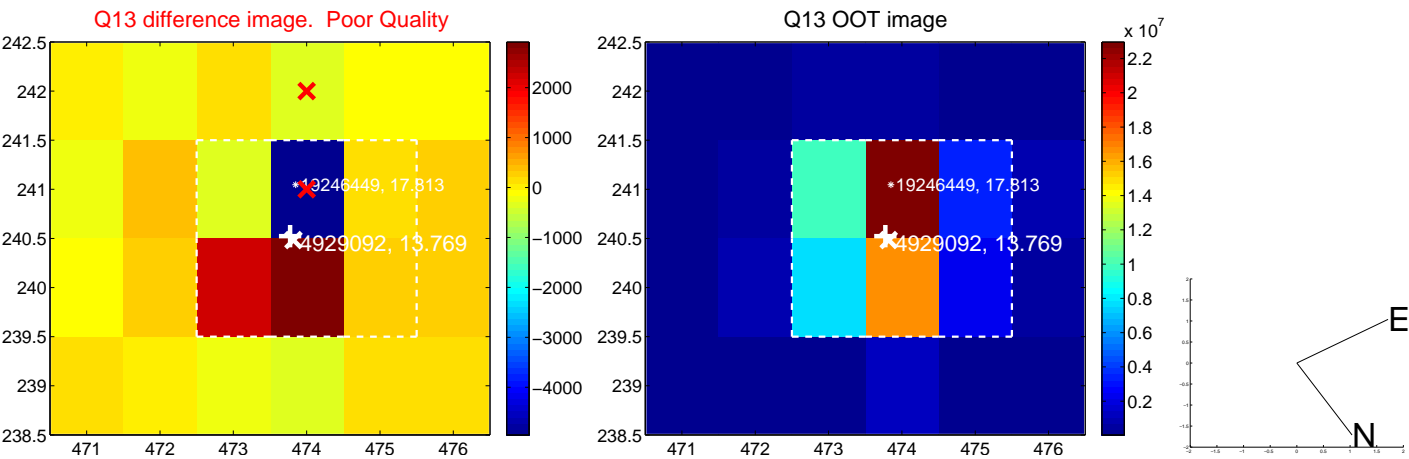
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



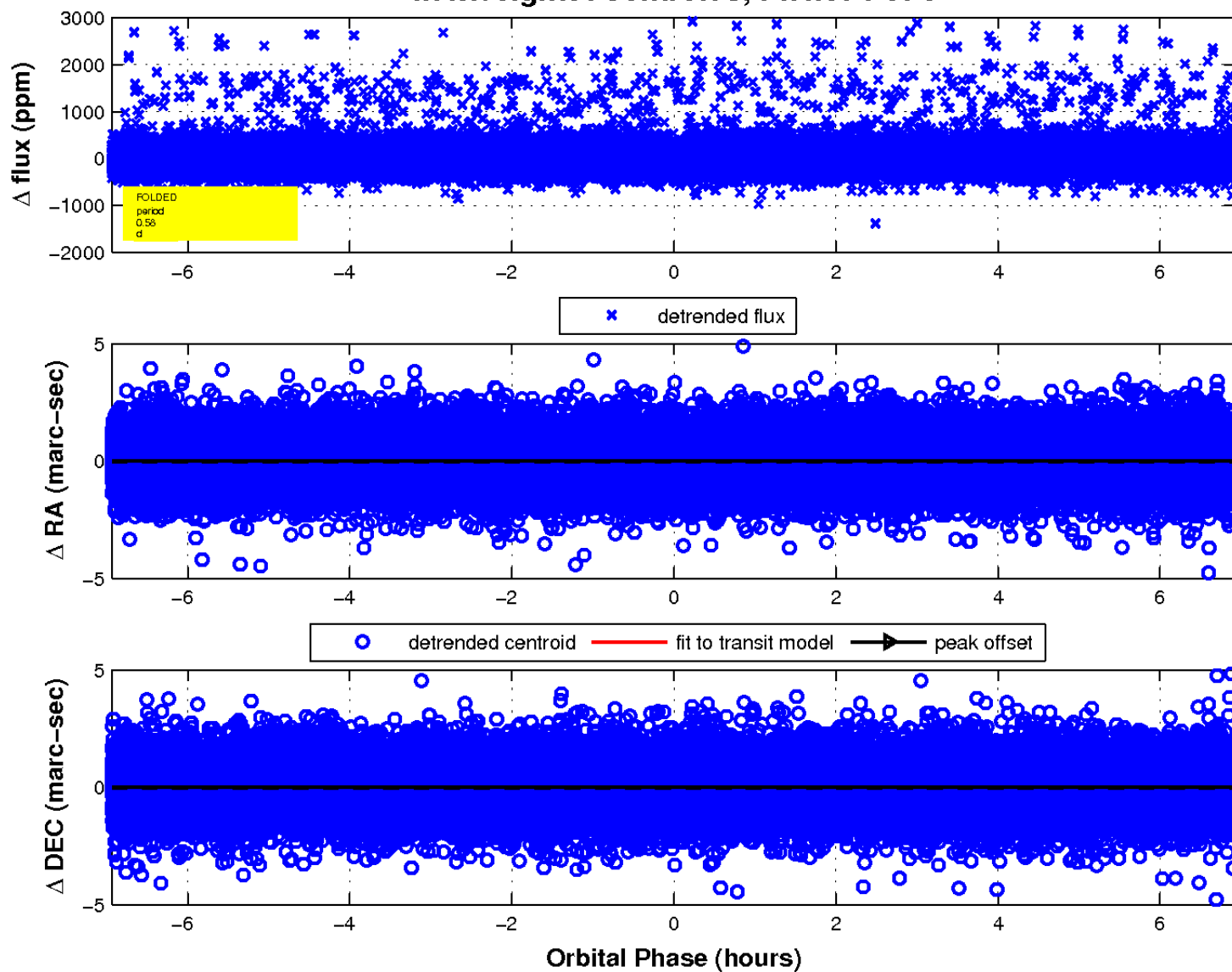
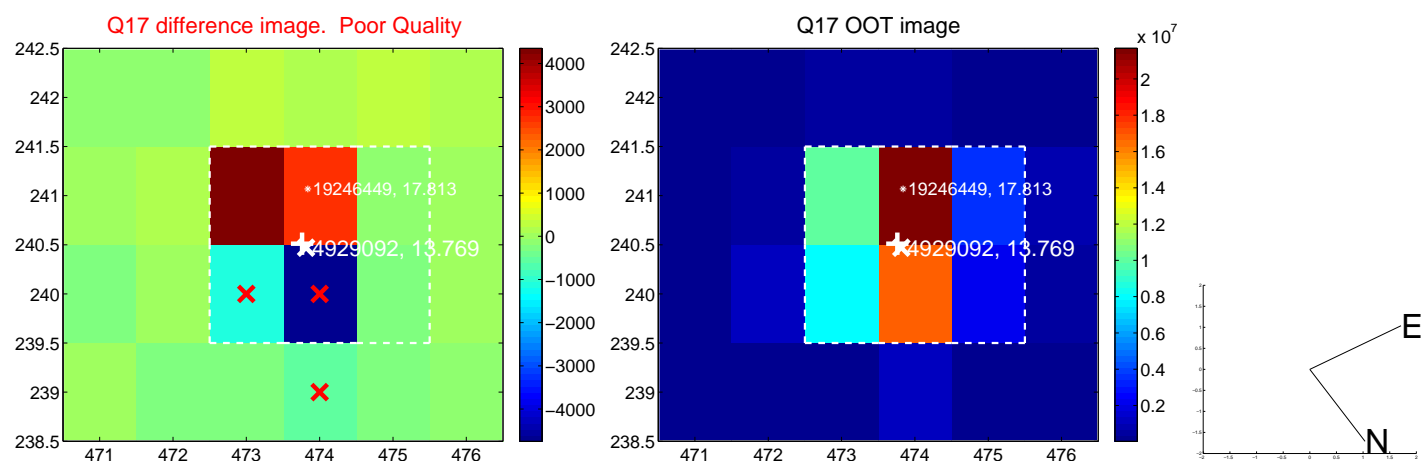
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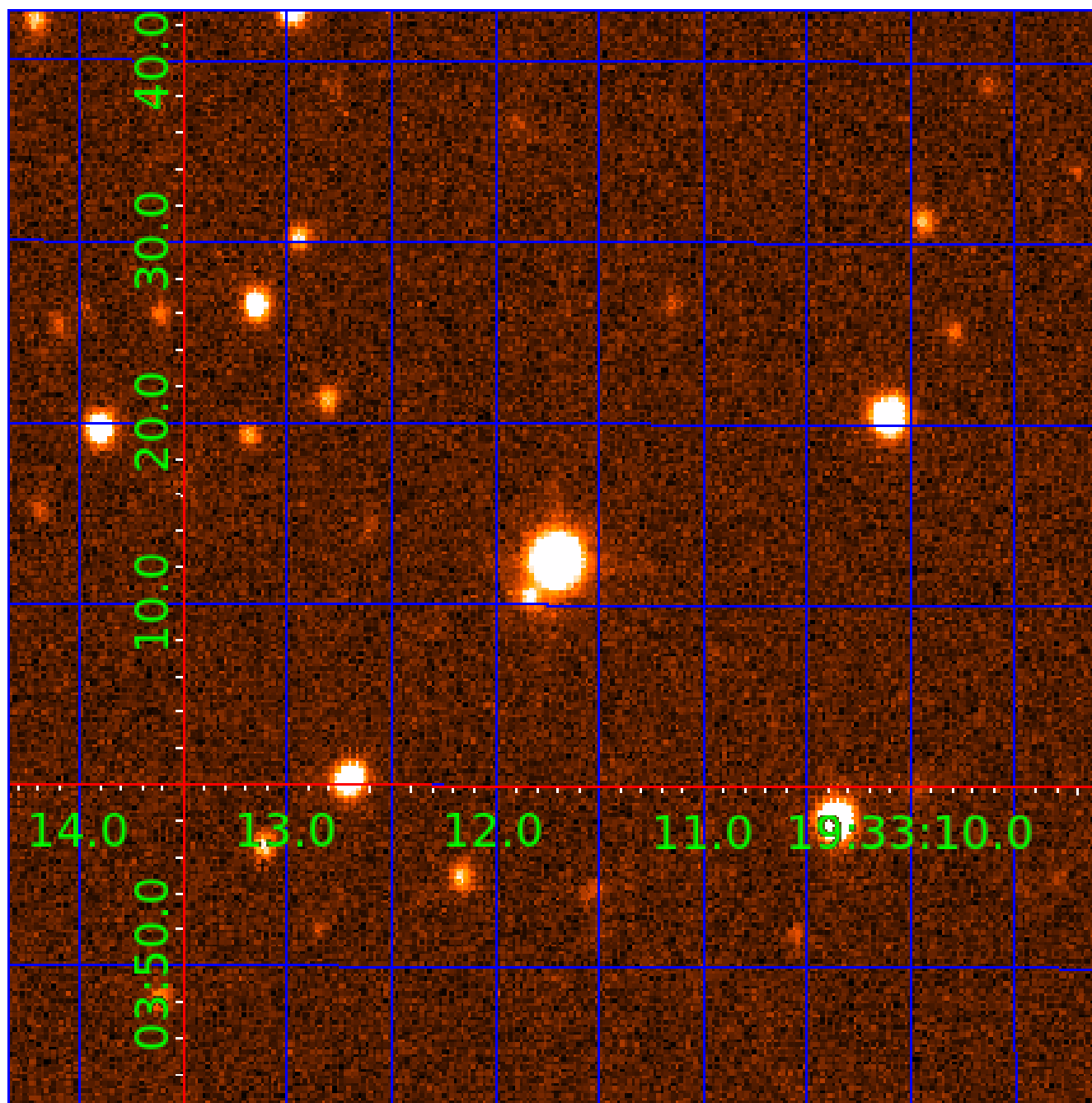


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004929092

Q1-17 DR25 TCE Parameters

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004929092-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED
004929092-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST
004929092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_MEAS

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

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

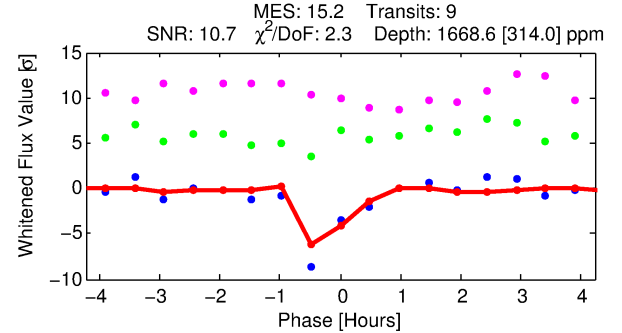
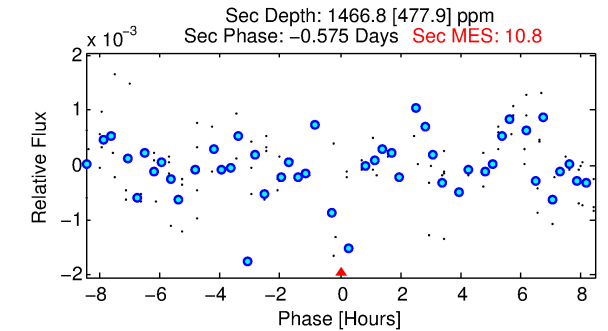
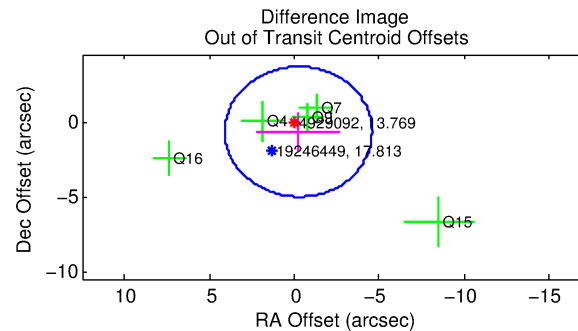
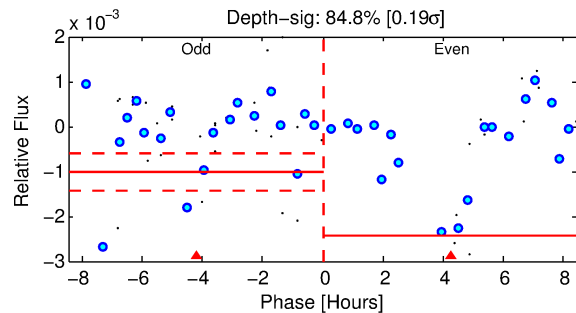
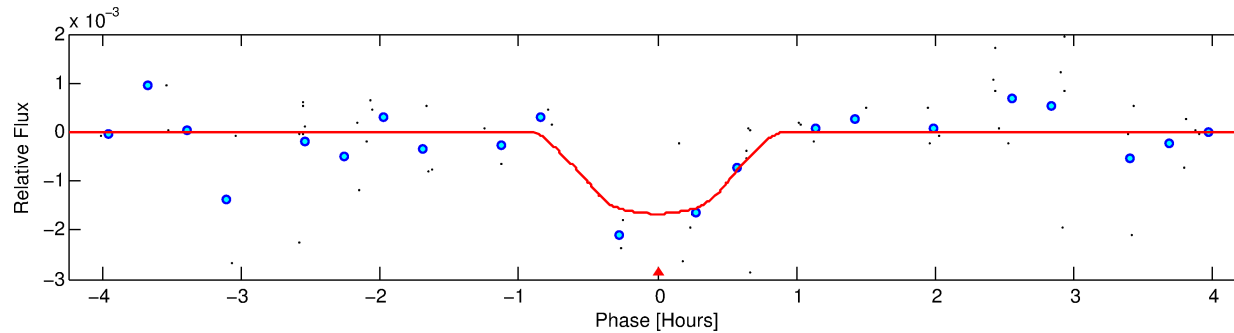
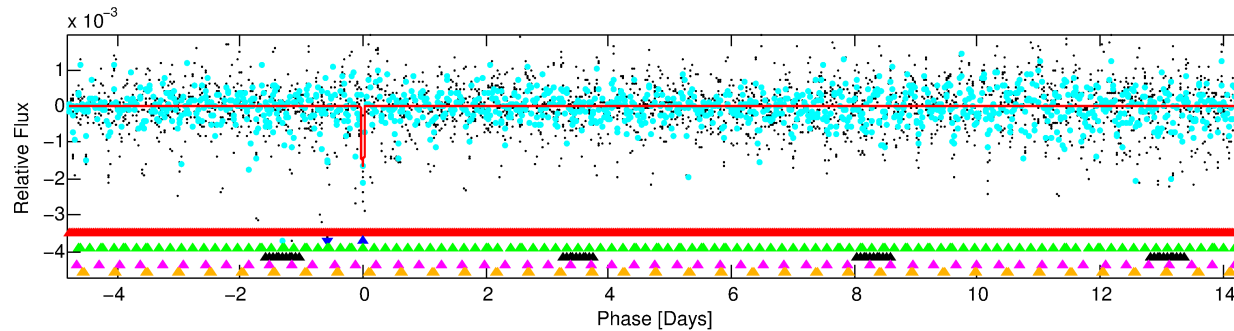
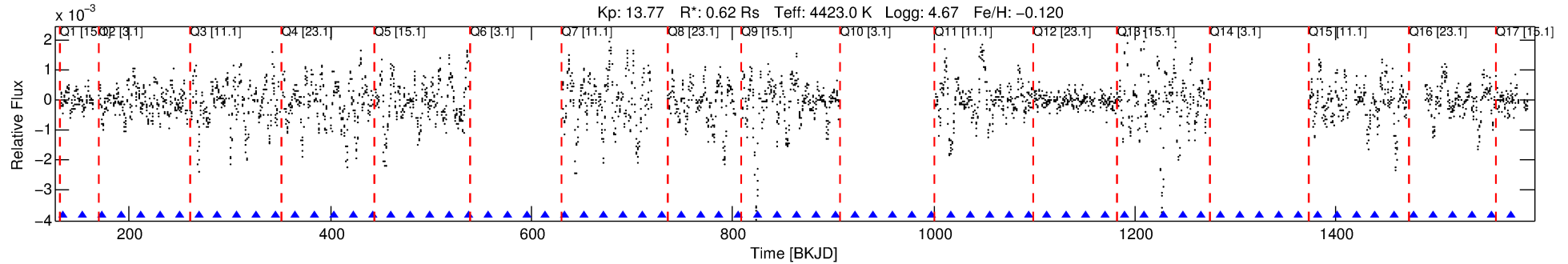
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004929092-02

No Significant Match Found

DV One-Page Summary

KIC: 4929092 Candidate: 2 of 6 Period: 19.180 d



DV Fit Results:

Period = 19.17980 [0.00011] d
Epoch = 134.8042 [0.0037] BKJD
Rp/R* = 0.0430 [0.3999]
a/R* = 66.93 [2073.46]
b = 0.82 [13.02]
Seff = 8.88 [0.92]
Teq = 440 [11] K
Rp = 2.91 [27.06] Re
a = 0.1219 [0.0064] AU
Ag = 1415.62 [26333.37] [0.05 σ]
Teffp = 4174 [19412] K [0.19 σ]

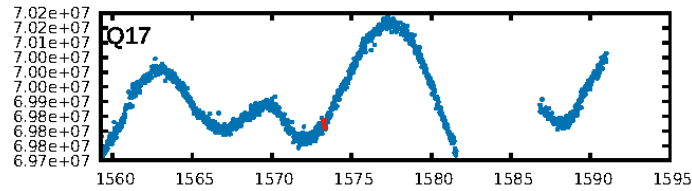
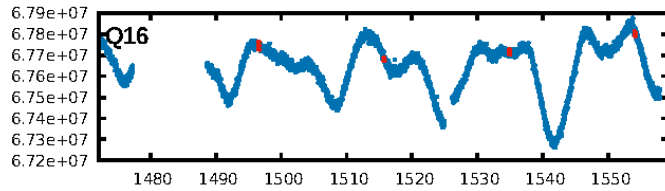
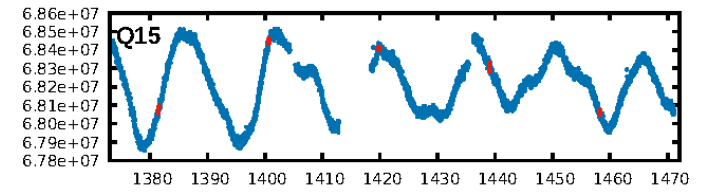
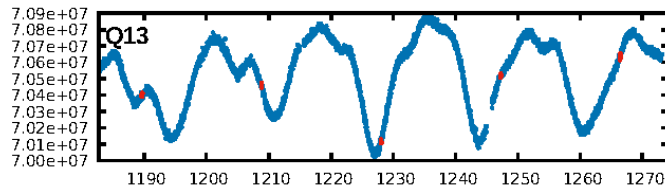
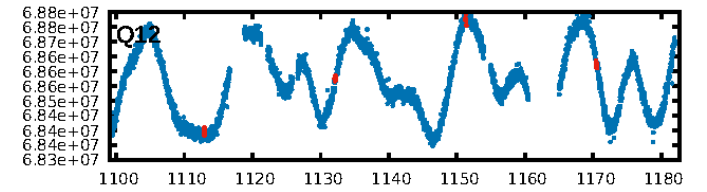
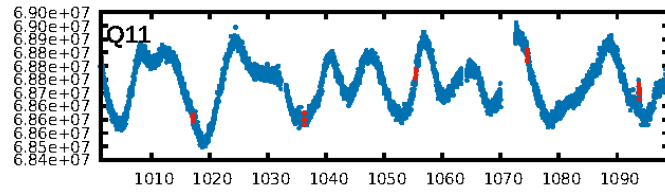
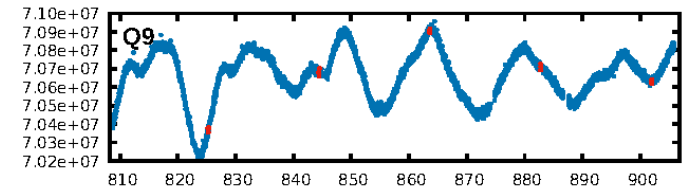
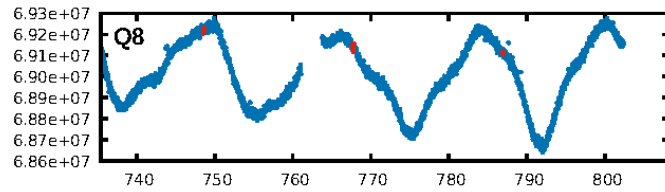
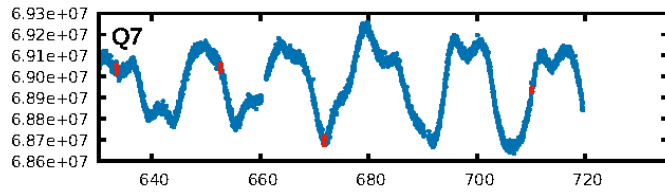
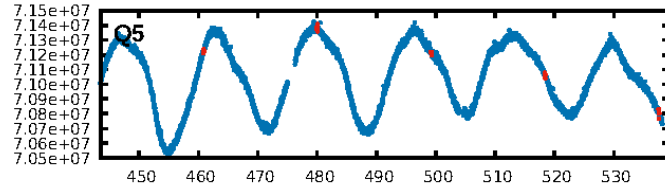
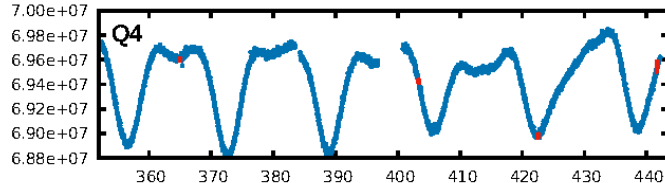
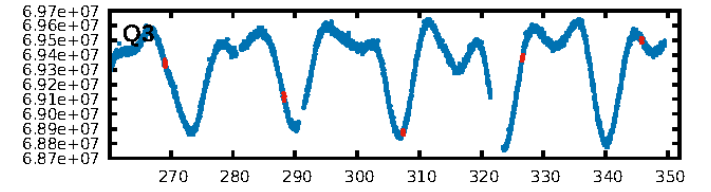
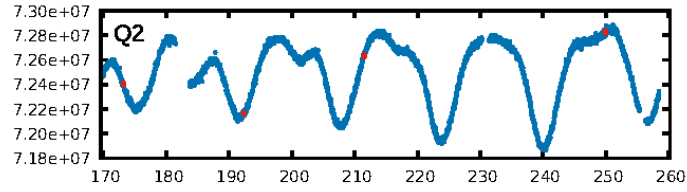
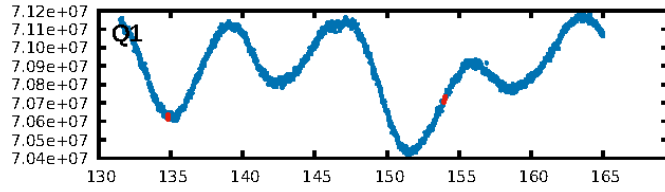
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.48 σ]
LongPeriod-sig: 100.0% [7.08 σ]
ModelChiSquare2-sig: 7.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.44e-29
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 1.066
Centroid-sig: 3.3%
Centroid-so: 0.145 arcsec [1.08 σ]
OotOffset-rm: 0.721 arcsec [0.50 σ]
KicOffset-rm: 1.050 arcsec [0.56 σ]
OotOffset-st: 0/2/2/1 [5]
KicOffset-st: 0/2/2/1 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/14]

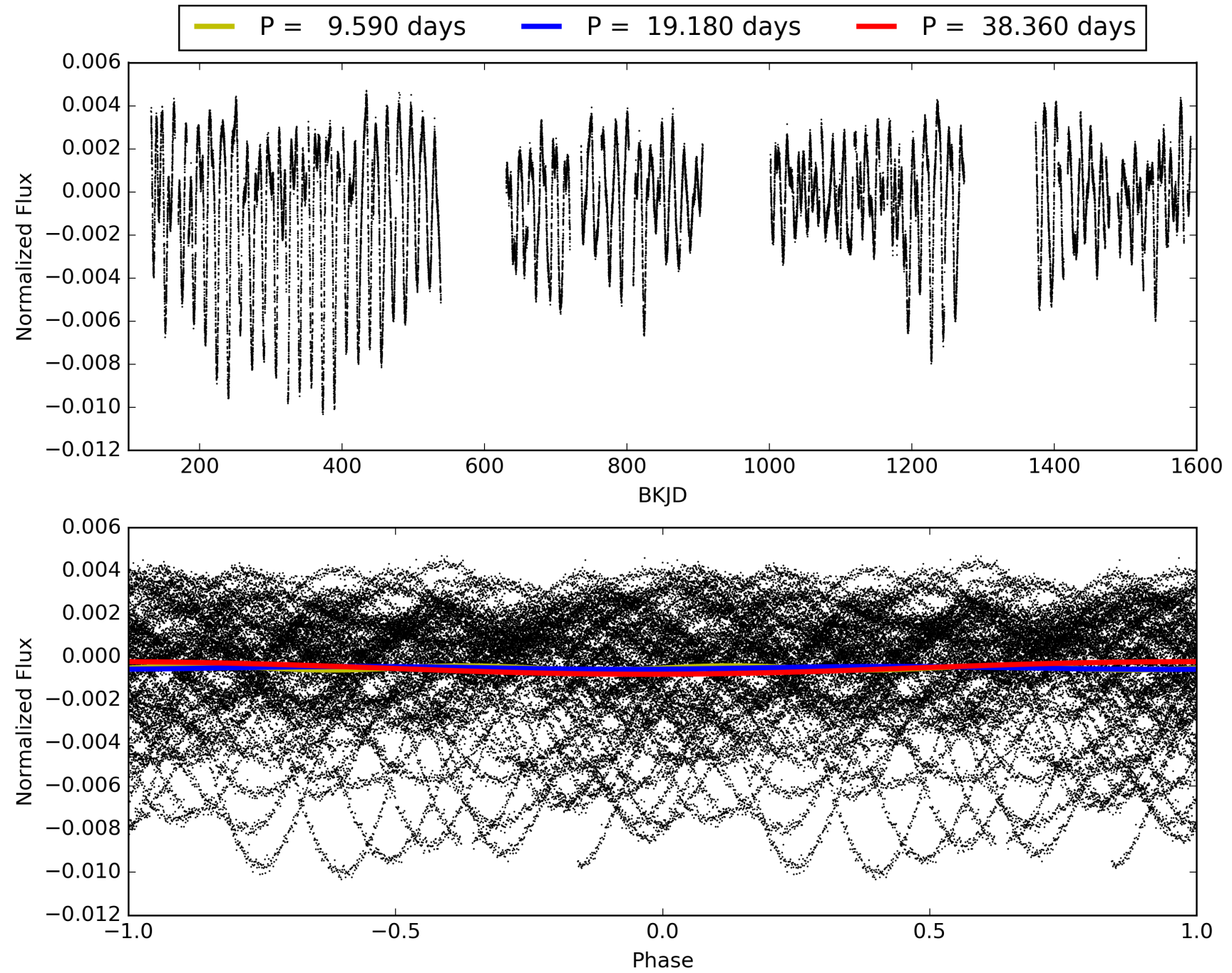
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:35:40 Z

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

TCE 004929092-02, PDC Light Curves

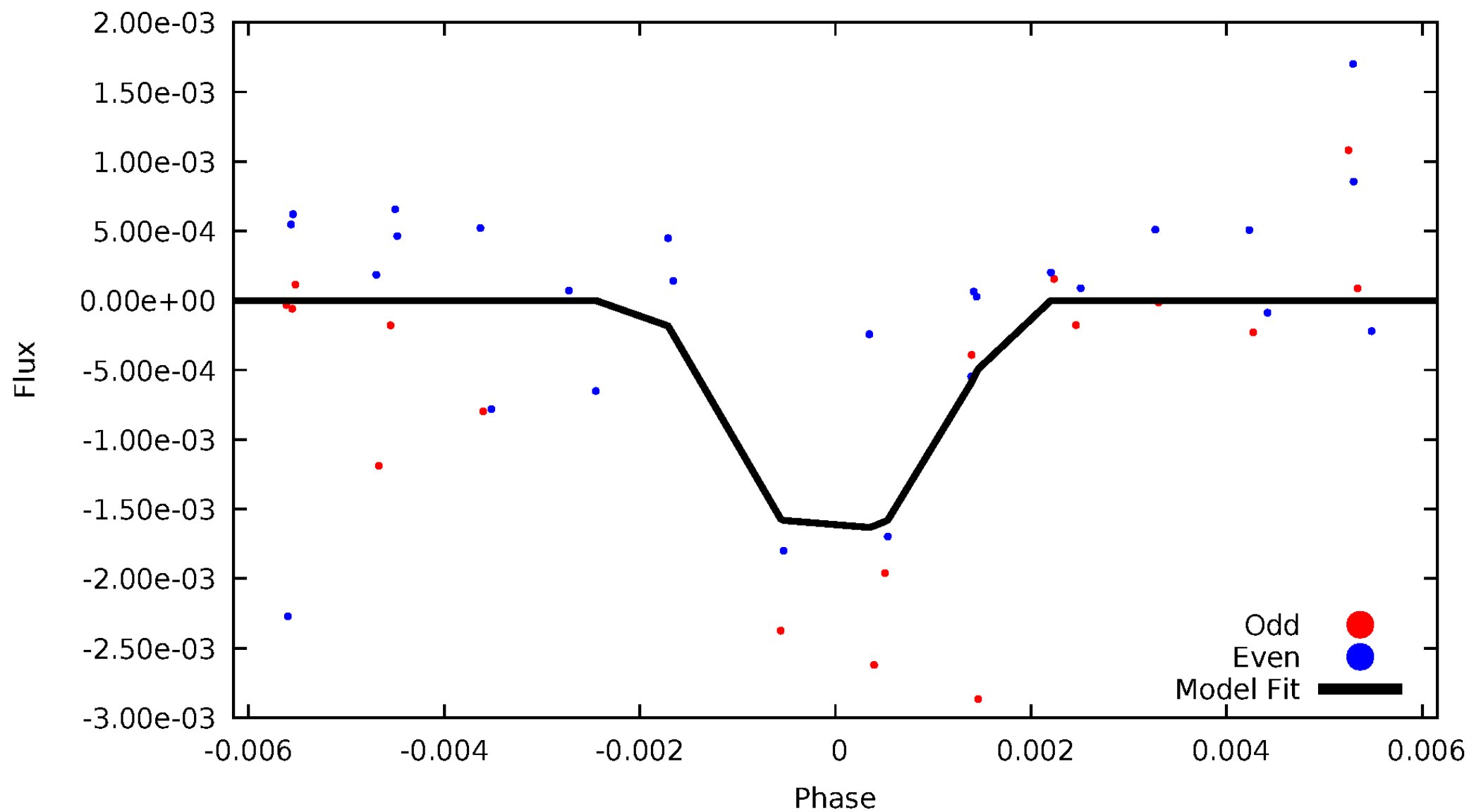


TCE 004929092-02



DV Odd/Even

TCE 004929092-02

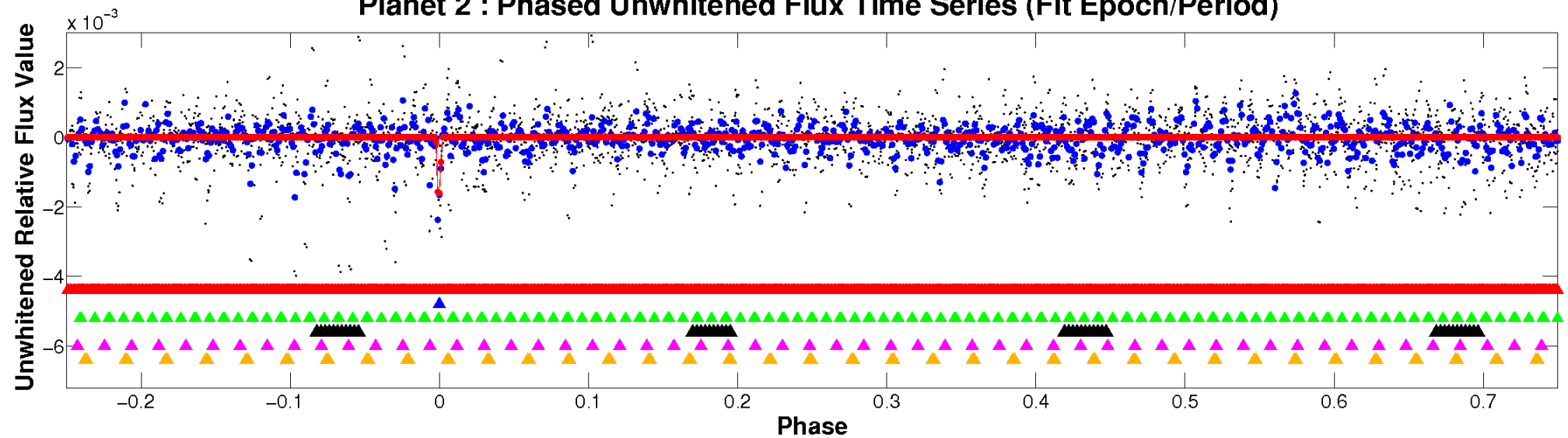


ALT Odd/Even

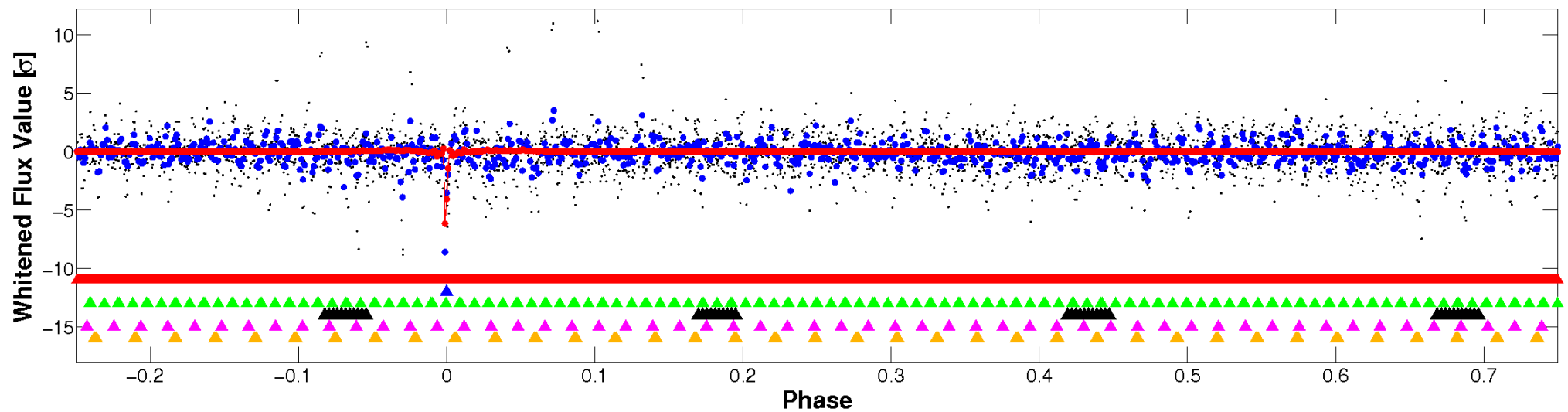
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

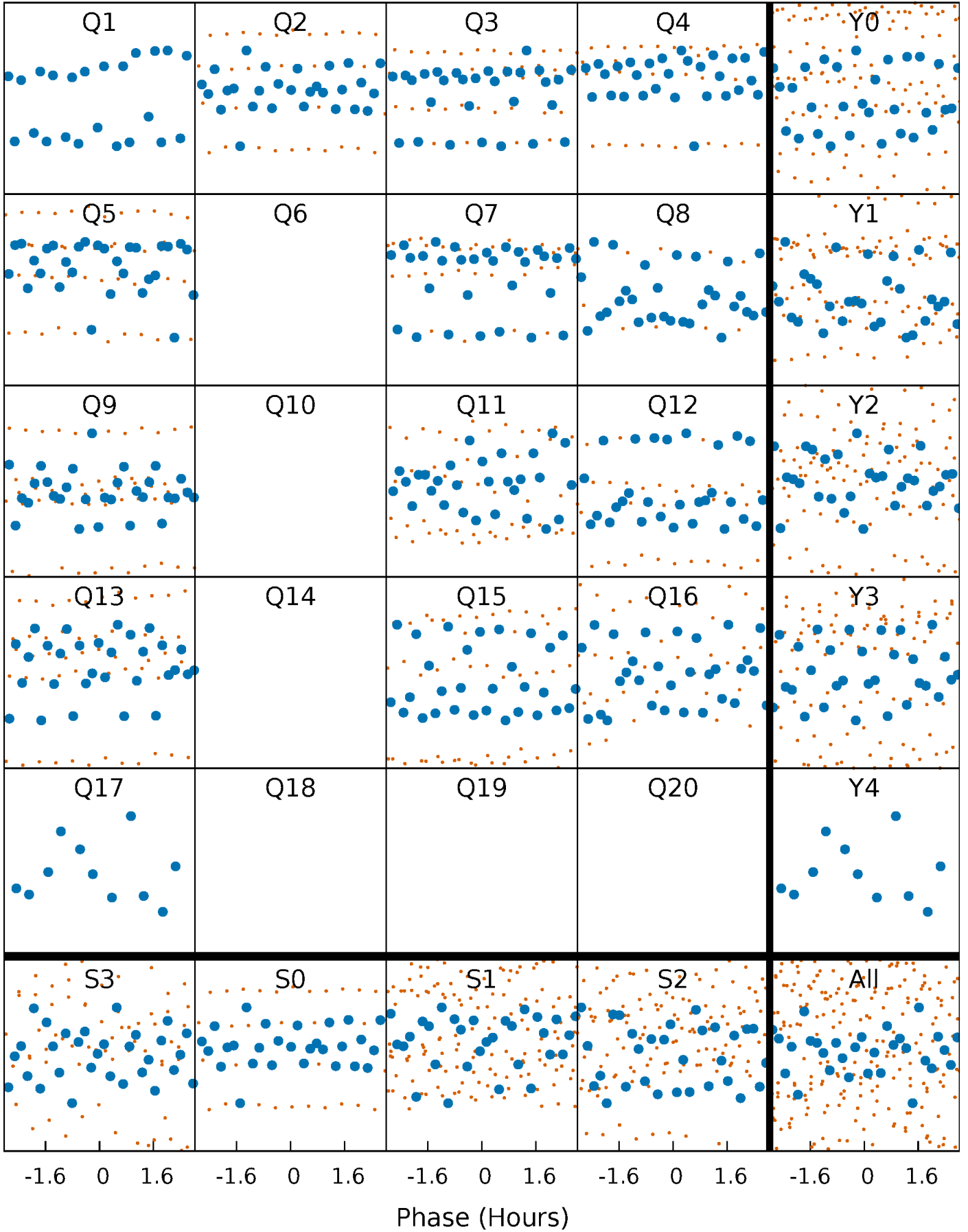


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



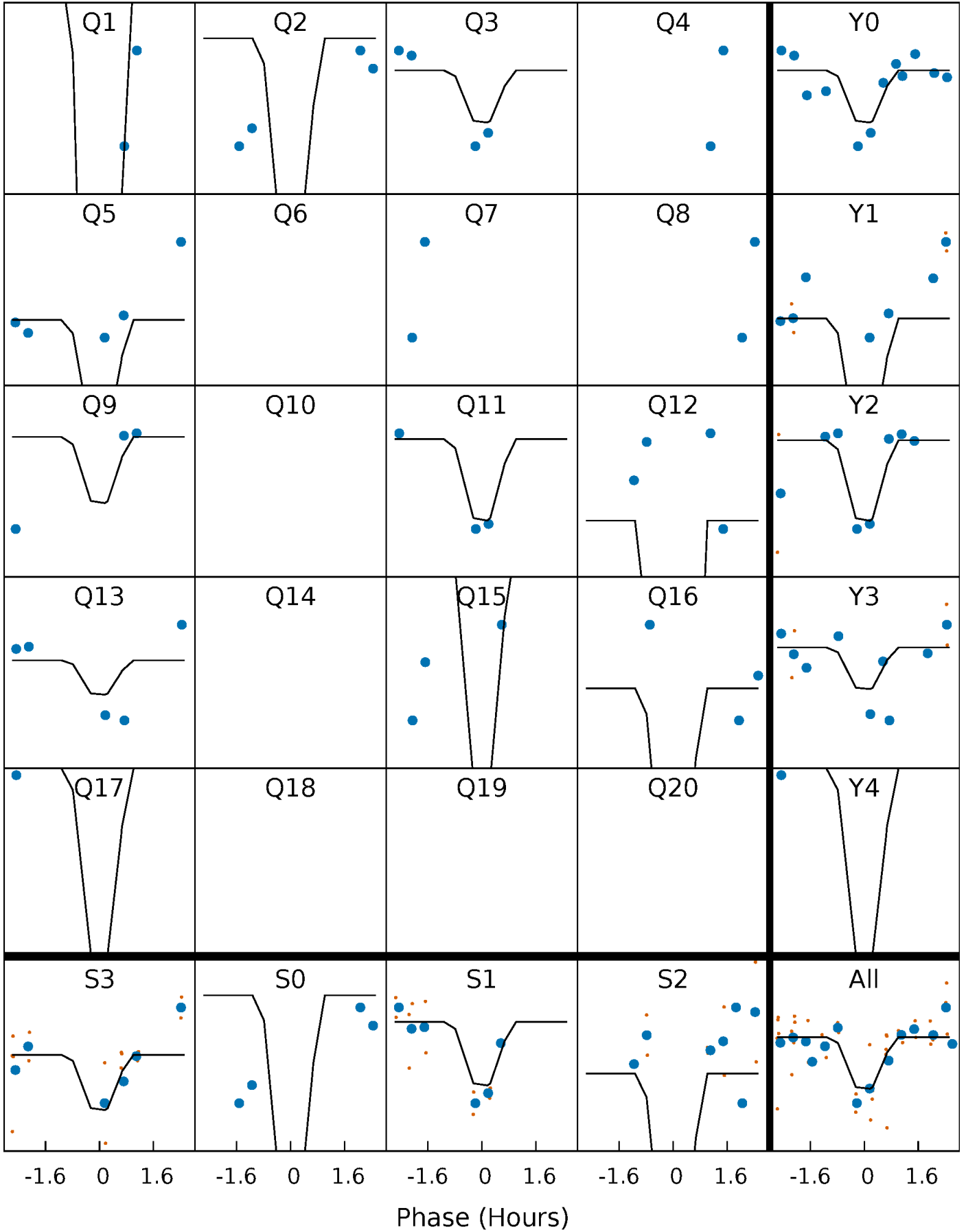
PDC Quarter-Phased Transit Curves

TCE 004929092-02 $P = 19.179796$ Days $T_0 = 134.804235$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004929092-02 P= 19.179796 Days $T_0=134.804235$ (BKJD)

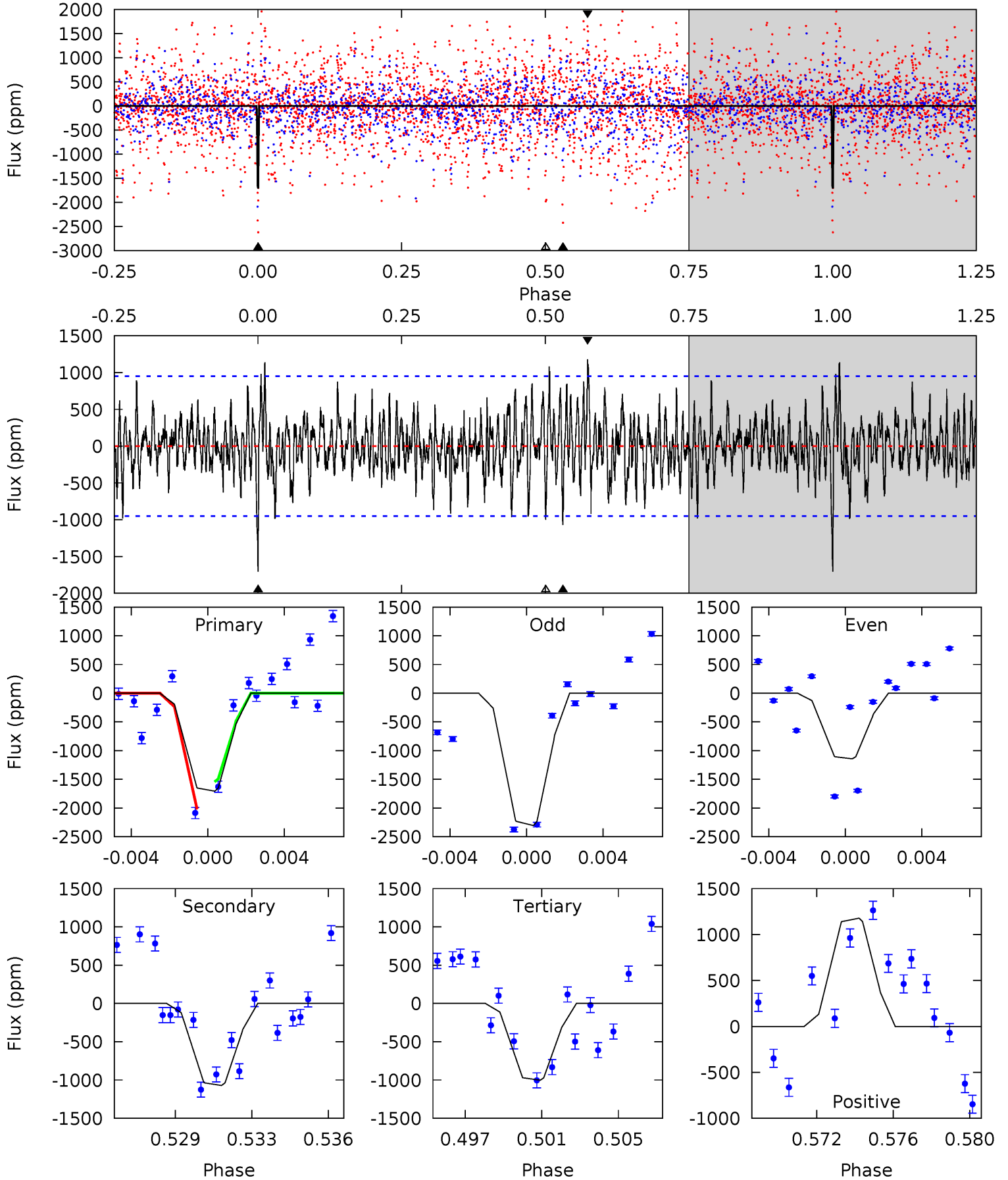


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004929092-02, P = 19.179796 Days, E = 115.624439 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.35	5.87	5.49	6.45	5.20	2.88	1.80	3.86	2.90	0.37	-0.59	3.04	0.92	0.41	1.14



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004929092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4423^{+79}_{-79}	$4.670^{+0.012}_{-0.040}$	$-0.120^{+0.150}_{-0.150}$	$0.620^{+0.040}_{-0.019}$	$0.675^{+0.027}_{-0.043}$	$3.984^{+0.211}_{-0.607}$
	+2%/-2%	+0%/-1%	+125%/-125%	+6%/-3%	+4%/-6%	+5%/-15%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004929092-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1071±183	$19.44^{+20.56}_{-13.28}$	619^{+12}_{-12}	2340^{+810}_{-360}	24^{+207}_{-18}
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 $A_{obs} \gg 1.0$

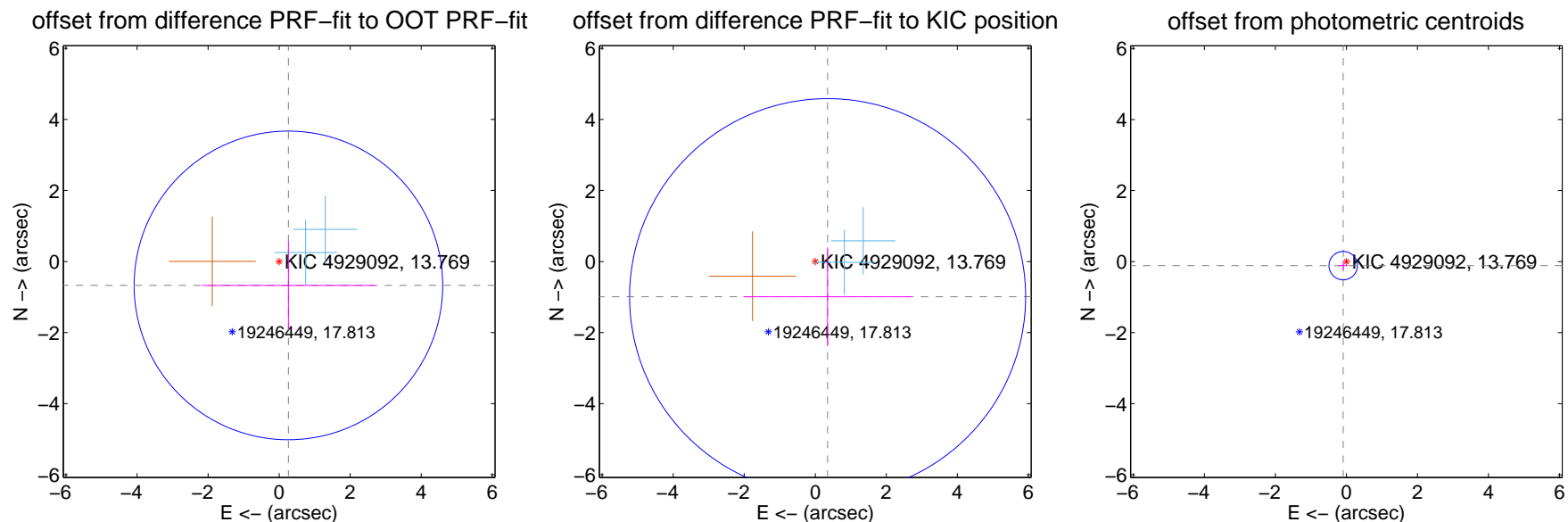
DV Centroid Data

Supplemental centroid analysis for 004929092-02. Kepler magnitude: 13.77. Transit SNR 10.69

There are 2 quarters with good PRF difference image offsets

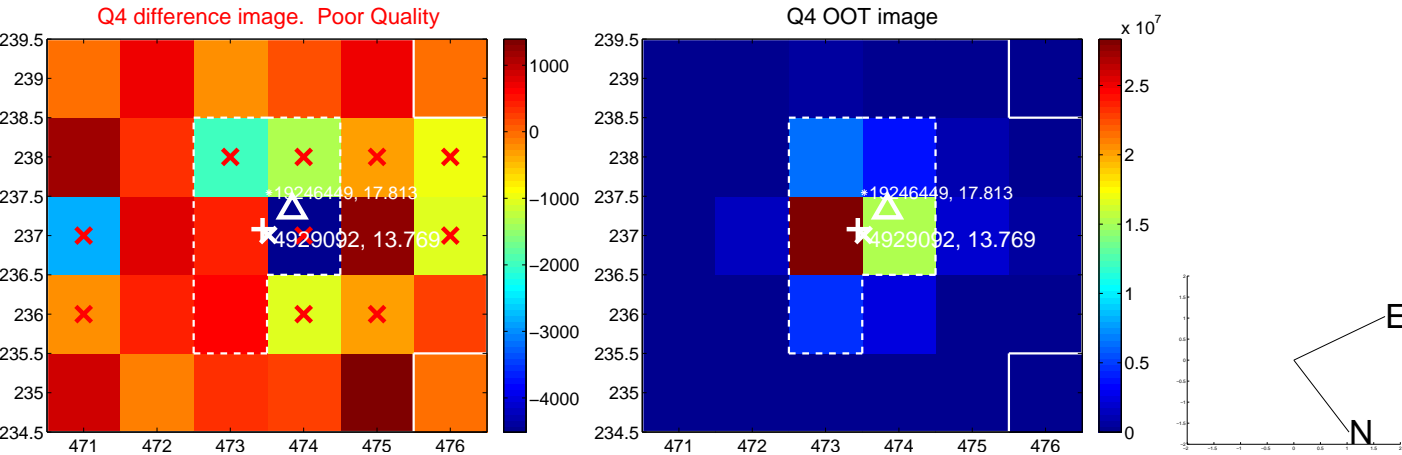
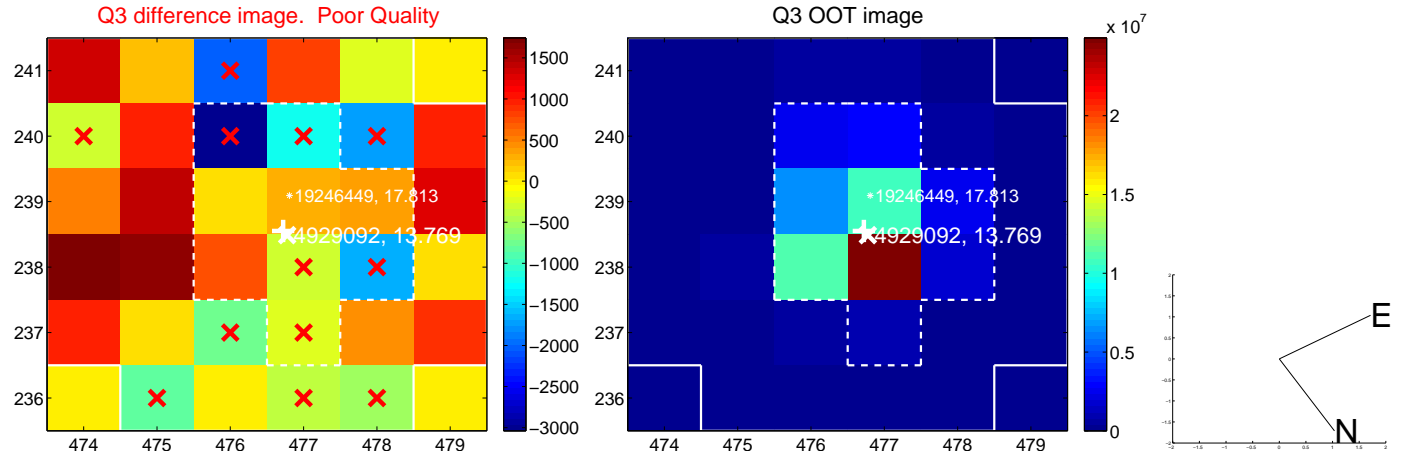
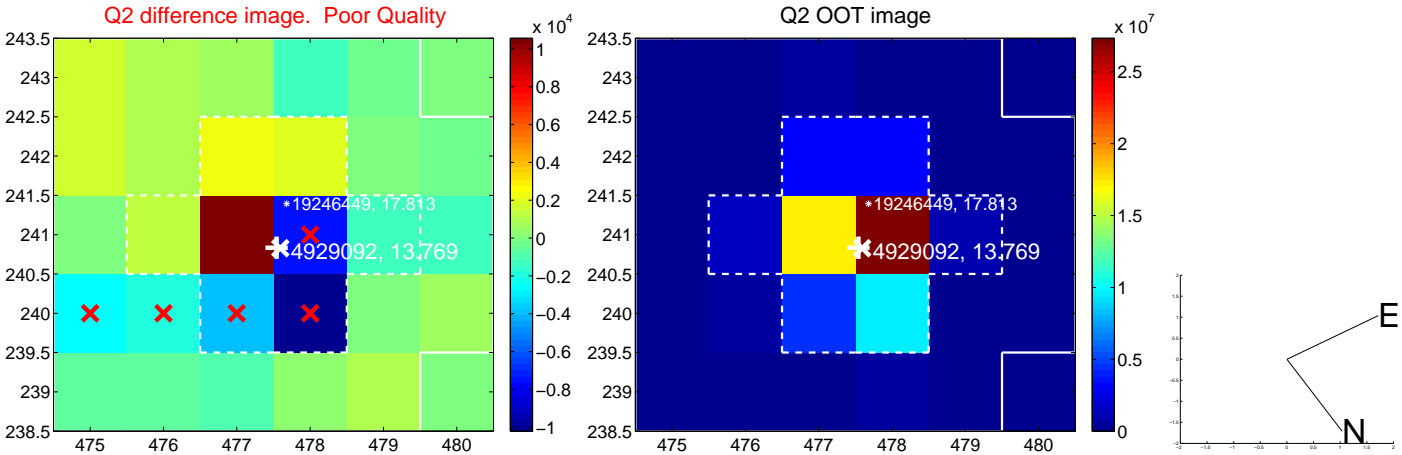
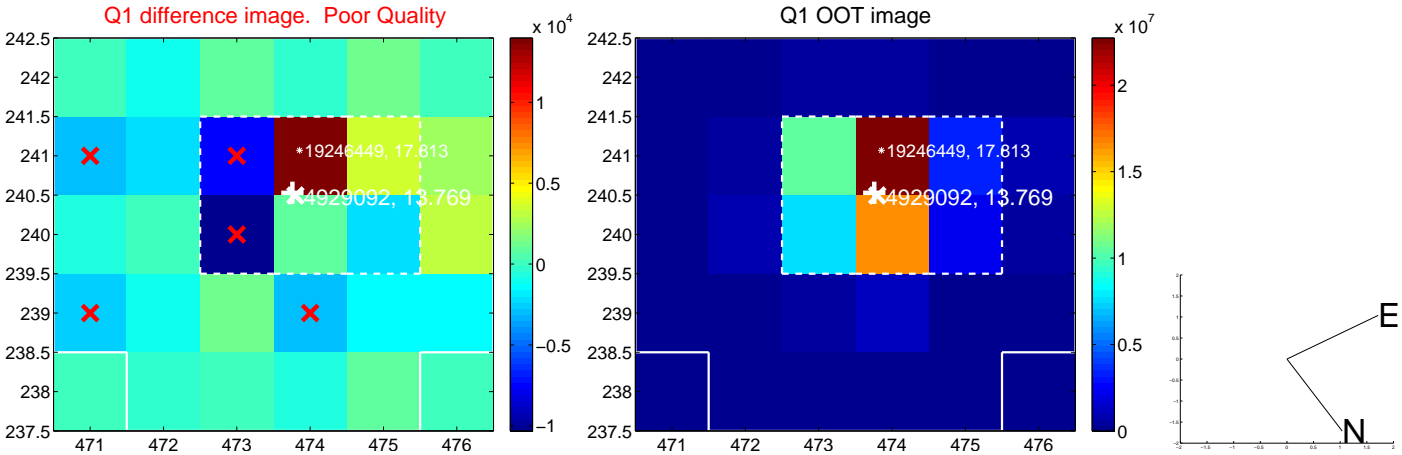
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.721 ± 1.448	0.50	-0.261 ± 2.439	-0.672 ± 1.231
PRF-fit source offset from KIC position	1.050 ± 1.858	0.56	-0.347 ± 2.366	-0.990 ± 1.388
photometric centroid source offset	0.14 ± 0.13	1.08	0.09 ± 0.14	-0.11 ± 0.13

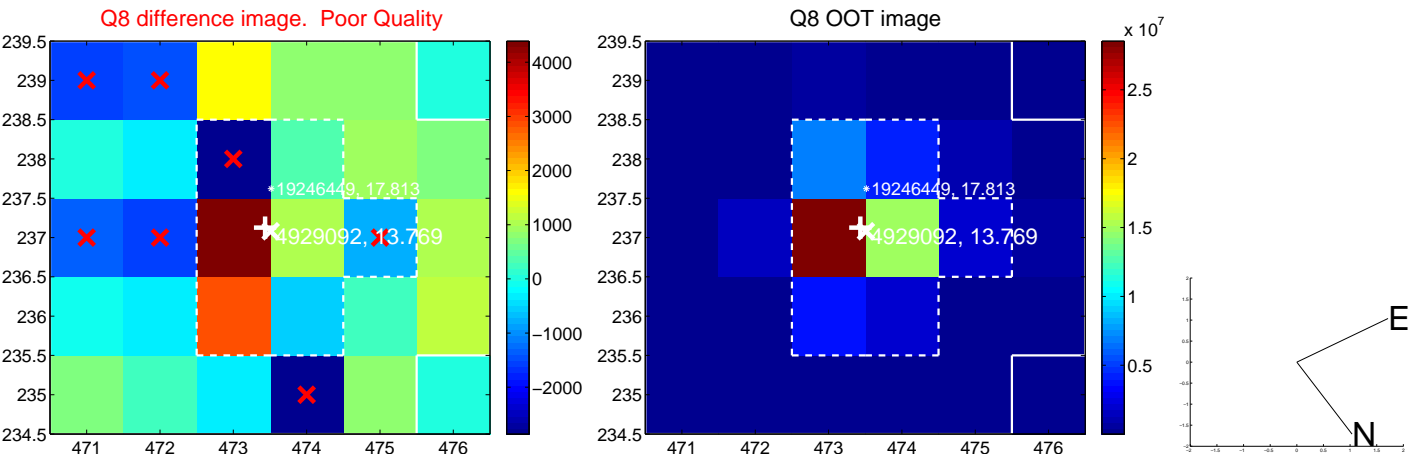
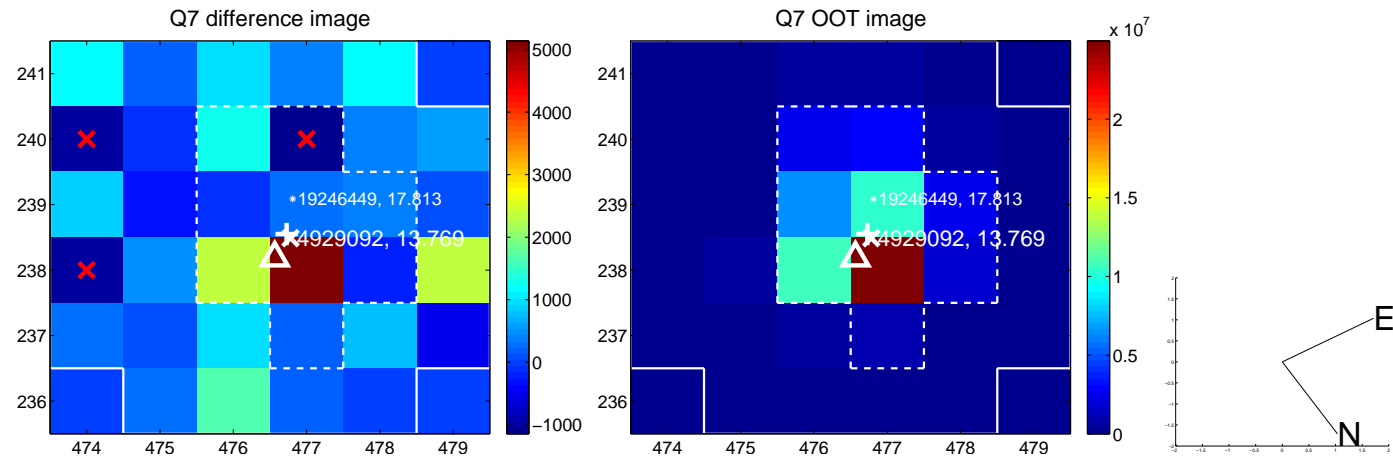
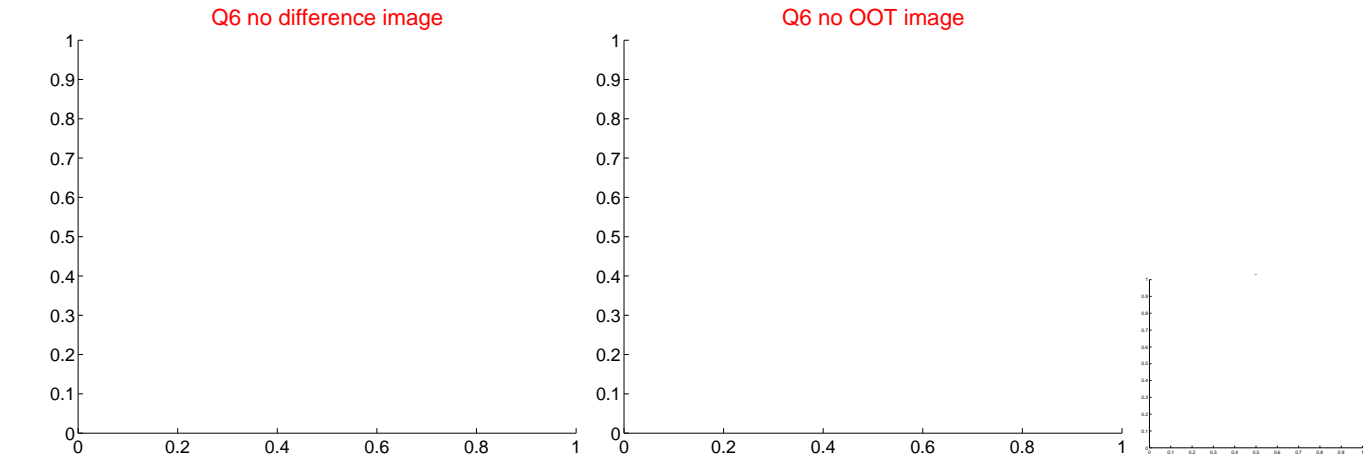
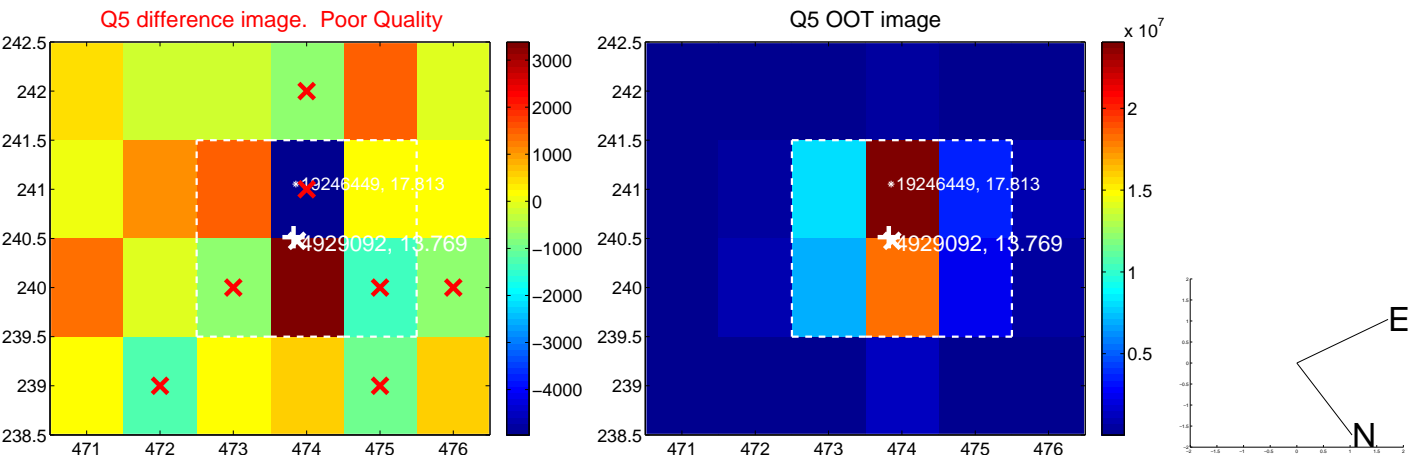


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

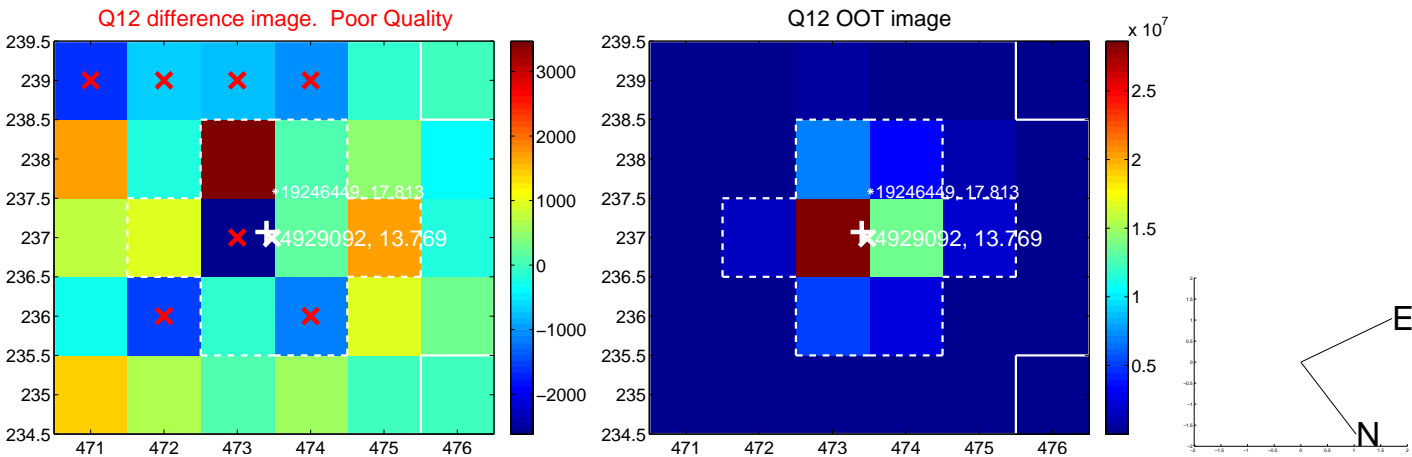
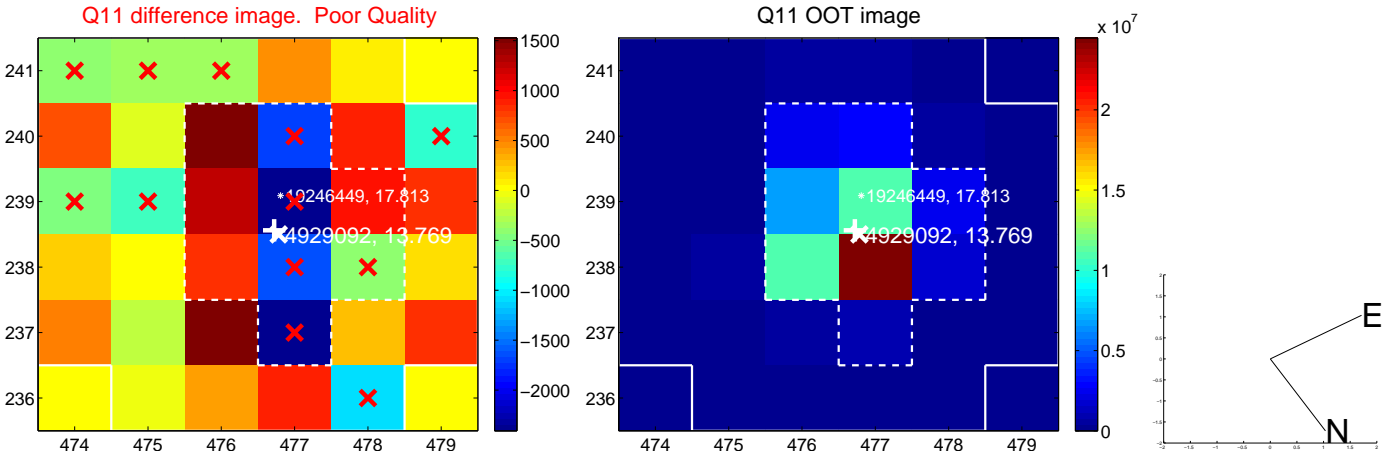
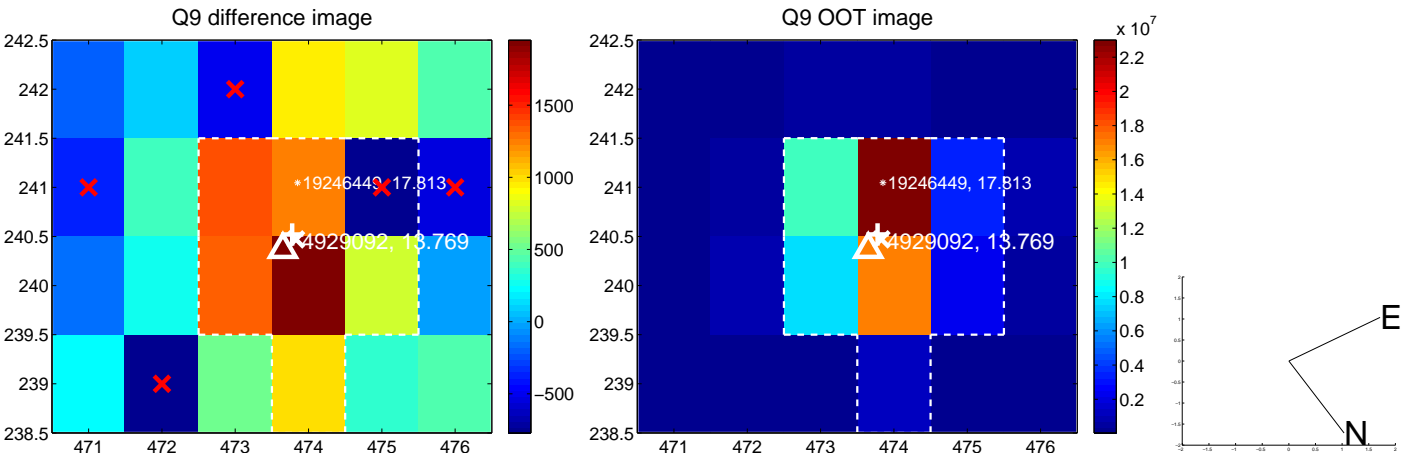
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



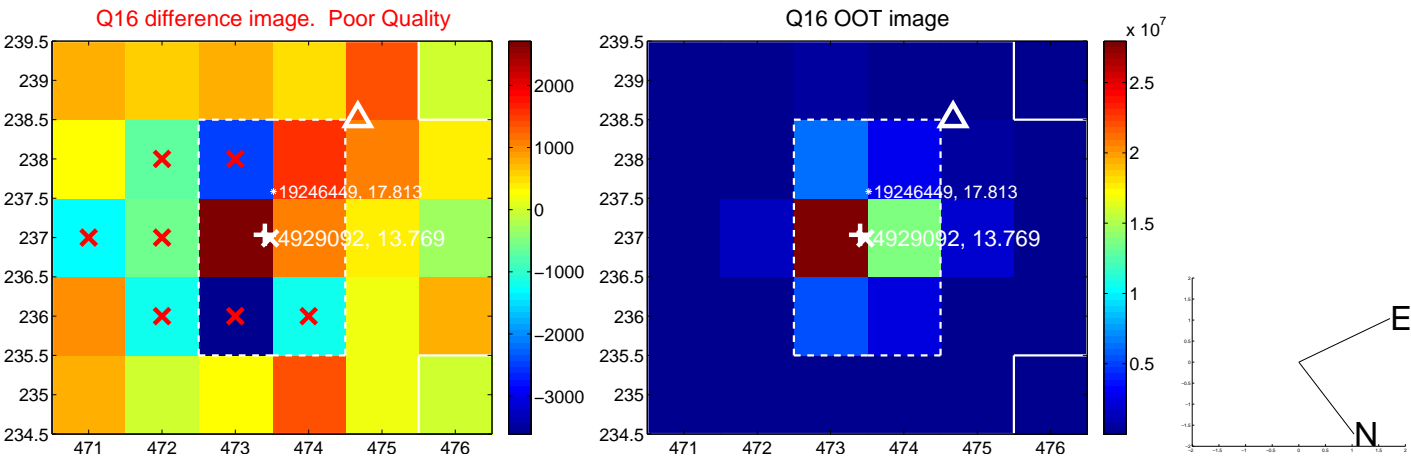
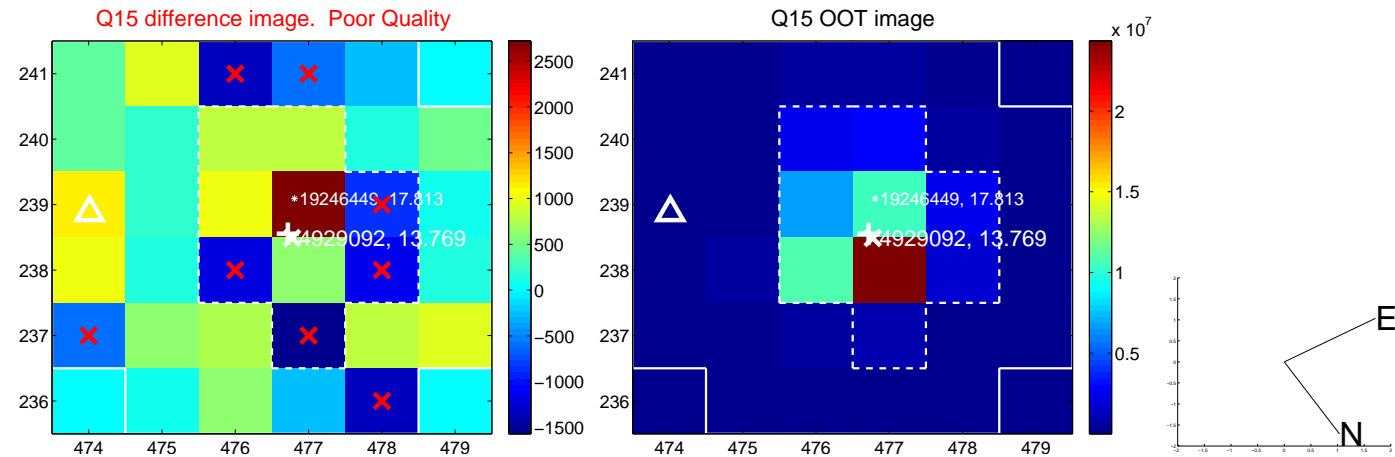
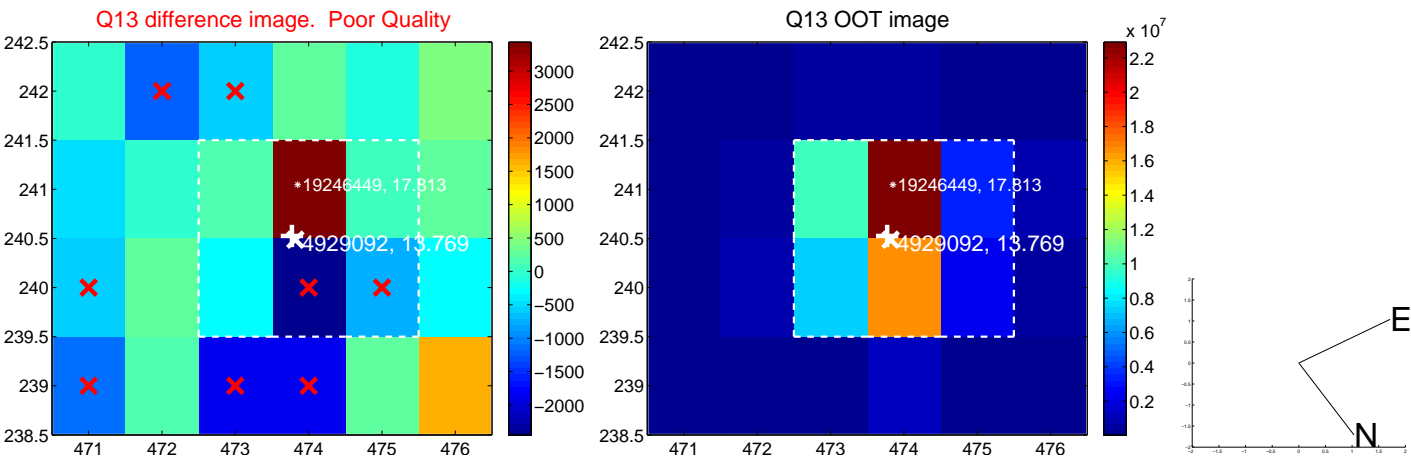
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



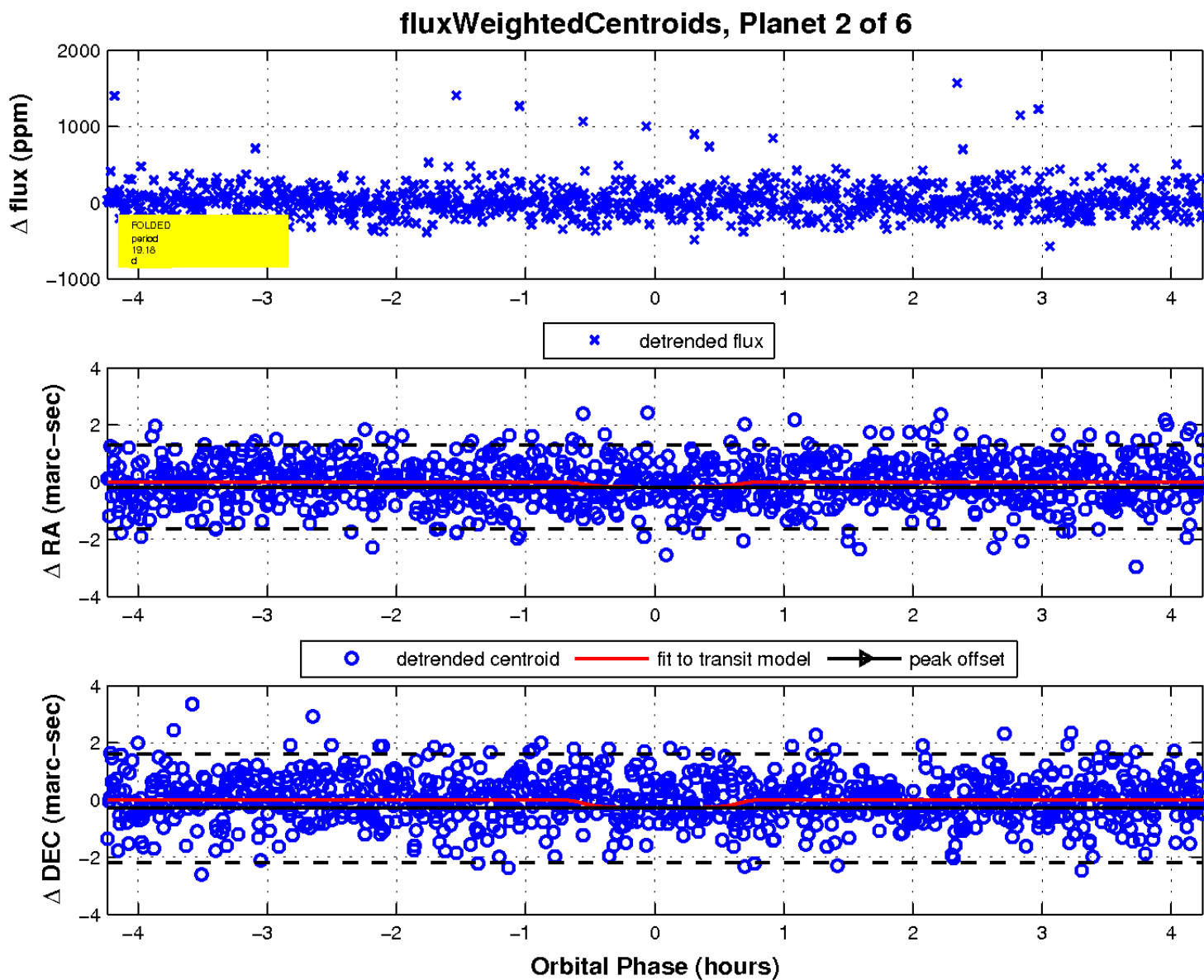
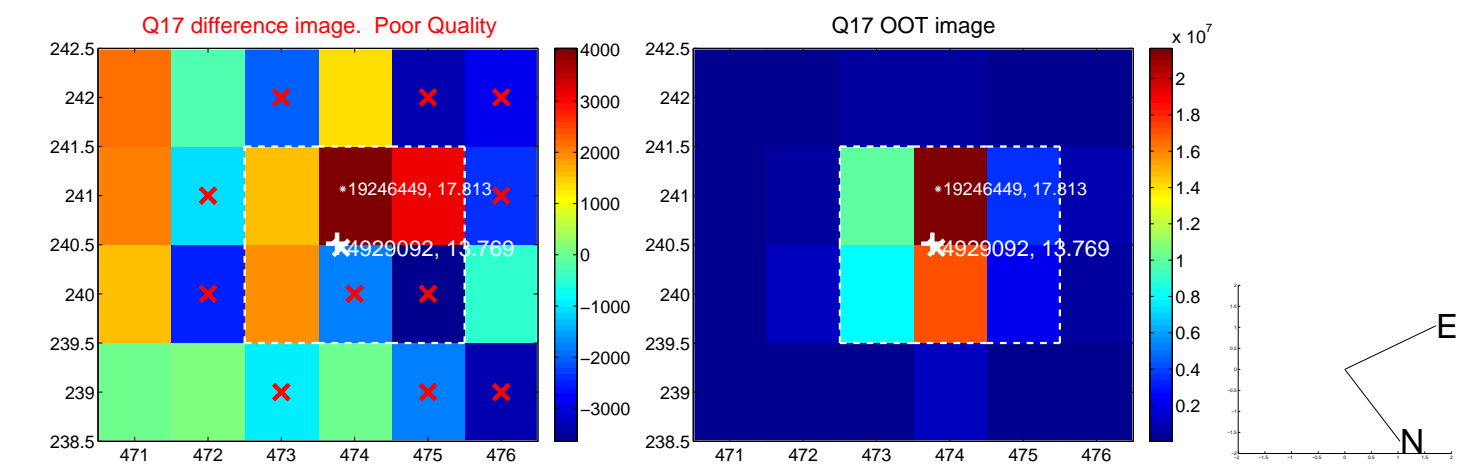
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

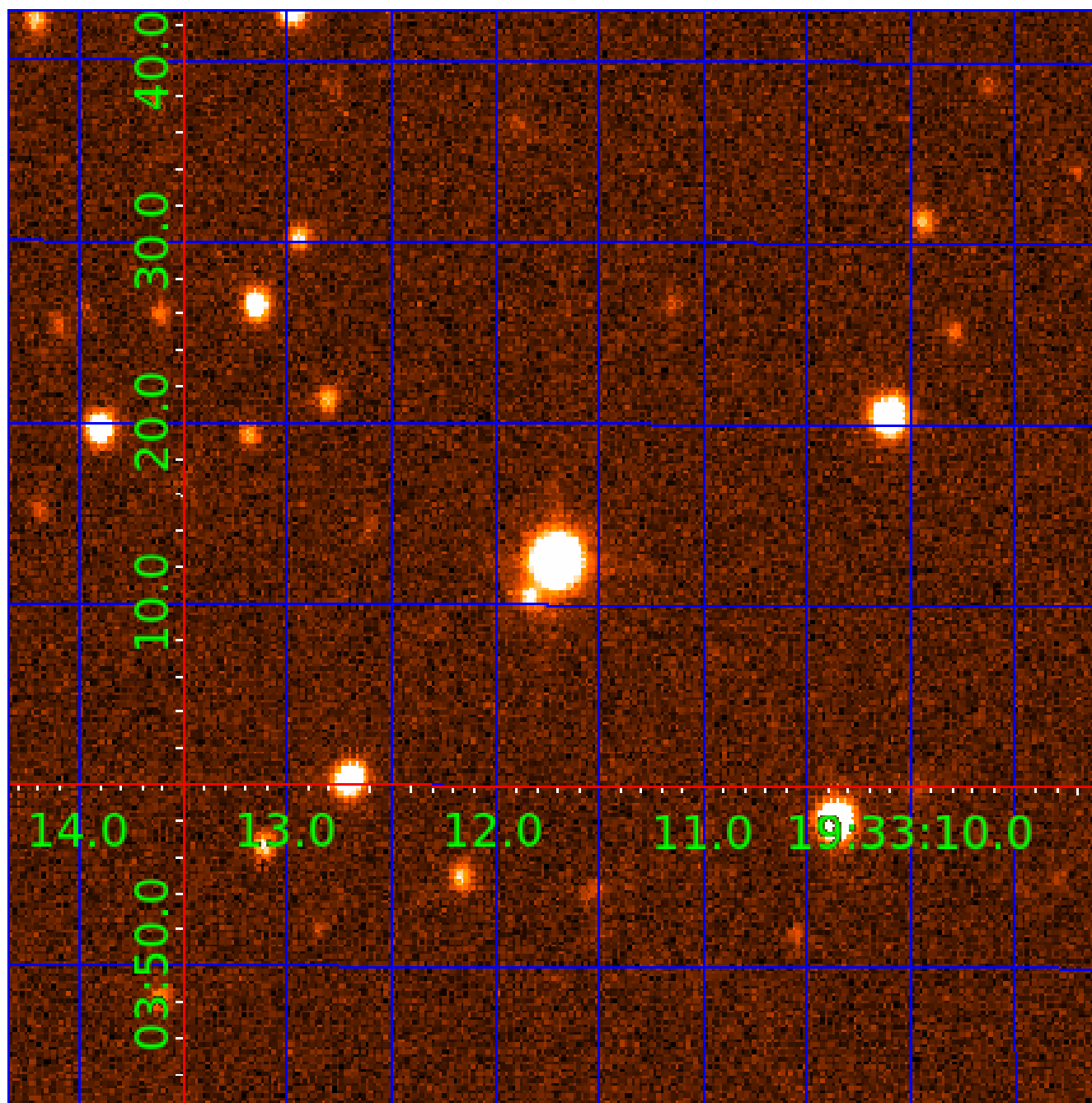


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004929092

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})
004929092-01	OBS	No	0.578061	131.773381	21.3	4.153	7.7	10.3	0.62	4423	0.28	946.37
004929092-02	OBS	No	19.179796	134.804235	1668.6	1.416	15.2	10.7	0.62	4423	2.91	8.88
004929092-03	OBS	No	9.405644	136.814412	1722.3	0.927	13.0	12.2	0.62	4423	2.51	22.95
004929092-05	OBS	No	16.738756	138.168652	324.4	2.653	9.3	4.2	0.62	4423	1.31	10.64
004929092-06	OBS	No	19.697526	140.130677	1416.3	1.037	10.6	9.5	0.62	4423	2.26	8.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004929092-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS
004929092-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004929092-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED
004929092-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST
004929092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_MEAS

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

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

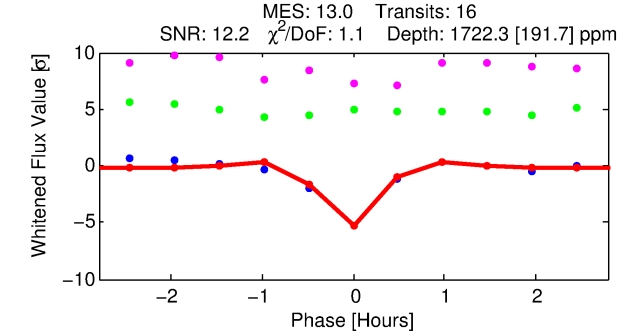
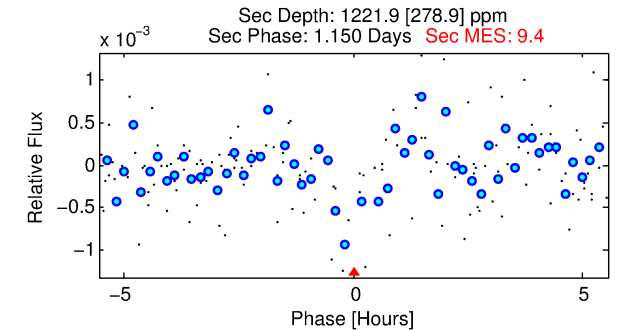
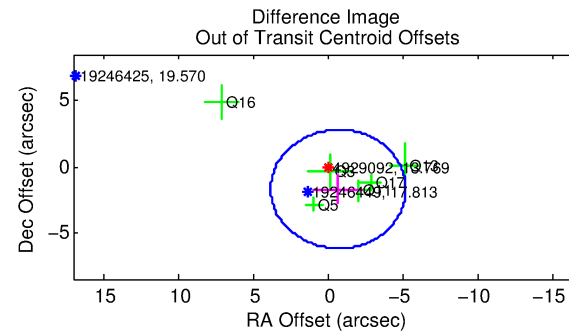
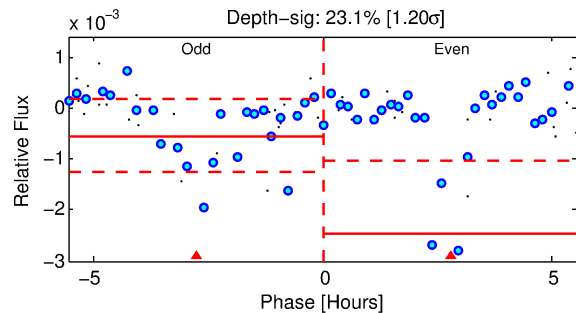
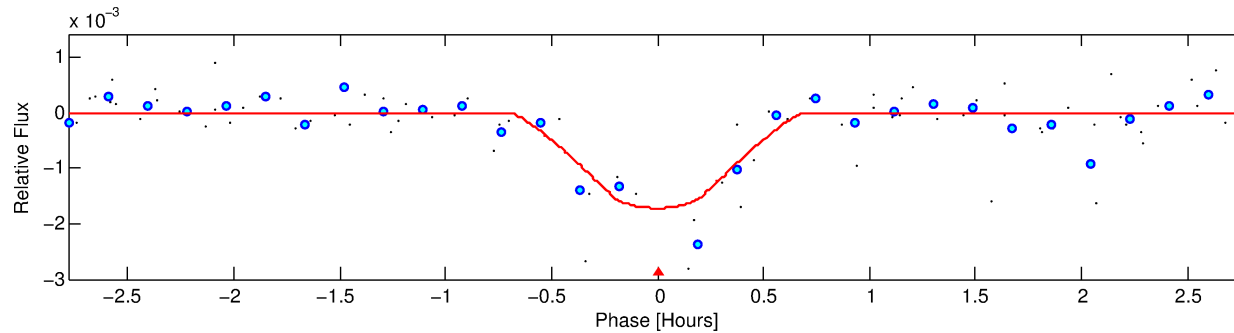
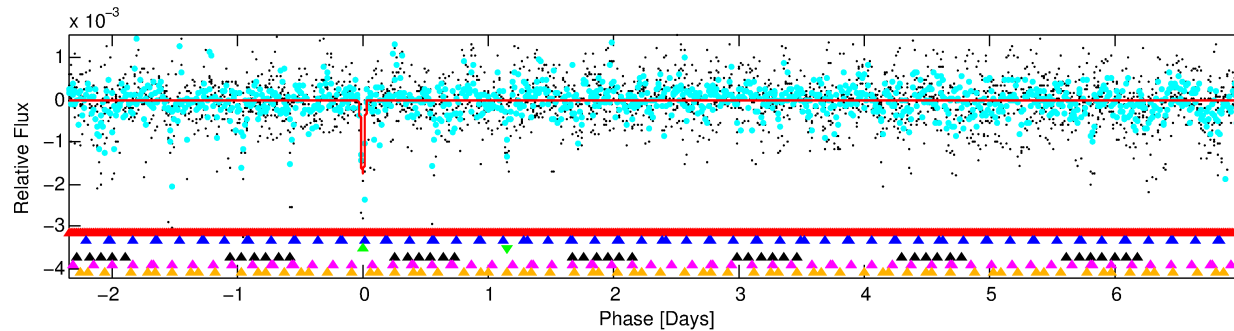
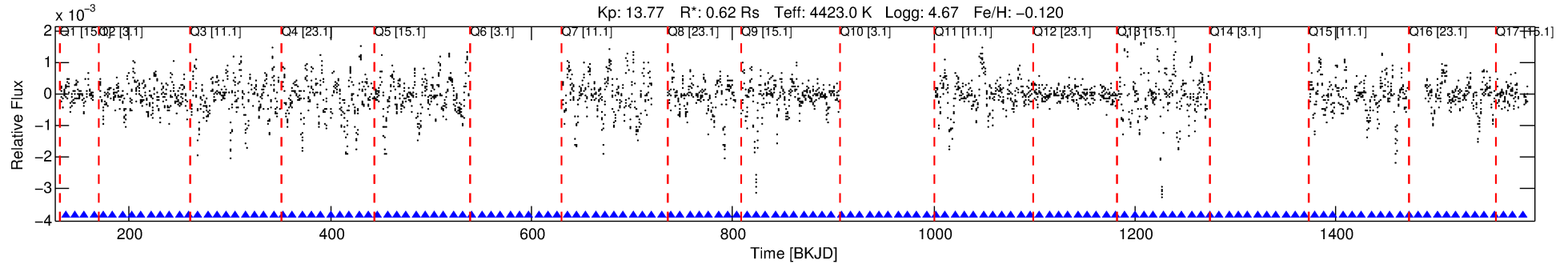
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004929092-03

No Significant Match Found

DV One-Page Summary

KIC: 4929092 Candidate: 3 of 6 Period: 9.406 d



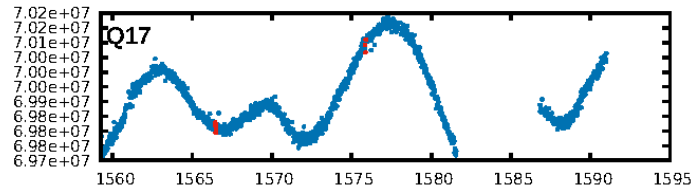
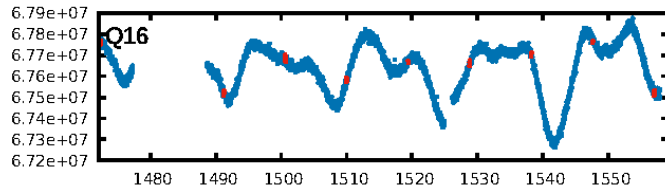
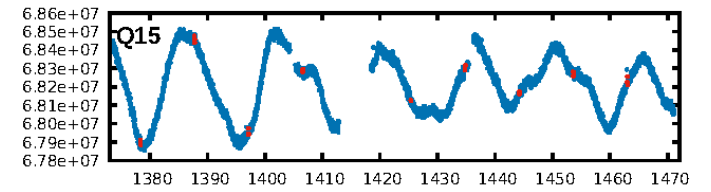
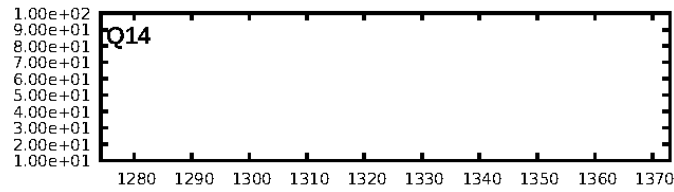
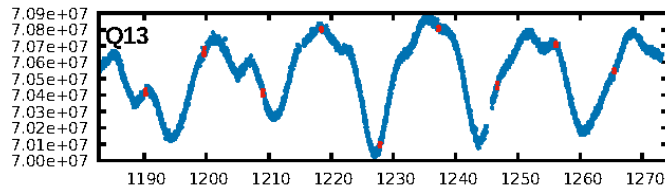
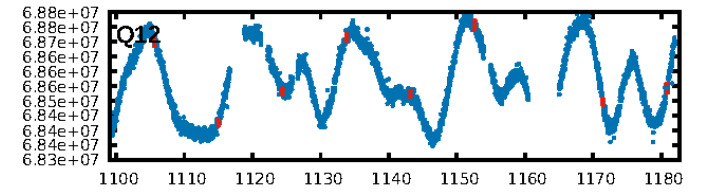
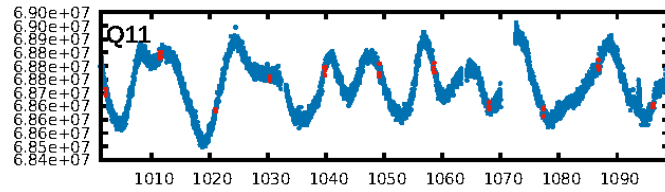
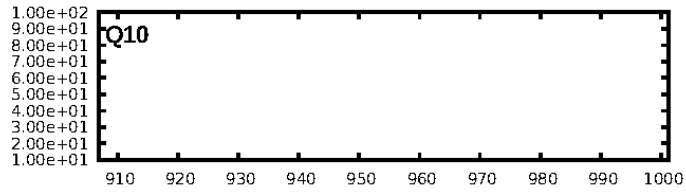
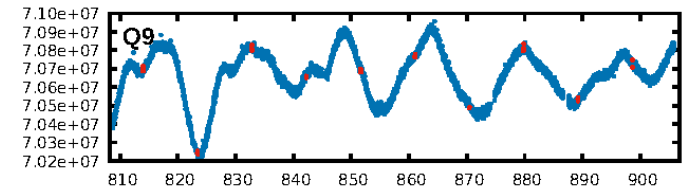
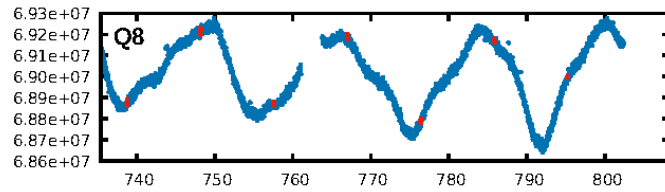
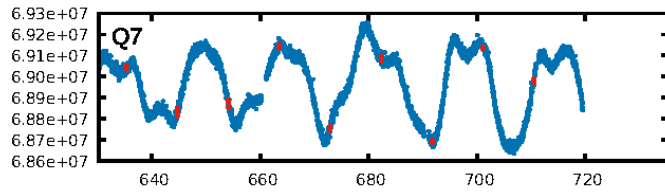
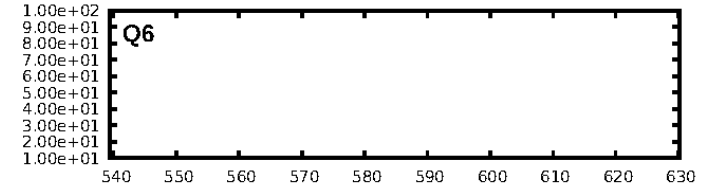
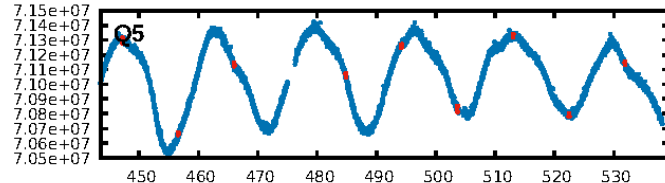
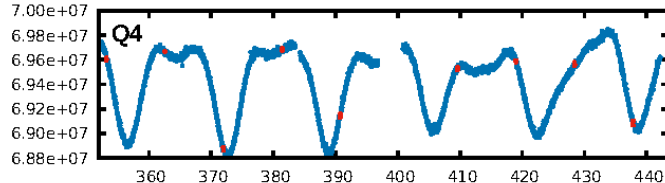
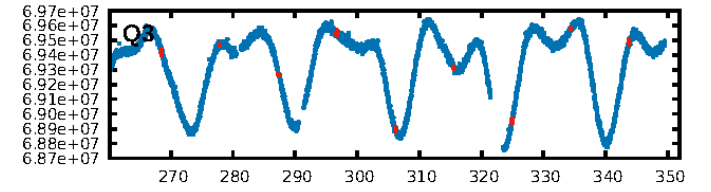
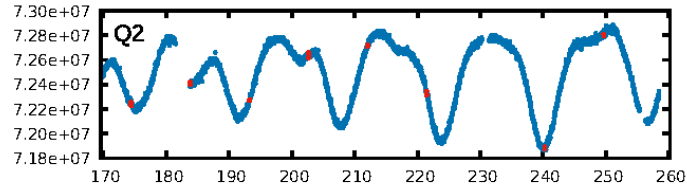
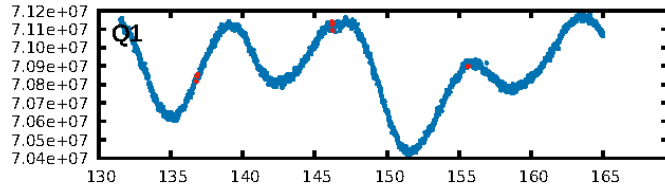
DV Fit Results:

Period = 9.40564 [0.00003] d
Epoch = 136.8144 [0.0026] BKJD
Rp/R* = 0.0371 [0.0423]
a/R* = 79.95 [275.39]
b = 0.11 [30.71]
Seff = 22.95 [2.38]
Teq = 558 [14] K
Rp = 2.51 [2.86] Re
a = 0.0758 [0.0040] AU
Ag = 613.65 [1407.26] [0.44 σ]
Teffp = 4295 [2462] K [1.52 σ]

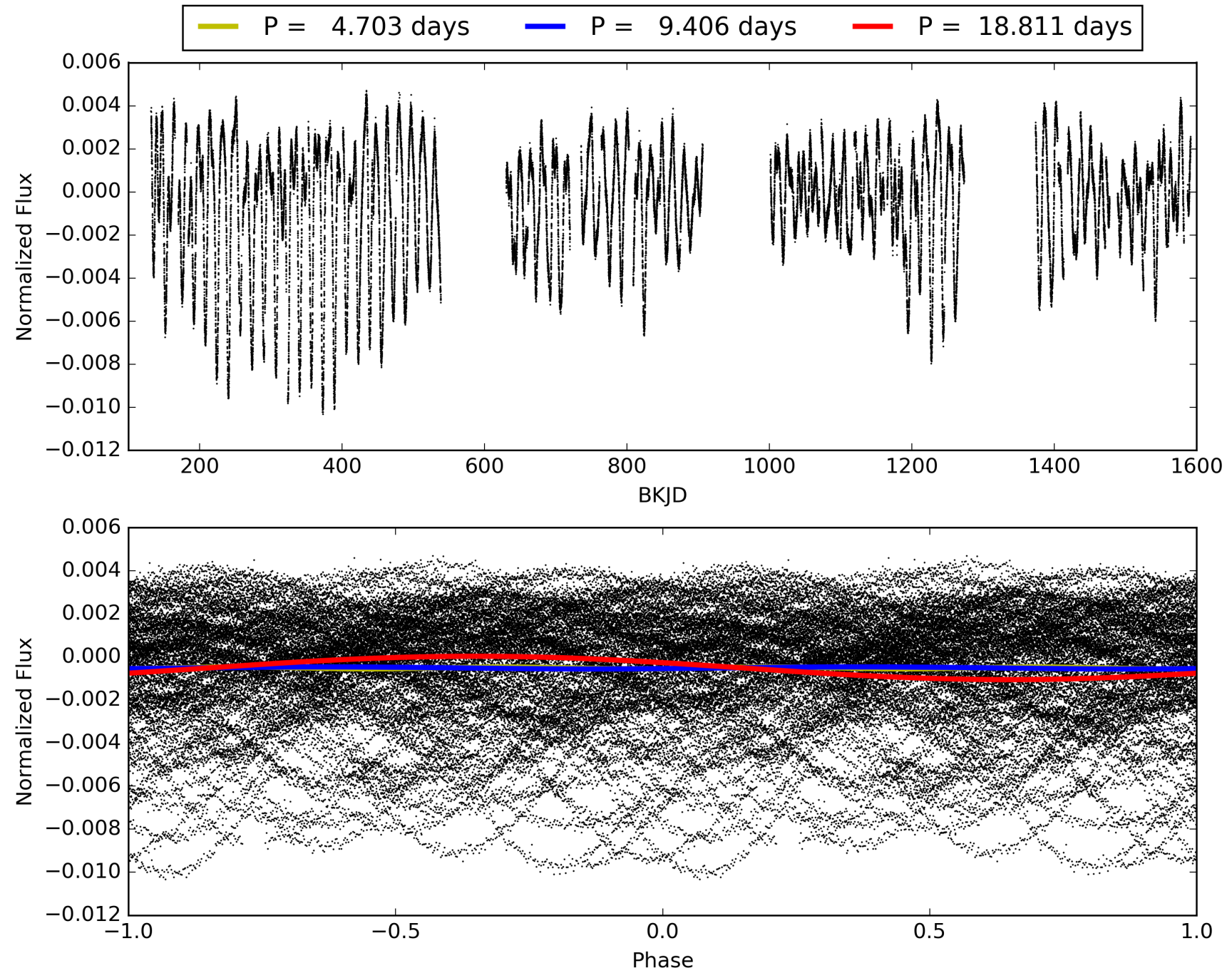
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [49.79 σ]
LongPeriod-sig: 100.0% [62.63 σ]
ModelChiSquare2-sig: 22.6%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.38e-23
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: -1.388
Centroid-sig: 3.0%
Centroid-so: 0.179 arcsec [1.61 σ]
OotOffset-rm: 1.846 arcsec [1.23 σ]
KicOffset-rm: 2.127 arcsec [1.26 σ]
OotOffset-st: 0/2/1/3 [6]
KicOffset-st: 0/2/1/3 [6]
DiffImageQuality-fgm: 0.33 [2/6]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 004929092-03, PDC Light Curves

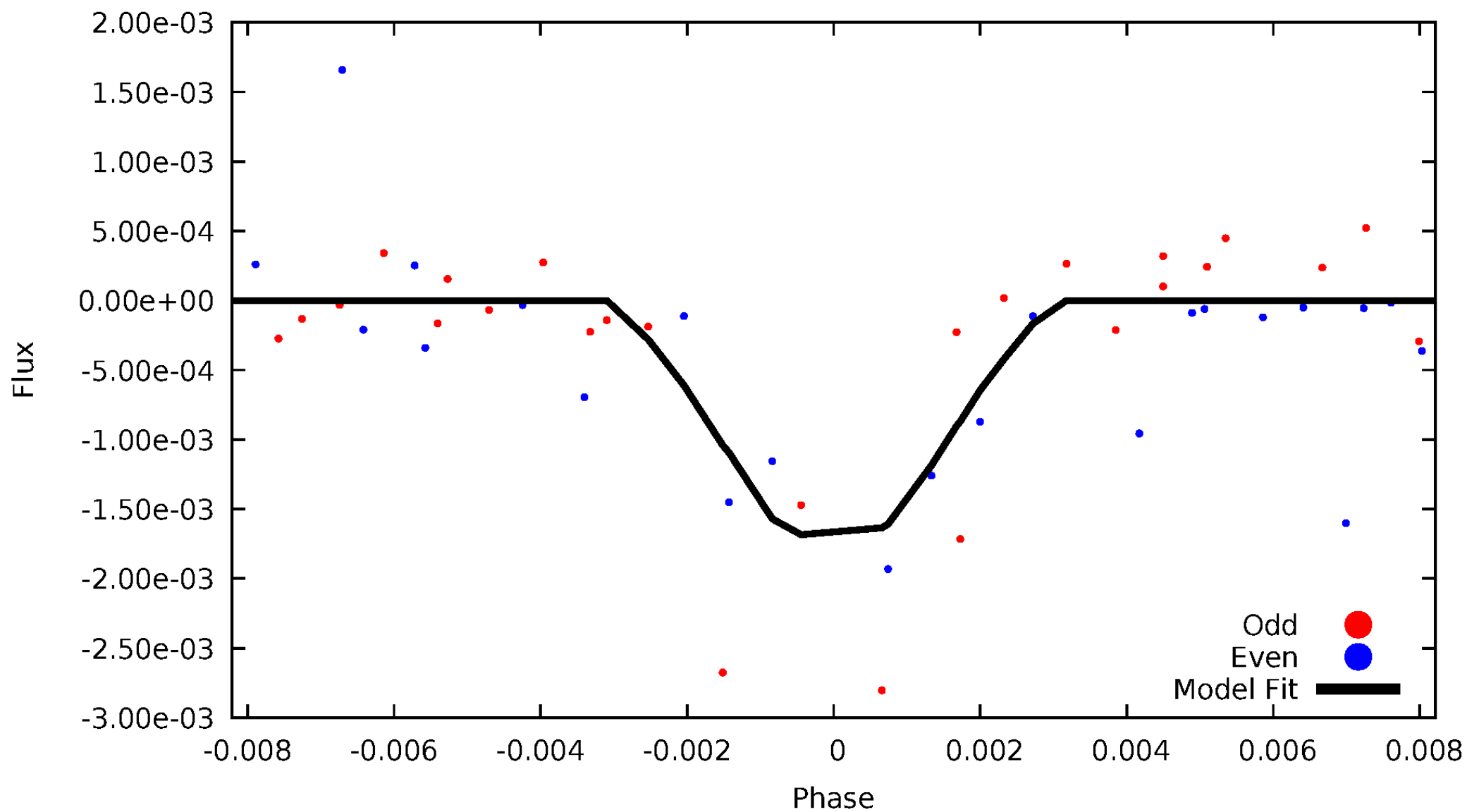


TCE 004929092-03



DV Odd/Even

TCE 004929092-03

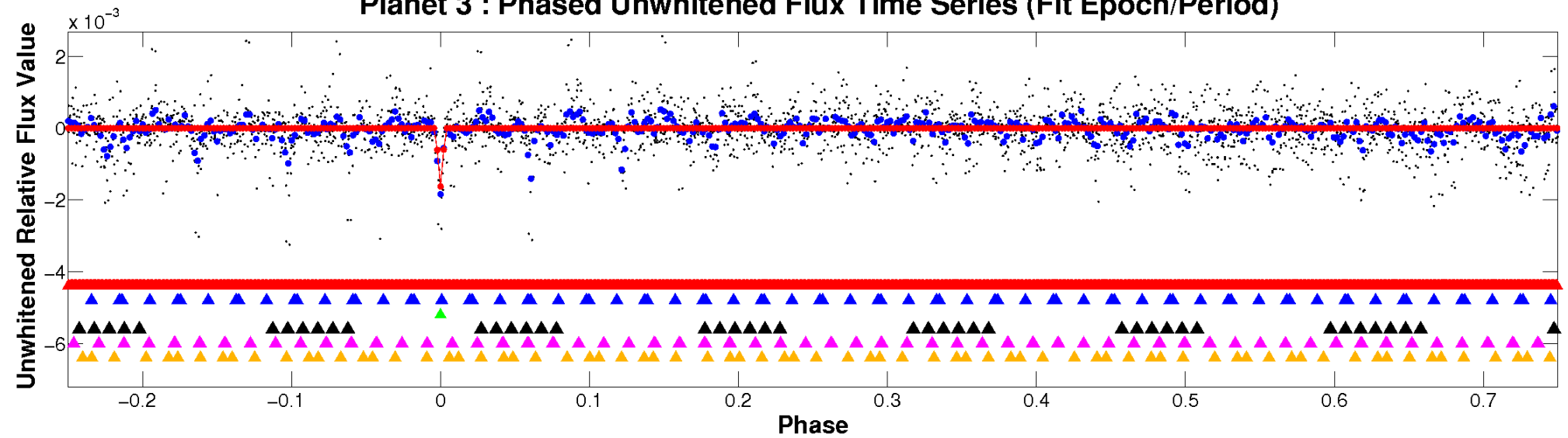


ALT Odd/Even

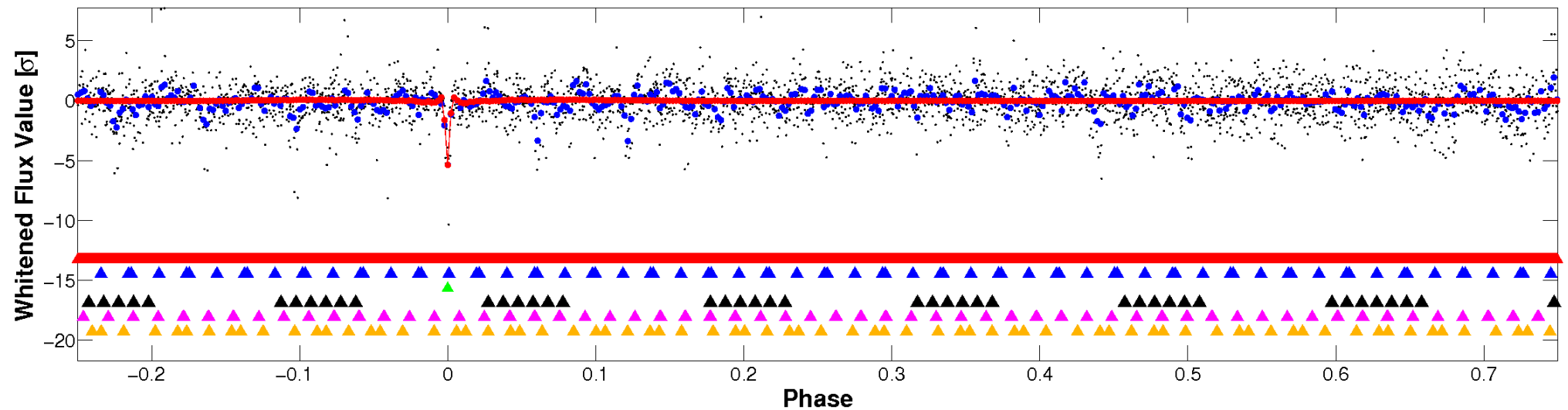
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

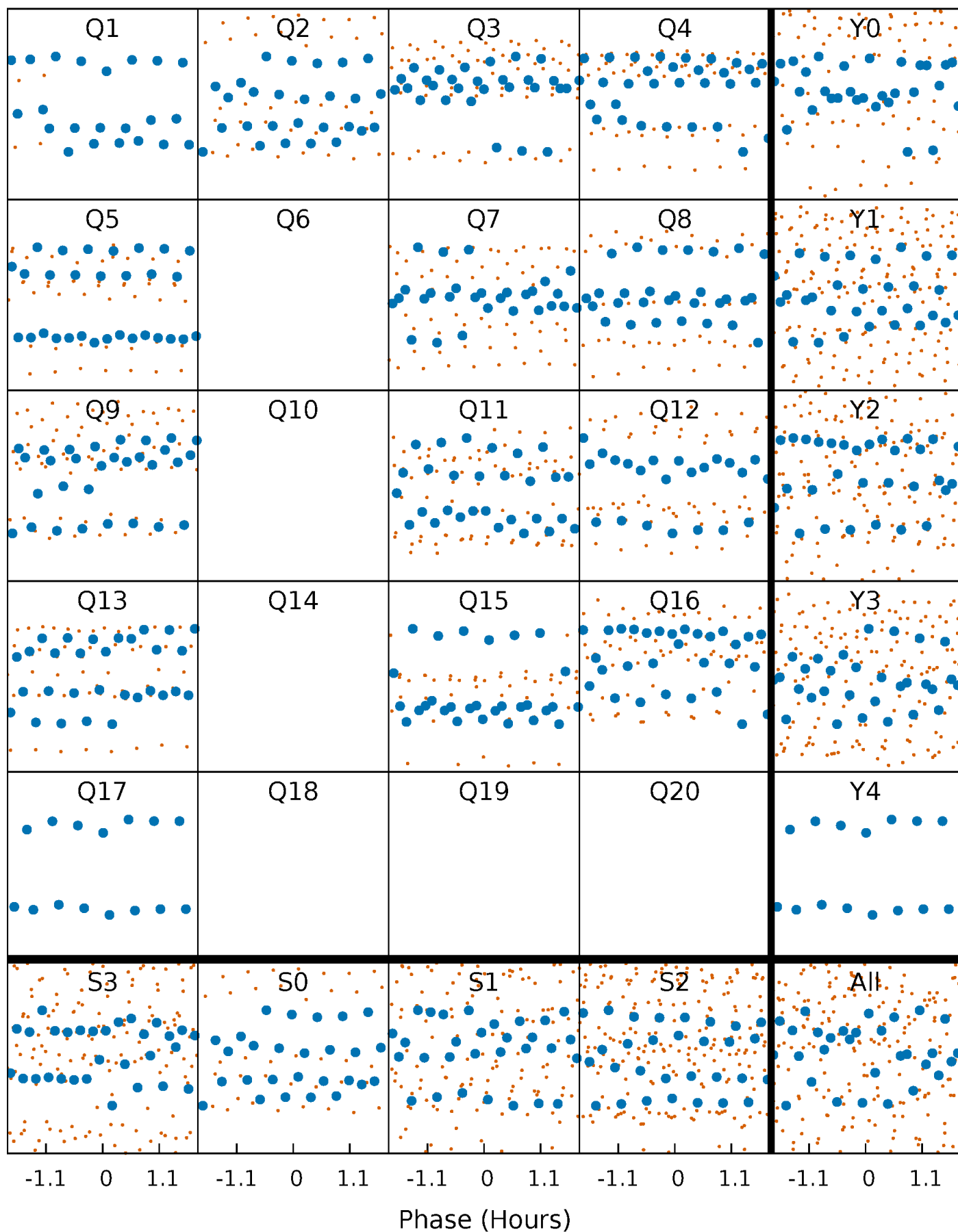


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



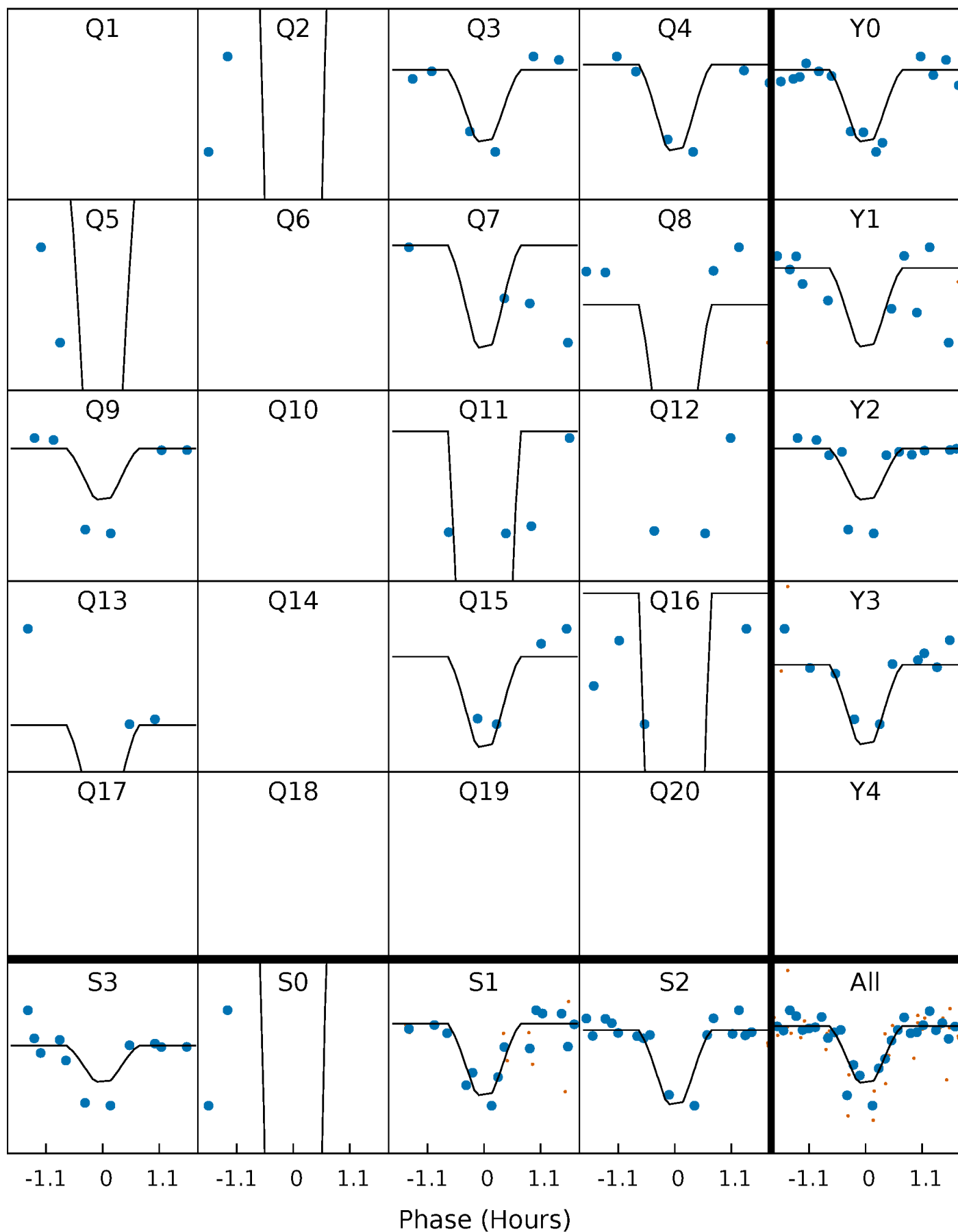
PDC Quarter-Phased Transit Curves

TCE 004929092-03 $P = 9.405644$ Days $T_0 = 136.814412$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004929092-03 P= 9.405644 Days $T_0=136.814412$ (BKJD)

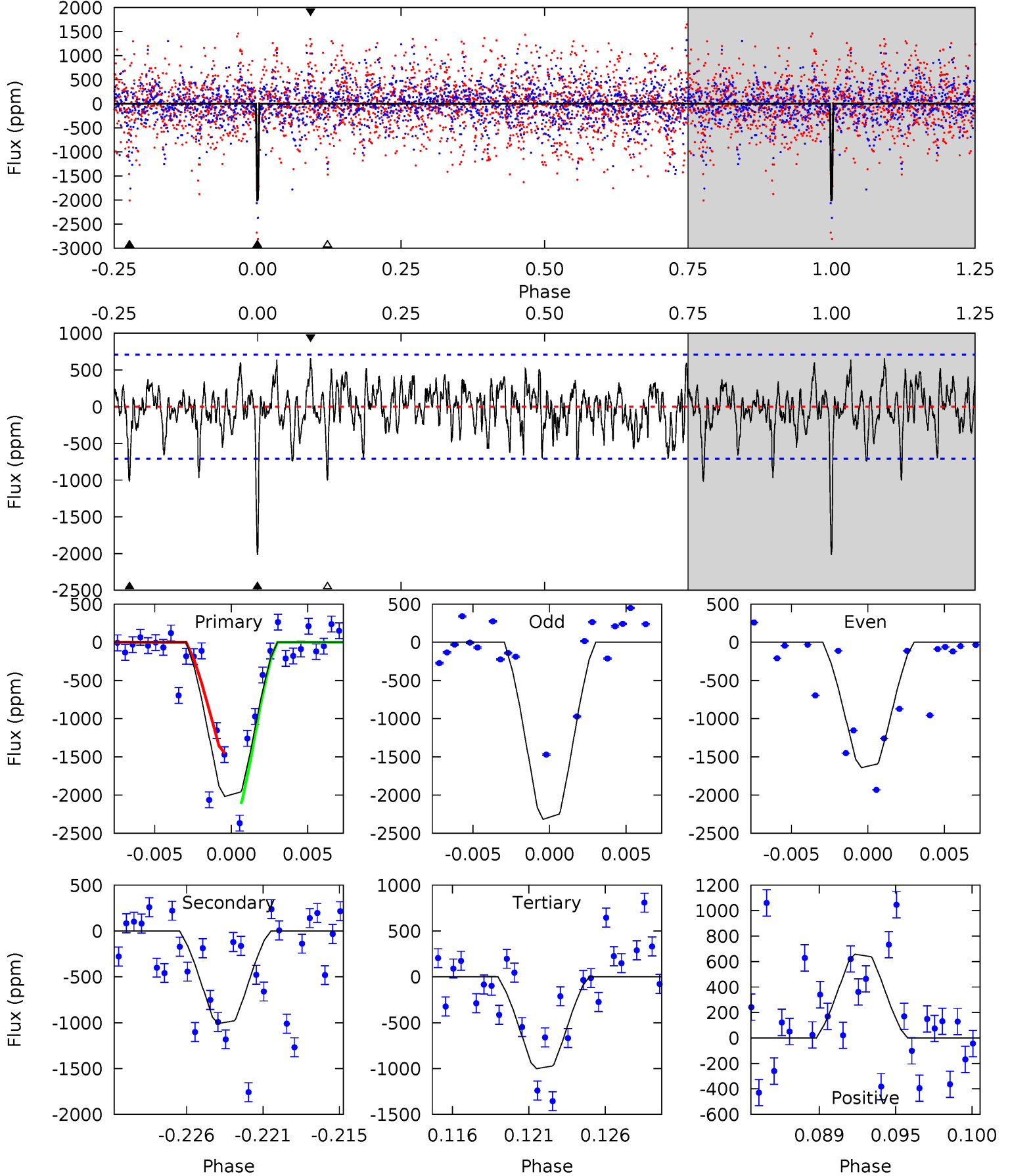


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004929092-03, P = 9.405644 Days, E = 127.408768 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	7.34	7.29	4.79	5.15	2.79	1.80	7.40	9.90	0.05	2.56	2.47	1.10	0.25	2.23



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004929092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4423^{+79}_{-79}	$4.670^{+0.012}_{-0.040}$	$-0.120^{+0.150}_{-0.150}$	$0.620^{+0.040}_{-0.019}$	$0.675^{+0.027}_{-0.043}$	$3.984^{+0.211}_{-0.607}$
	+2%/-2%	+0%/-1%	+125%/-125%	+6%/-3%	+4%/-6%	+5%/-15%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004929092-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1009 ± 137	$3.29^{+2.47}_{-2.08}$	786^{+16}_{-16}	3815^{+1910}_{-631}	298^{+1940}_{-200}
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 $A_{obs} \gg 1.0$

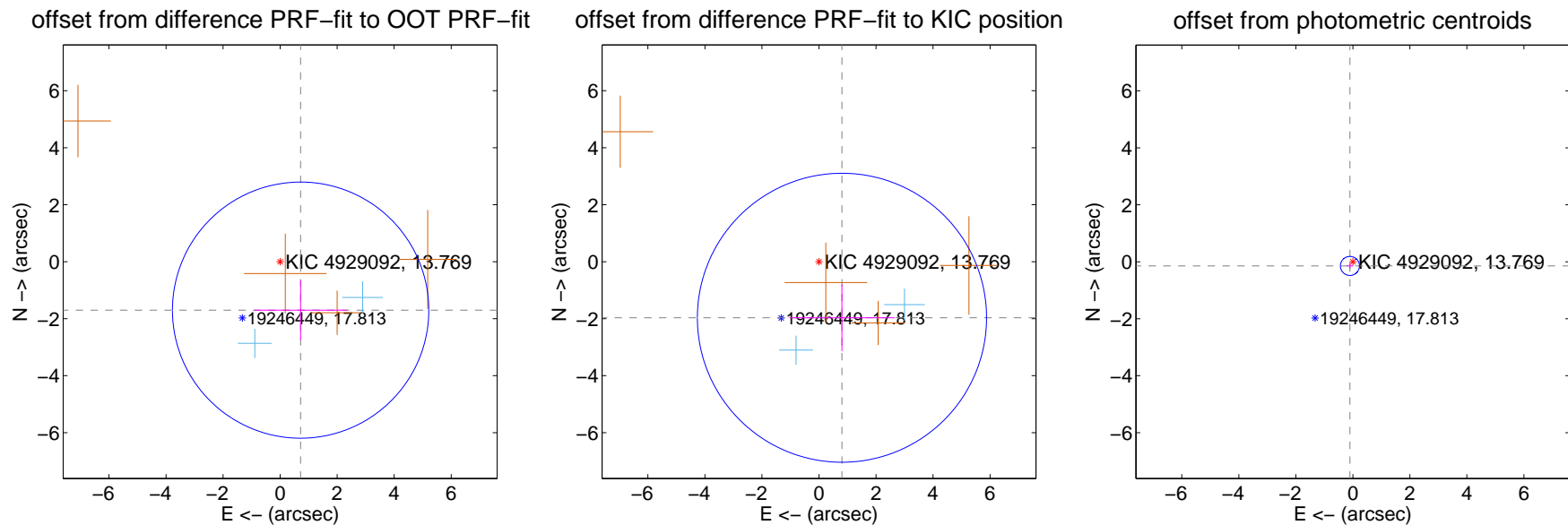
DV Centroid Data

Supplemental centroid analysis for 004929092-03. Kepler magnitude: 13.77. Transit SNR 12.23

There are 2 quarters with good PRF difference image offsets

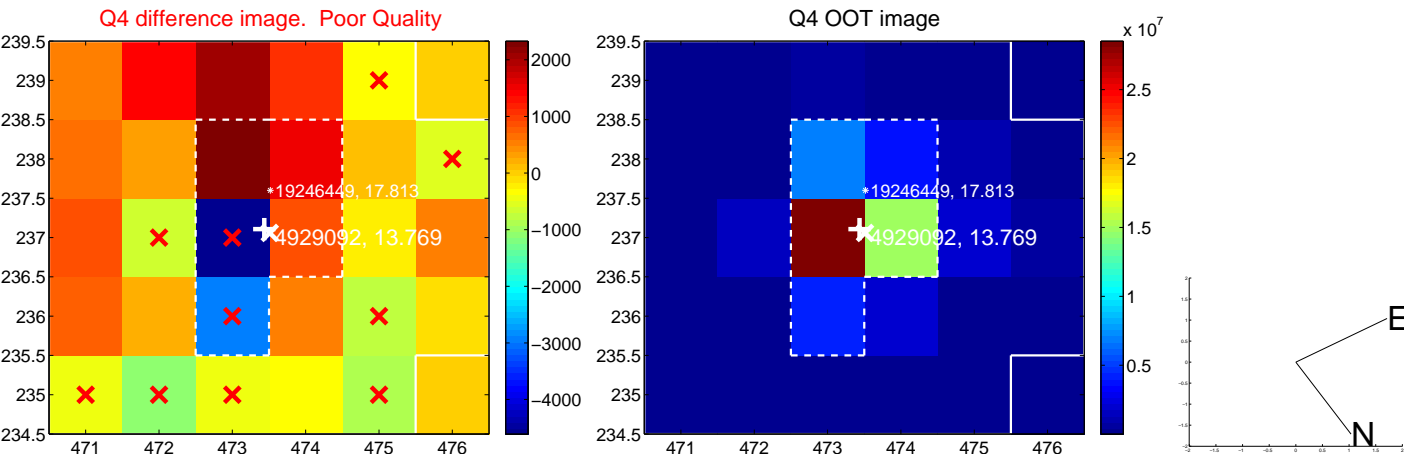
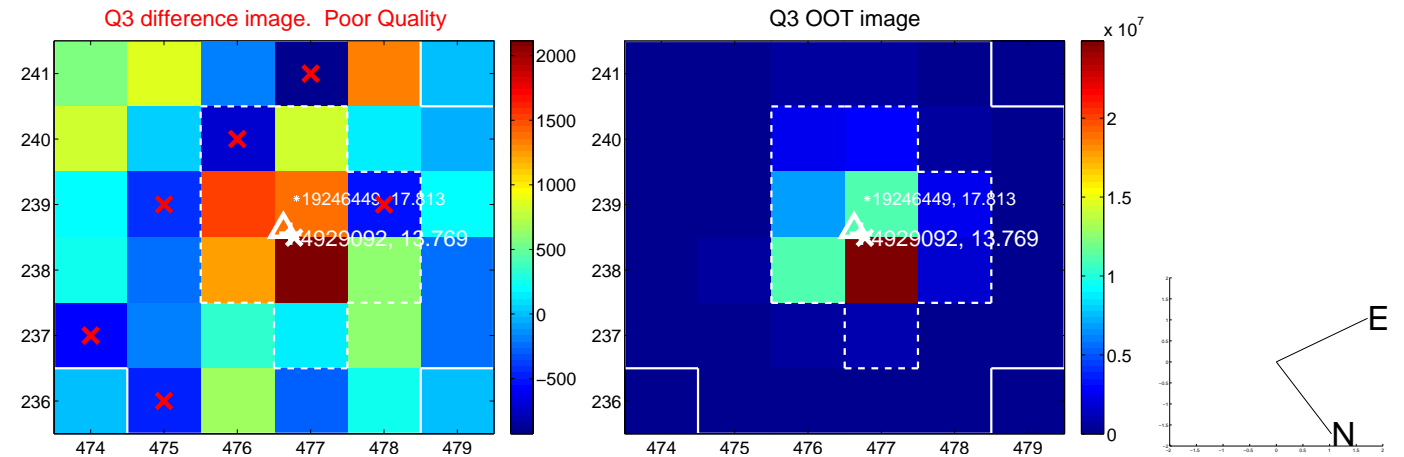
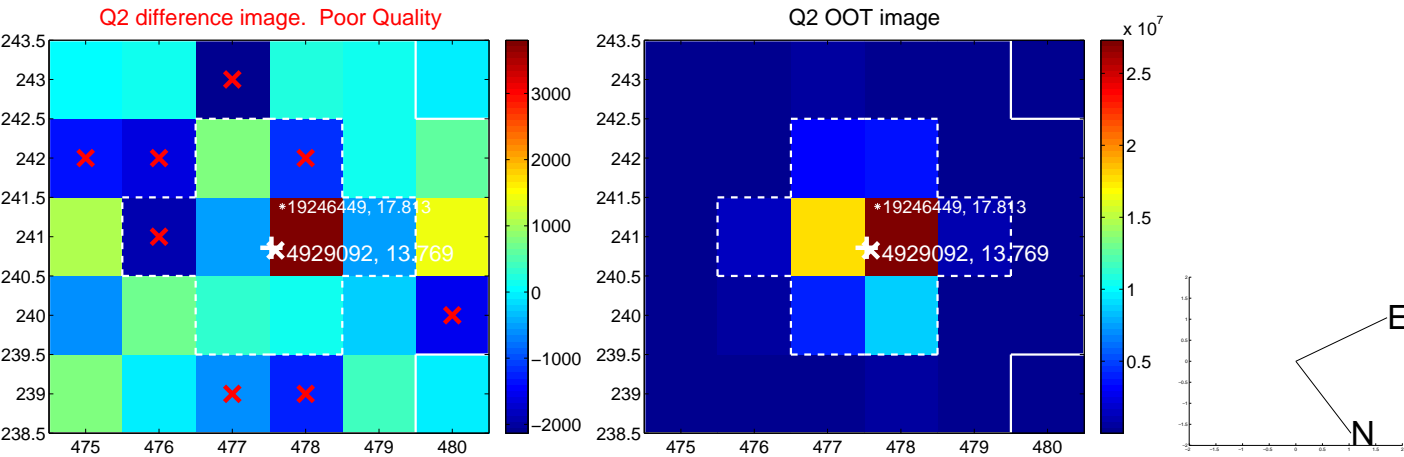
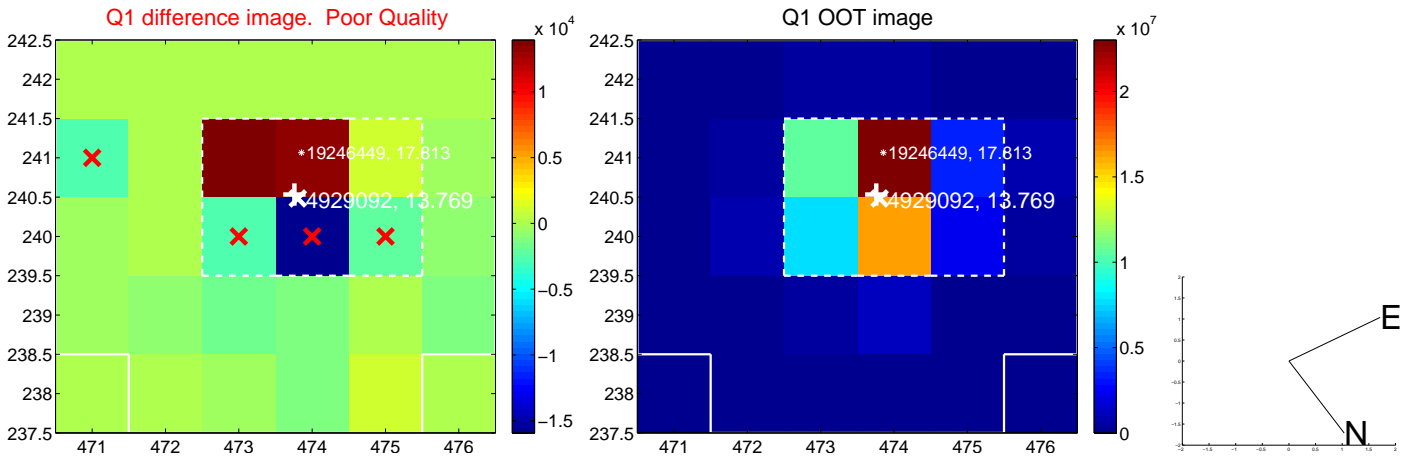
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.846 ± 1.498	1.23	-0.719 ± 1.633	-1.700 ± 1.049
PRF-fit source offset from KIC position	2.127 ± 1.690	1.26	-0.806 ± 1.847	-1.968 ± 1.172
photometric centroid source offset	0.18 ± 0.11	1.61	0.10 ± 0.12	-0.15 ± 0.11

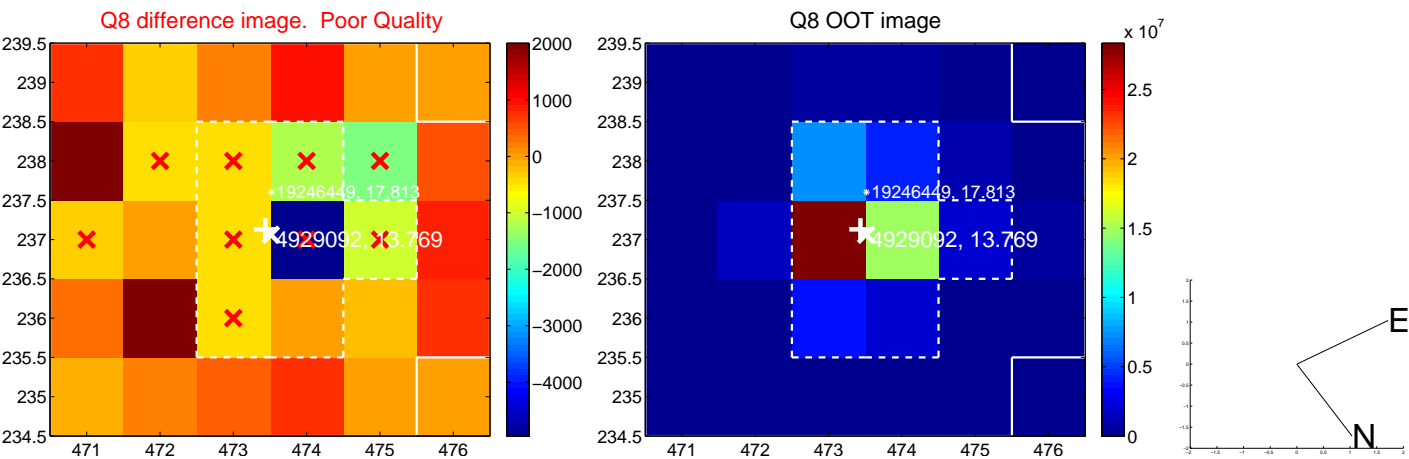
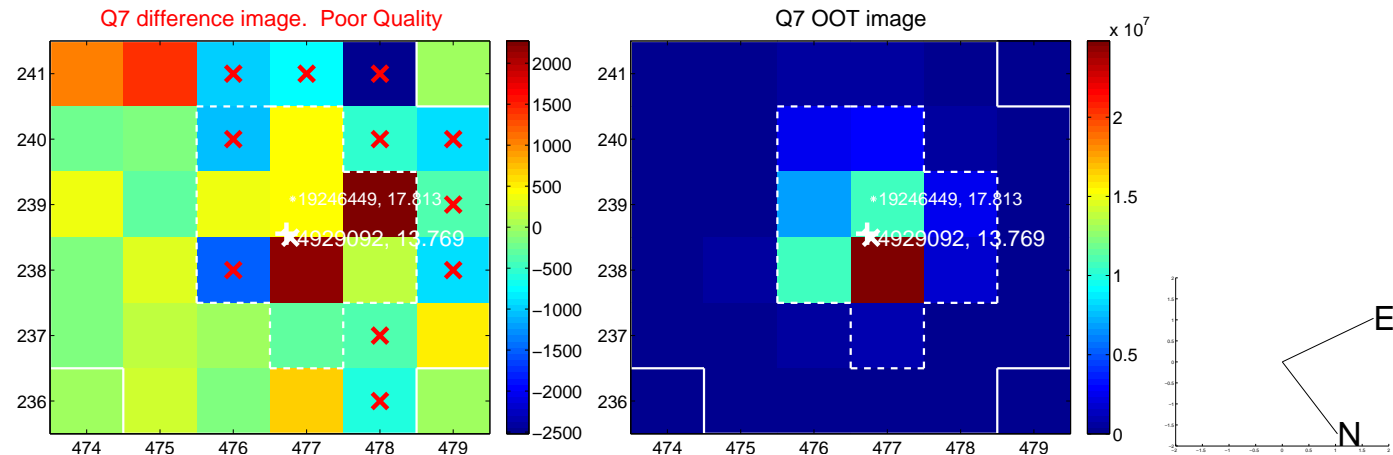
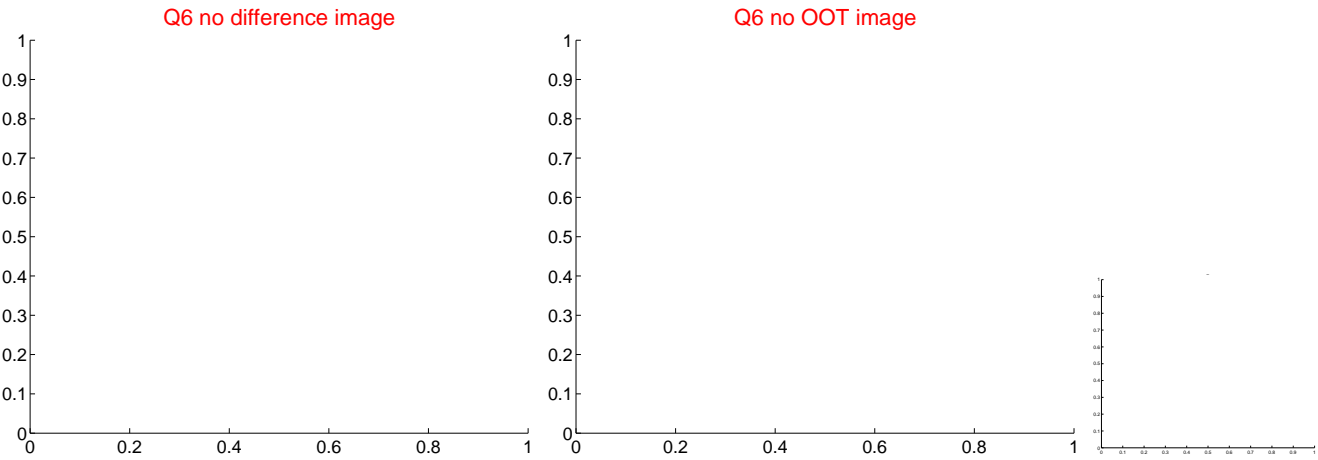
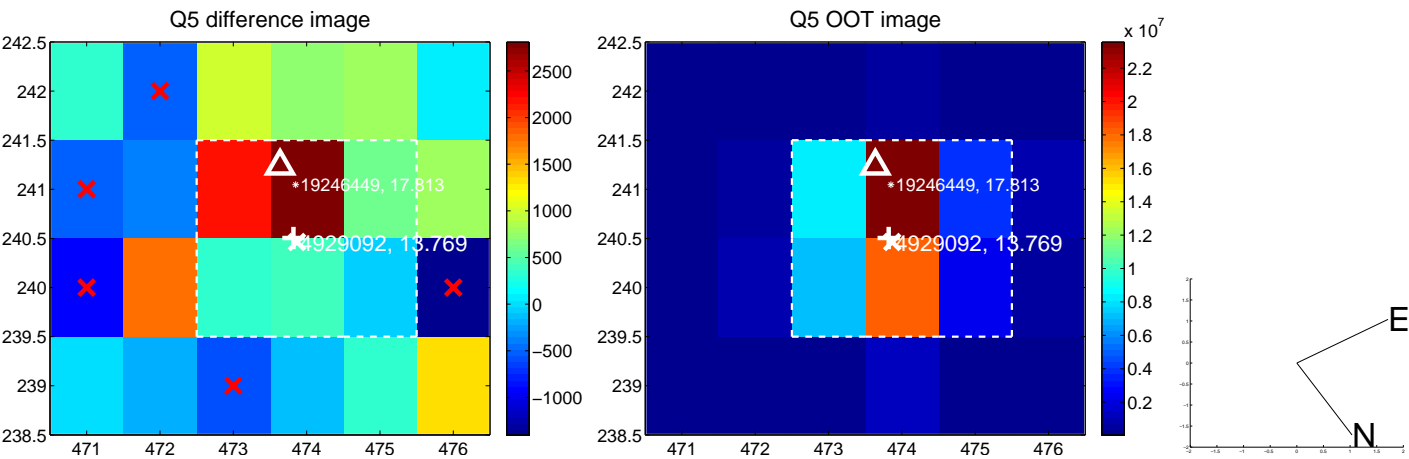


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

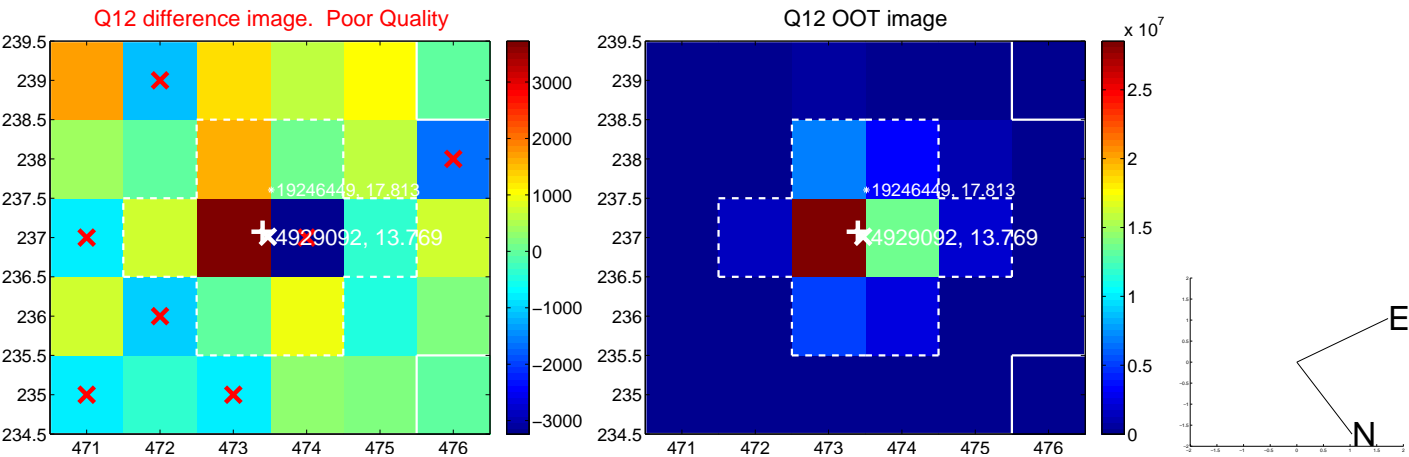
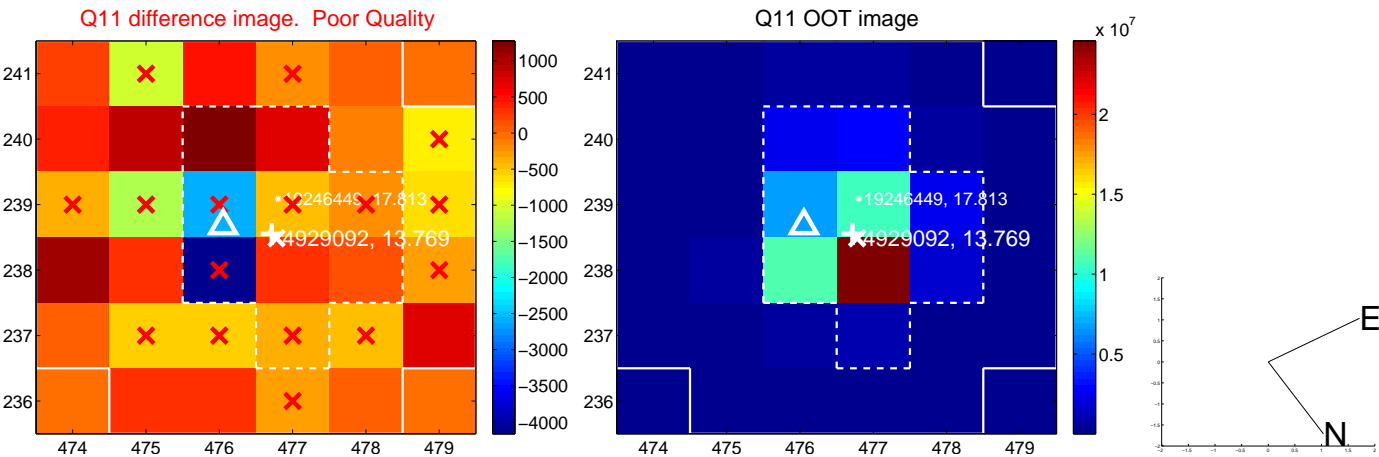
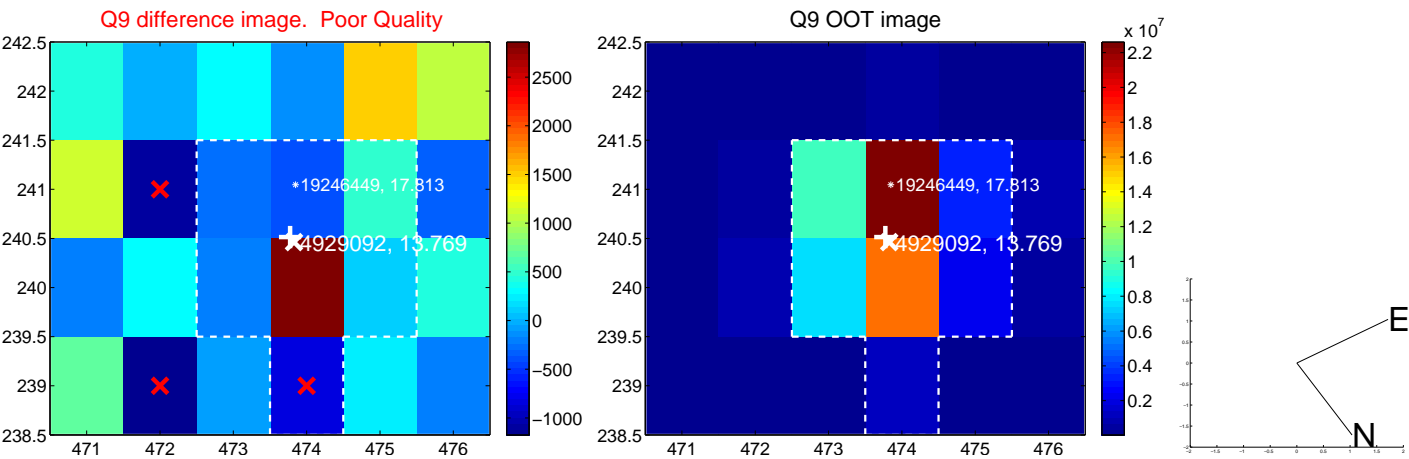
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



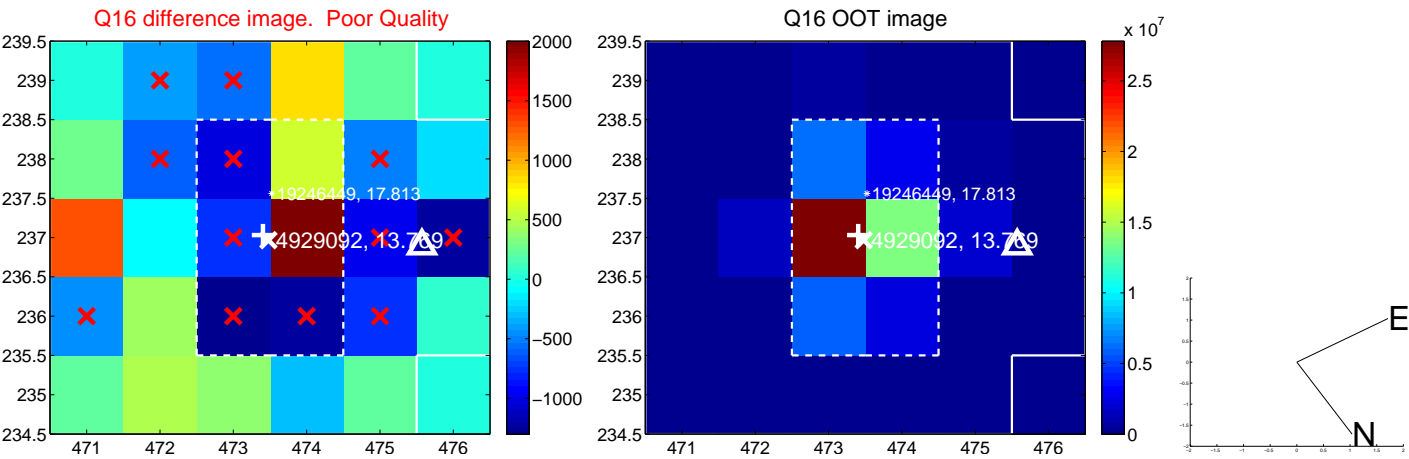
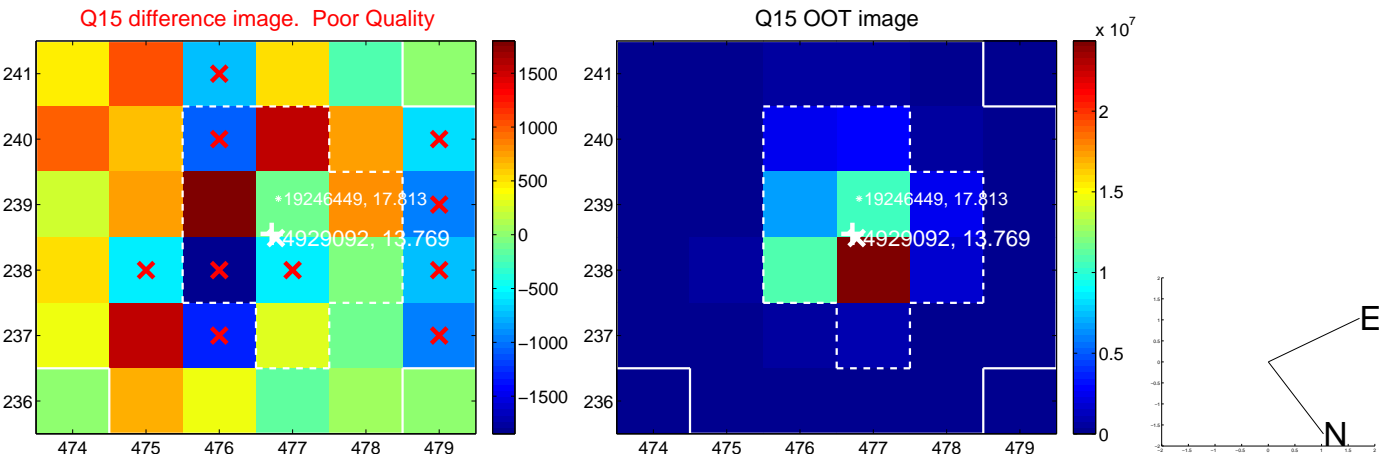
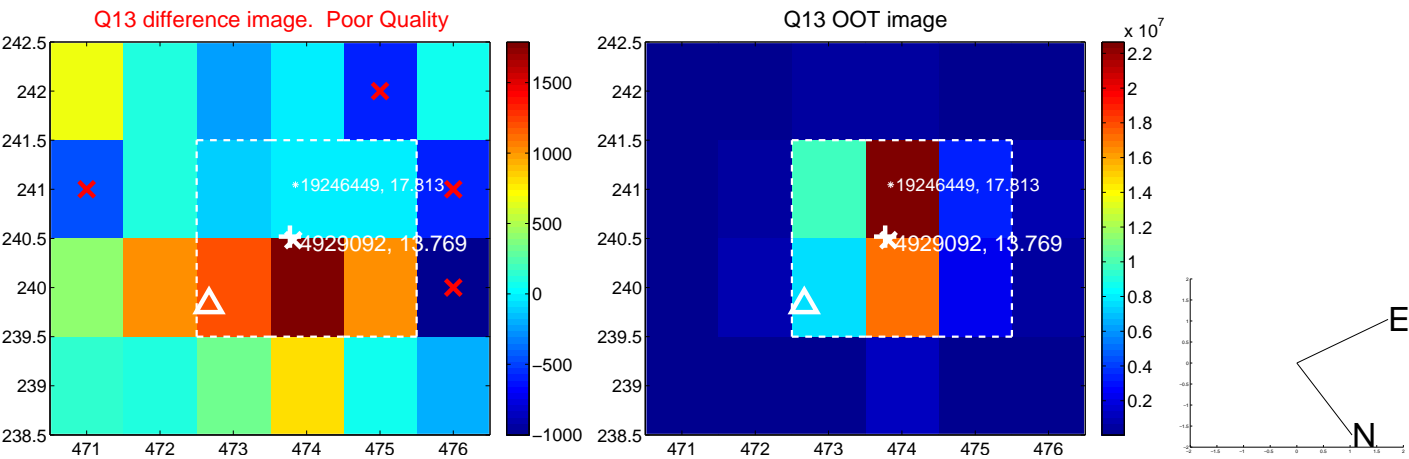
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



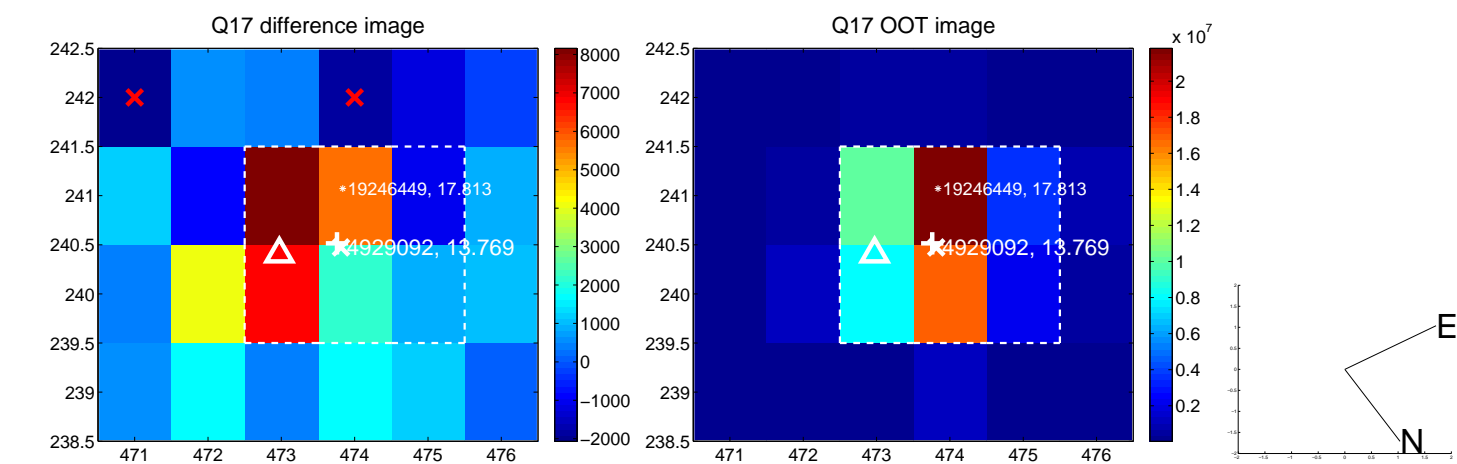
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



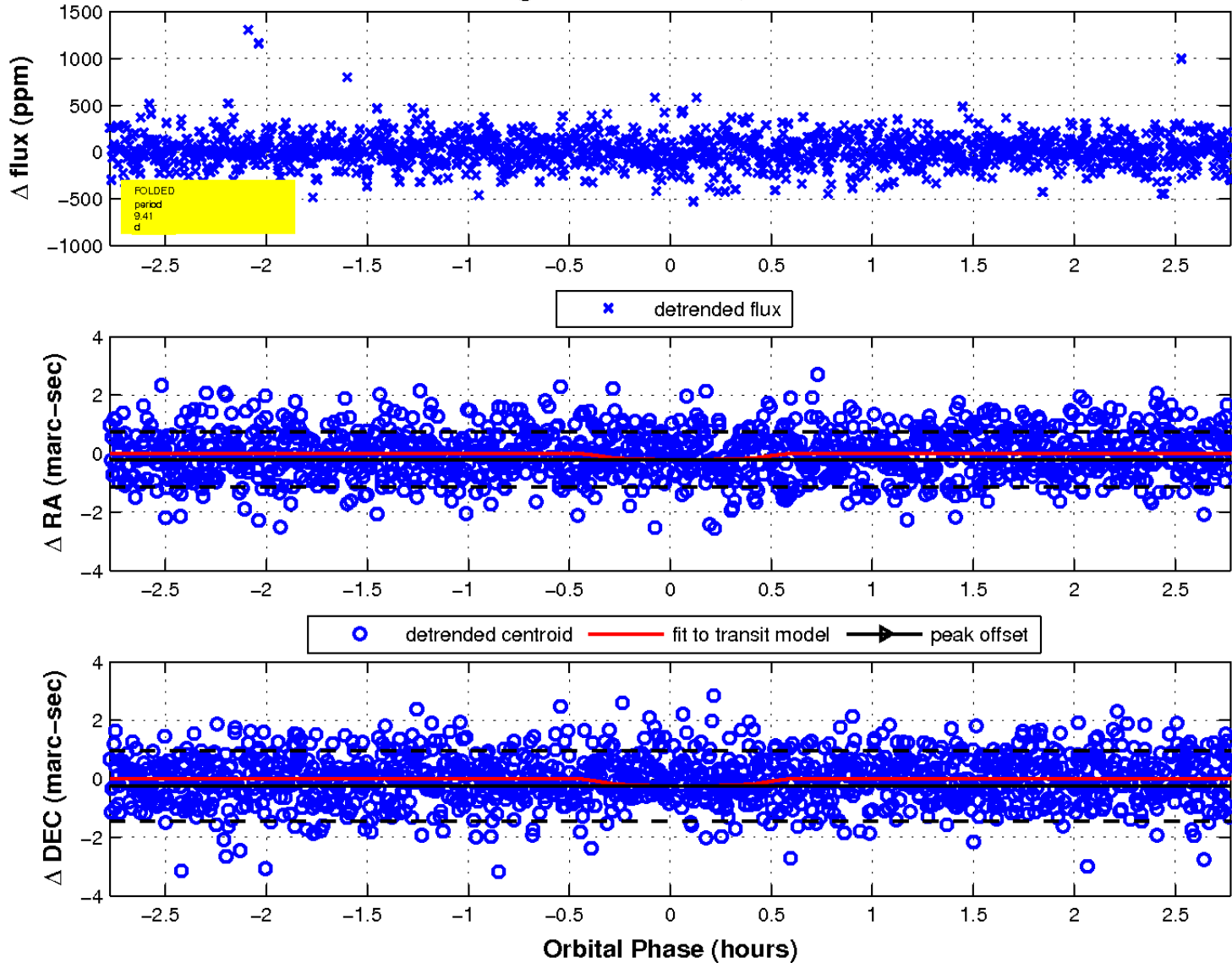
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

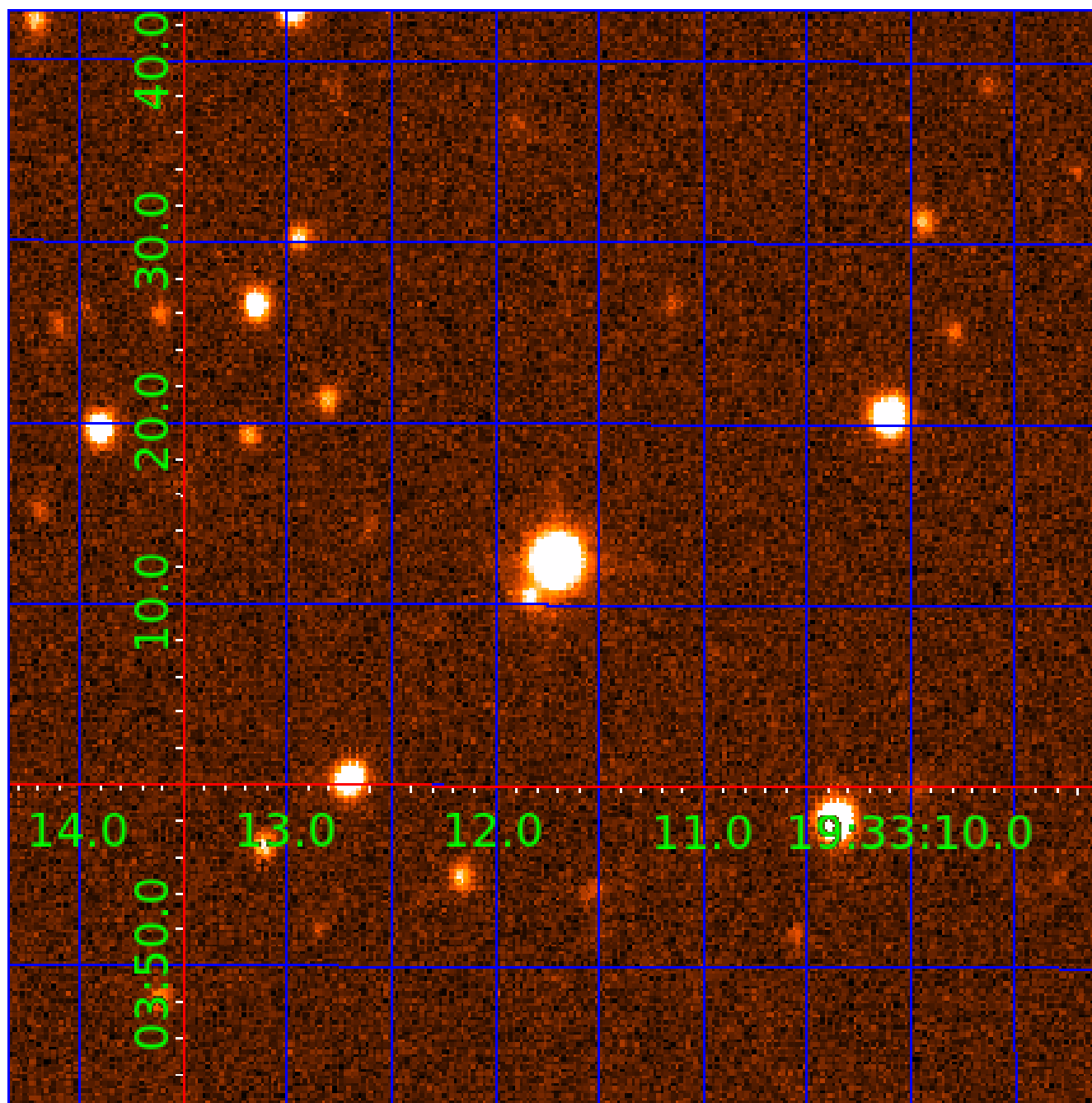


fluxWeightedCentroids, Planet 3 of 6



UKIRT Image

Declination



KIC 004929092

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})
004929092-01	OBS	No	0.578061	131.773381	21.3	4.153	7.7	10.3	0.62	4423	0.28	946.37
004929092-02	OBS	No	19.179796	134.804235	1668.6	1.416	15.2	10.7	0.62	4423	2.91	8.88
004929092-03	OBS	No	9.405644	136.814412	1722.3	0.927	13.0	12.2	0.62	4423	2.51	22.95
004929092-05	OBS	No	16.738756	138.168652	324.4	2.653	9.3	4.2	0.62	4423	1.31	10.64
004929092-06	OBS	No	19.697526	140.130677	1416.3	1.037	10.6	9.5	0.62	4423	2.26	8.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004929092-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS
004929092-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004929092-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED
004929092-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST
004929092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_MEAS

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

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

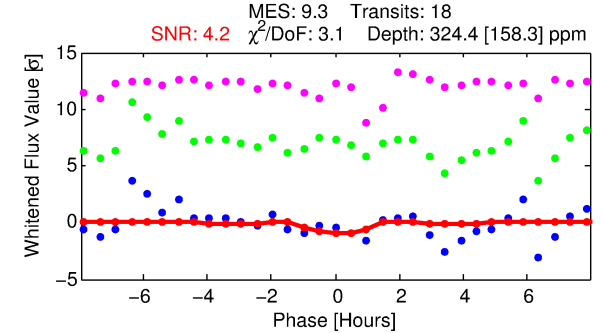
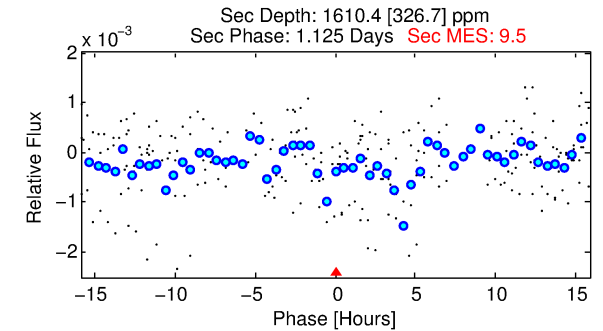
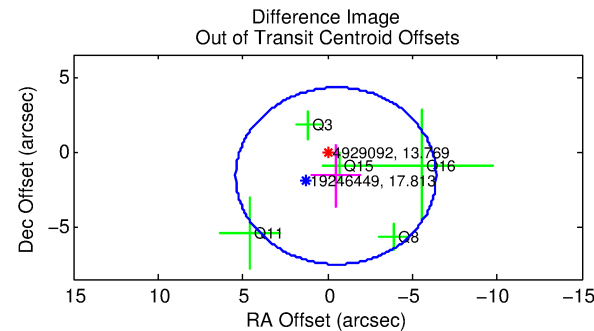
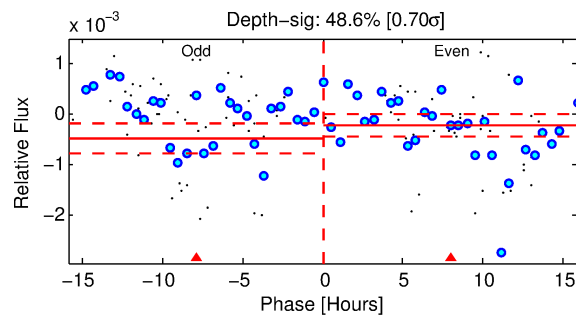
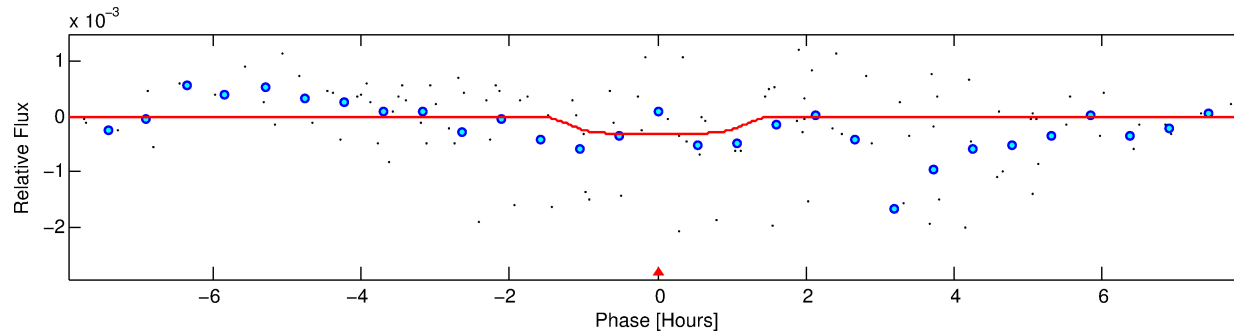
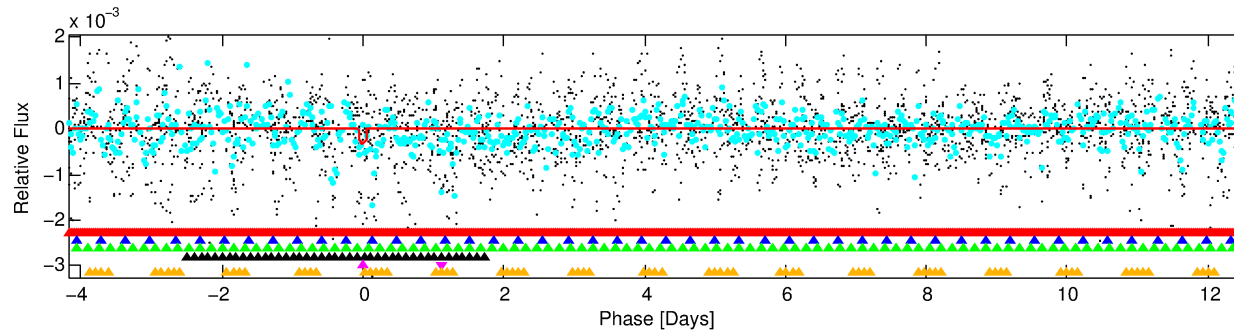
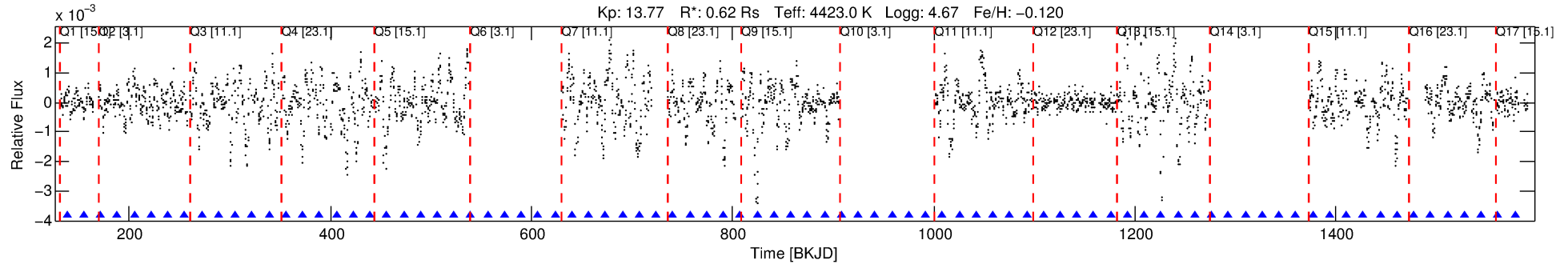
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004929092-05

No Significant Match Found

DV One-Page Summary

KIC: 4929092 Candidate: 5 of 6 Period: 16.739 d



DV Fit Results:

Period = 16.73876 [0.00088] d
Epoch = 138.1687 [0.0532] BKJD
Rp/R* = 0.0193 [0.0831]
a/R* = 27.21 [400.74]
b = 0.85 [5.07]
Seff = 10.64 [1.10]
Teq = 461 [12] K
Rp = 1.31 [5.62] Re
a = 0.1113 [0.0059] AU
Ag = 6435.22 [55415.11] [0.12 σ]
Teffp = 6378 [13730] K [0.43 σ]

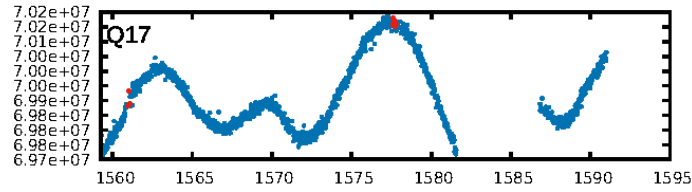
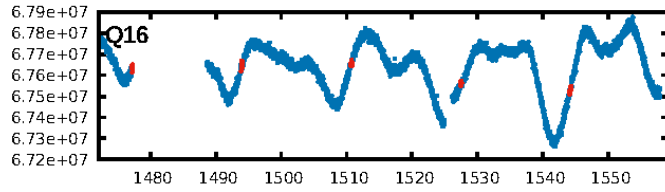
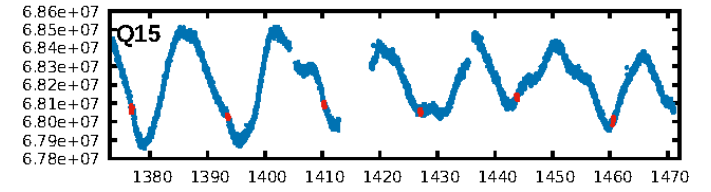
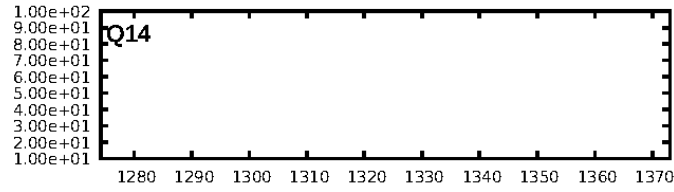
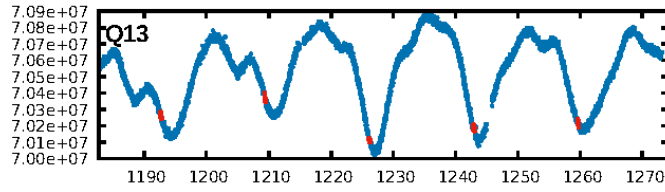
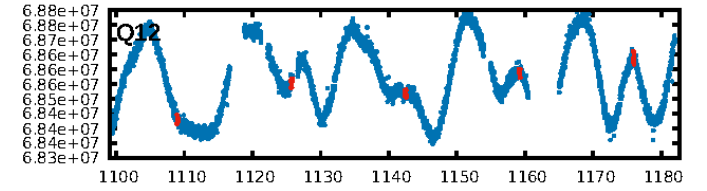
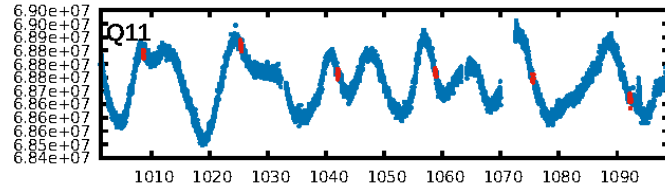
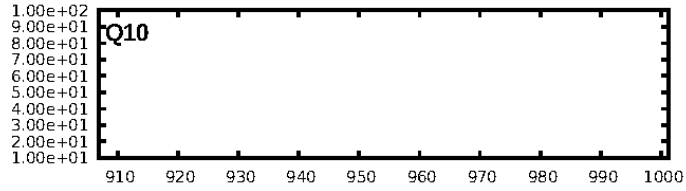
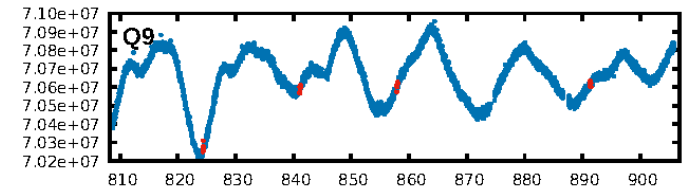
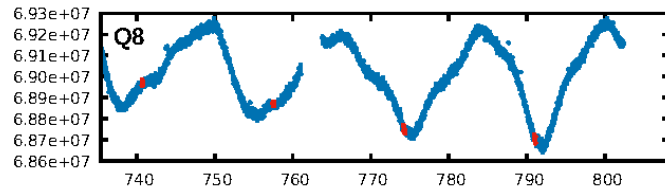
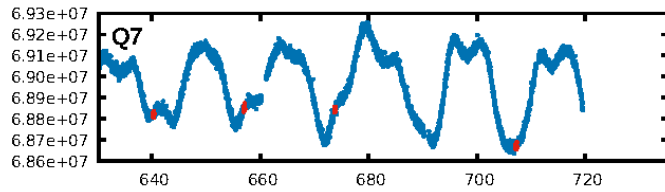
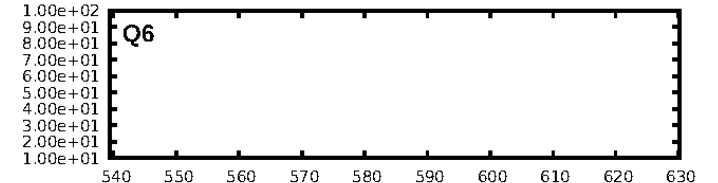
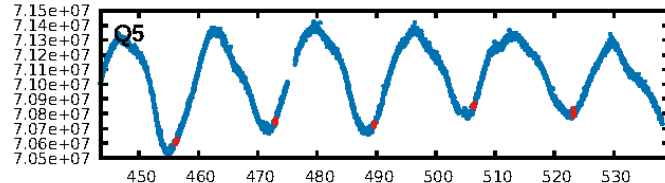
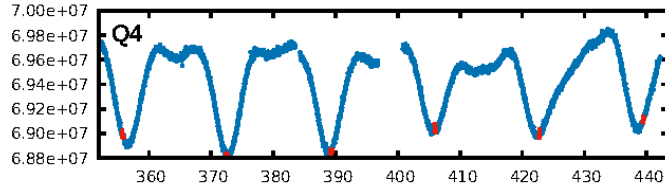
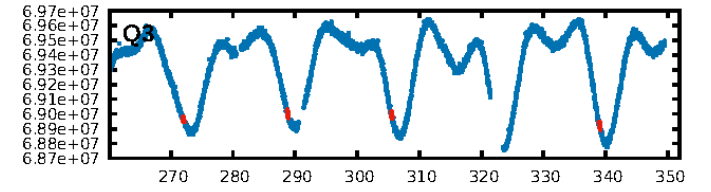
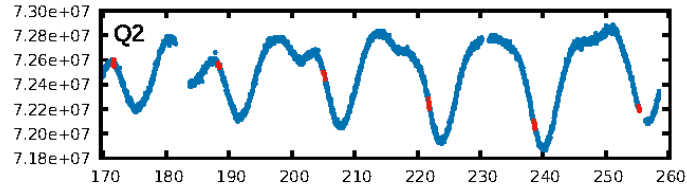
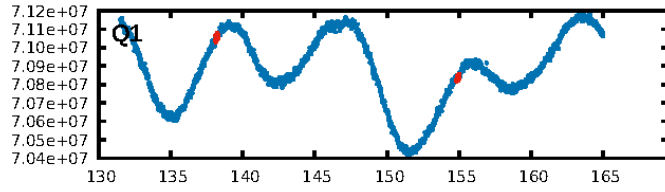
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [62.63 σ]
LongPeriod-sig: 100.0% [19.48 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.39e-16
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: -0.1953
Centroid-sig: 49.0%
Centroid-so: 0.129 arcsec [0.27 σ]
OotOffset-rm: 1.699 arcsec [0.86 σ]
KicOffset-rm: 2.047 arcsec [1.03 σ]
OotOffset-st: 0/3/2/0 [5]
KicOffset-st: 0/3/2/0 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 0.00 [0/14]

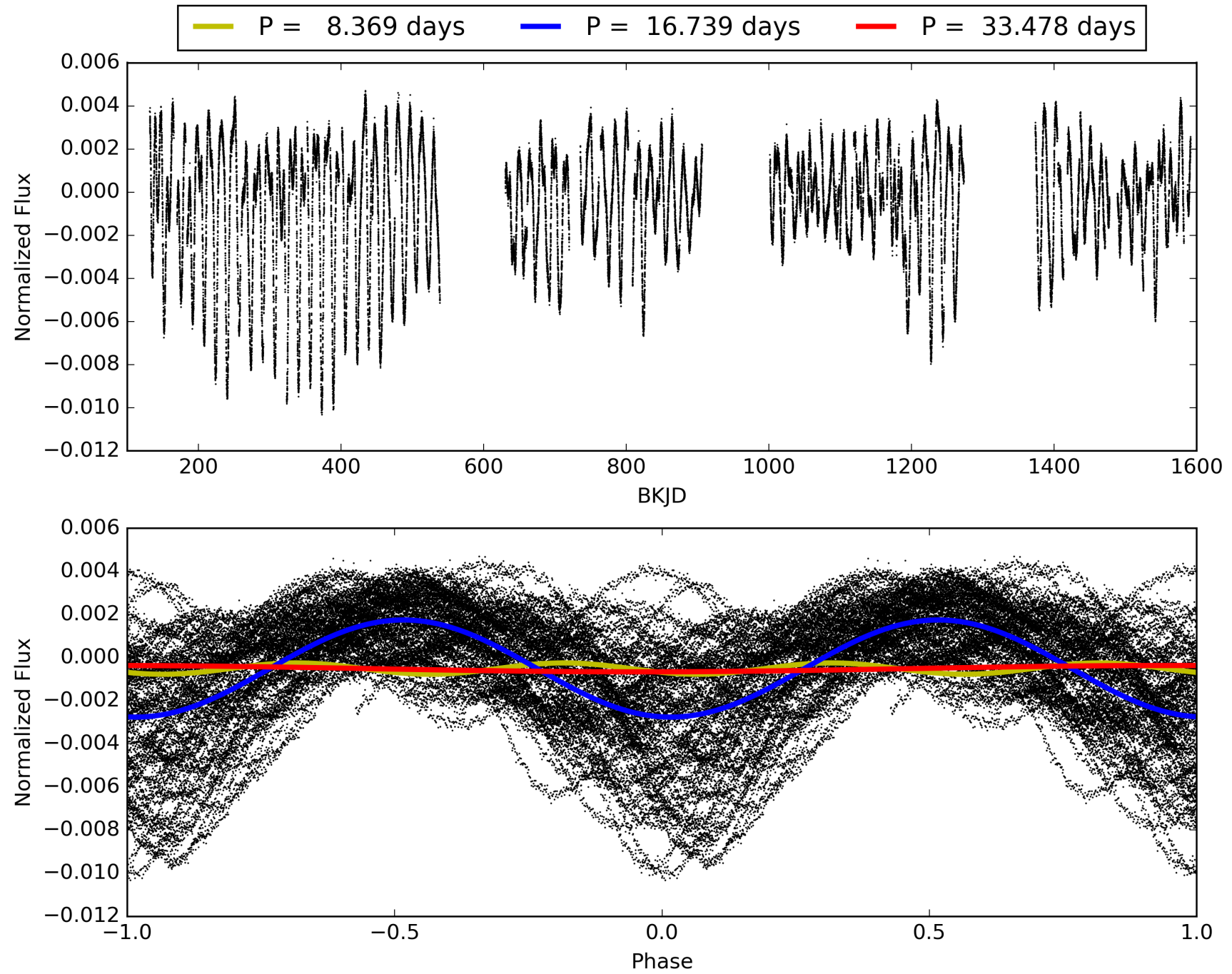
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:35:49 Z

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

TCE 004929092-05, PDC Light Curves

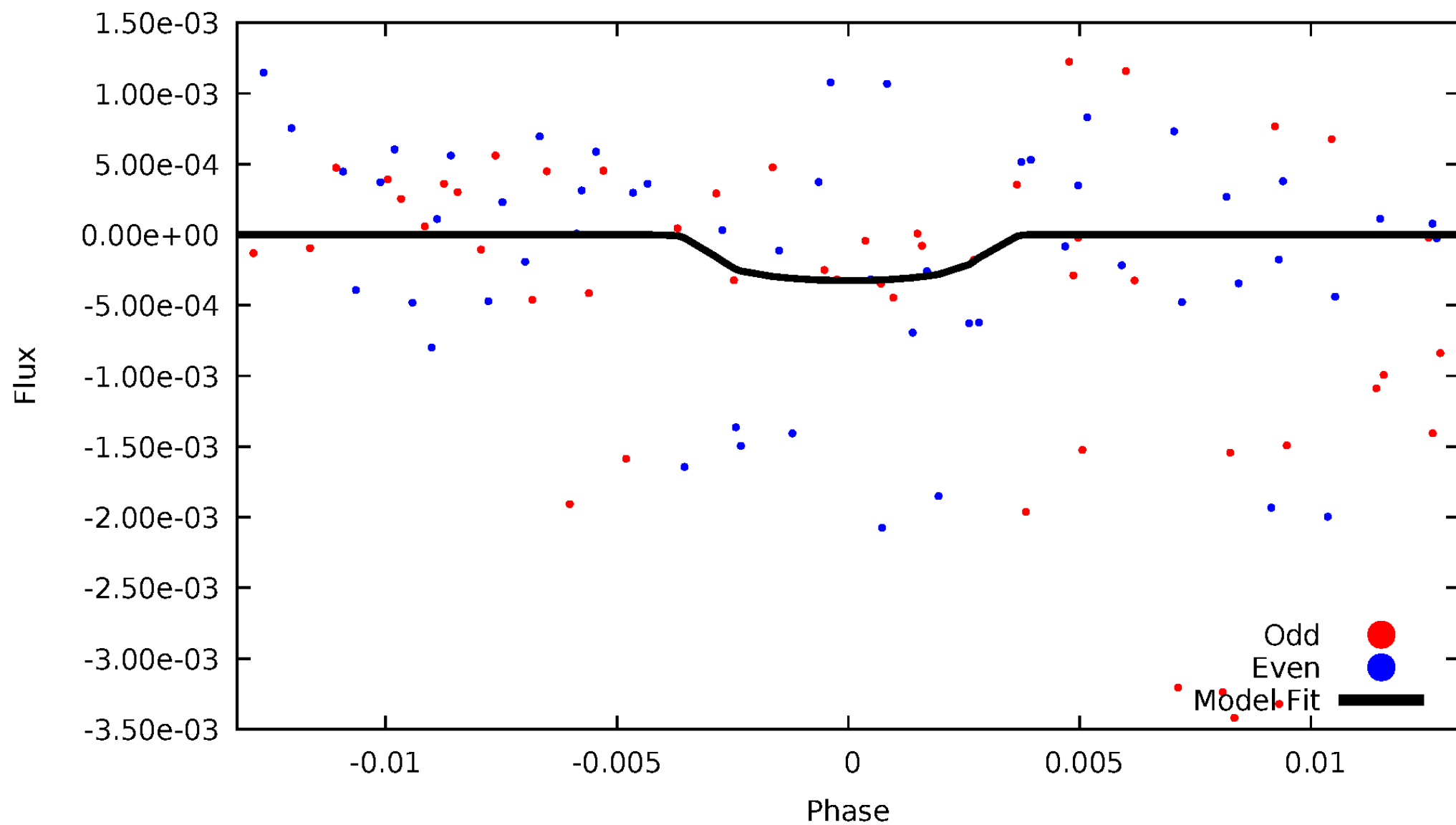


TCE 004929092-05



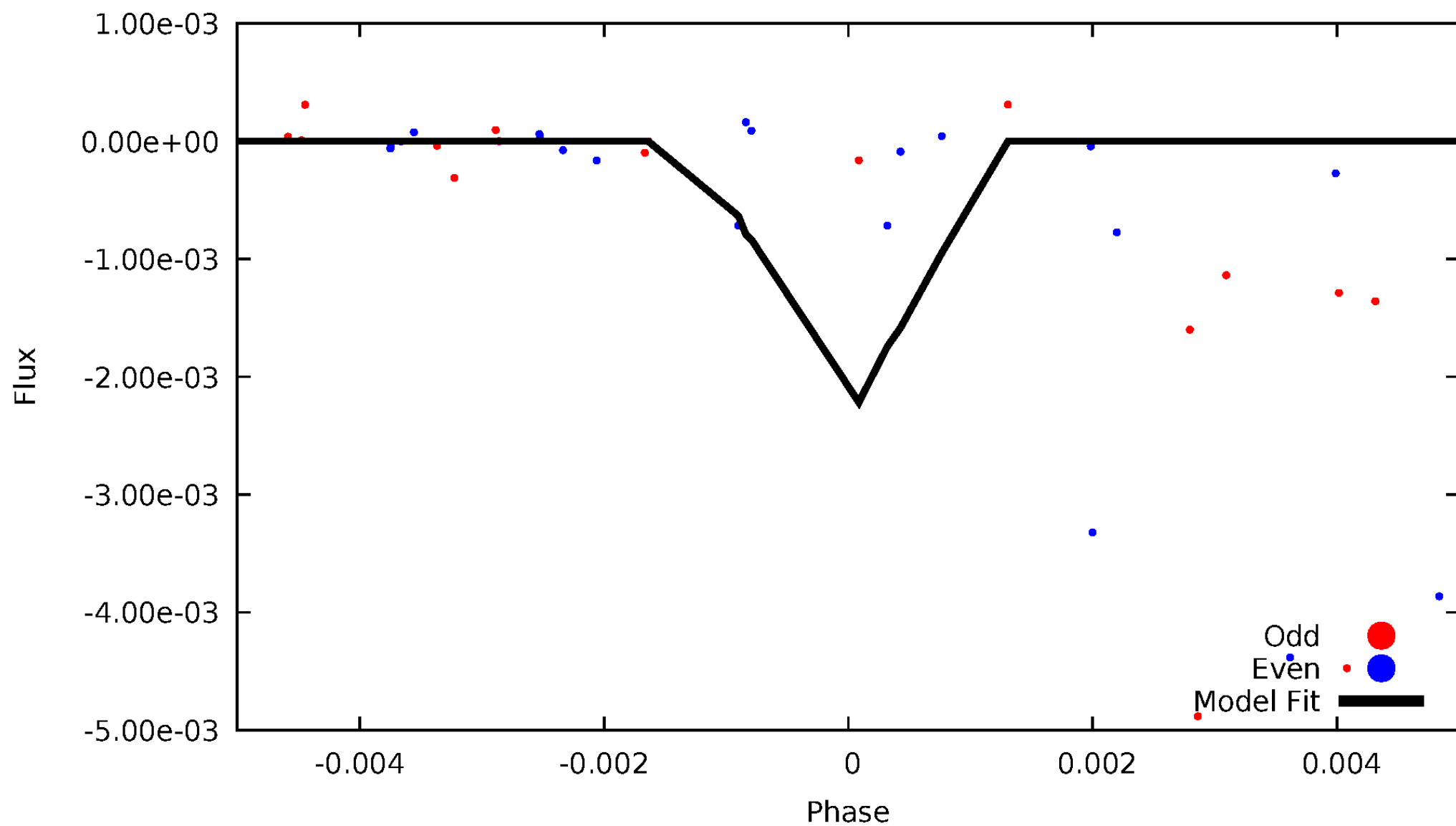
DV Odd/Even

TCE 004929092-05



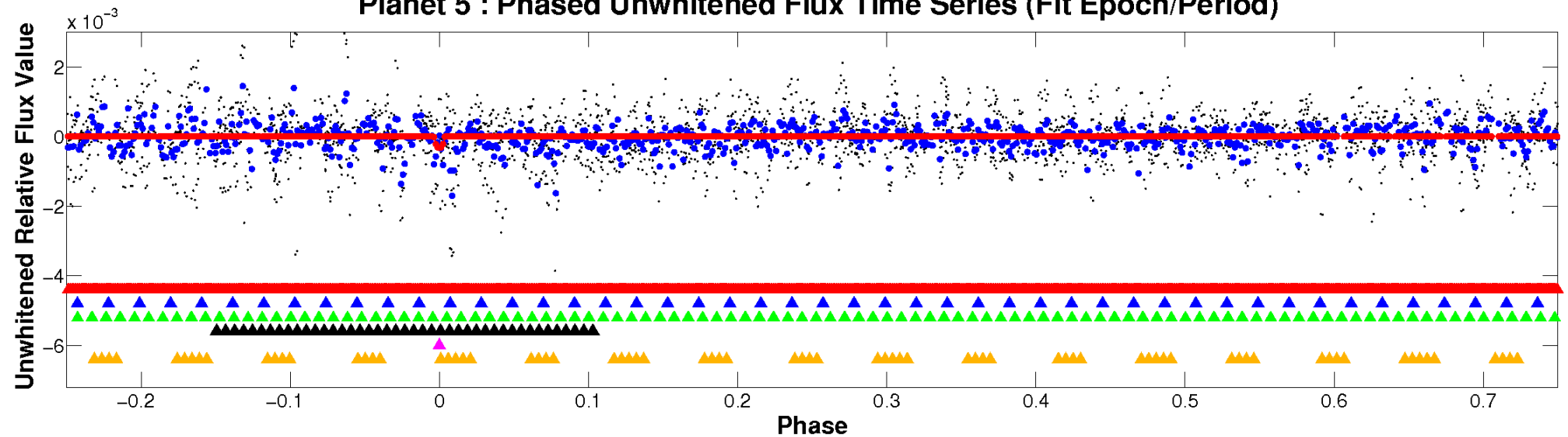
ALT Odd/Even

TCE 004929092-05

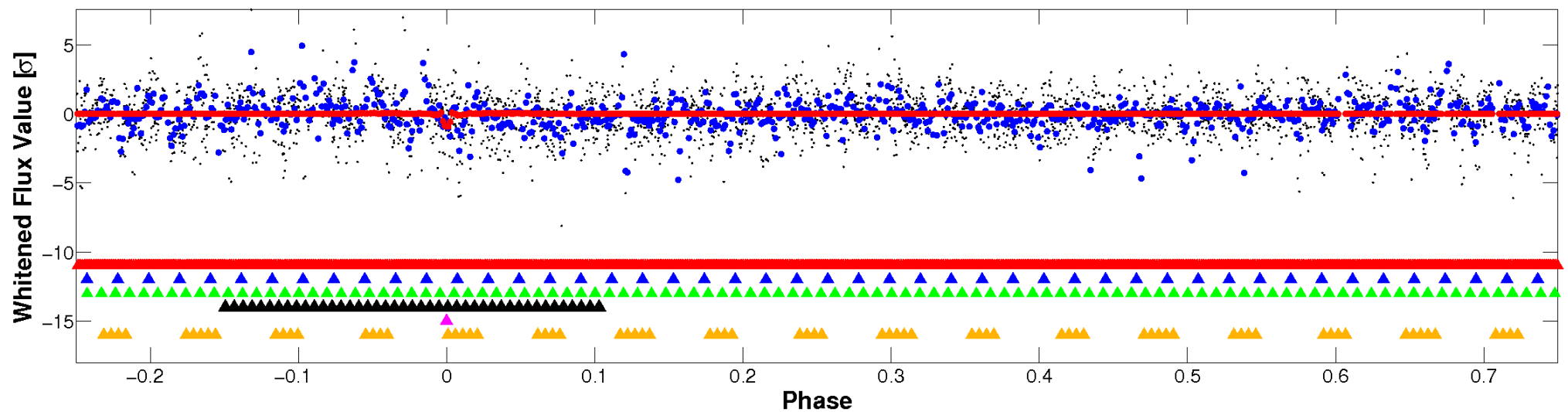


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

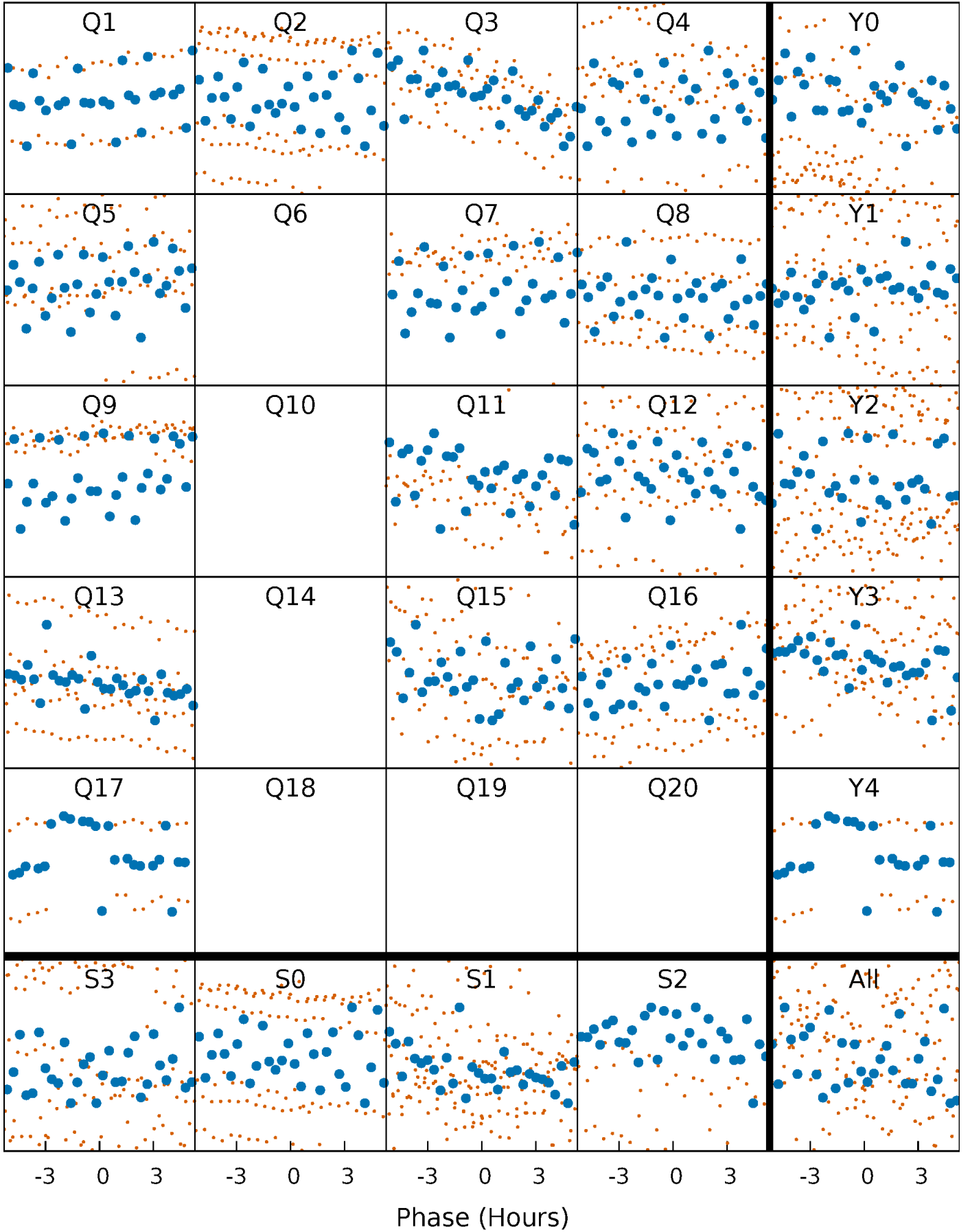


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



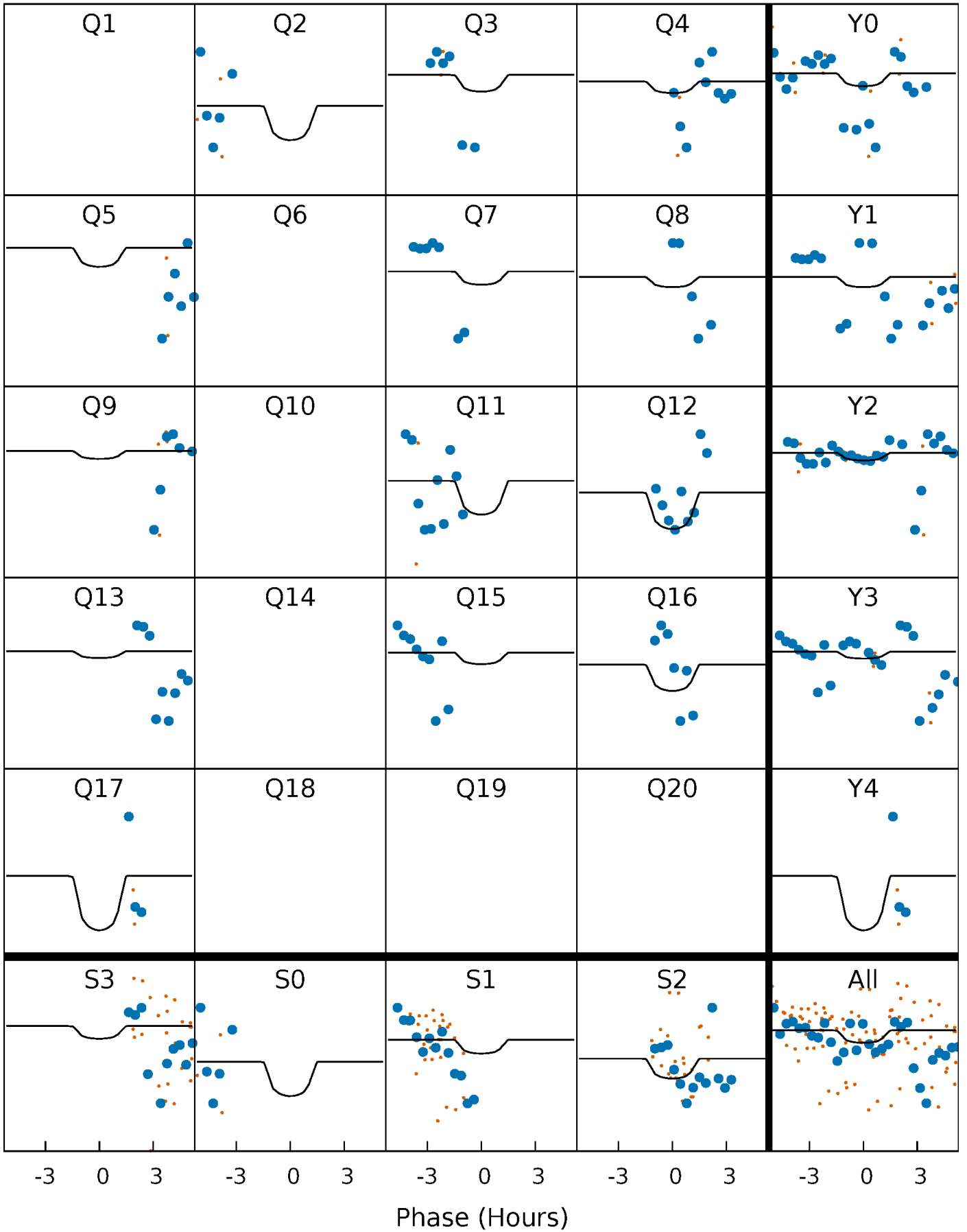
PDC Quarter-Phased Transit Curves

TCE 004929092-05 P= 16.738756 Days $T_0=138.168652$ (BKJD)



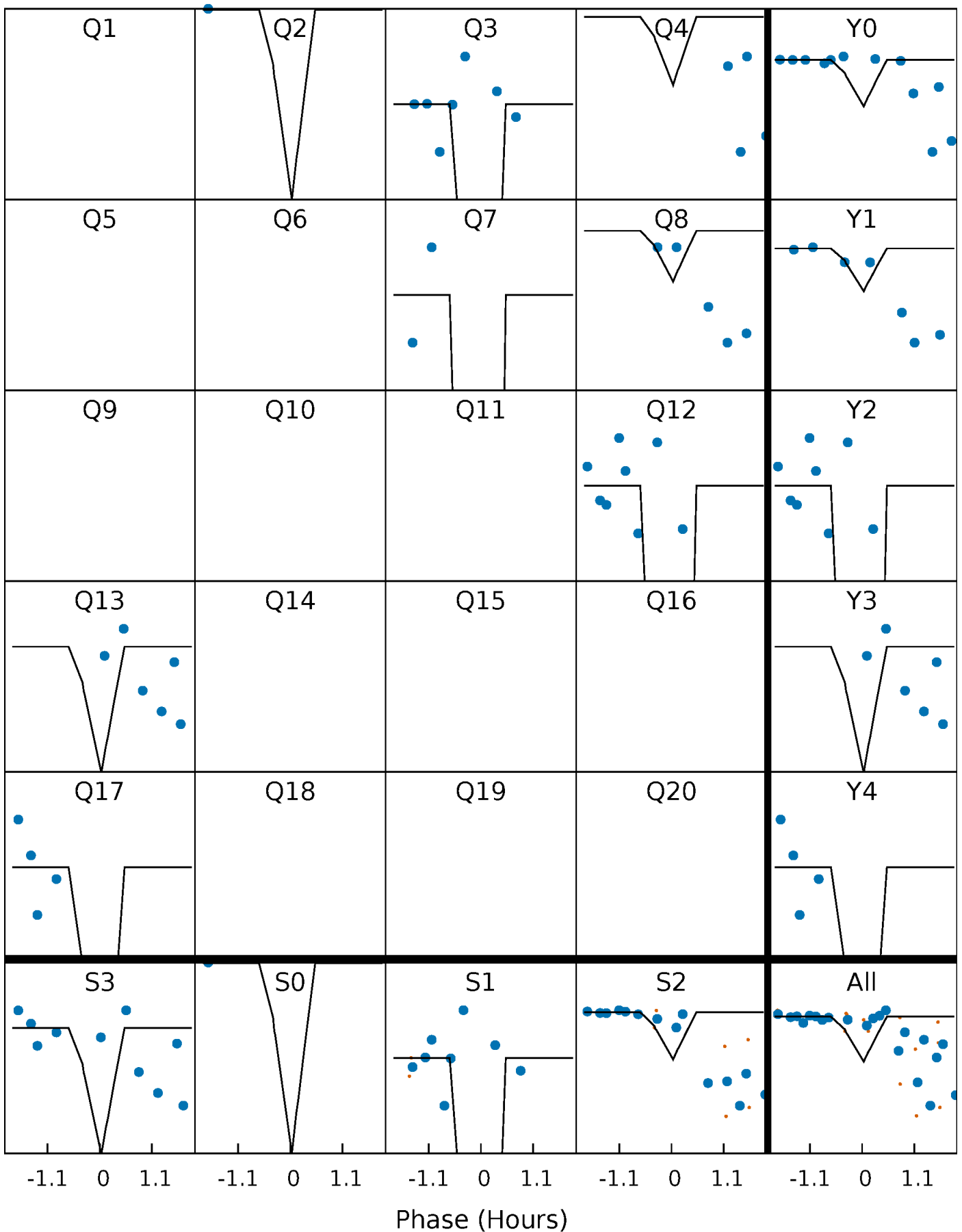
DV Quarter-Phased Transit Curves

TCE 004929092-05 $P = 16.738756$ Days $T_0 = 138.168652$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

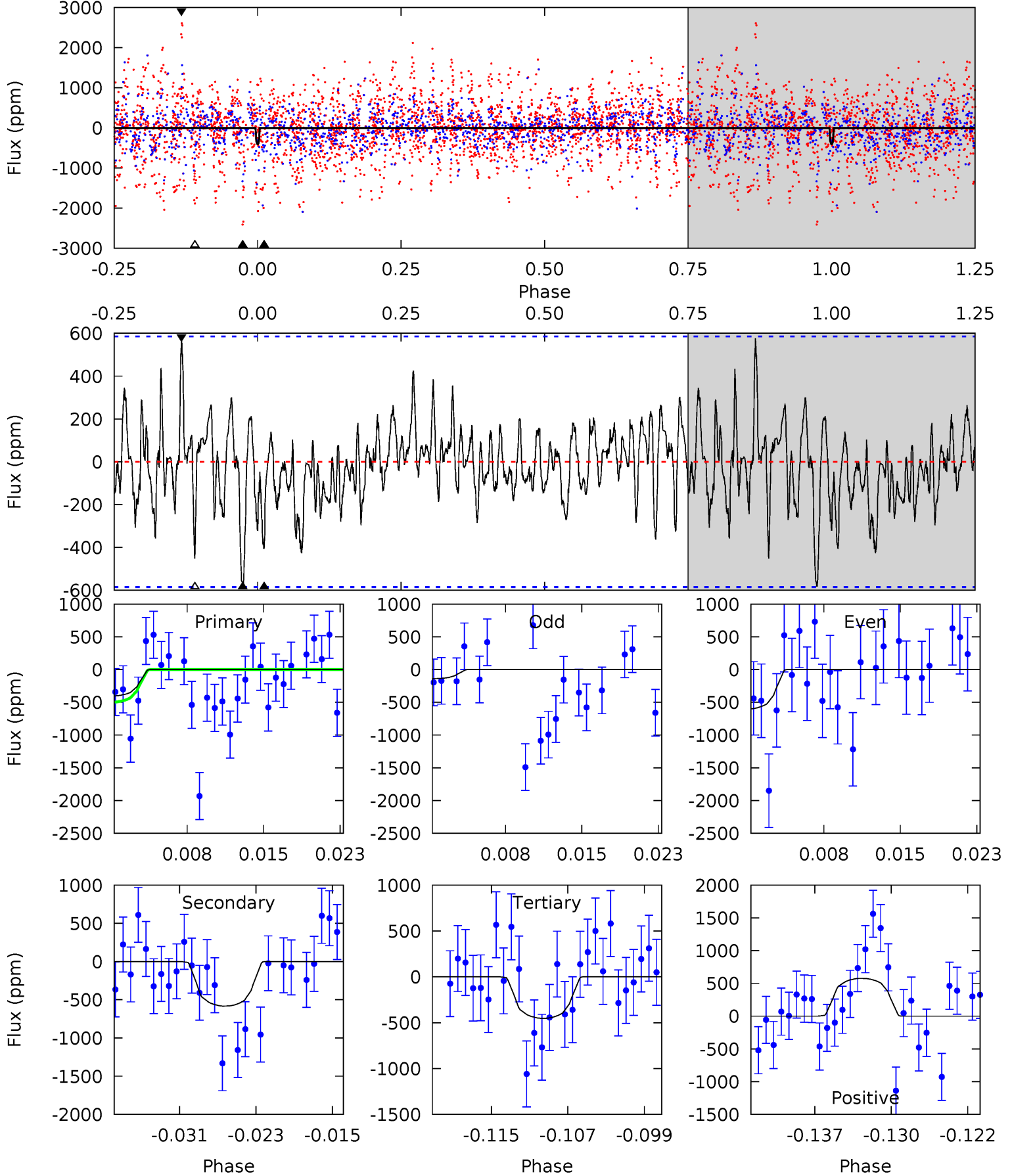
TCE 004929092-05 $P = 16.741344$ Days $T_0 = 138.084111$ (BKJD)



DV Model-Shift Uniqueness Test

004929092-05, P = 16.738756 Days, E = 121.429896 Days

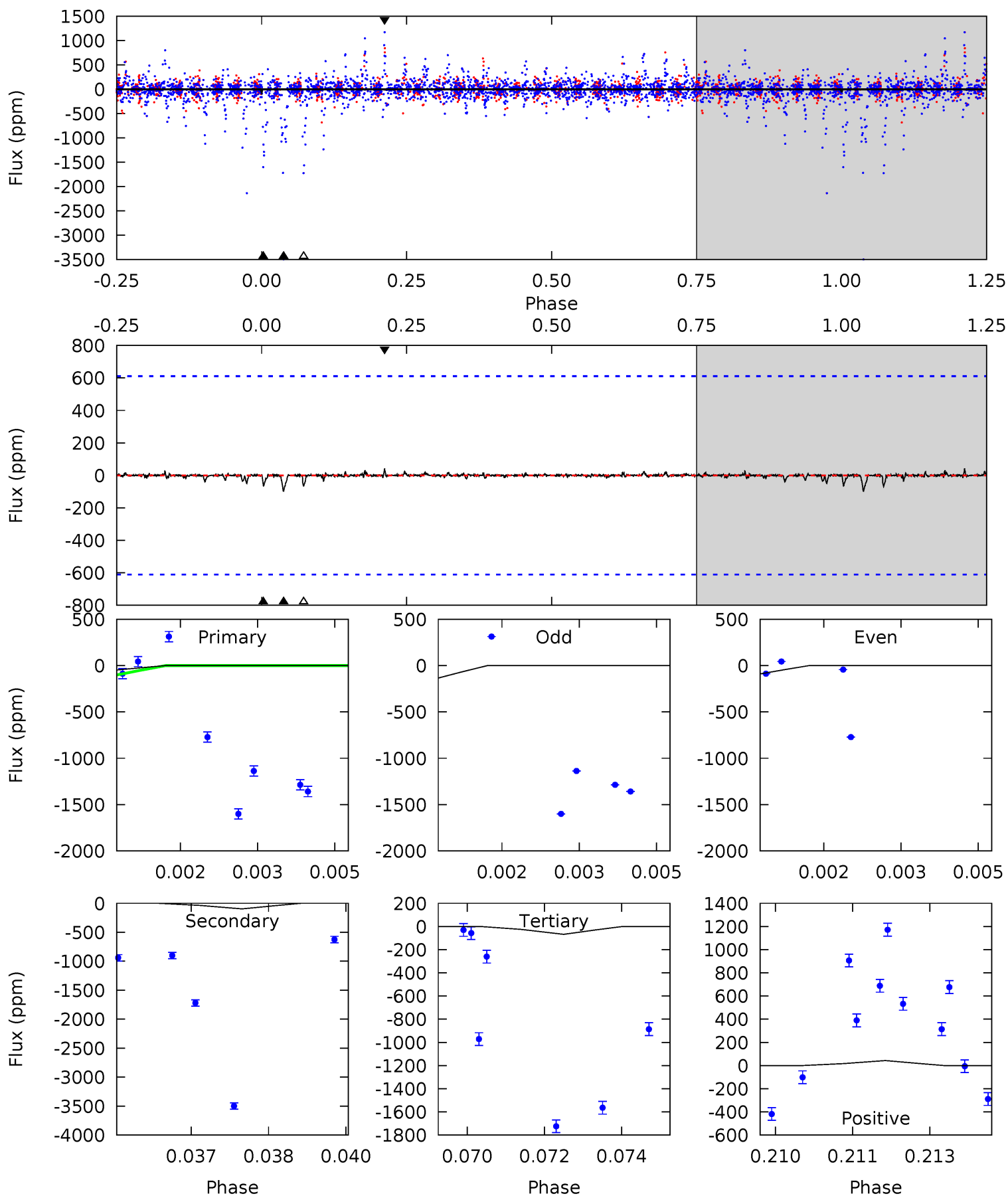
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.51	5.06	3.92	5.00	5.08	2.67	1.32	-0.42	-1.50	1.13	0.05	1.98	1.67	0.50	0.94



Alt Model-Shift Uniqueness Test

004929092-05, P = 16.741344 Days, E = 121.342767 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.51	0.85	0.59	0.38	5.37	3.16	0.06	-0.08	0.13	0.26	0.47	0.13	1.00	0.31	0.03



Stellar Parameters For KIC 004929092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4423^{+79}_{-79}	$4.670^{+0.012}_{-0.040}$	$-0.120^{+0.150}_{-0.150}$	$0.620^{+0.040}_{-0.019}$	$0.675^{+0.027}_{-0.043}$	$3.984^{+0.211}_{-0.607}$
	+2%/-2%	+0%/-1%	+125%/-125%	+6%/-3%	+4%/-6%	+5%/-15%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004929092-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-583 ± 115	$4.32^{+4.57}_{-3.02}$	648^{+14}_{-14}	3201^{+1691}_{-596}	211^{+2245}_{-163}
Alt.	-97 ± 114	$5.59^{+4.62}_{-3.79}$	649^{+15}_{-13}	2254^{+866}_{-4238}	14^{+162}_{-18}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

DV Centroid Data

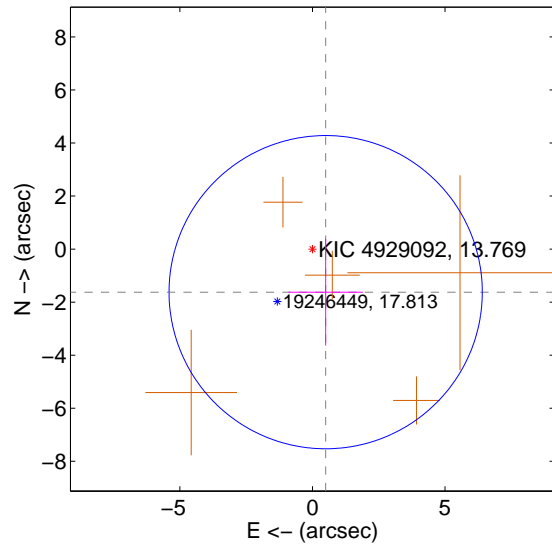
Supplemental centroid analysis for 004929092-05. Kepler magnitude: 13.77. Transit SNR 4.22

There are 0 quarters with good PRF difference image offsets

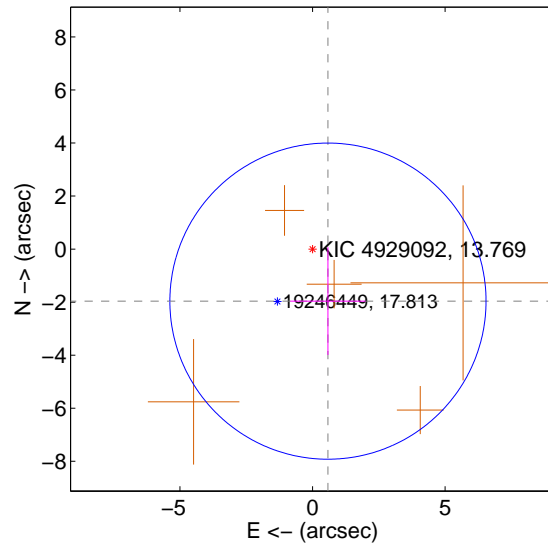
The direct PRF centroid is offset from the target star catalog position by about 0.40 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.699 ± 1.969	0.86	-0.499 ± 1.404	-1.624 ± 2.014
PRF-fit source offset from KIC position	2.047 ± 1.987	1.03	-0.582 ± 1.417	-1.963 ± 2.029
photometric centroid source offset	0.13 ± 0.49	0.27	-0.13 ± 0.49	-0.01 ± 0.44

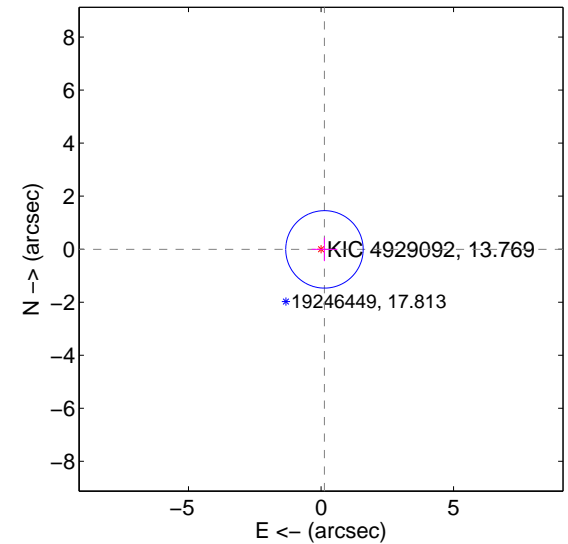
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

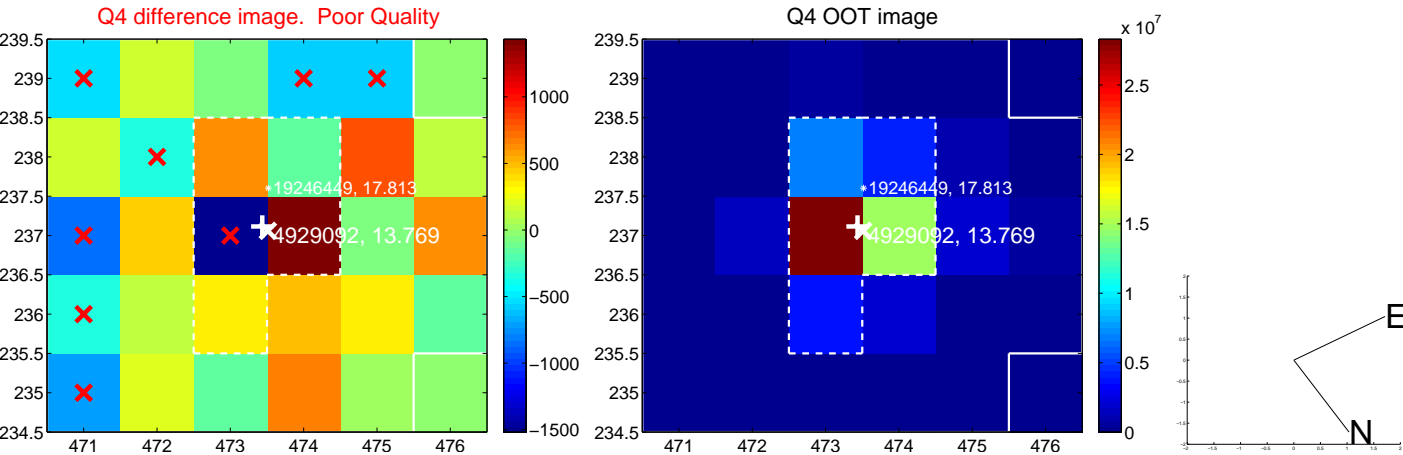
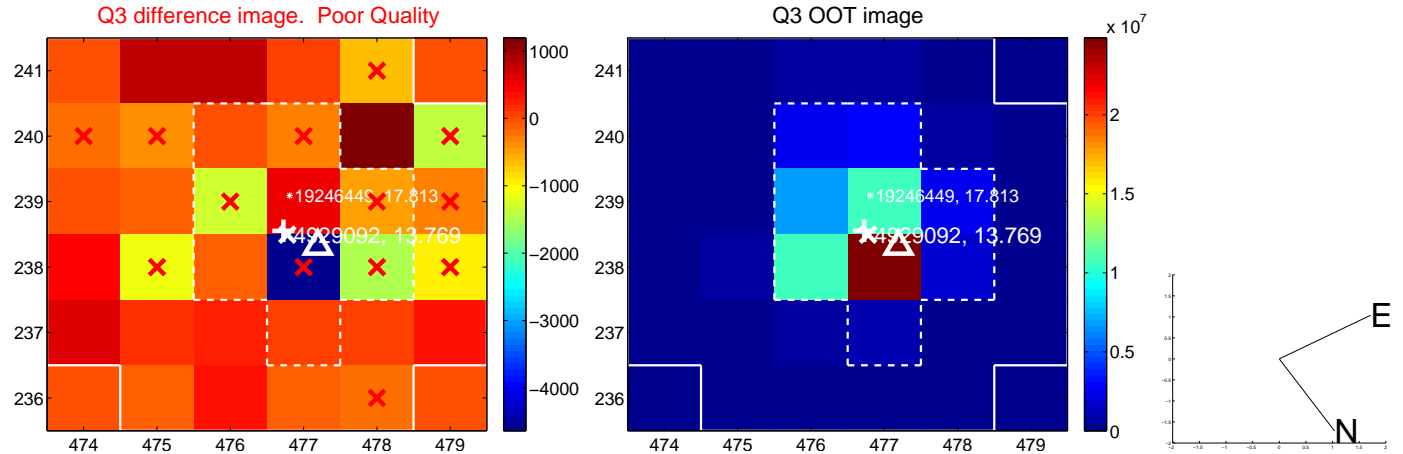
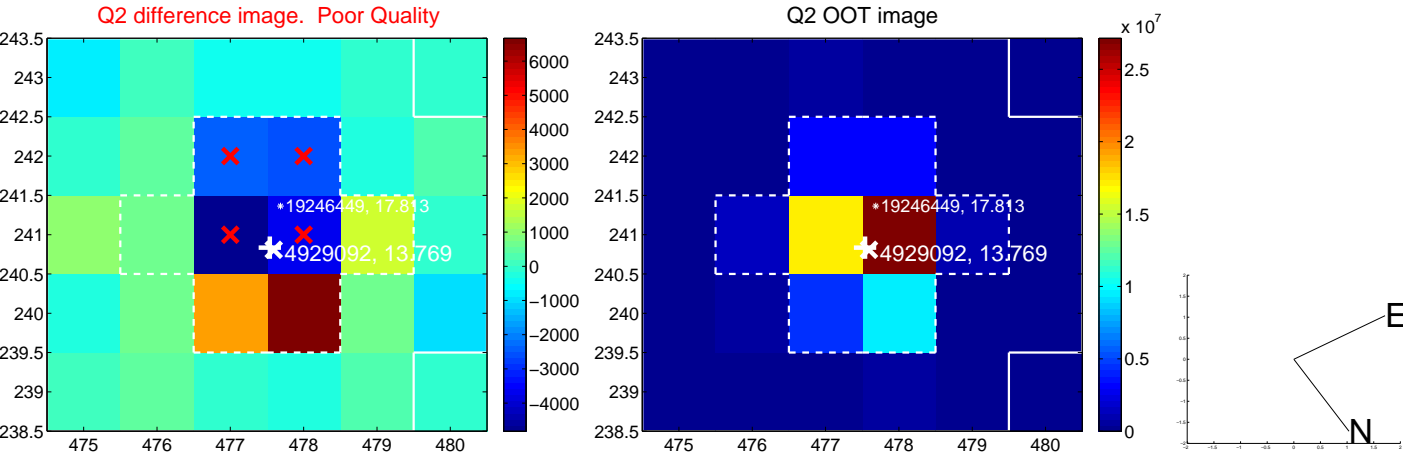
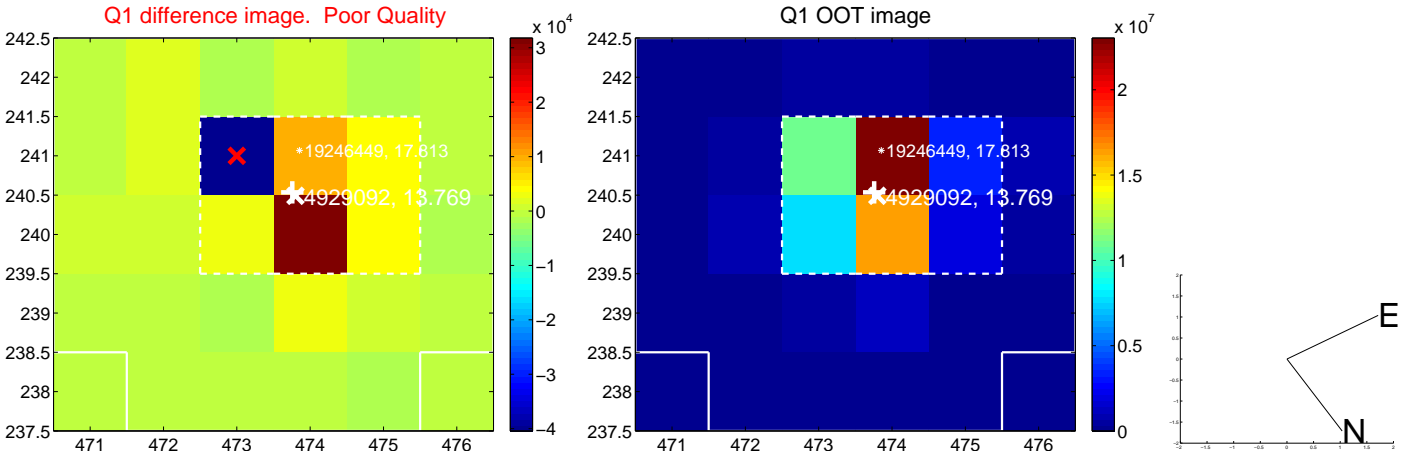


offset from photometric centroids

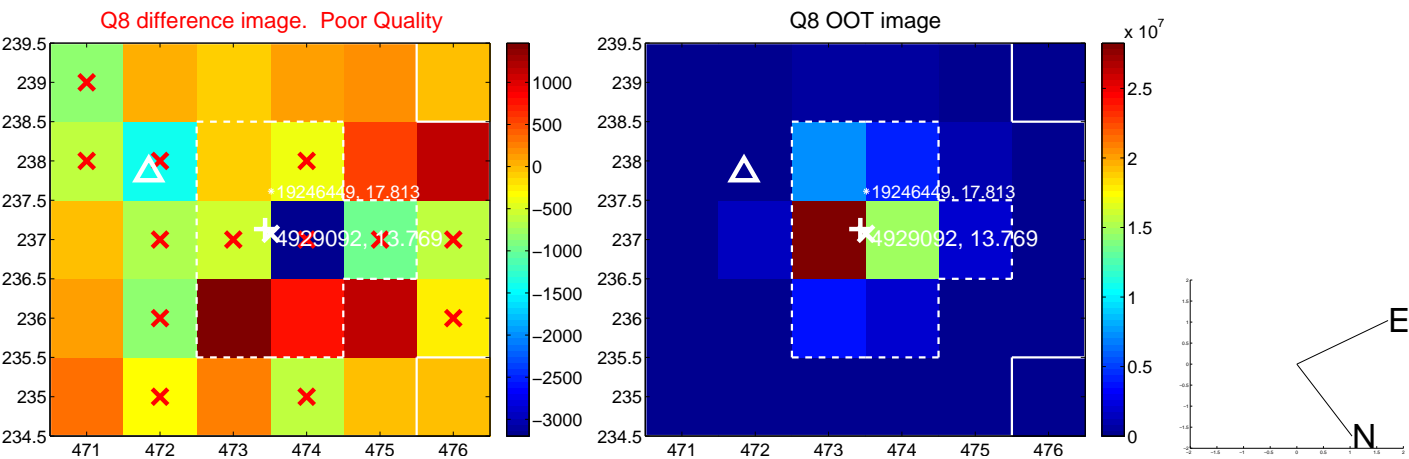
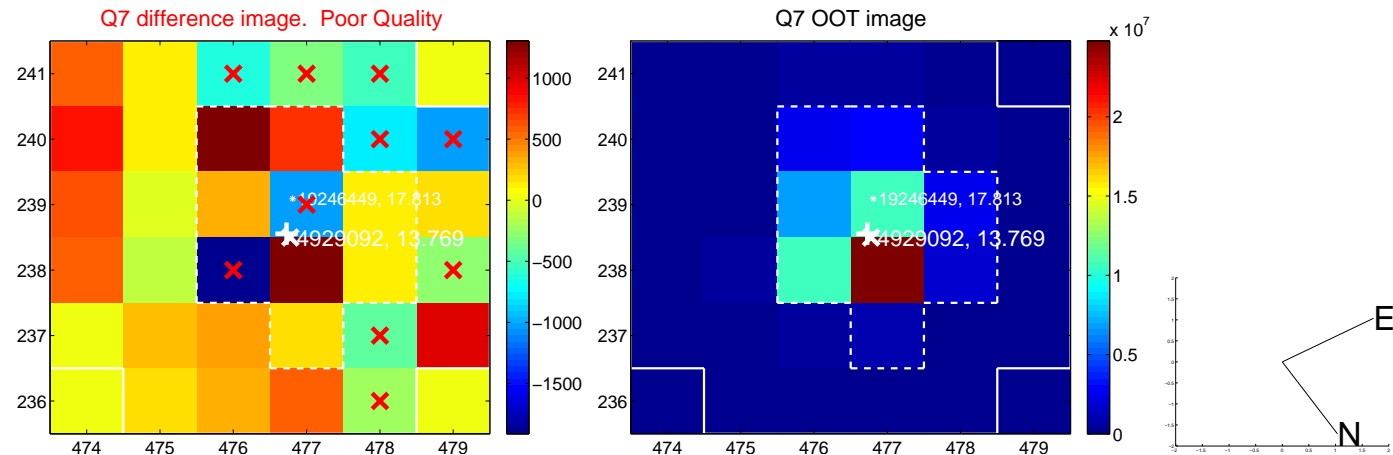
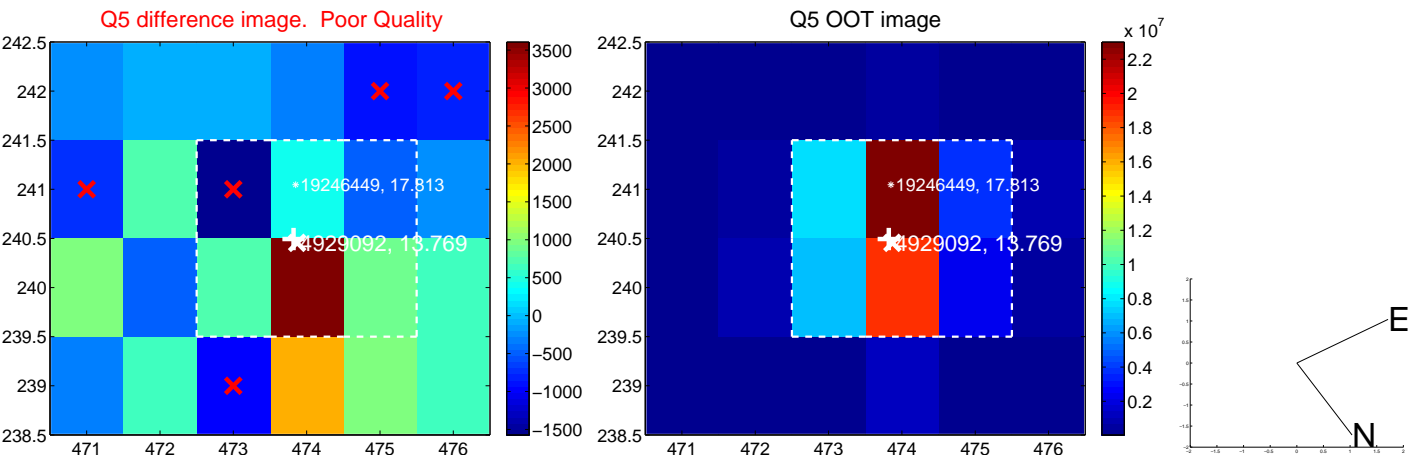


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

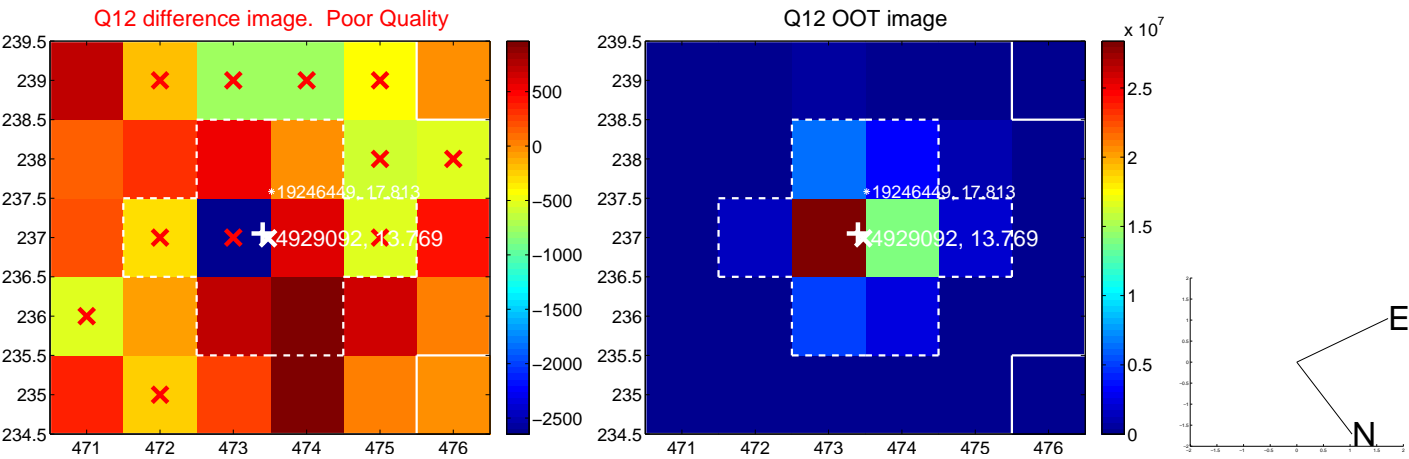
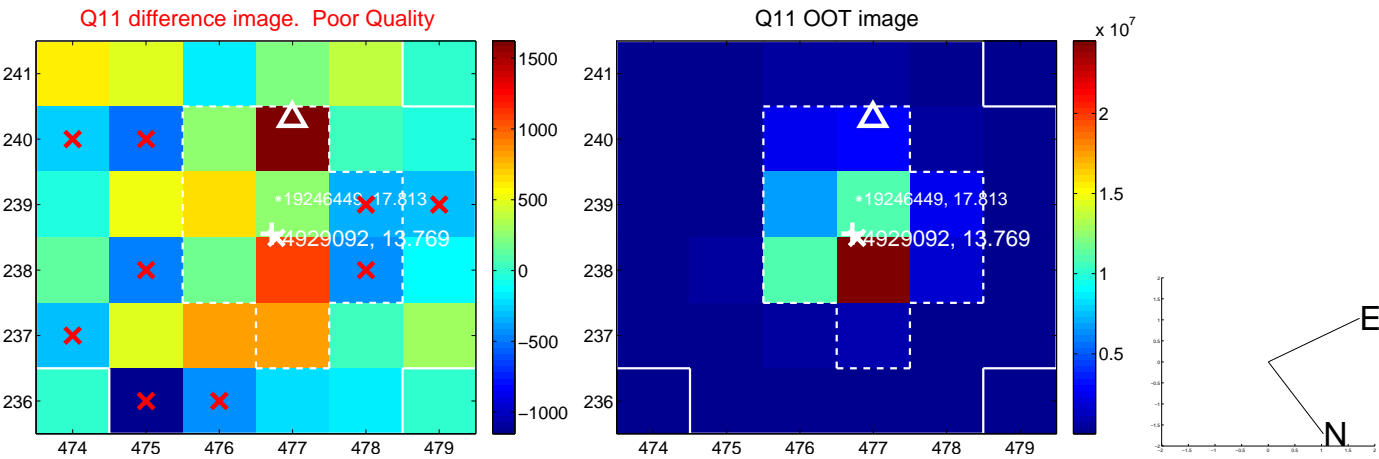
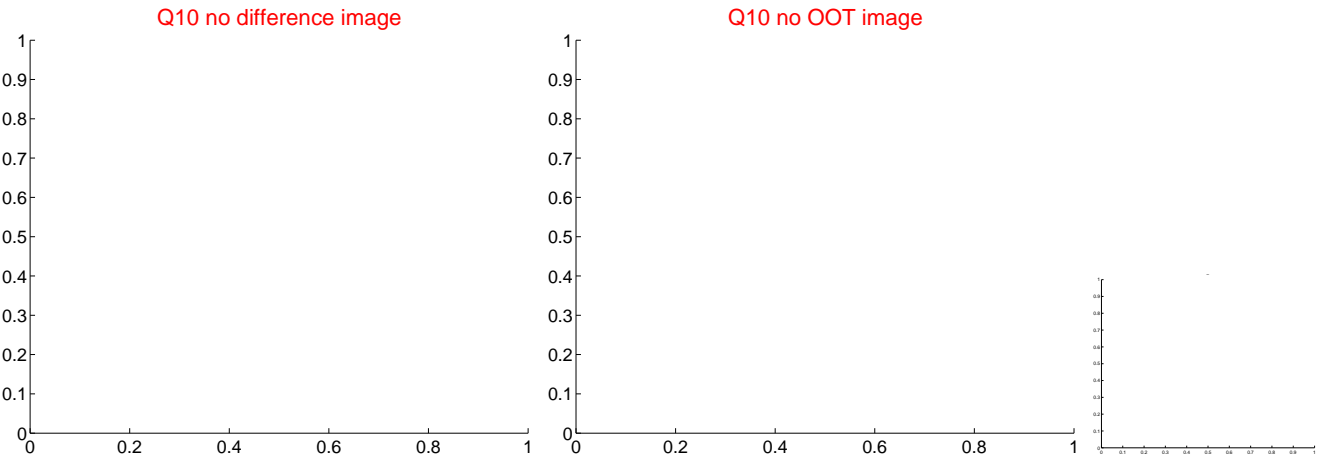
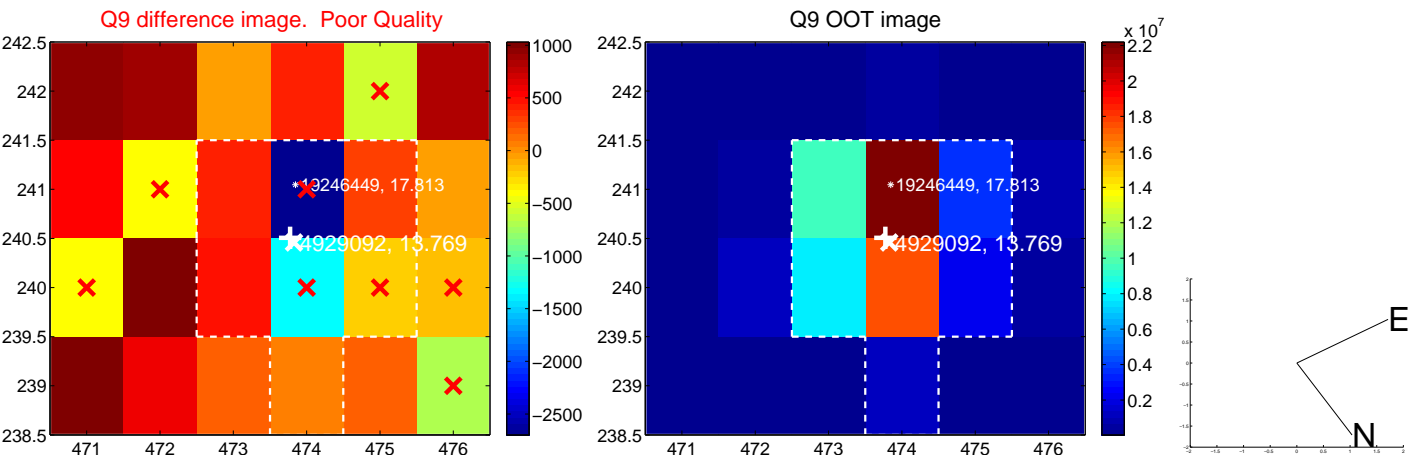
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



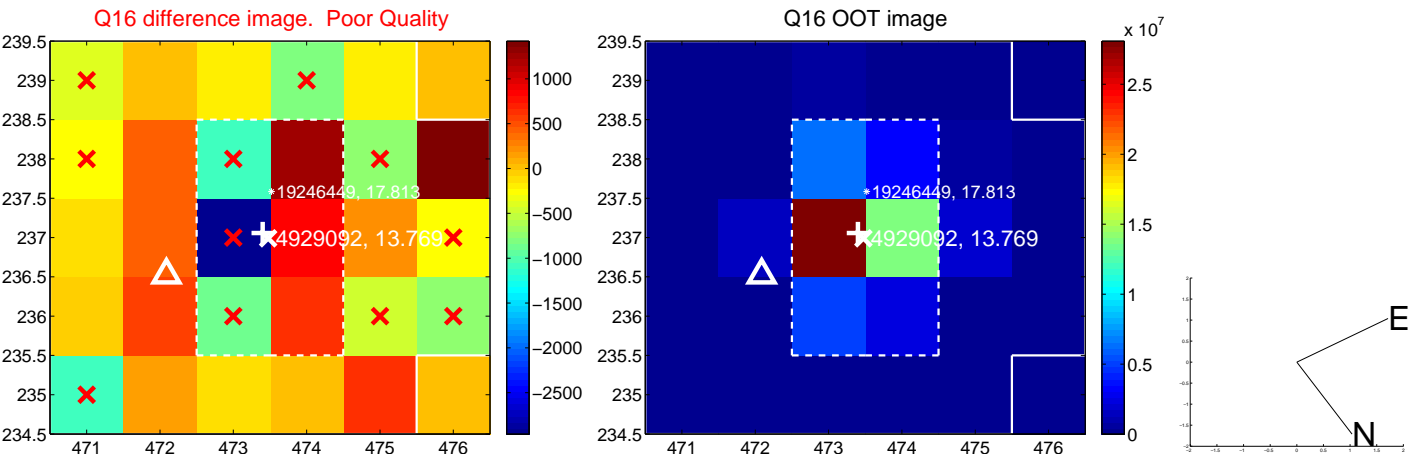
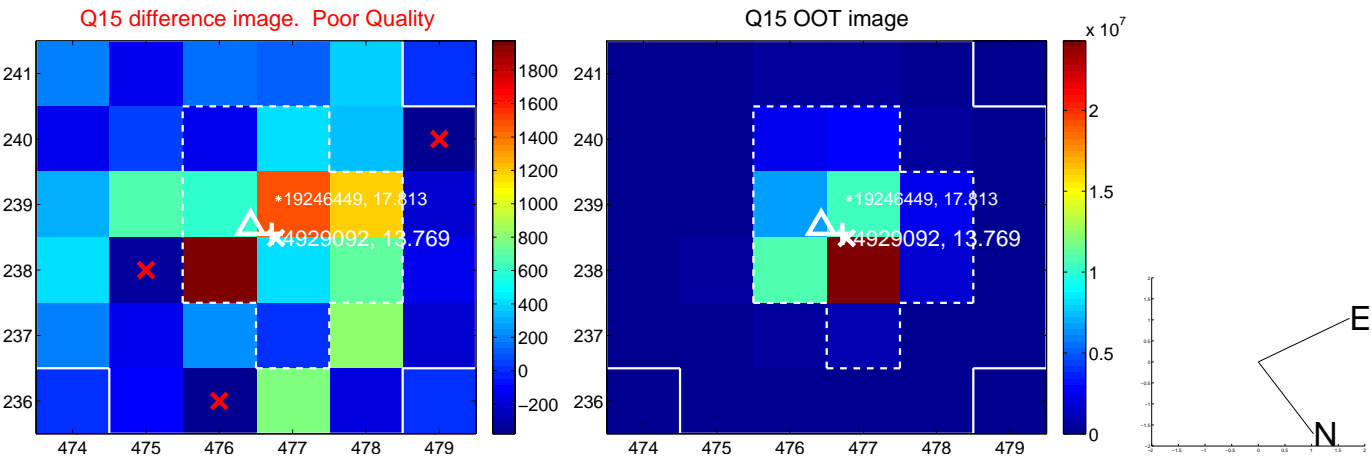
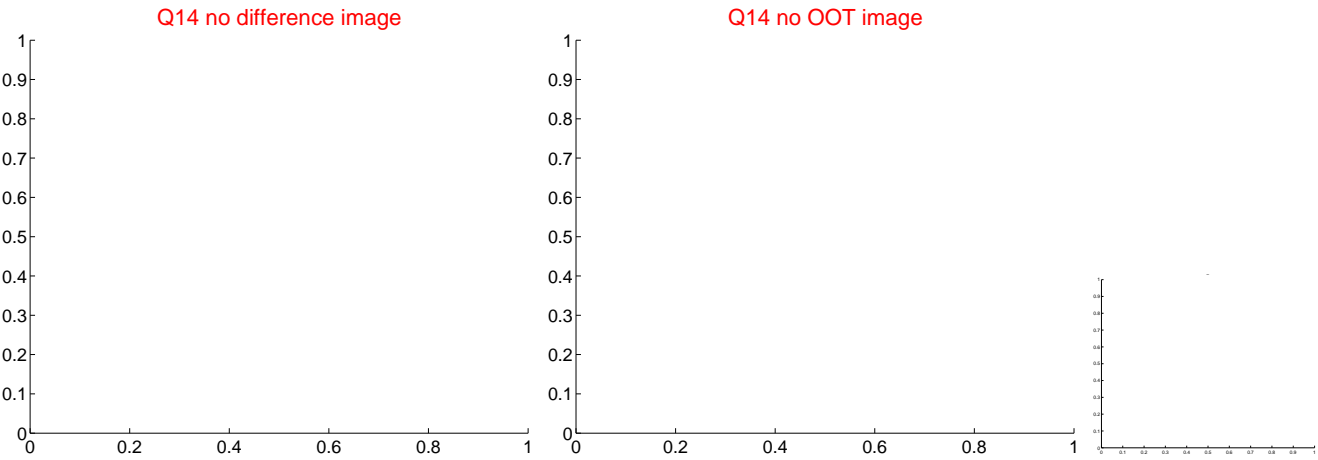
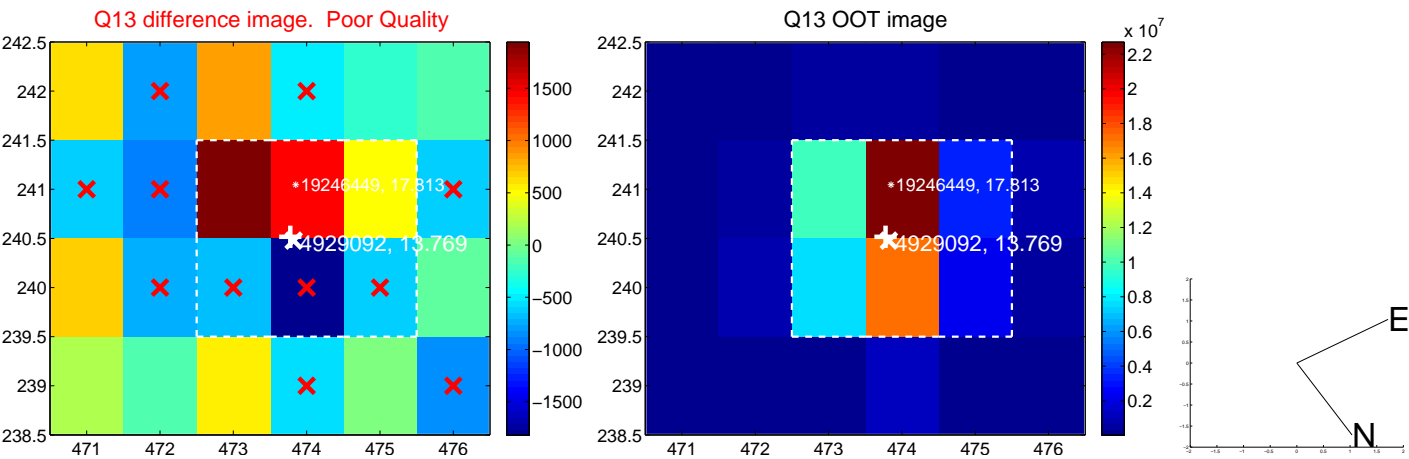
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



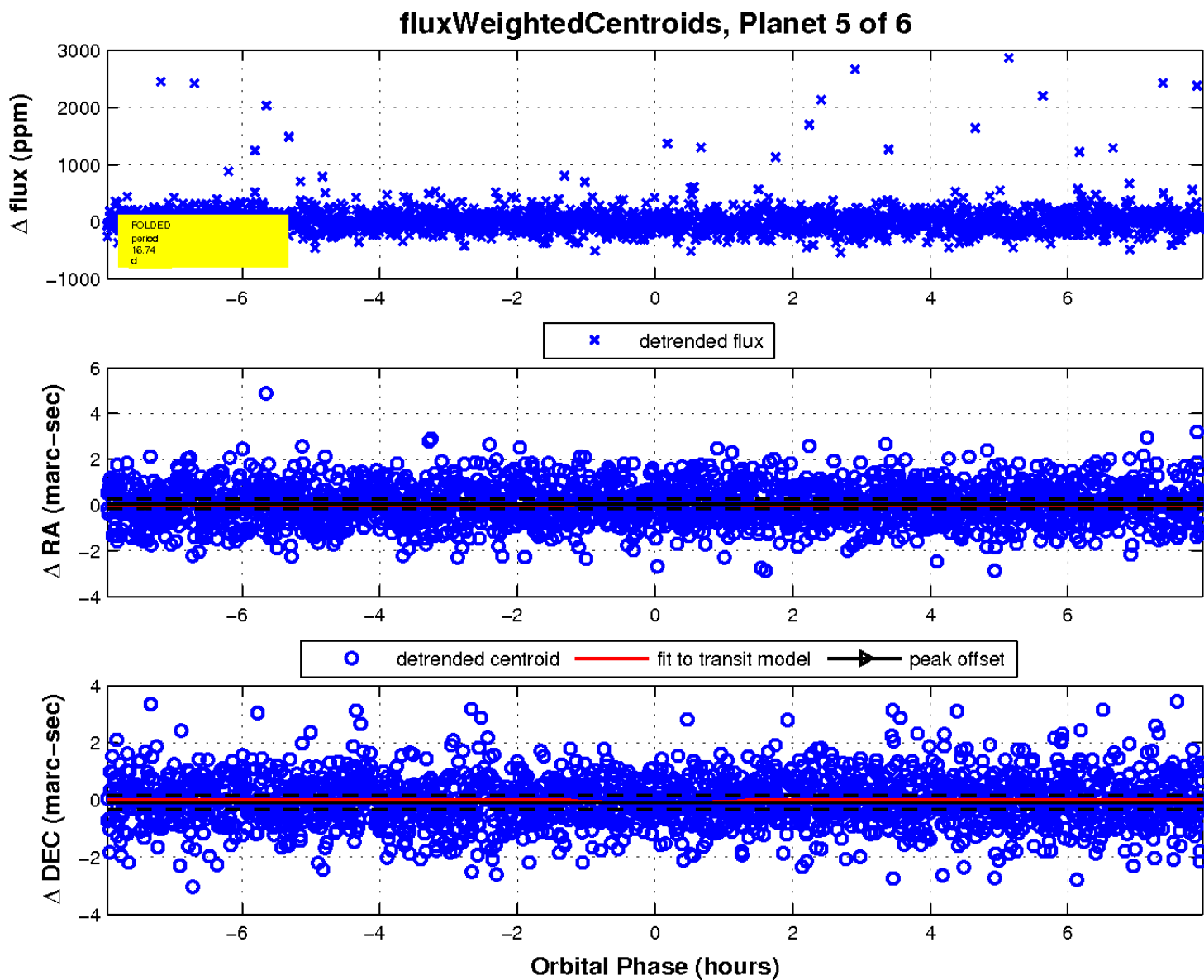
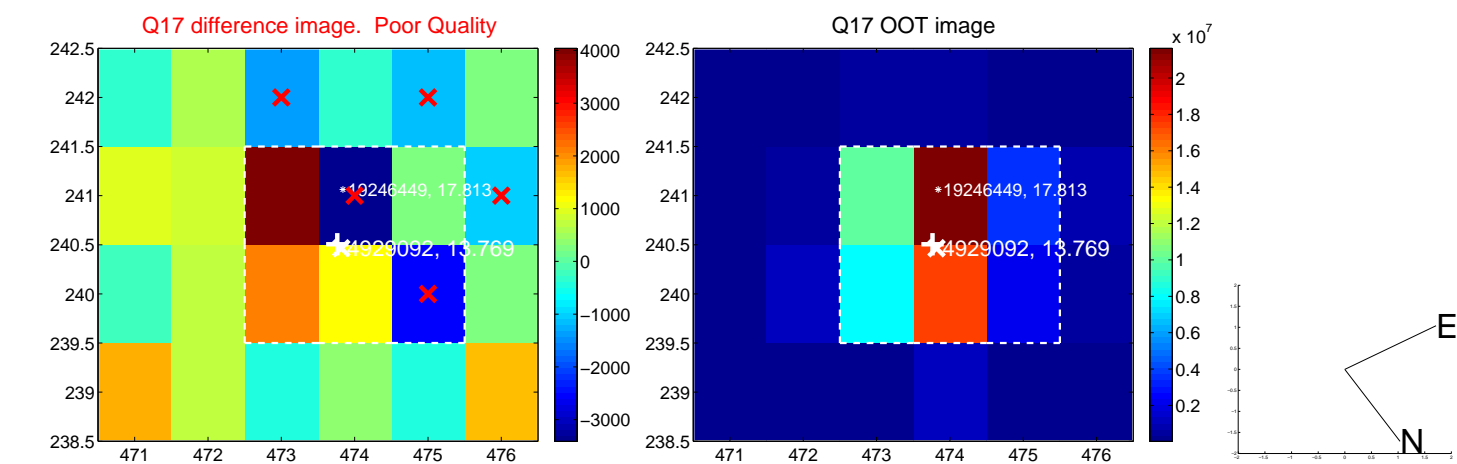
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

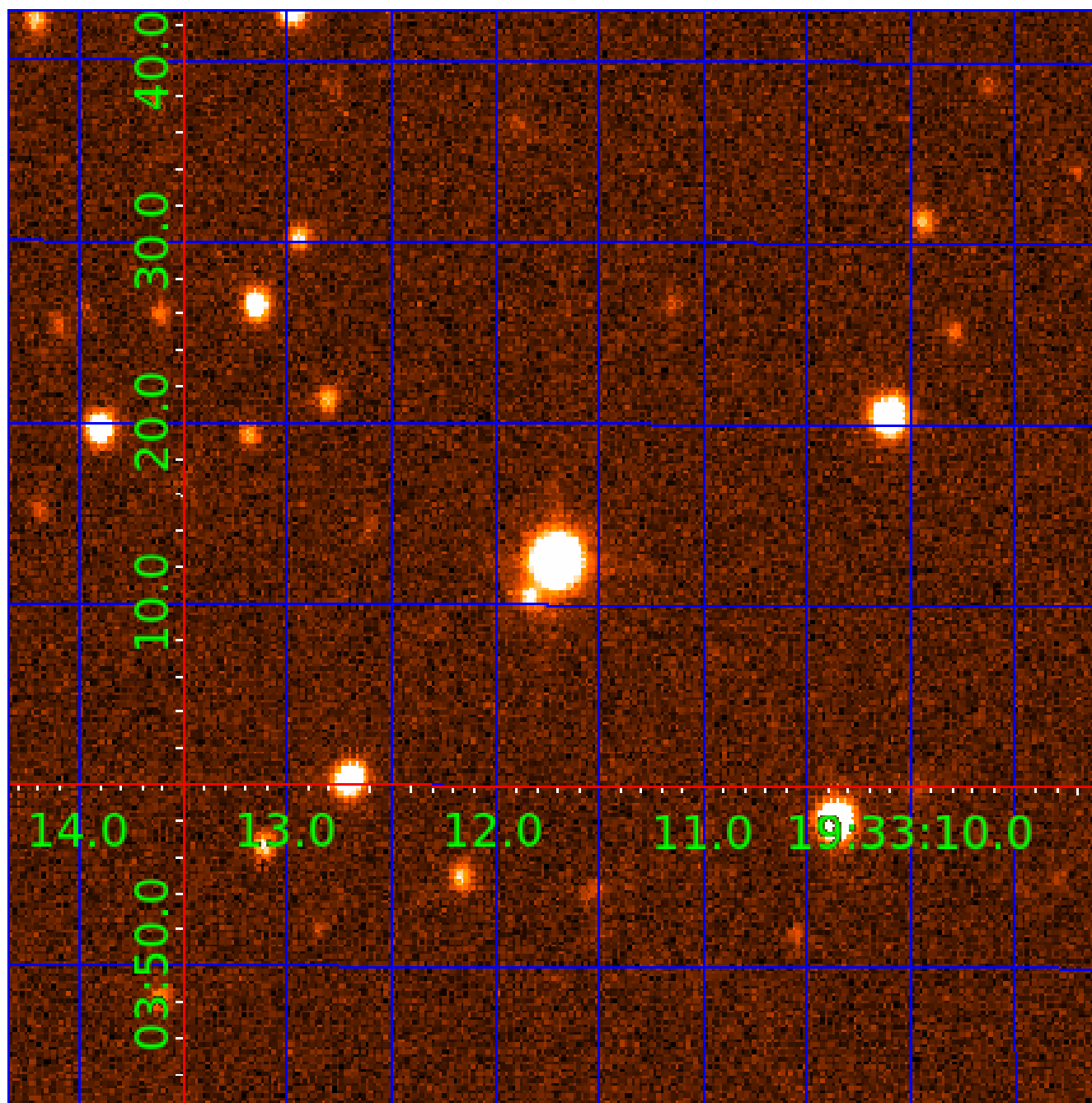


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004929092

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})
004929092-01	OBS	No	0.578061	131.773381	21.3	4.153	7.7	10.3	0.62	4423	0.28	946.37
004929092-02	OBS	No	19.179796	134.804235	1668.6	1.416	15.2	10.7	0.62	4423	2.91	8.88
004929092-03	OBS	No	9.405644	136.814412	1722.3	0.927	13.0	12.2	0.62	4423	2.51	22.95
004929092-05	OBS	No	16.738756	138.168652	324.4	2.653	9.3	4.2	0.62	4423	1.31	10.64
004929092-06	OBS	No	19.697526	140.130677	1416.3	1.037	10.6	9.5	0.62	4423	2.26	8.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004929092-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS
004929092-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_FEW_DIFFS
004929092-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED
004929092-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_MEAS—HALO_GHOST
004929092-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—CENT_FEW_MEAS

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

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

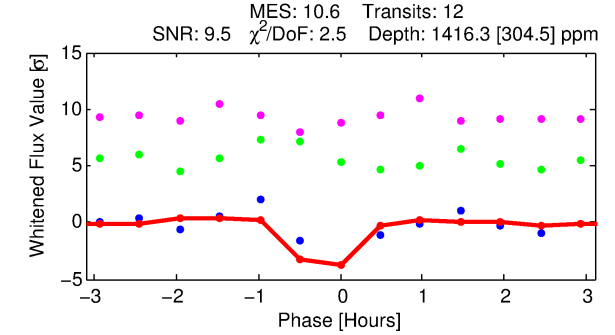
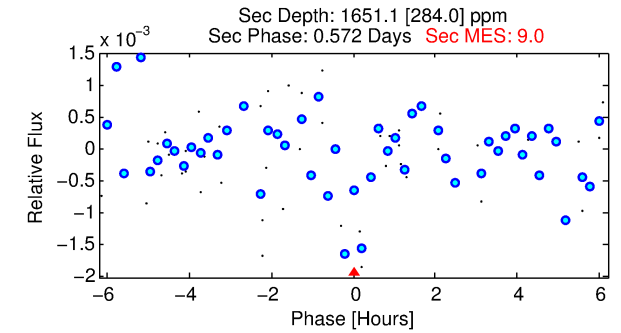
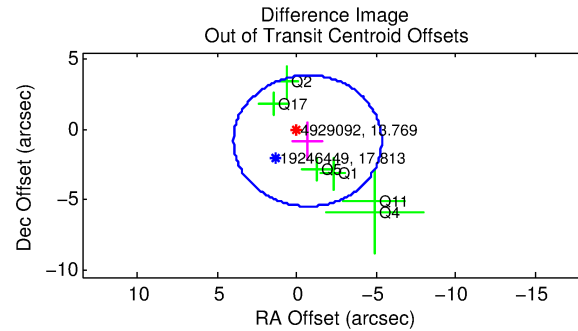
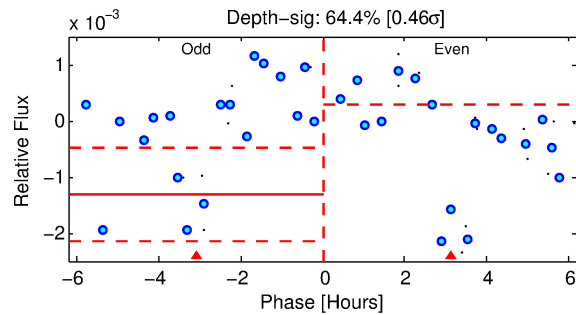
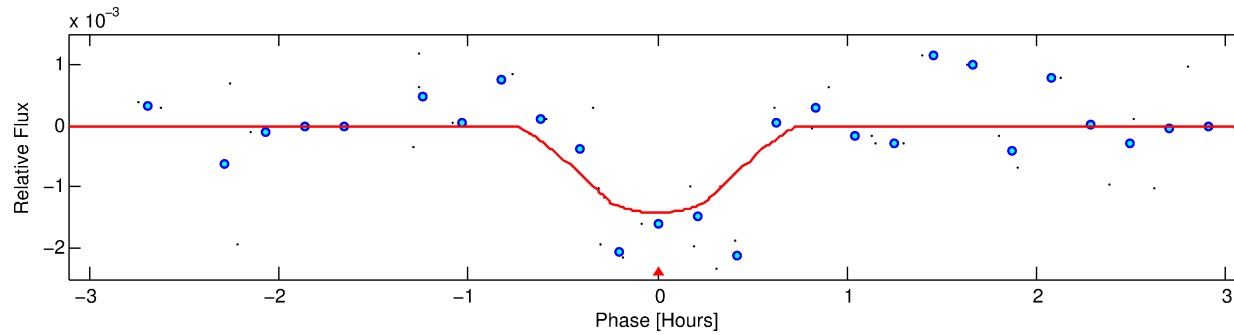
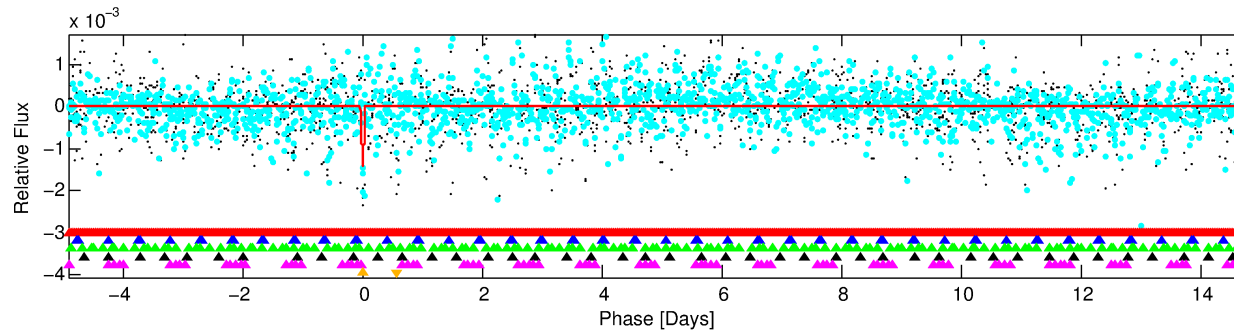
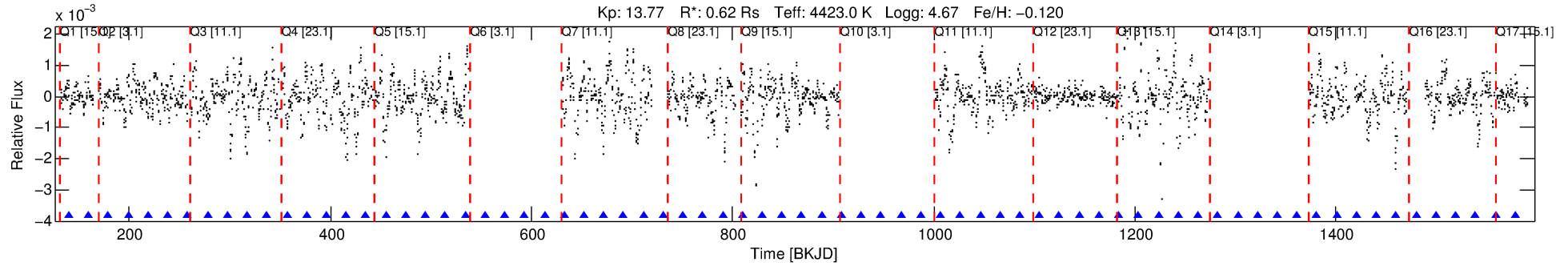
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004929092-06

No Significant Match Found

DV One-Page Summary

KIC: 4929092 Candidate: 6 of 6 Period: 19.698 d



DV Fit Results:

Period = 19.69753 [0.00009] d
Epoch = 140.1307 [0.0027] BKJD
Rp/R* = 0.0334 [0.0666]
a/R* = 149.61 [869.09]
b = 0.08 [78.15]
Seff = 8.57 [0.89]
Teq = 436 [11] K
Rp = 2.26 [4.51] Re
a = 0.1240 [0.0066] AU
Ag = 2729.60 [10888.77] [0.25 σ]
Teffp = 4875 [4862] K [0.91 σ]

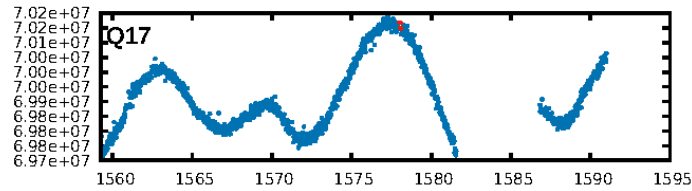
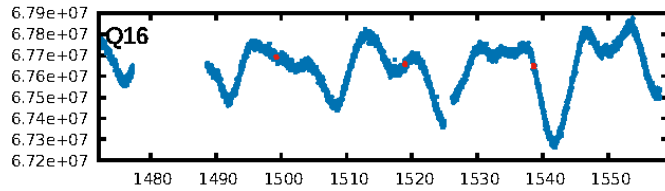
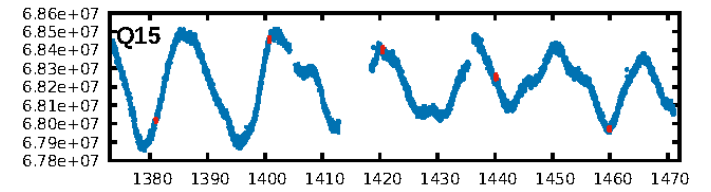
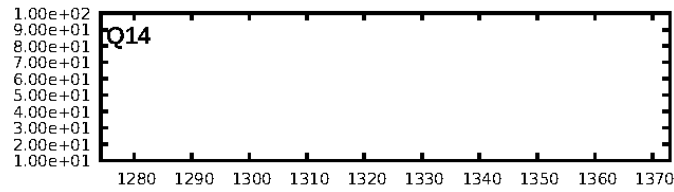
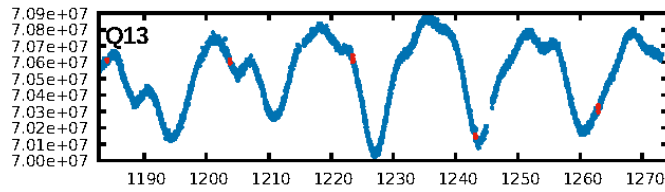
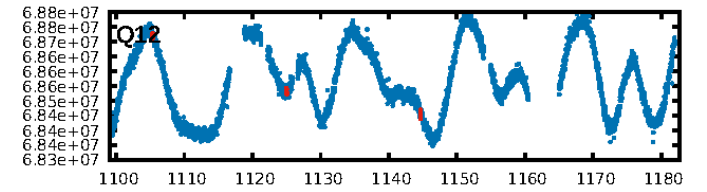
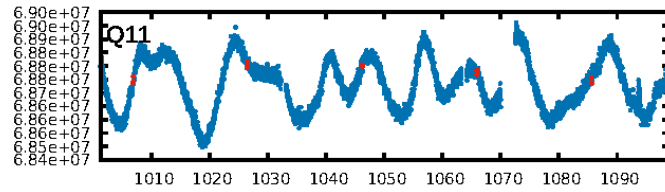
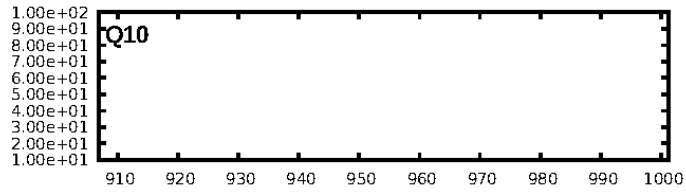
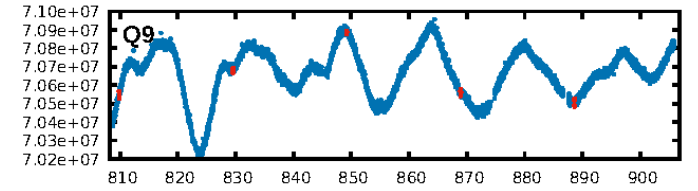
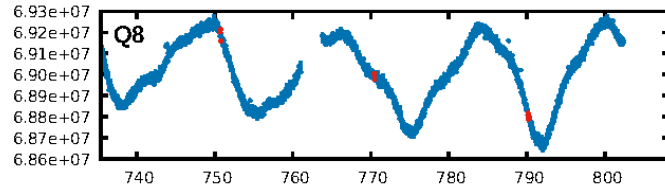
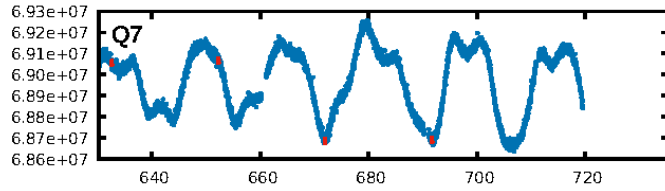
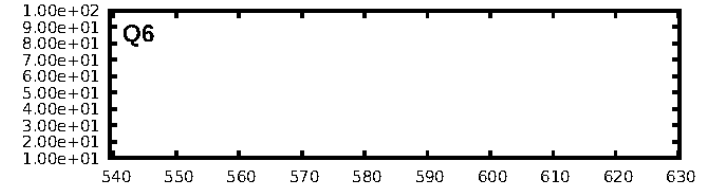
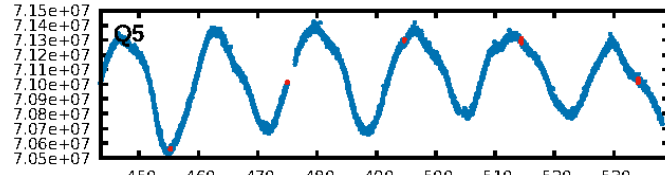
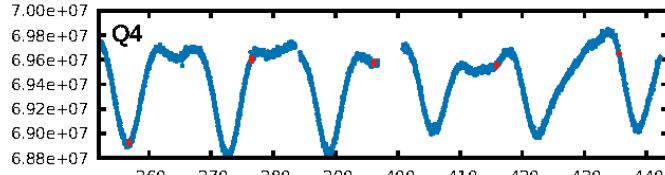
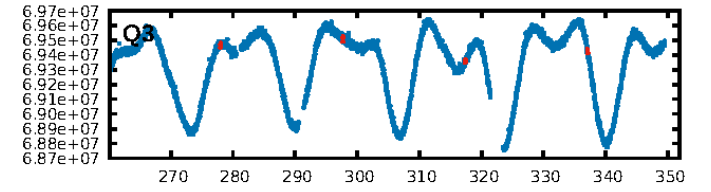
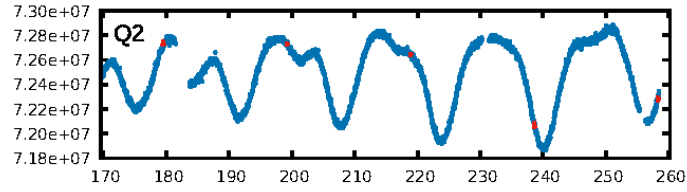
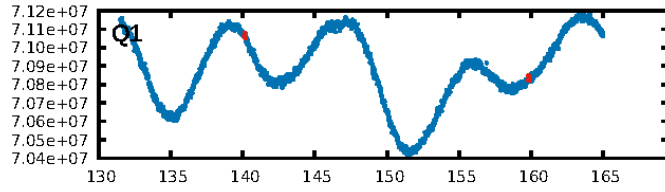
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.08 σ]
LongPeriod-sig: 100.0% [181.01 σ]
ModelChiSquare2-sig: 24.8%
ModelChiSquareGof-sig: 96.6%
Bootstrap-pfa: 1.06e-15
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: -2.472
Centroid-sig: 15.4%
Centroid-so: 0.432 arcsec [2.52 σ]
OotOffset-rm: 1.058 arcsec [0.68 σ]
KicOffset-rm: 1.320 arcsec [0.73 σ]
OotOffset-st: 1/1/1/3 [6]
KicOffset-st: 1/1/1/3 [6]
DiffImageQuality-fgm: 0.17 [1/6]
DiffImageOverlap-fno: 0.00 [0/14]

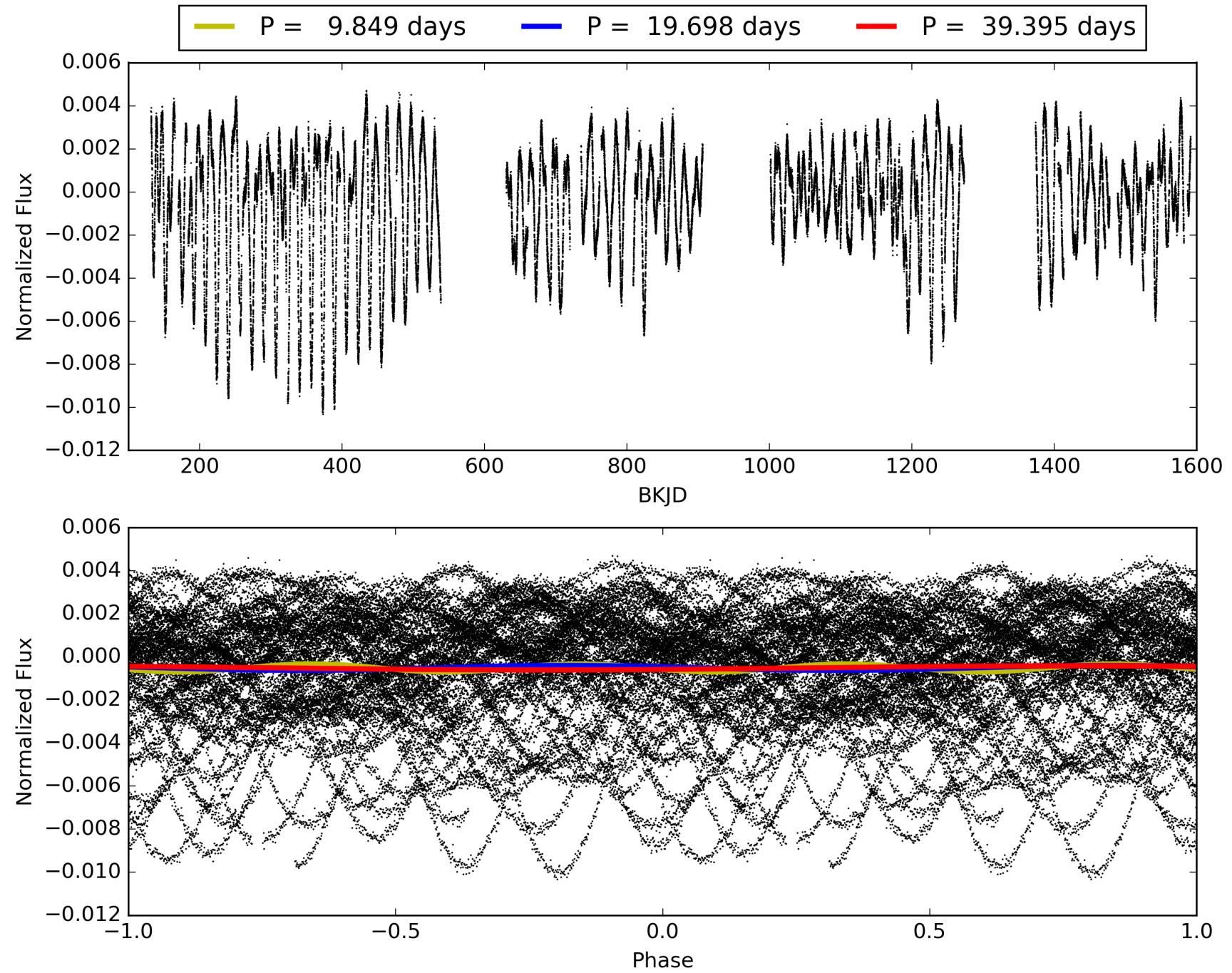
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:35:52 Z

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

TCE 004929092-06, PDC Light Curves

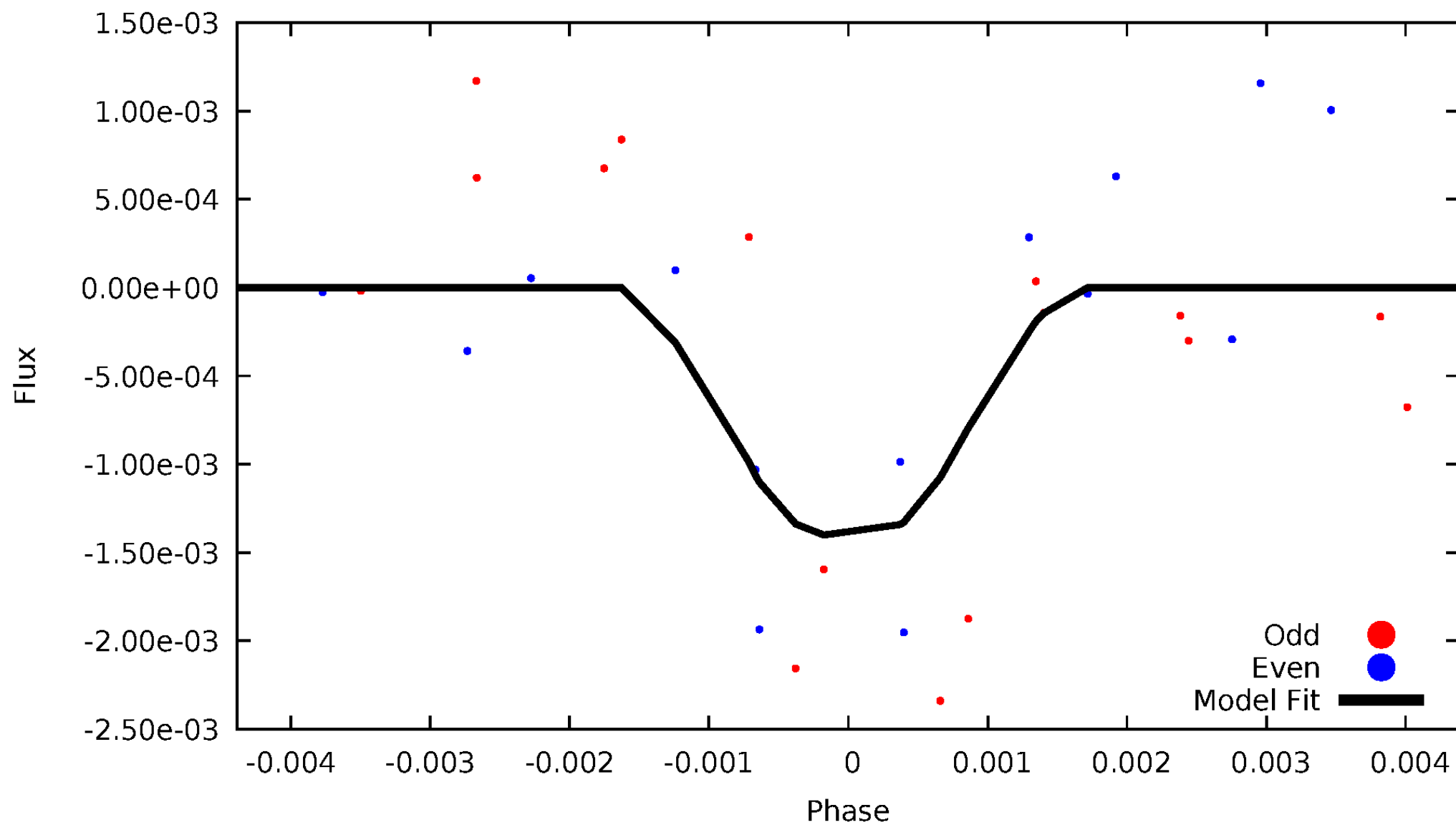


TCE 004929092-06



DV Odd/Even

TCE 004929092-06

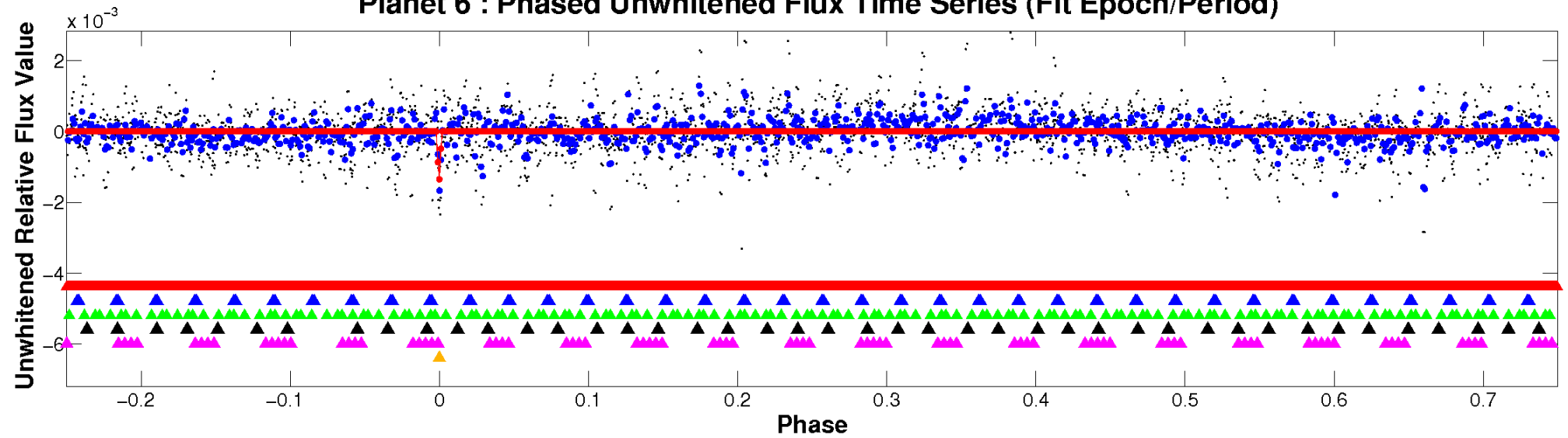


ALT Odd/Even

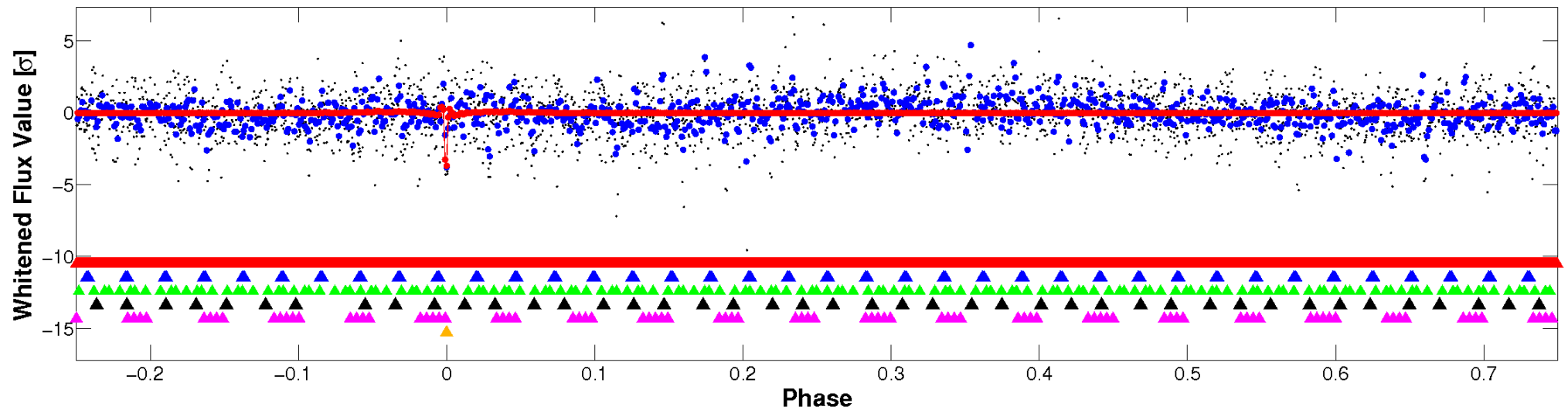
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

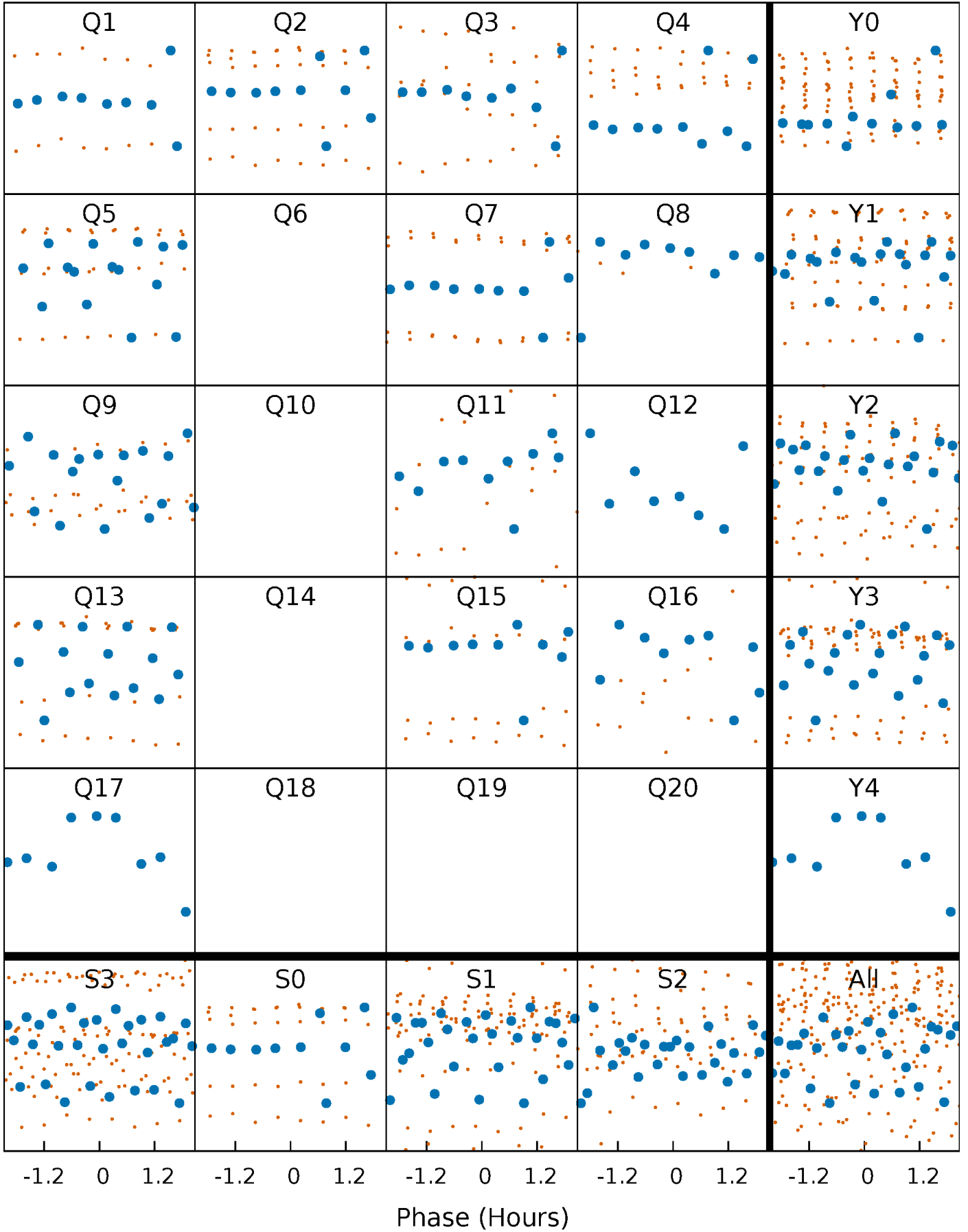


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



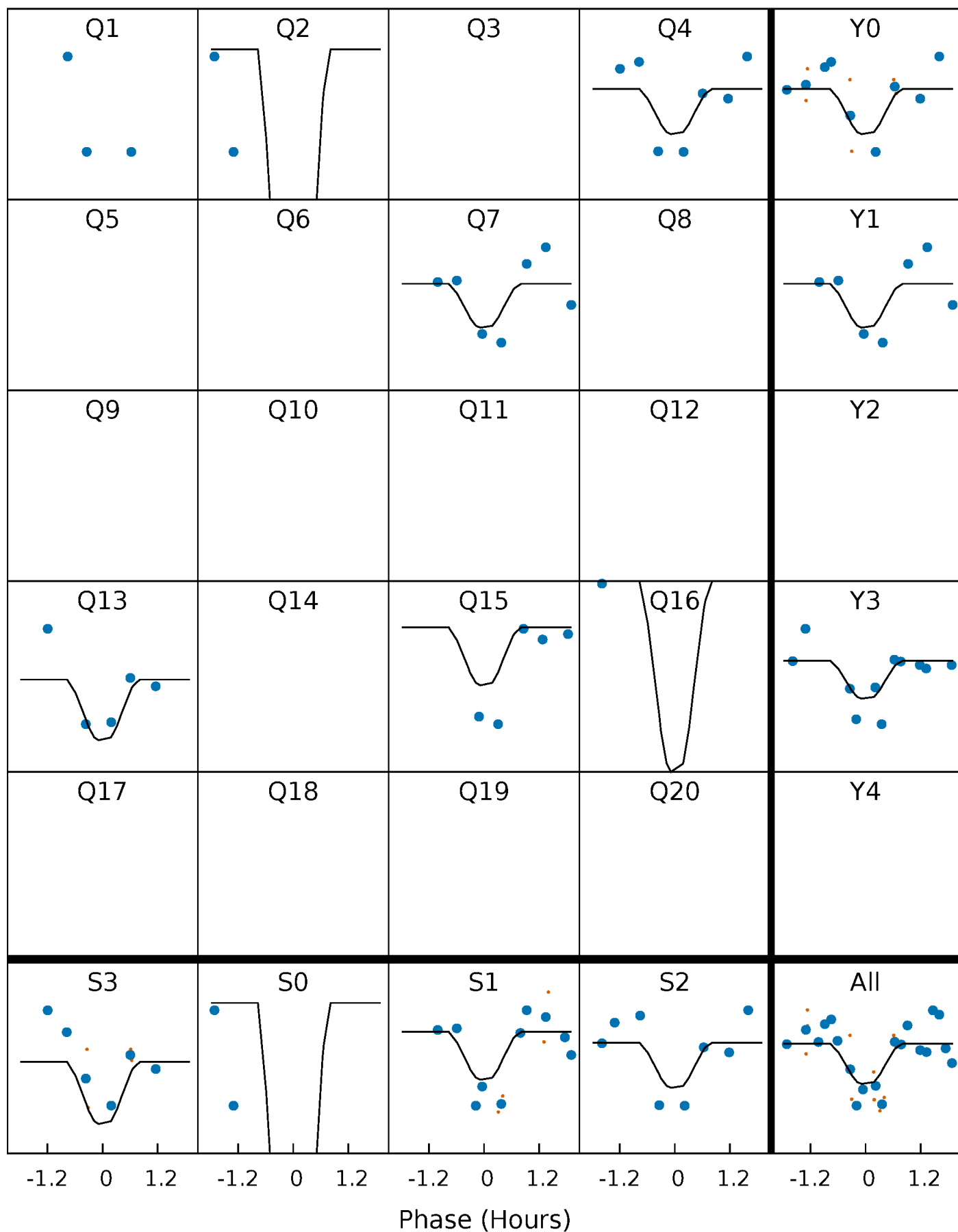
PDC Quarter-Phased Transit Curves

TCE 004929092-06 P= 19.697526 Days $T_0=140.130677$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004929092-06 P= 19.697526 Days $T_0=140.130677$ (BKJD)

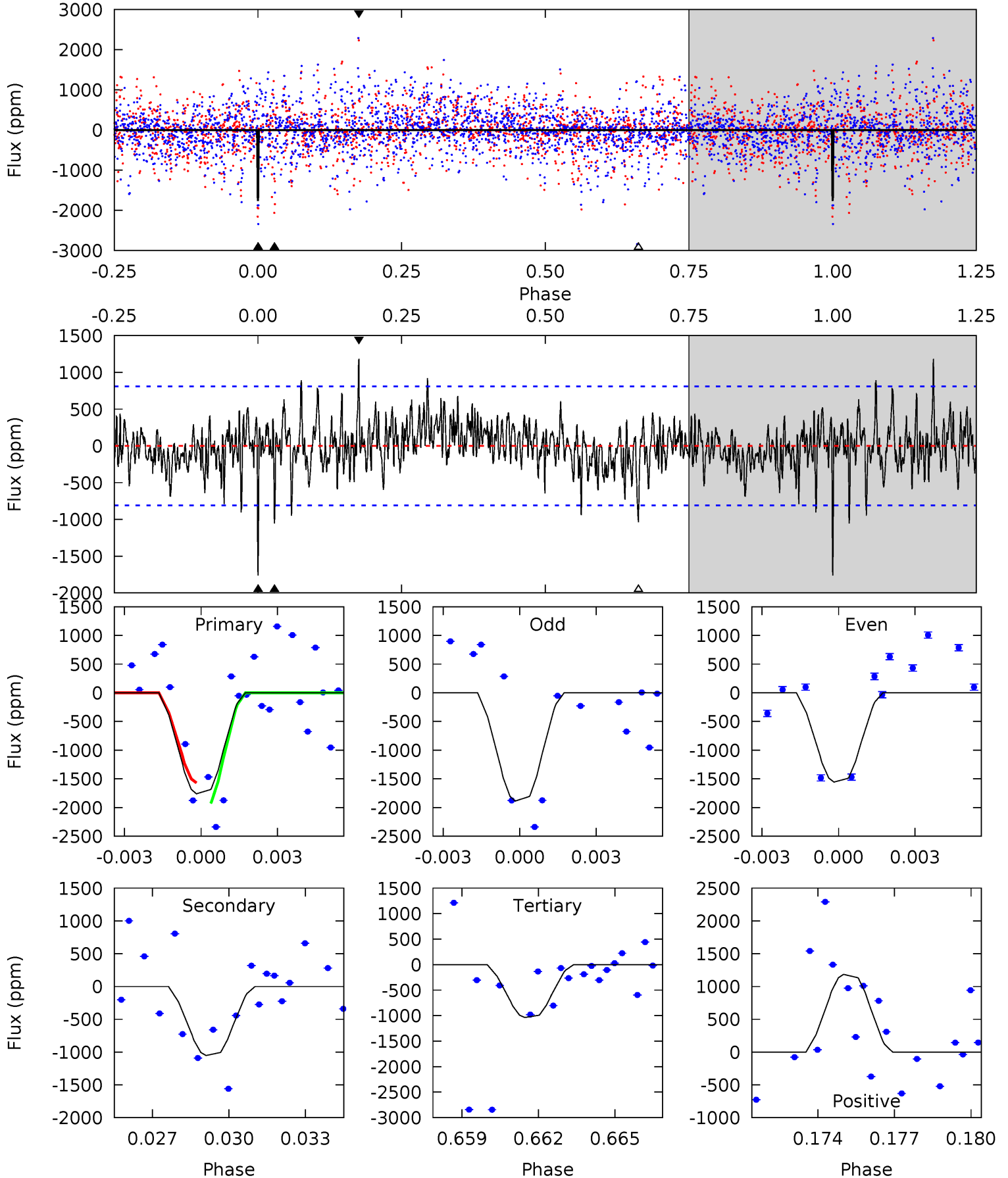


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004929092-06, P = 19.697526 Days, E = 120.433151 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	6.83	6.72	7.68	5.26	2.97	1.75	4.70	3.74	0.10	-0.86	1.08	0.94	0.40	1.17



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004929092

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4423^{+79}_{-79}	$4.670^{+0.012}_{-0.040}$	$-0.120^{+0.150}_{-0.150}$	$0.620^{+0.040}_{-0.019}$	$0.675^{+0.027}_{-0.043}$	$3.984^{+0.211}_{-0.607}$
	+2%/-2%	+0%/-1%	+125%/-125%	+6%/-3%	+4%/-6%	+5%/-15%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004929092-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1052 ± 154	$4.07^{+3.67}_{-2.69}$	614^{+14}_{-13}	3587^{+1821}_{-627}	538^{+4123}_{-386}
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 $A_{obs} \gg 1.0$

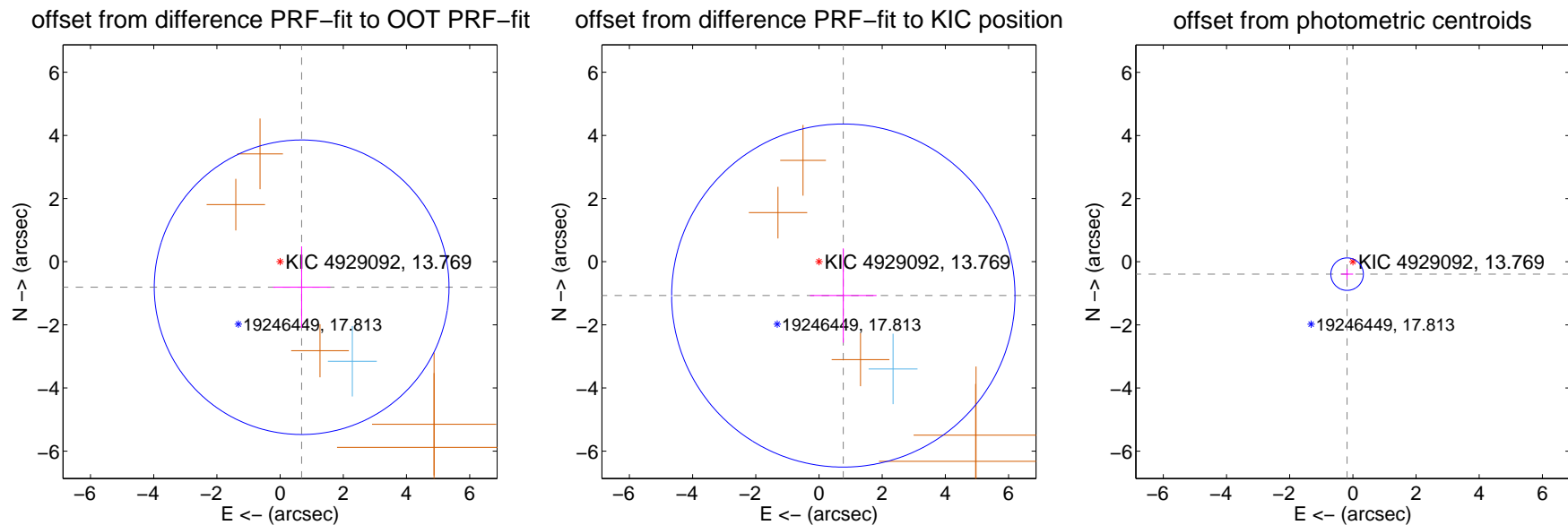
DV Centroid Data

Supplemental centroid analysis for 004929092-06. Kepler magnitude: 13.77. Transit SNR 9.46

There are 1 quarters with good PRF difference image offsets

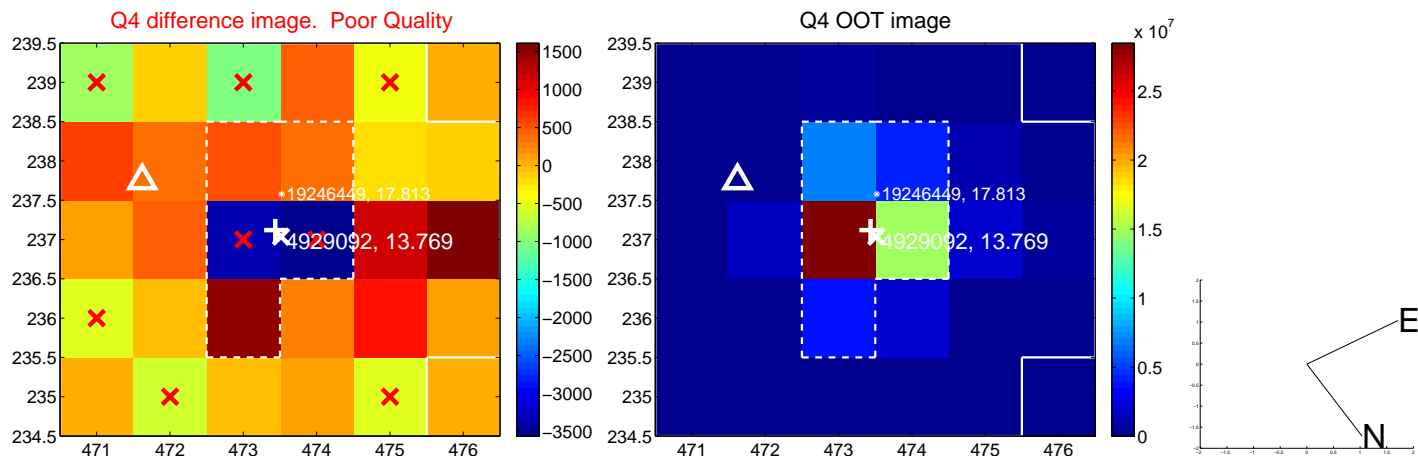
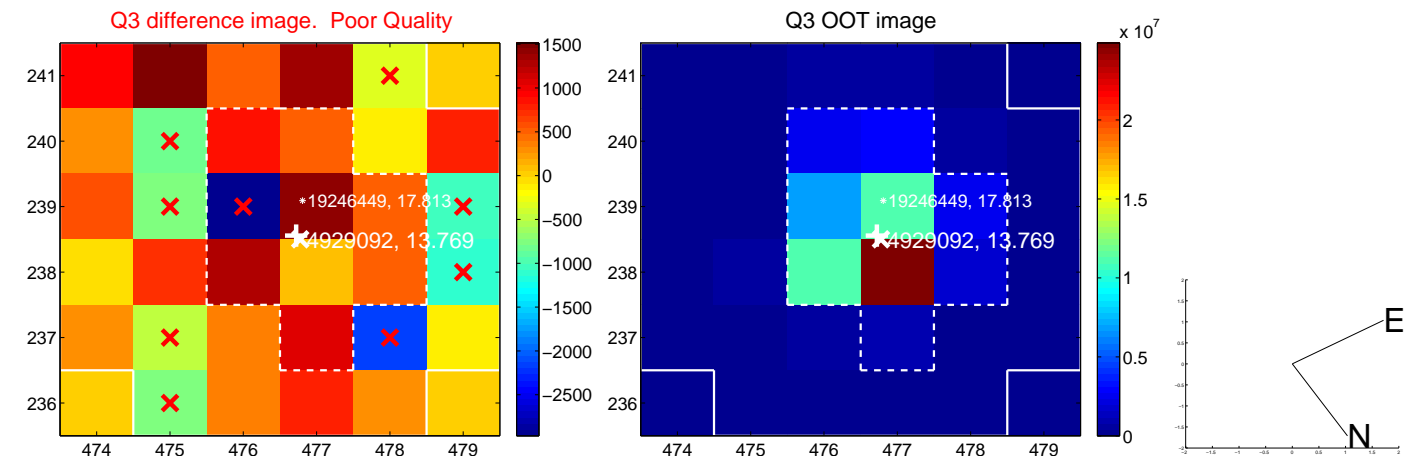
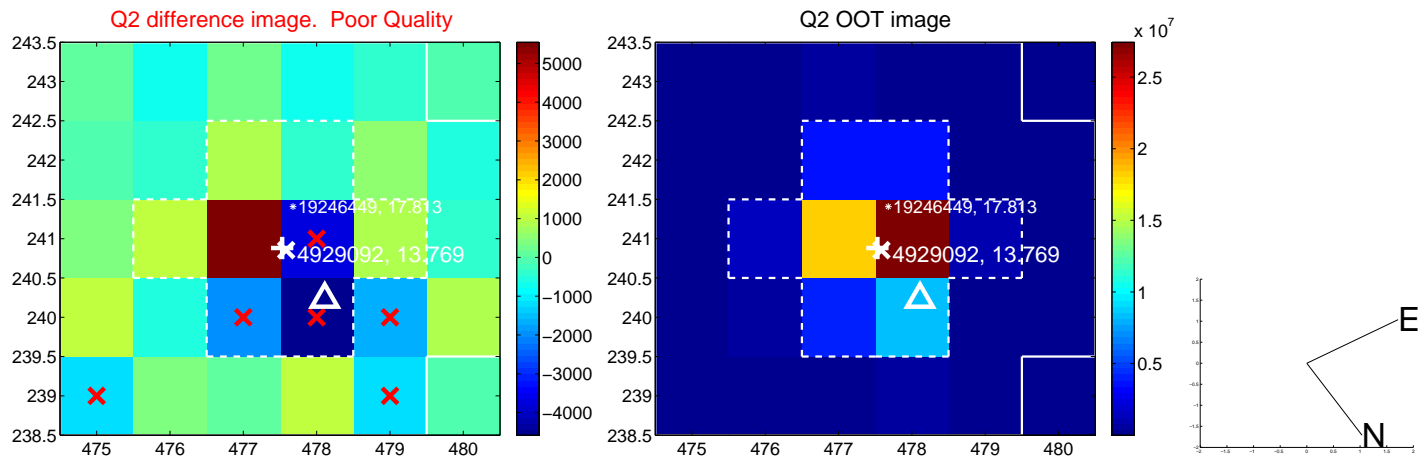
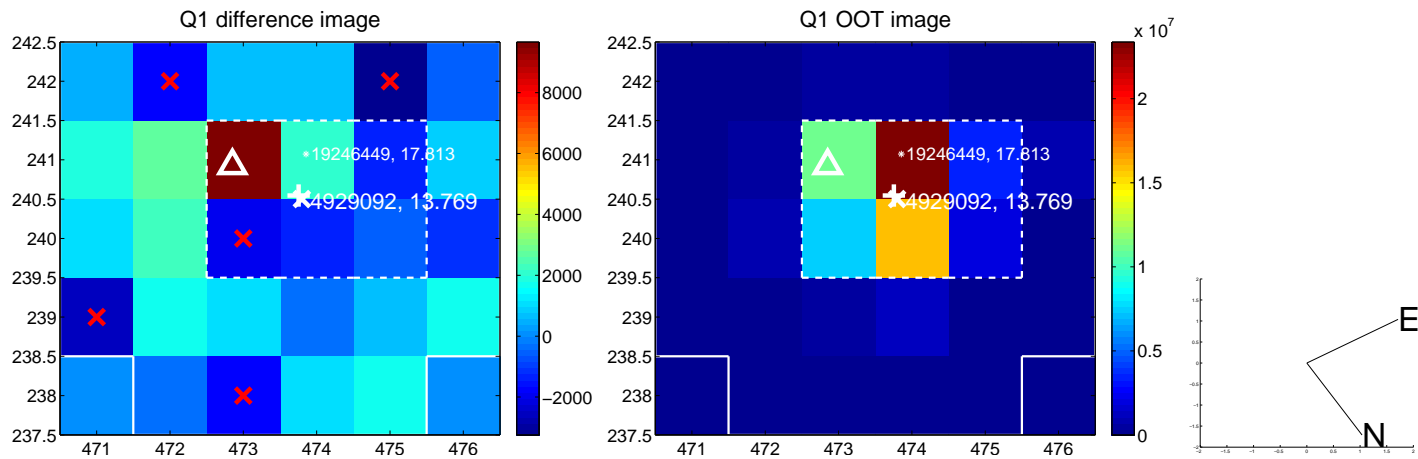
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.058 ± 1.555	0.68	-0.682 ± 0.907	-0.809 ± 1.294
PRF-fit source offset from KIC position	1.320 ± 1.811	0.73	-0.770 ± 1.053	-1.072 ± 1.493
photometric centroid source offset	0.43 ± 0.17	2.52	0.18 ± 0.19	-0.39 ± 0.17

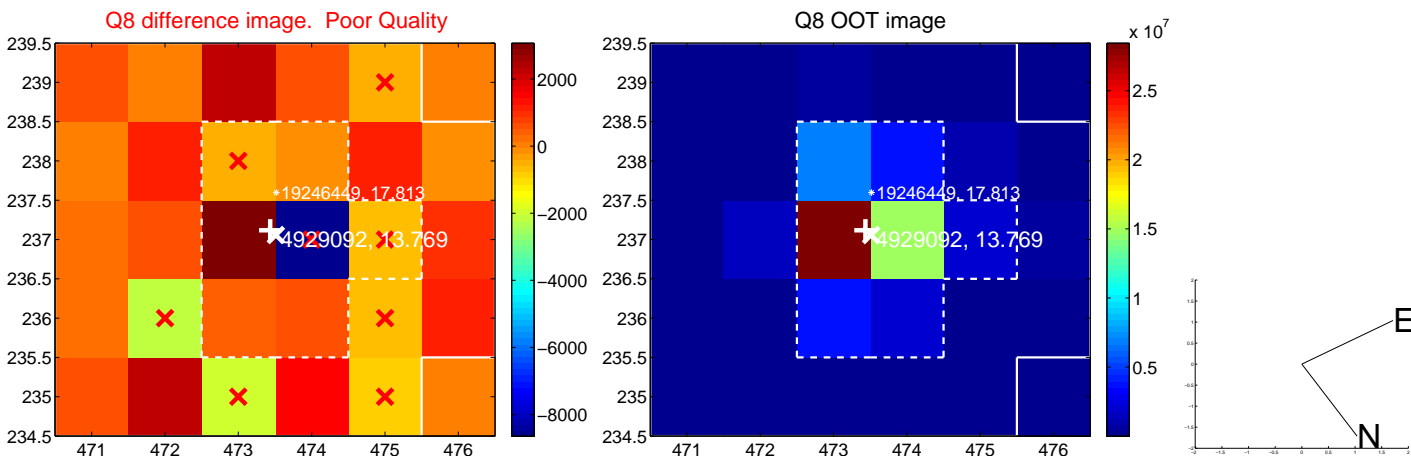
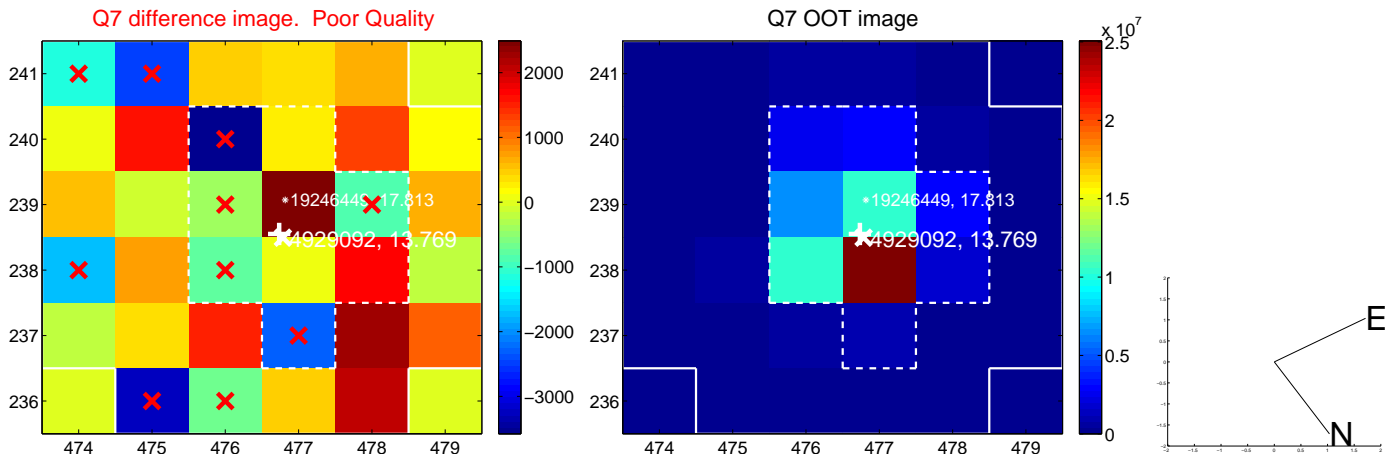
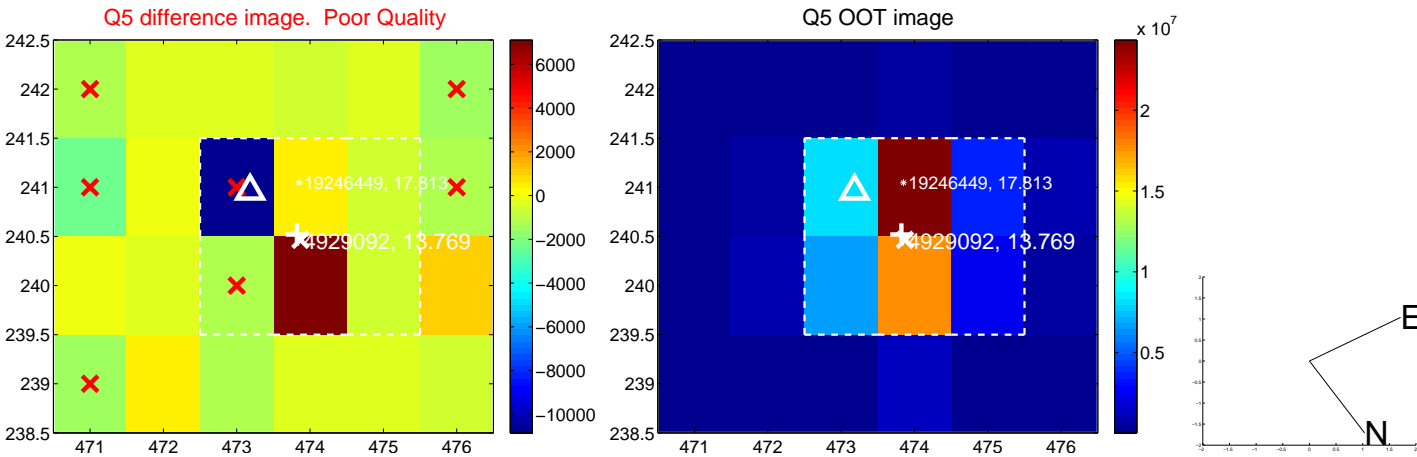


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

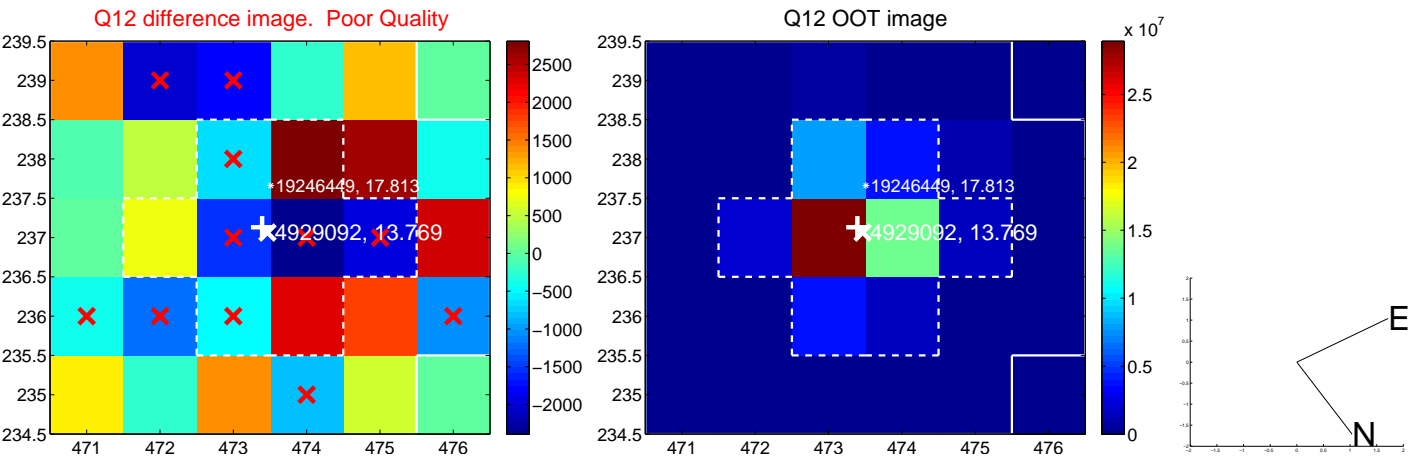
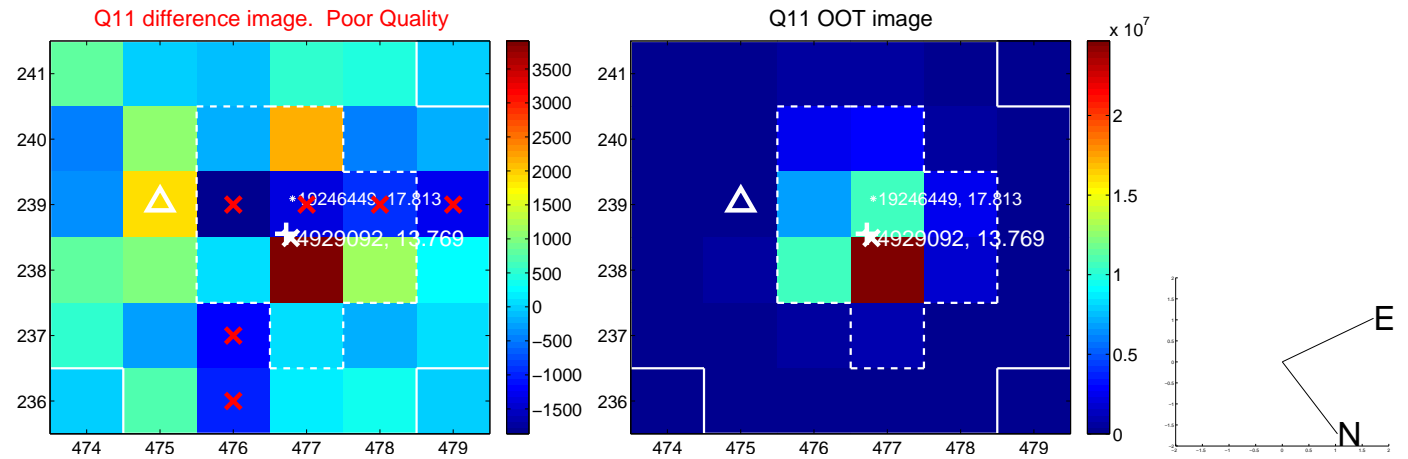
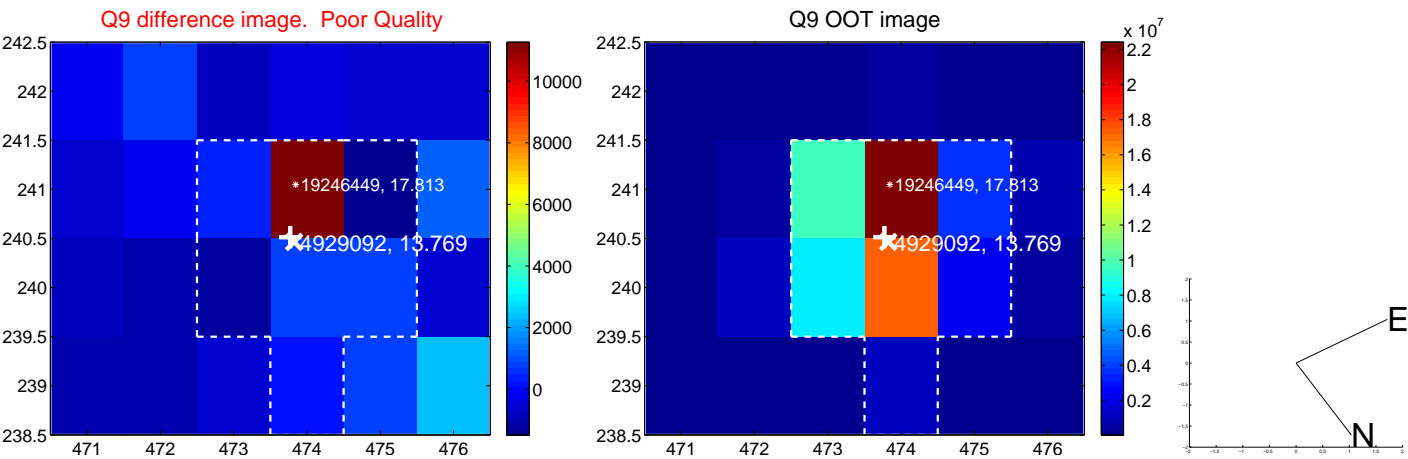
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



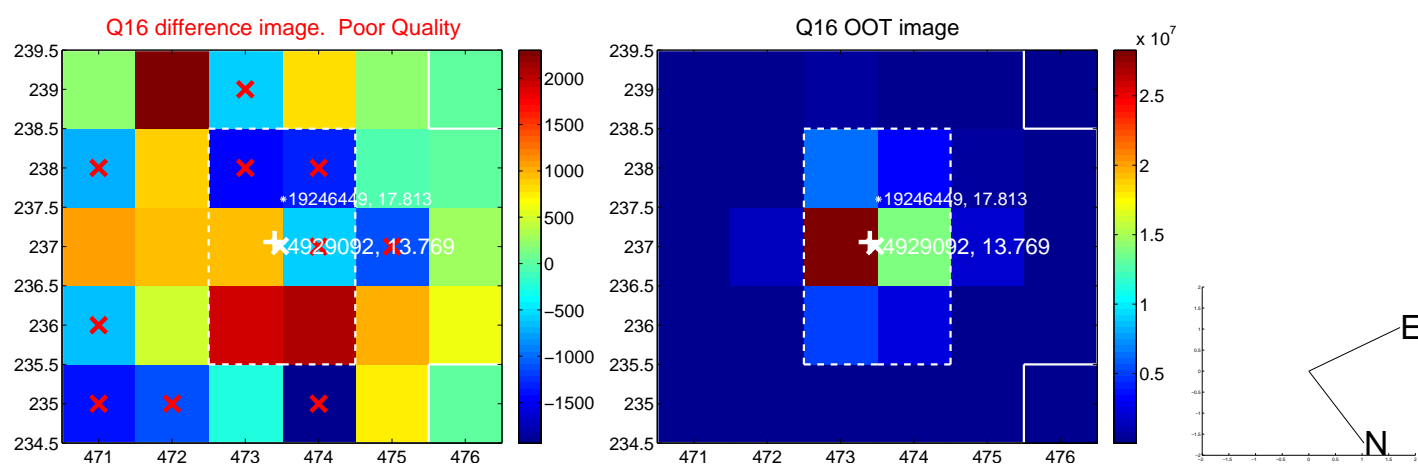
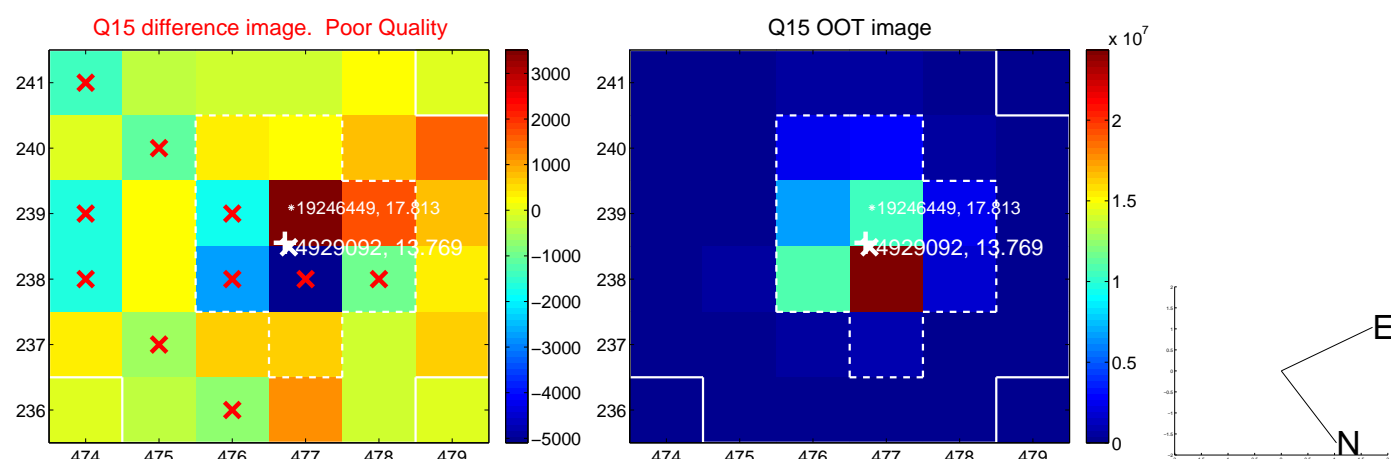
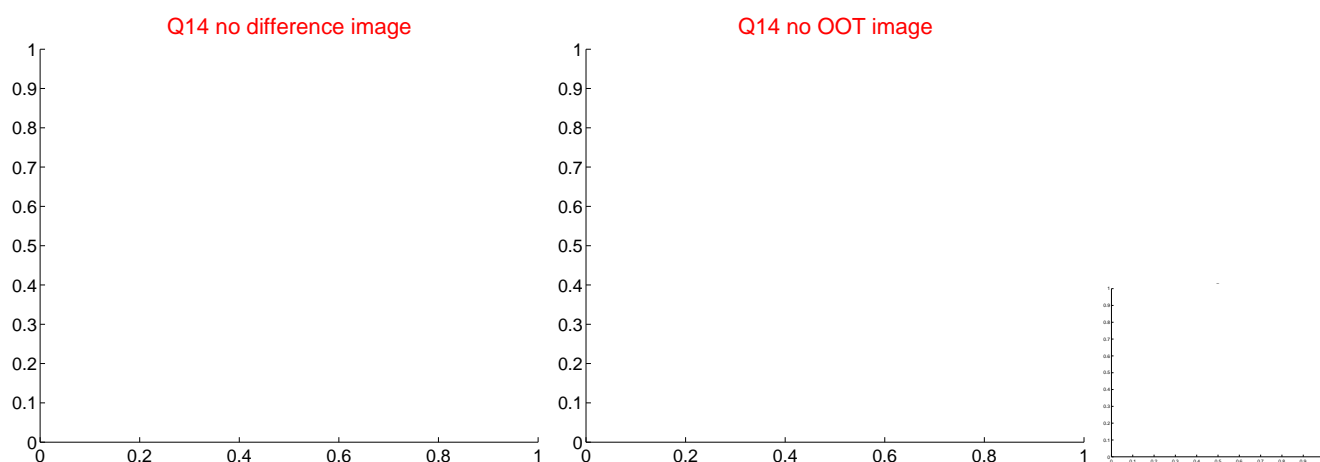
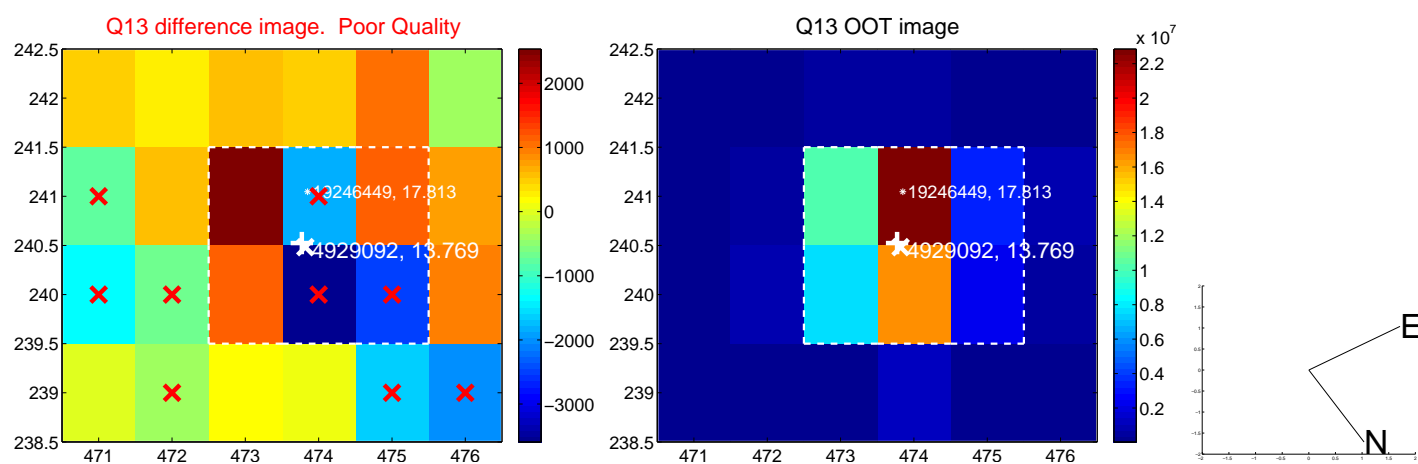
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



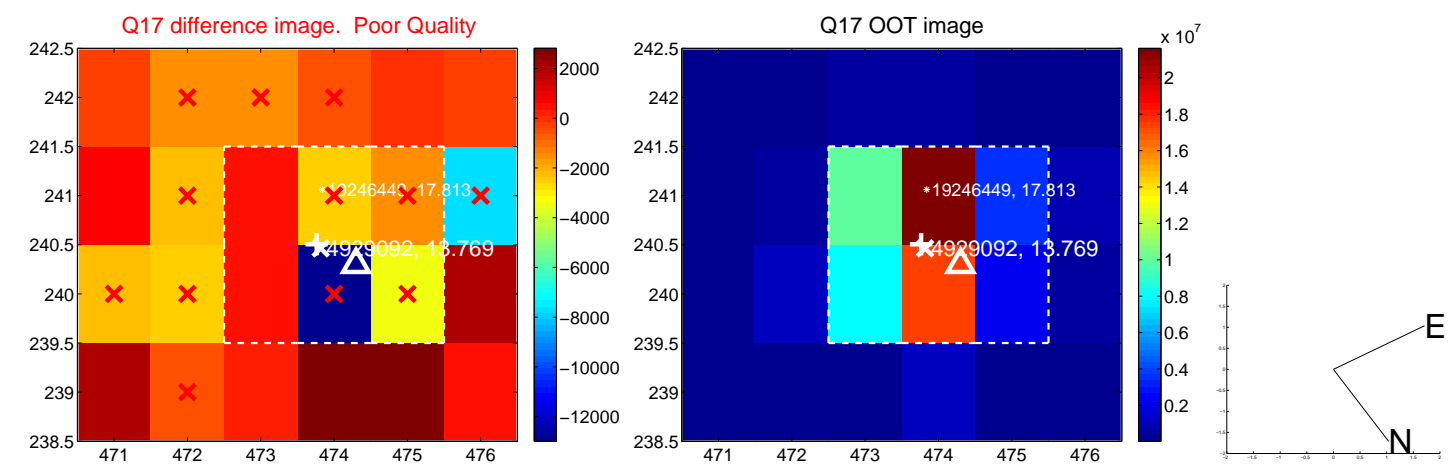
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



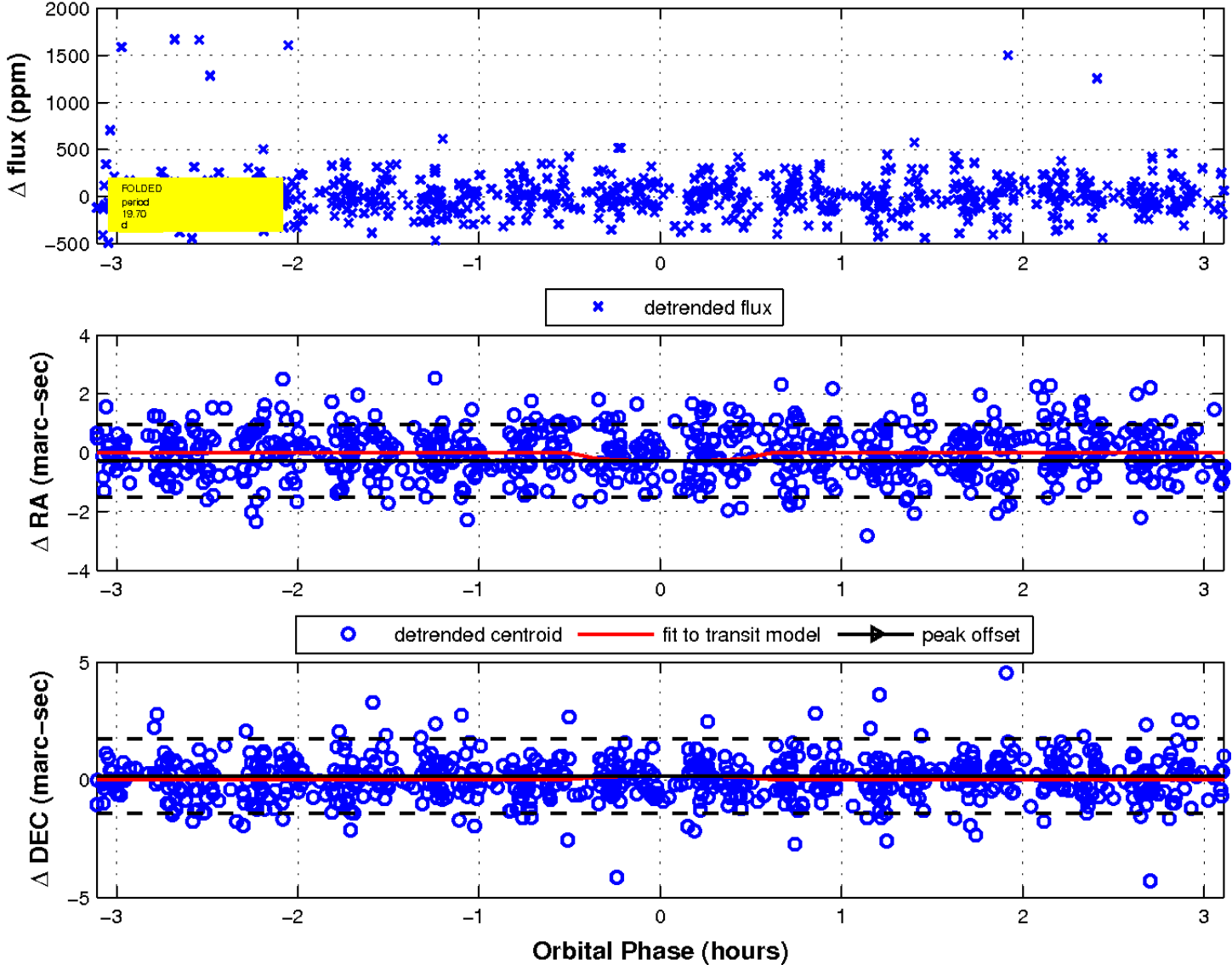
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 6 of 6



UKIRT Image

Declination

