

KIC 008430119

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})
008430119-01	OBS	No	0.537417	131.592104	41.8	2.135	10.8	11.4	2.40	7346	1.80	61364.25
008430119-02	OBS	No	2.886566	133.803931	116.4	4.320	9.0	8.9	2.40	7346	3.00	6523.62
008430119-03	OBS	No	427.238288	268.990163	983.4	24.356	8.0	7.8	2.40	7346	7.96	8.33
008430119-04	OBS	No	64.909733	189.011381	682.7	4.991	7.5	8.0	2.40	7346	7.00	102.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008430119-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008430119-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008430119-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST
008430119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT

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

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

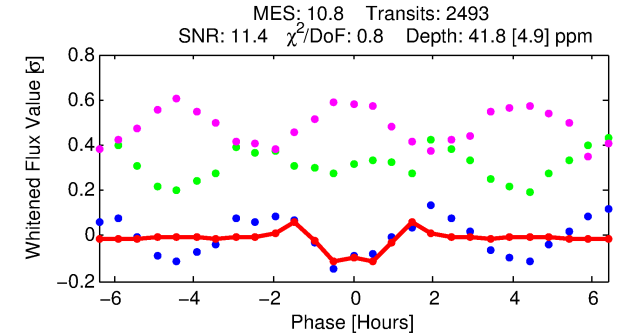
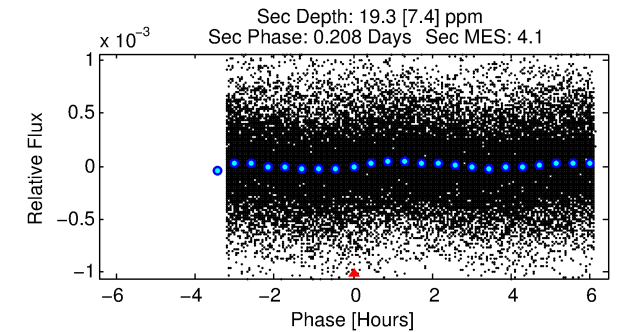
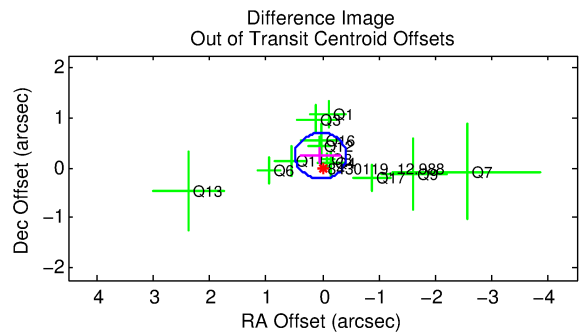
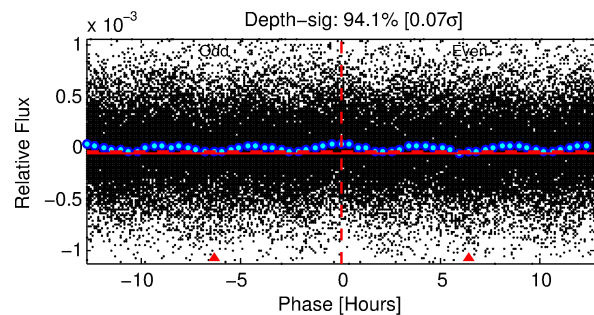
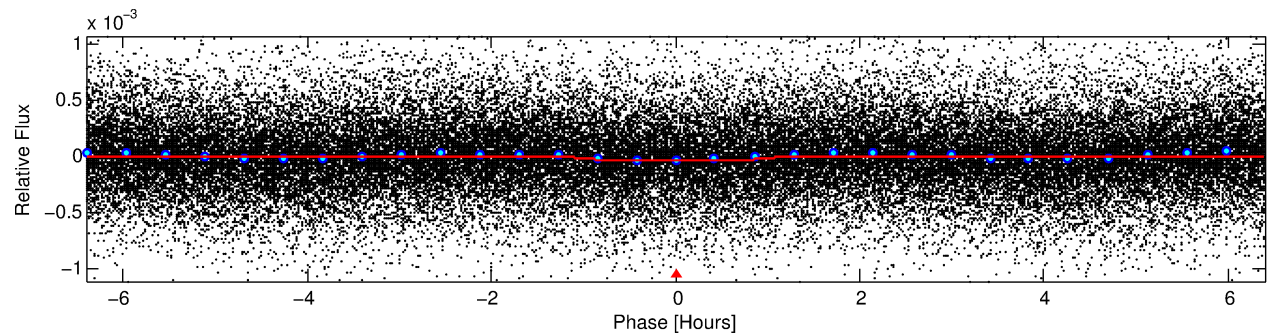
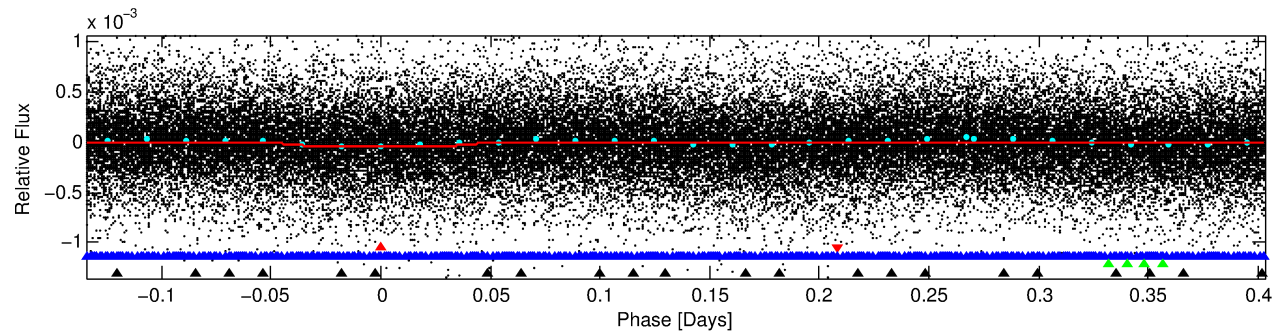
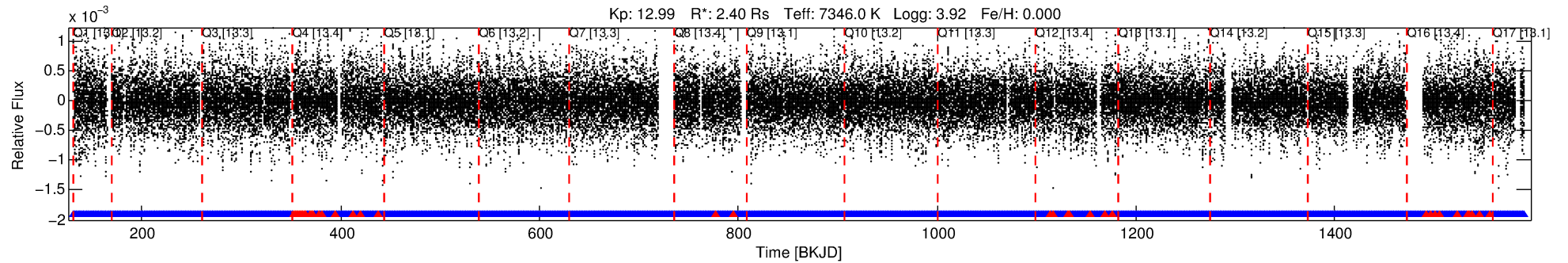
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008430119-01

No Significant Match Found

DV One-Page Summary

KIC: 8430119 Candidate: 1 of 4 Period: 0.537 d



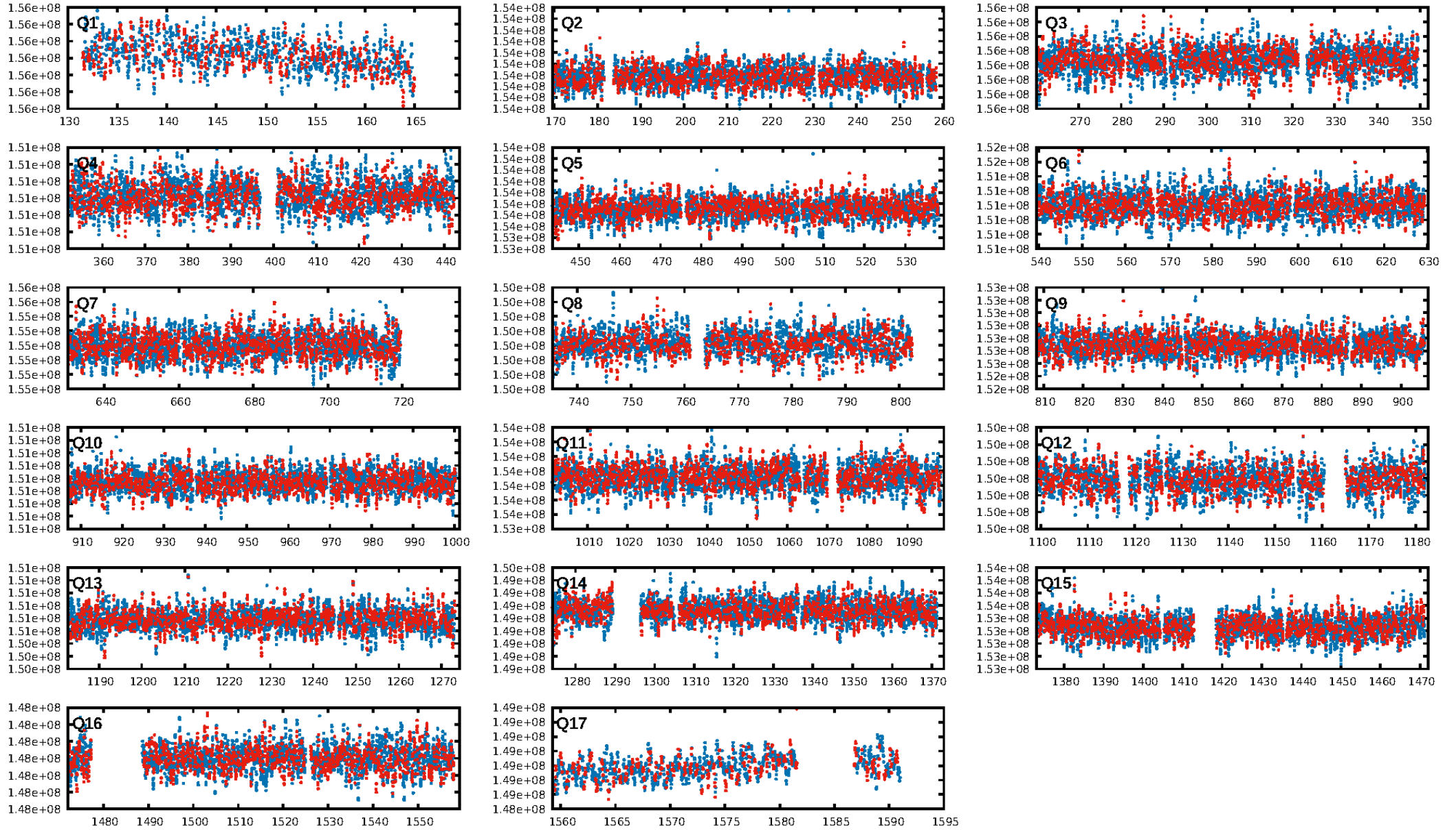
DV Fit Results:

Period = 0.53742 [0.00001] d
Epoch = 131.5921 [0.0013] BKJD
Rp/R* = 0.0069 [0.0013]
a/R* = 1.28 [0.60]
b = 0.90 [0.26]
Seff = 61364.25 [30205.33]
Teff = 4013 [494] K
Rp = 1.80 [0.70] Re
a = 0.0156 [0.0047] AU
Ag = 0.80 [0.57] [-0.34 σ]
Teffp = 5877 [843] K [1.91 σ]

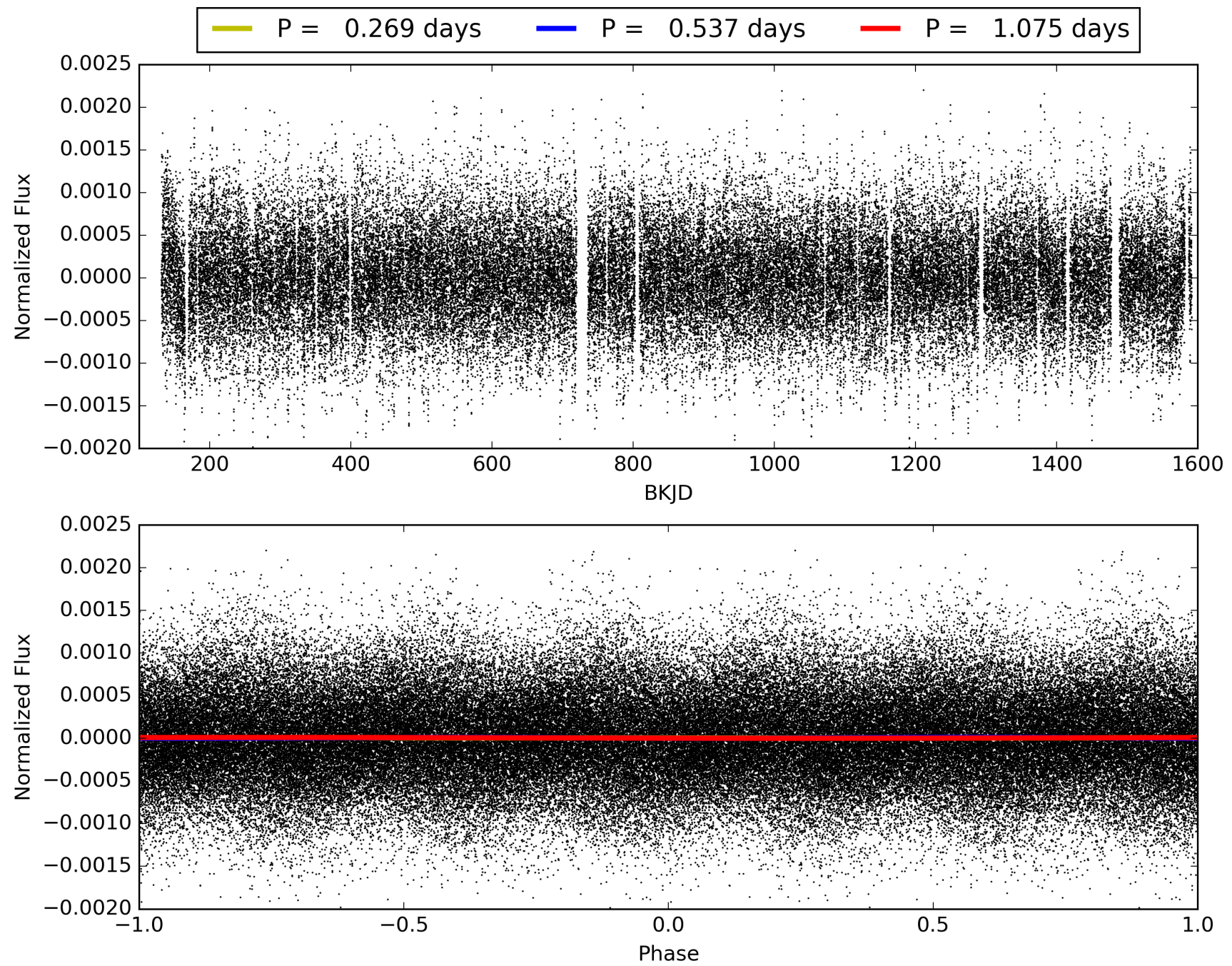
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [11.70 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.14e-22
RollingBand-fgt: 0.98 [2337/2380]
GhostDiagnostic-chr: 1.698
Centroid-sig: 67.8%
Centroid-so: 2.723 arcsec [3.69 σ]
OotOffset-rm: 0.240 arcsec [1.57 σ]
KicOffset-rm: 0.158 arcsec [1.01 σ]
OotOffset-st: 1/3/4/4 [12]
KicOffset-st: 1/3/4/4 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008430119-01, PDC Light Curves

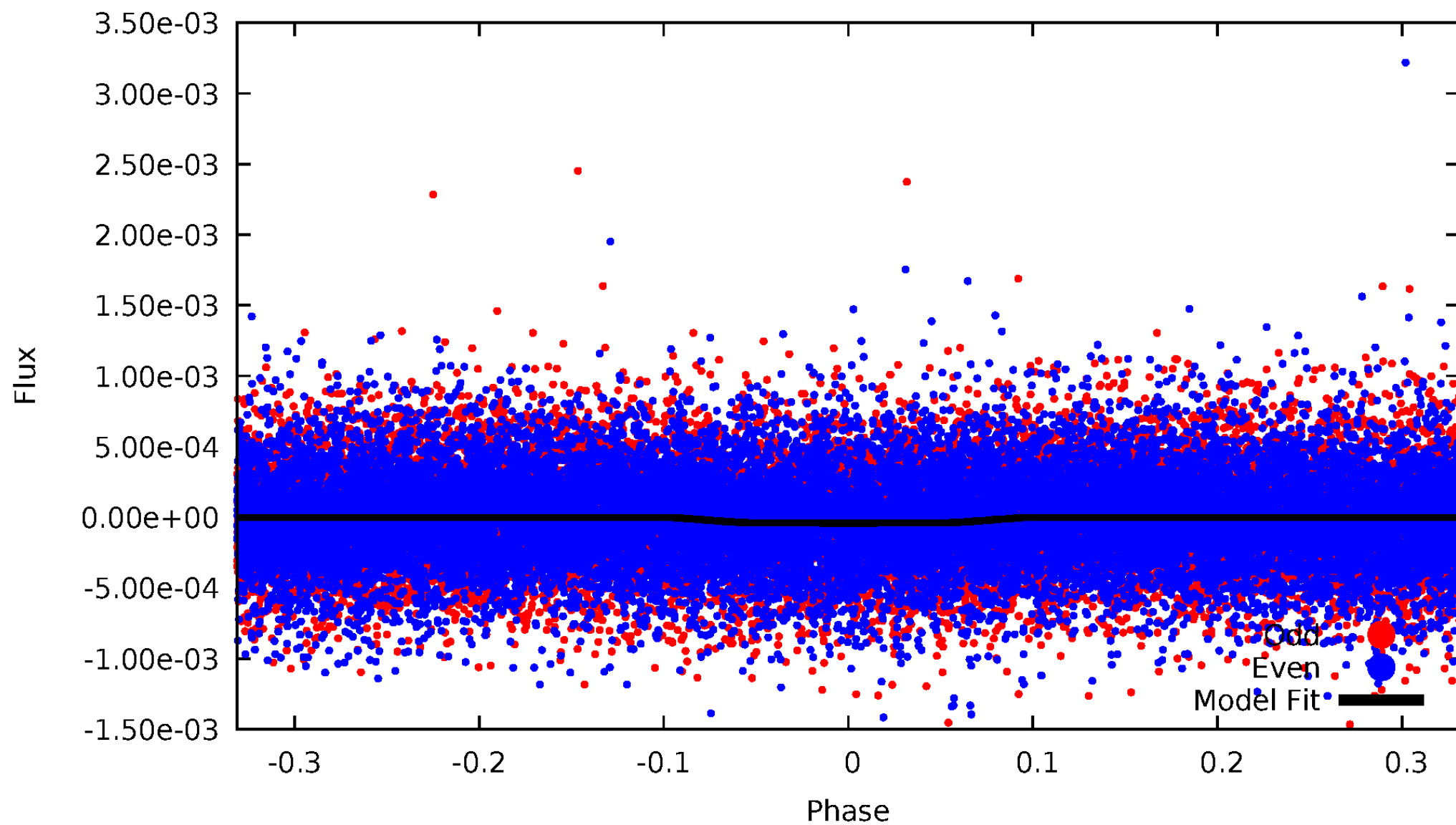


TCE 008430119-01



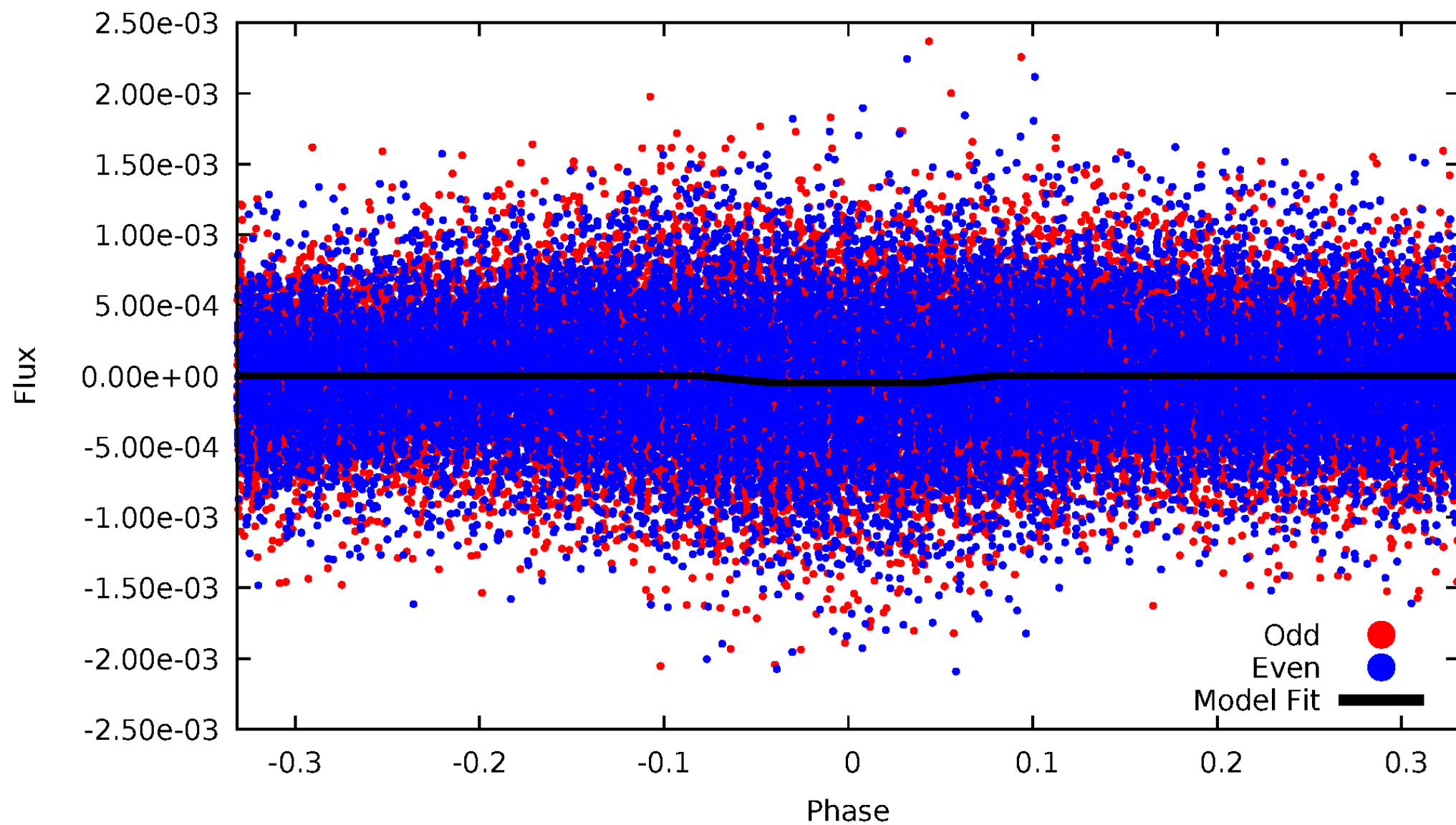
DV Odd/Even

TCE 008430119-01

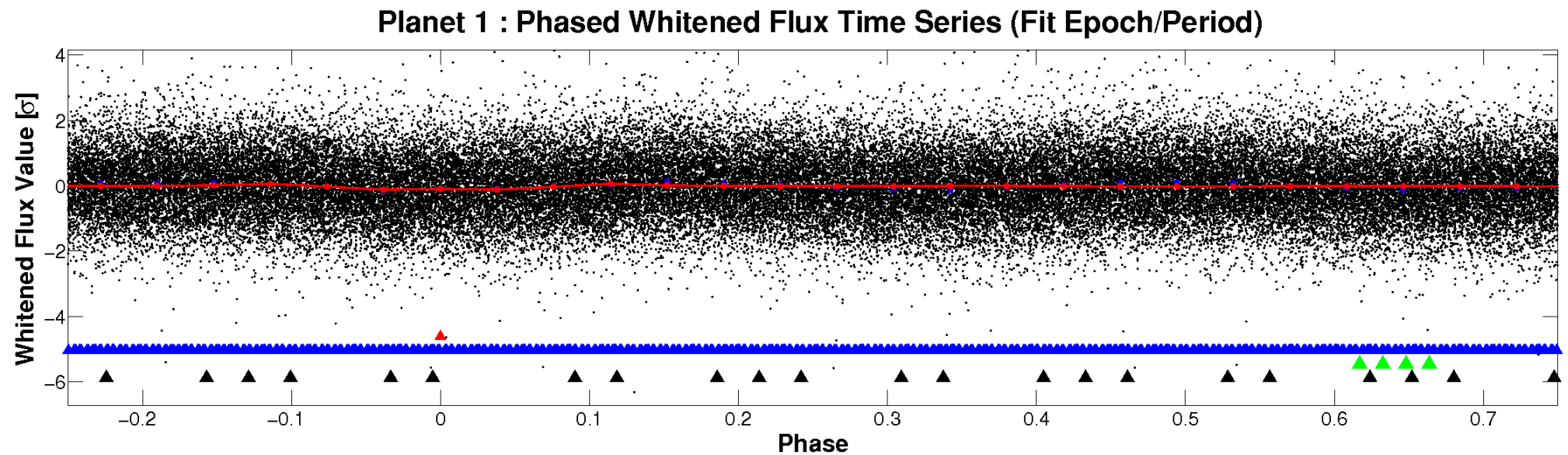
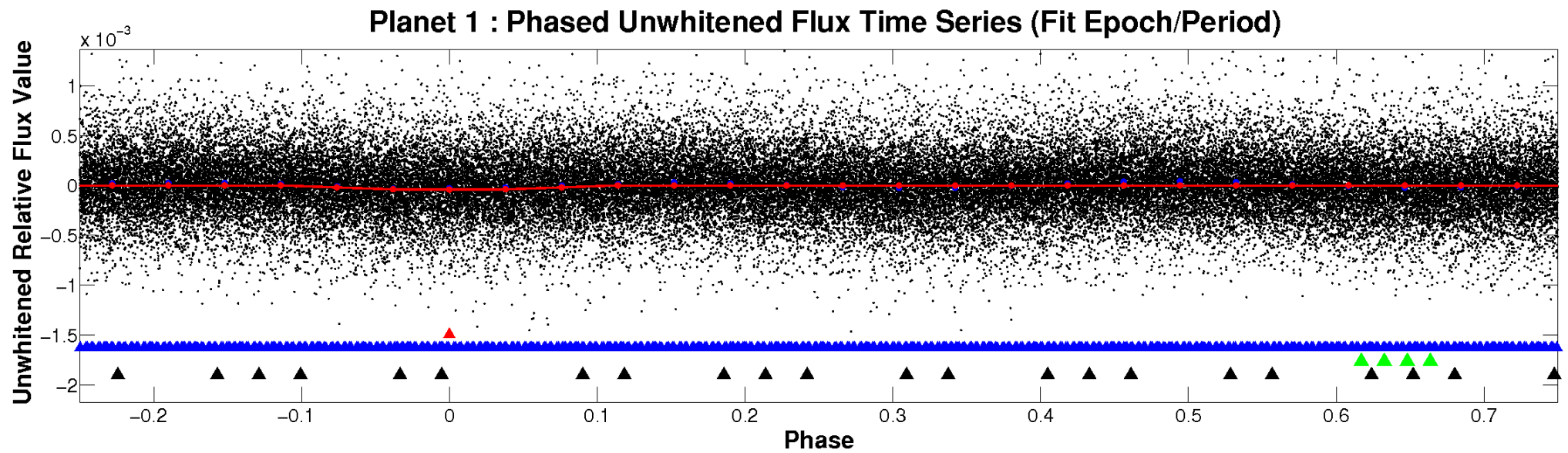


ALT Odd/Even

TCE 008430119-01

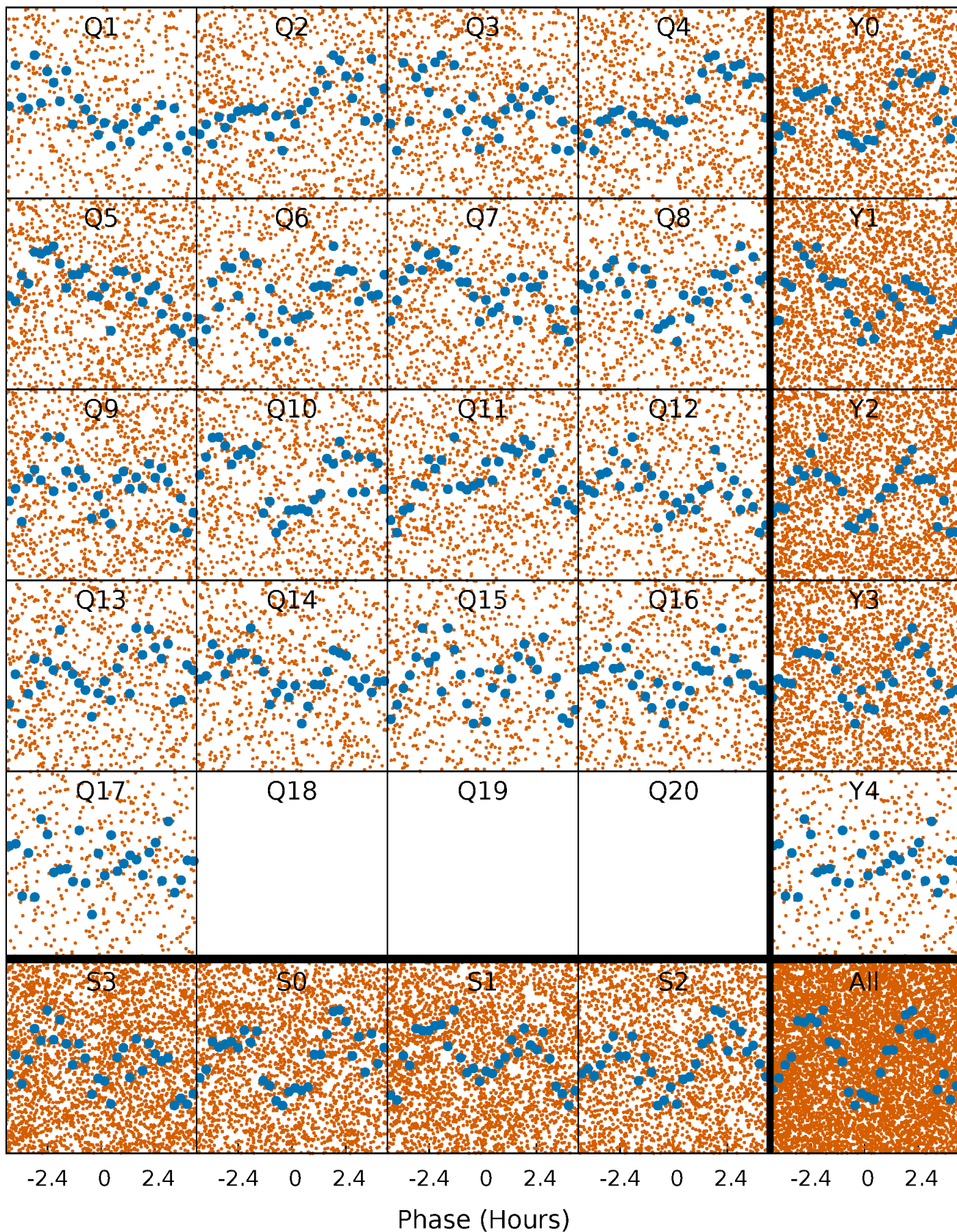


Non-Whitened Vs. Whitened Light Curve



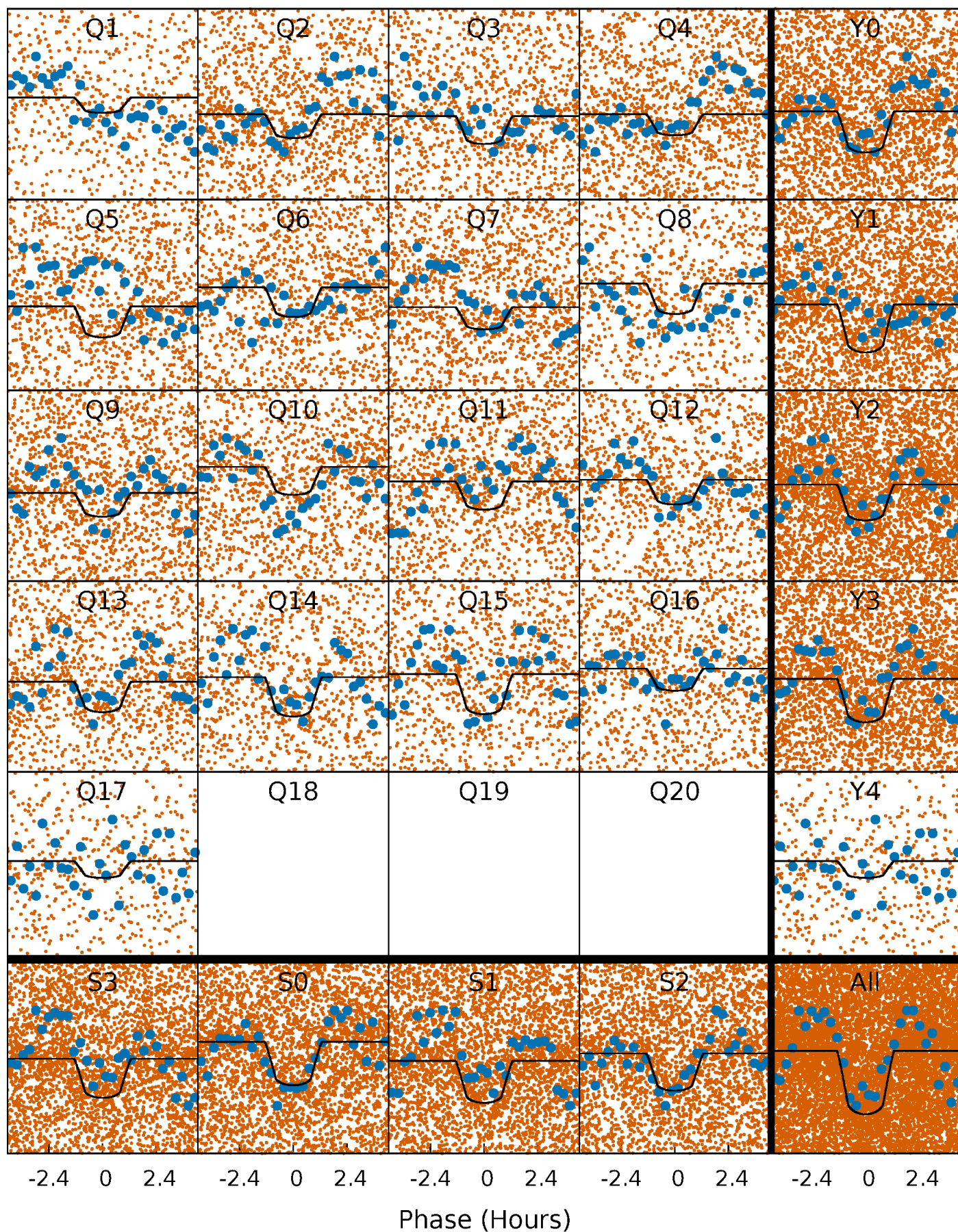
PDC Quarter-Phased Transit Curves

TCE 008430119-01 P= 0.537417 Days $T_0=131.592104$ (BKJD)



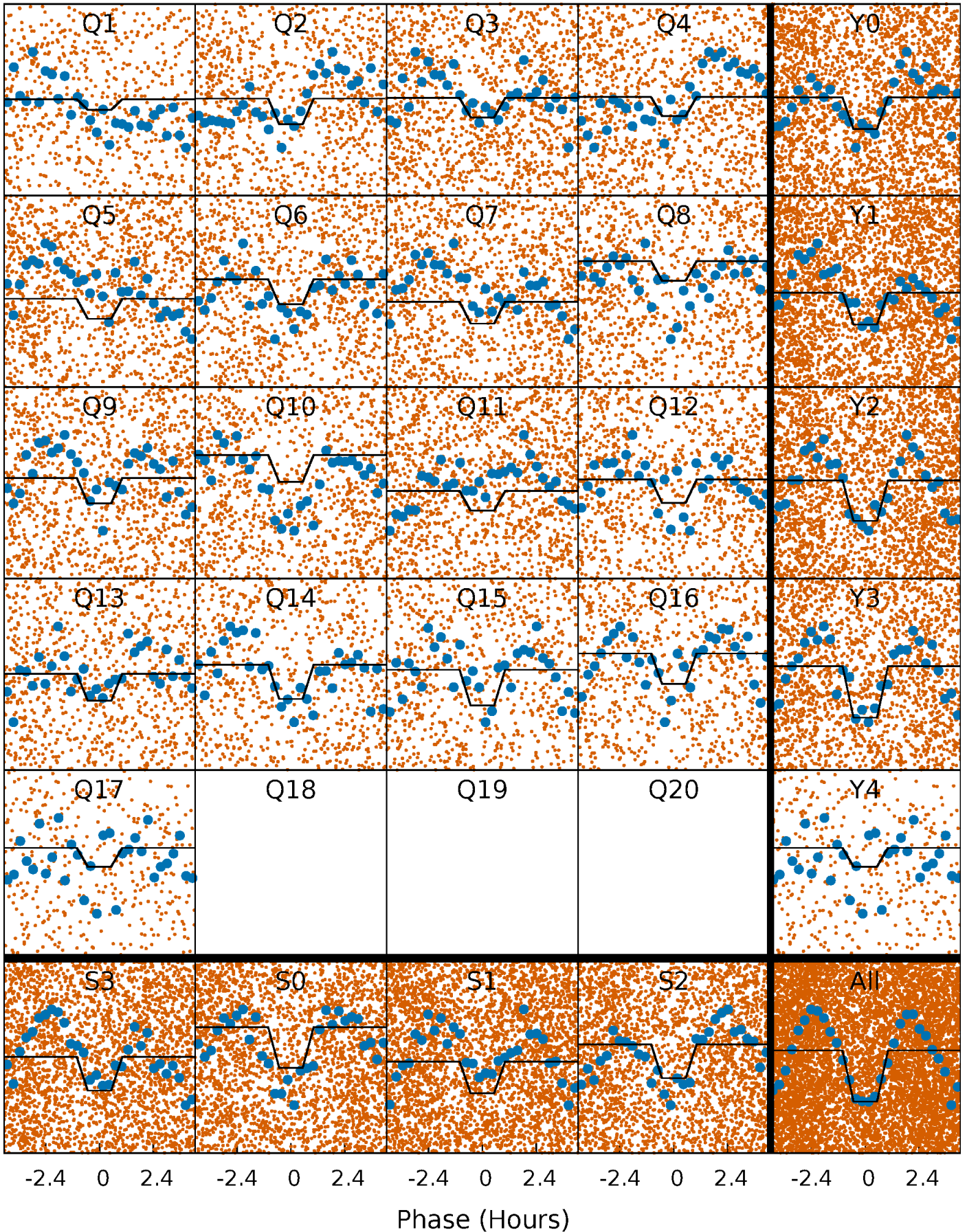
DV Quarter-Phased Transit Curves

TCE 008430119-01 P= 0.537417 Days $T_0=131.592104$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

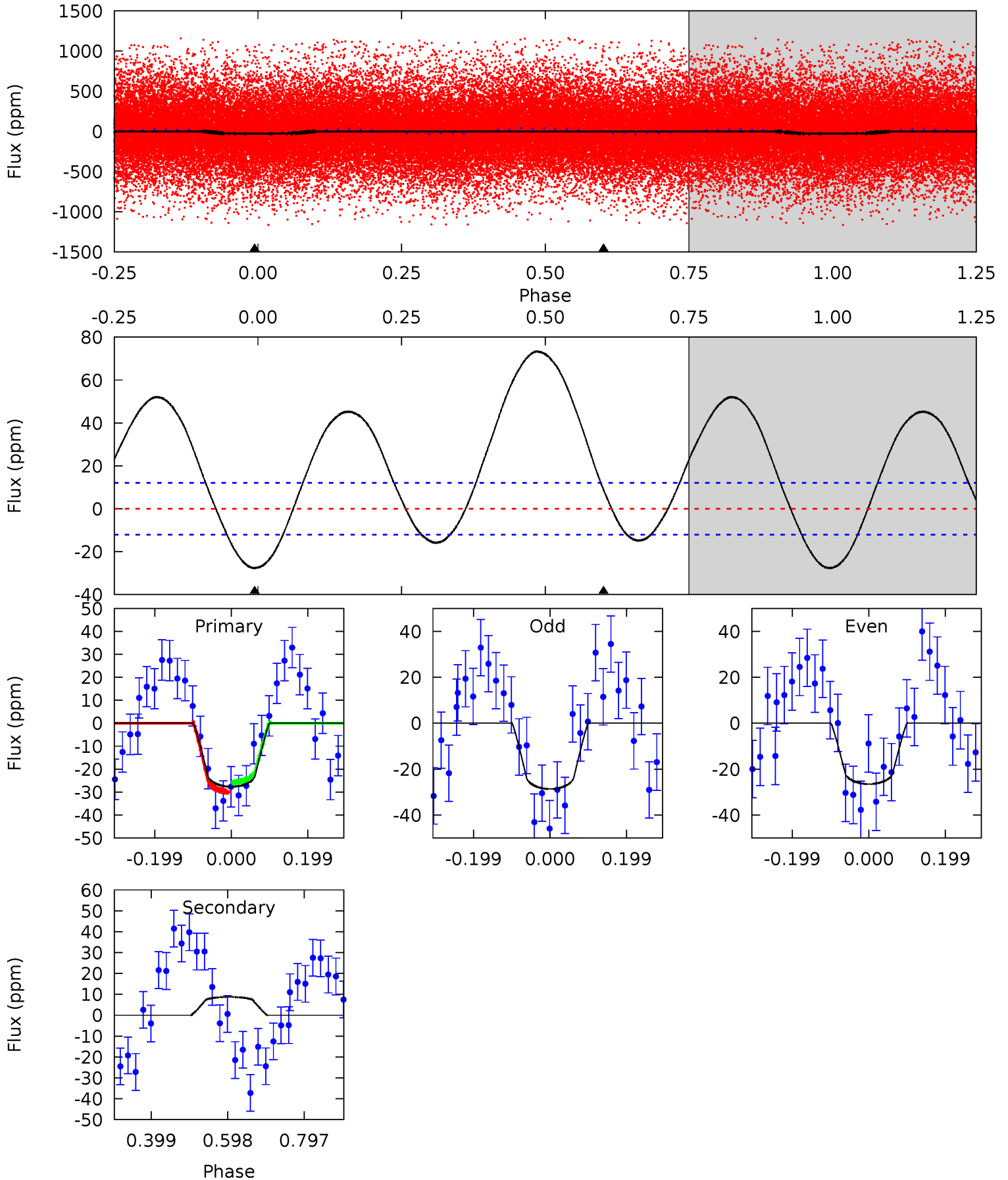
TCE 008430119-01 P= 0.537415 Days $T_0=131.591701$ (BKJD)



DV Model-Shift Uniqueness Test

008430119-01, P = 0.537417 Days, E = 131.054687 Days

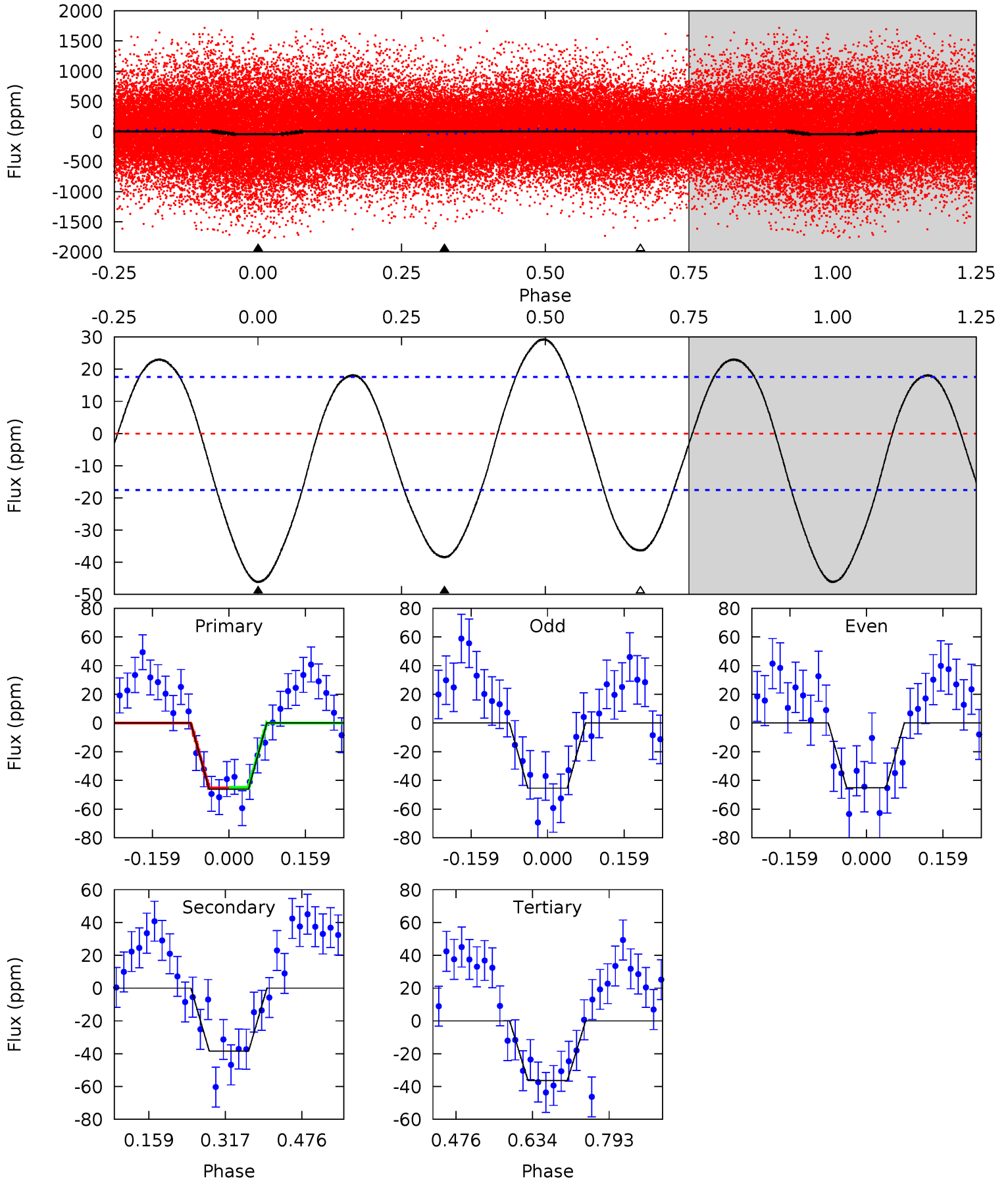
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	-3.19	0	0	4.42	1.28	5.96	10.1	10.1	-3.19	-3.19	0.40	0.90	0.73	0.77



Alt Model-Shift Uniqueness Test

008430119-01, P = 0.537415 Days, E = 131.054286 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	9.78	9.24	0	4.47	1.41	5.79	2.50	11.7	0.54	9.78	0.04	1.12	0.39	0.04



Stellar Parameters For KIC 008430119

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7346^{+203}_{-330}	$3.925^{+0.260}_{-0.140}$	$0.000^{+0.200}_{-0.350}$	$2.398^{+0.540}_{-0.810}$	$1.765^{+0.184}_{-0.368}$	$0.180^{+0.303}_{-0.073}$
	+3%/-4%	+7%/-4%	+inf%/-inf%	+23%/-34%	+10%/-21%	+168%/-41%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008430119-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	9 ± 3	$1.72^{+0.46}_{-0.42}$	5525^{+388}_{-500}	-5487^{+343}_{-481}	$-0.387^{+0.179}_{-0.284}$
Alt.	-38 ± 4	$1.78^{+0.46}_{-0.45}$	5551^{+416}_{-508}	6425^{+1119}_{-749}	$1.611^{+1.284}_{-0.595}$

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

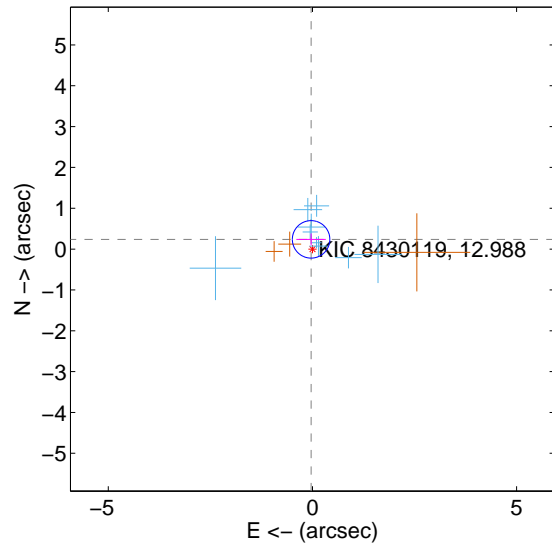
Supplemental centroid analysis for 008430119-01. Kepler magnitude: 12.99. Transit SNR 11.35

There are 9 quarters with good PRF difference image offsets

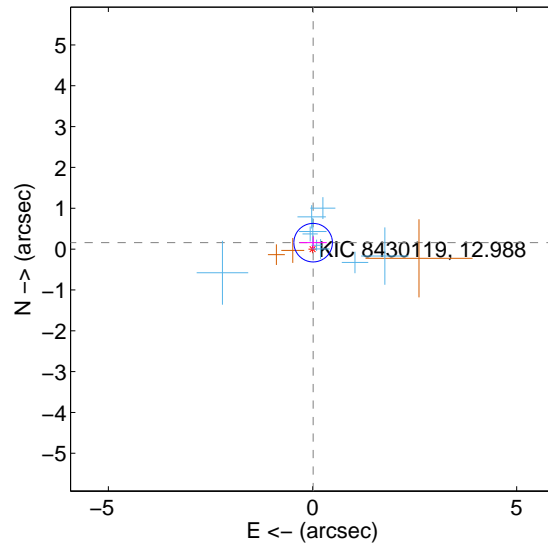
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.240 ± 0.153	1.57	0.033 ± 0.360	0.238 ± 0.145
PRF-fit source offset from KIC position	0.158 ± 0.157	1.01	-0.015 ± 0.333	0.157 ± 0.150
photometric centroid source offset	2.72 ± 0.74	3.69	-2.07 ± 0.72	-1.77 ± 0.77

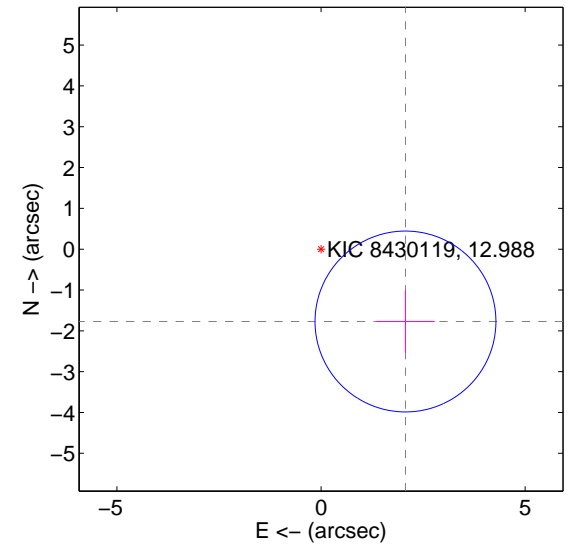
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

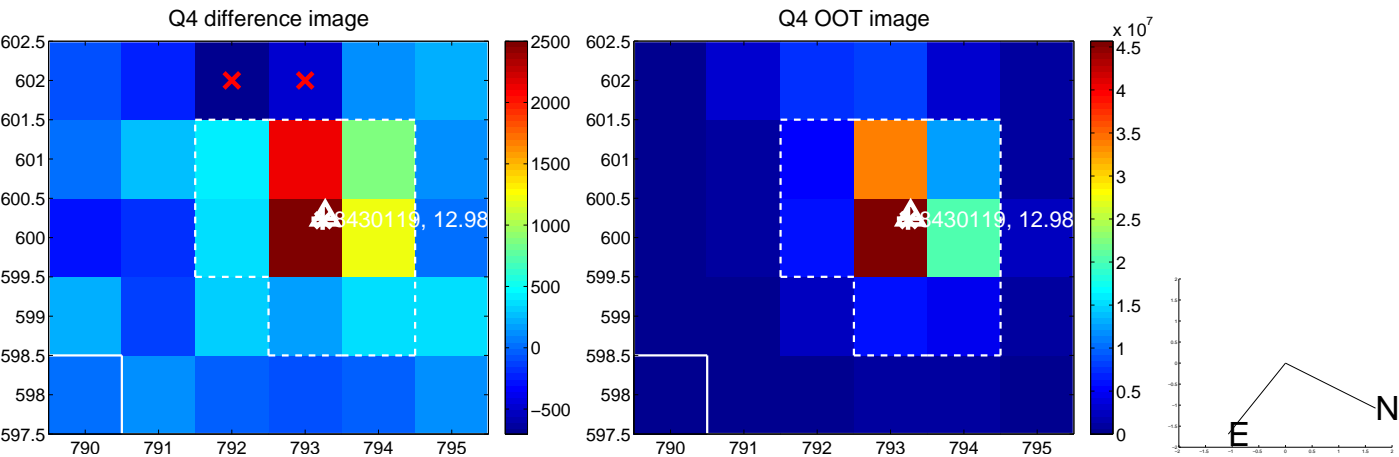
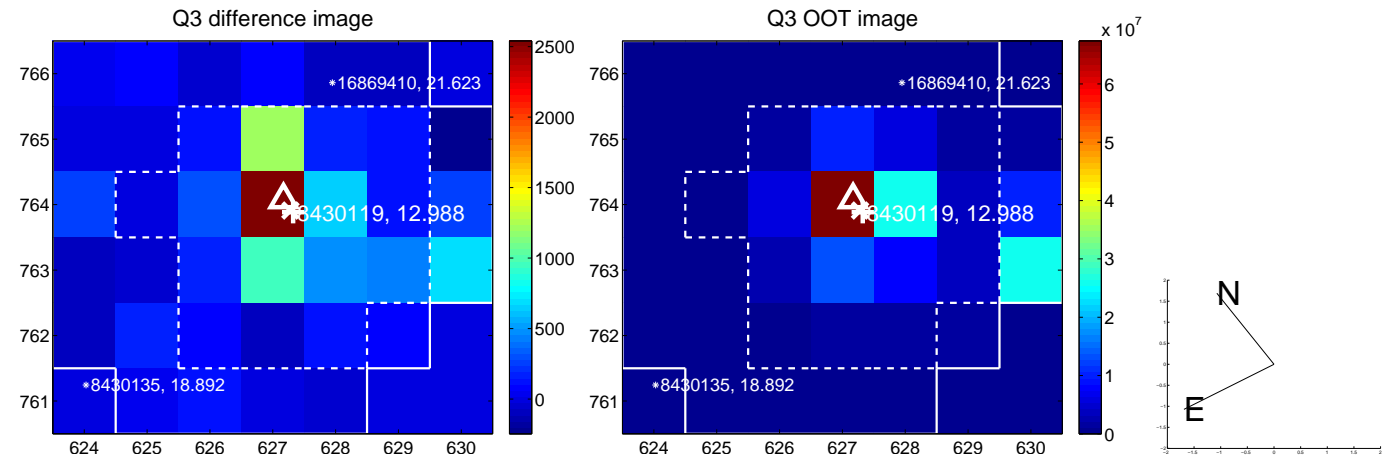
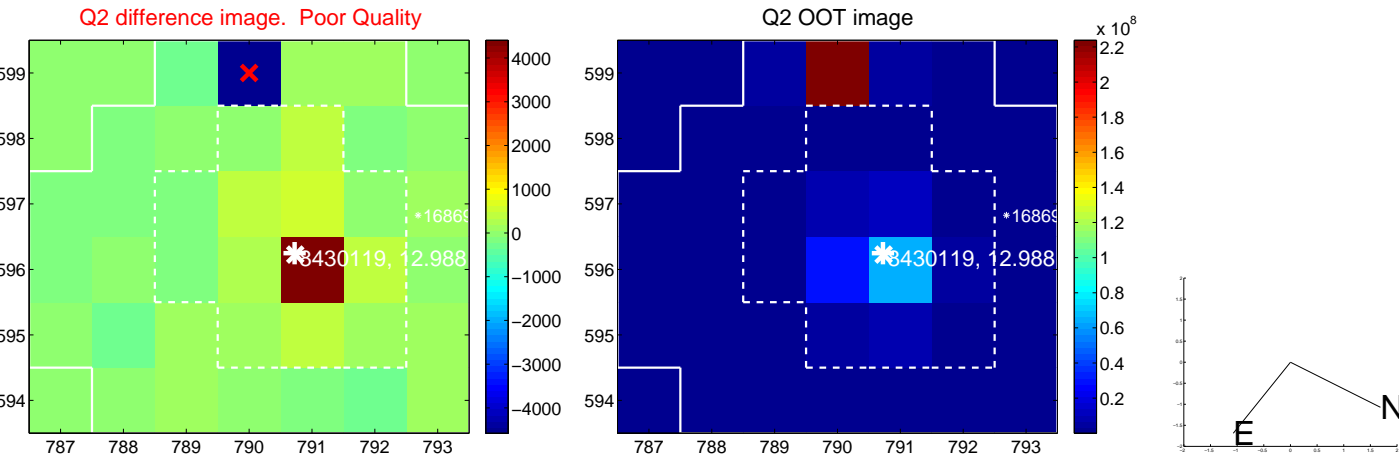
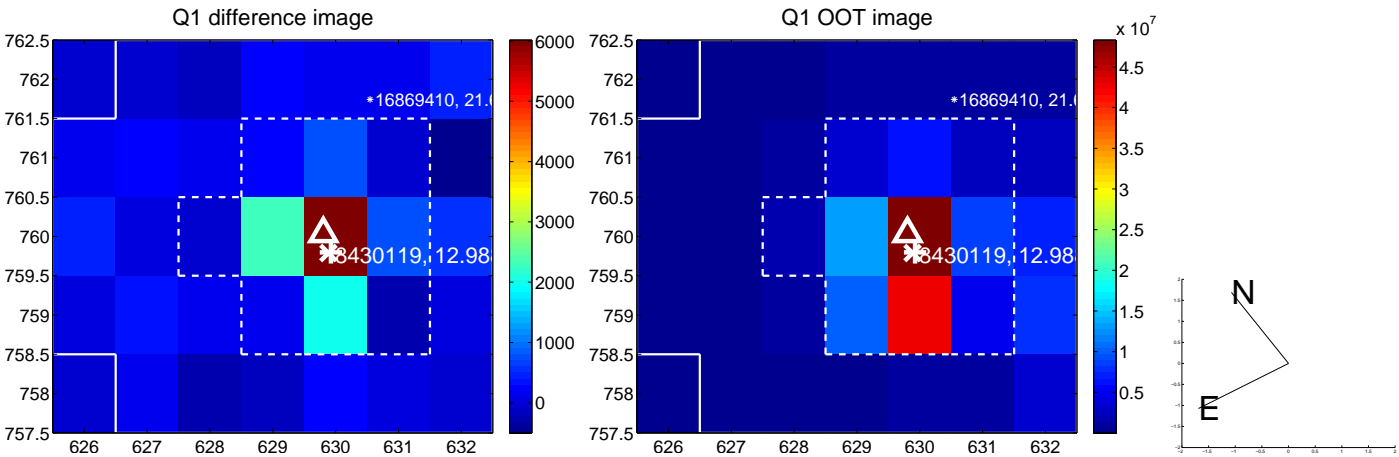


offset from photometric centroids

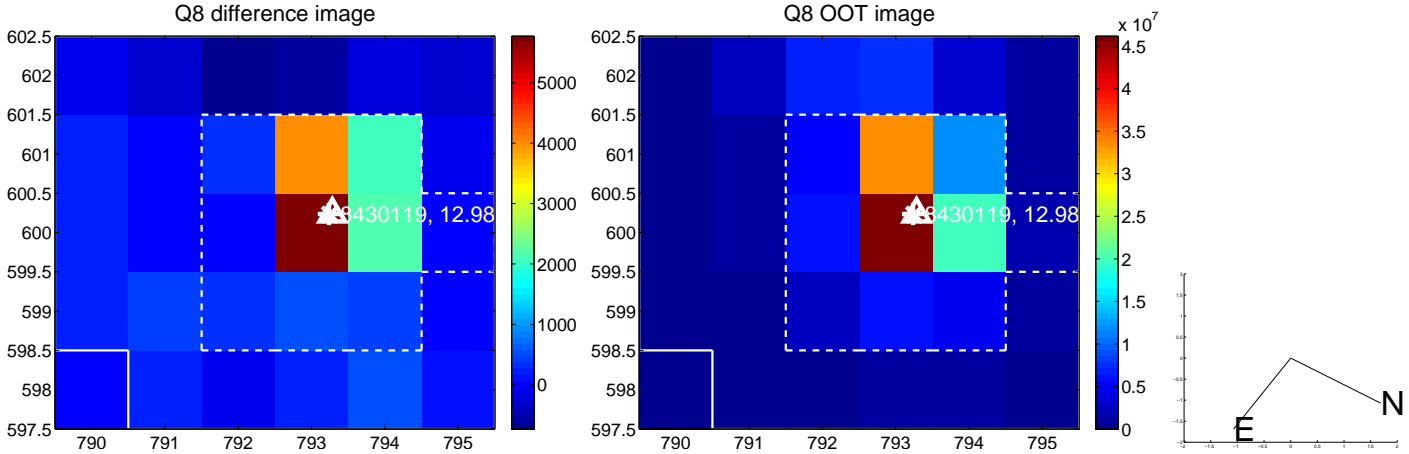
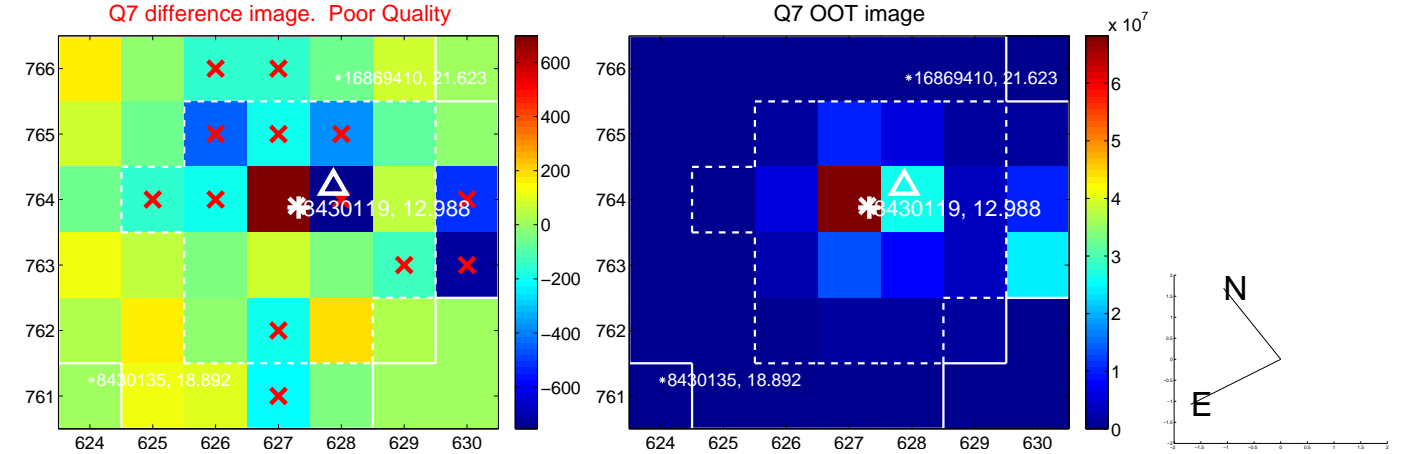
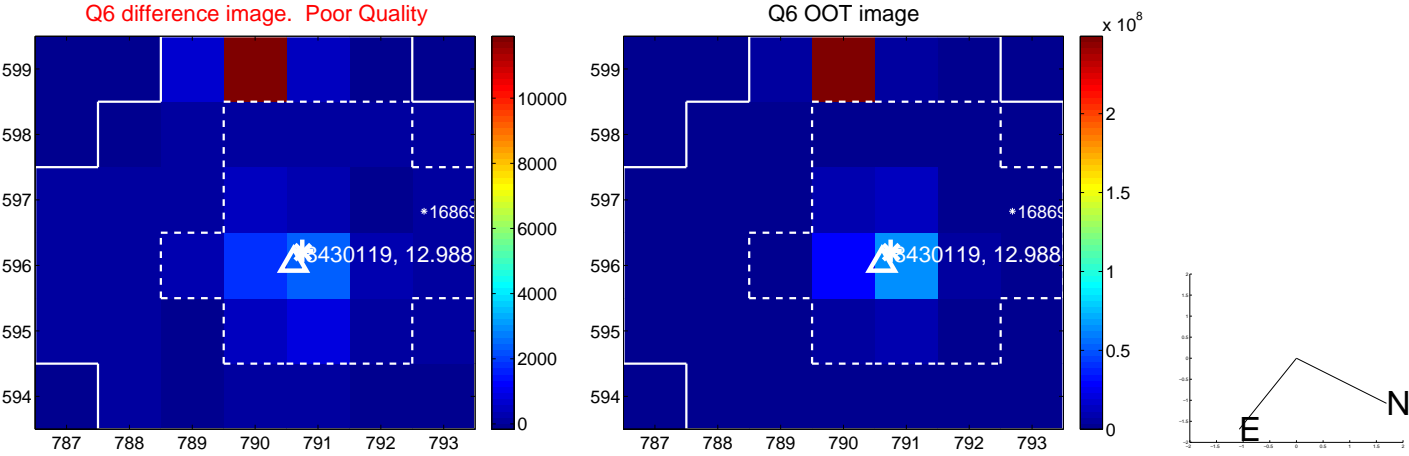
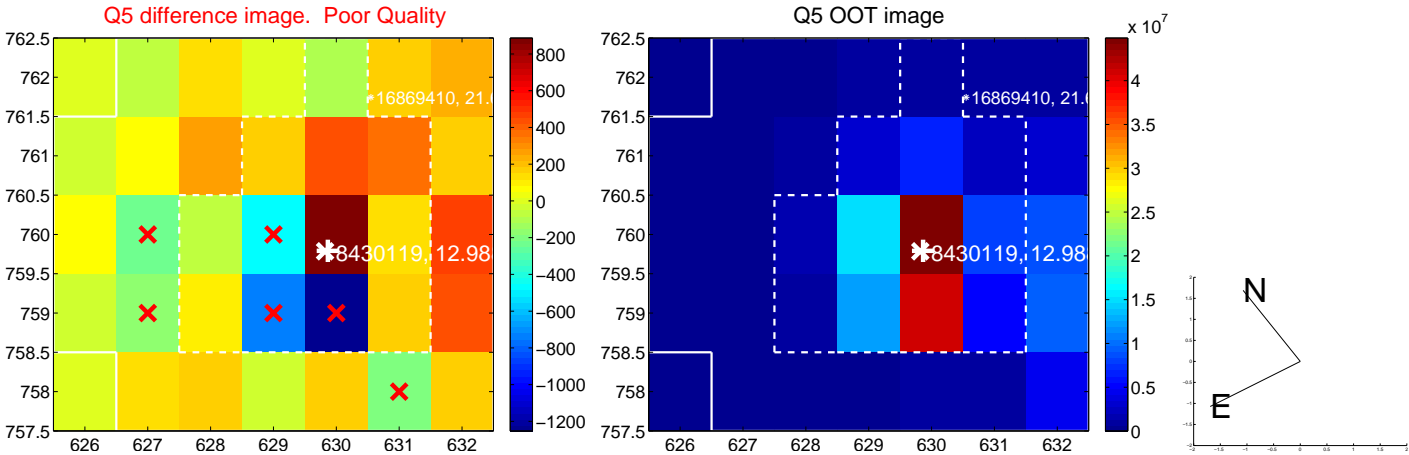


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

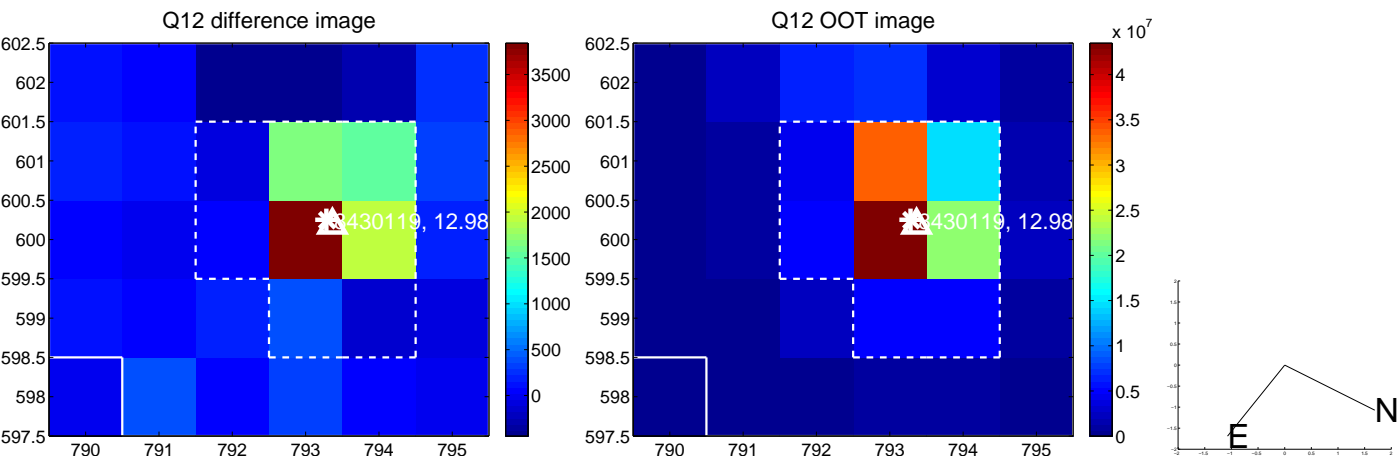
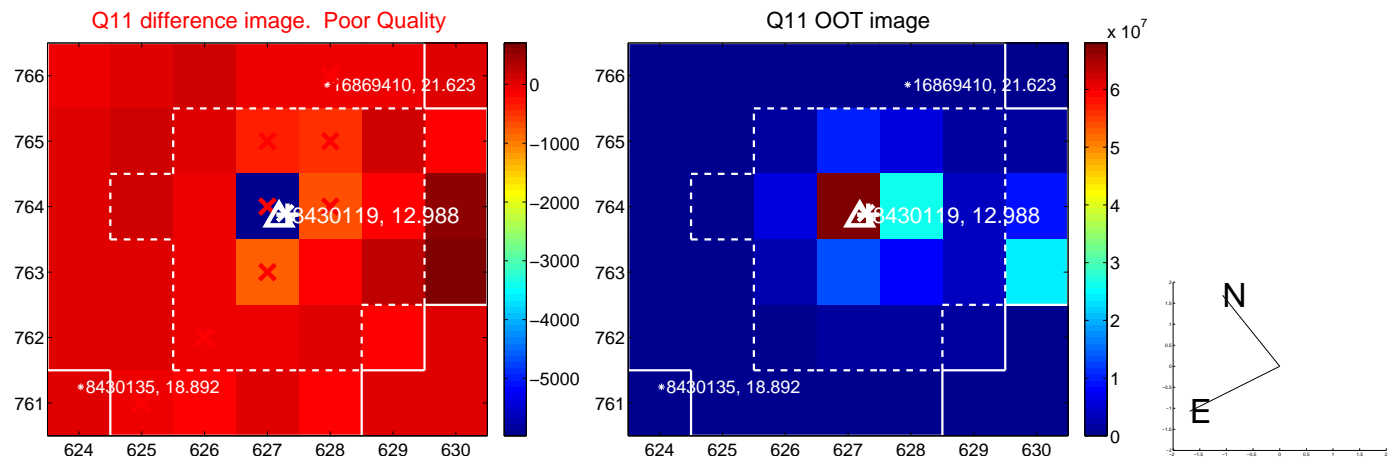
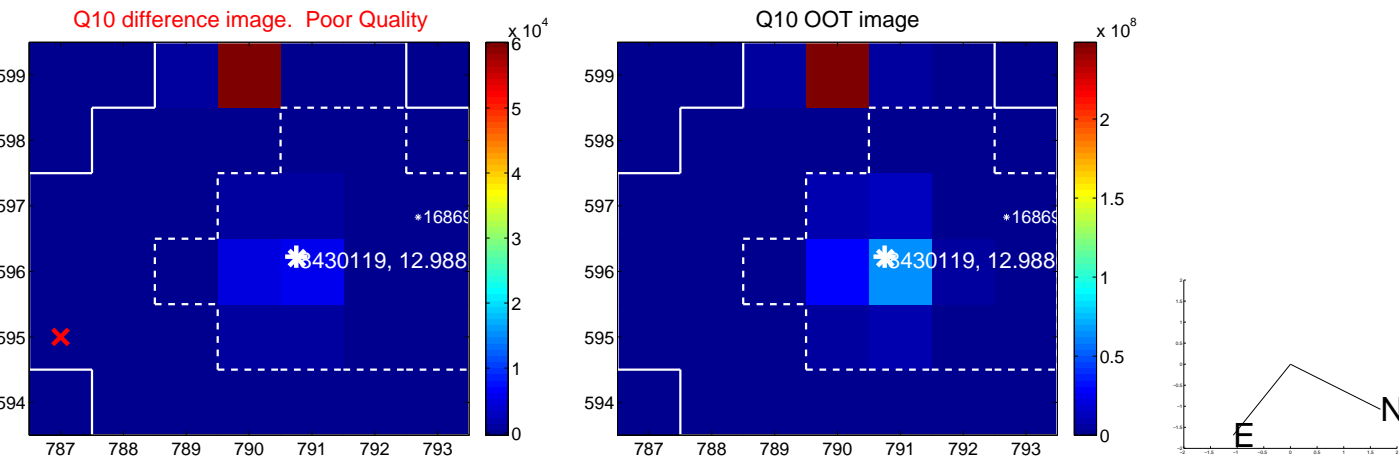
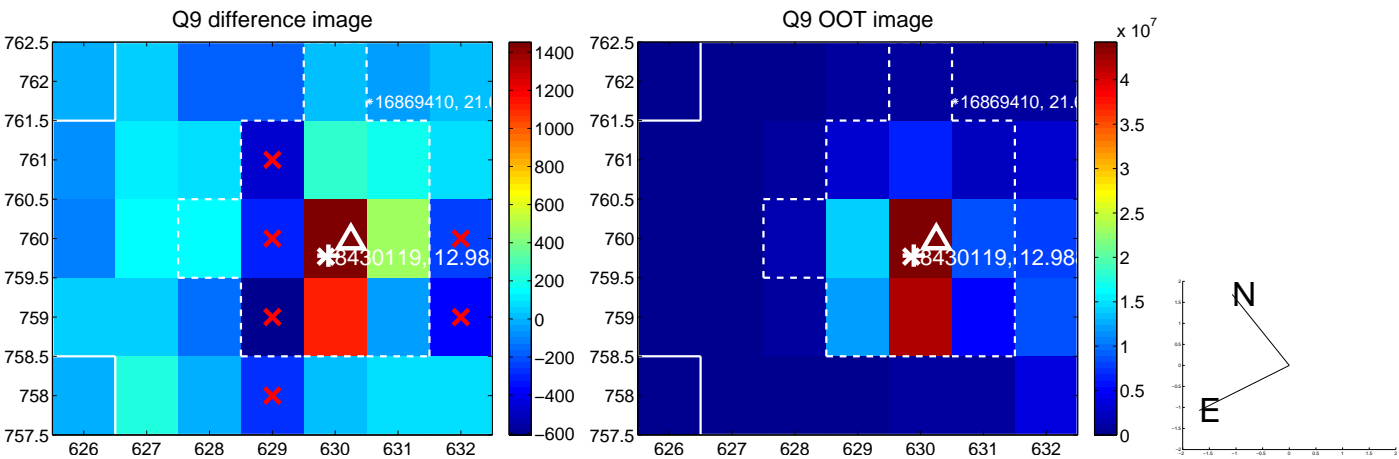
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



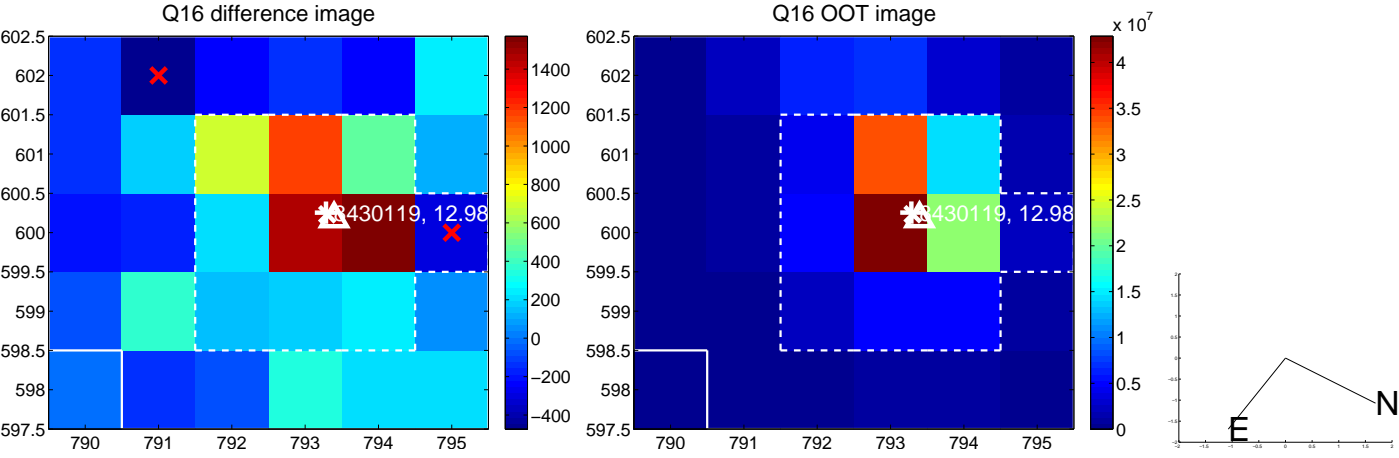
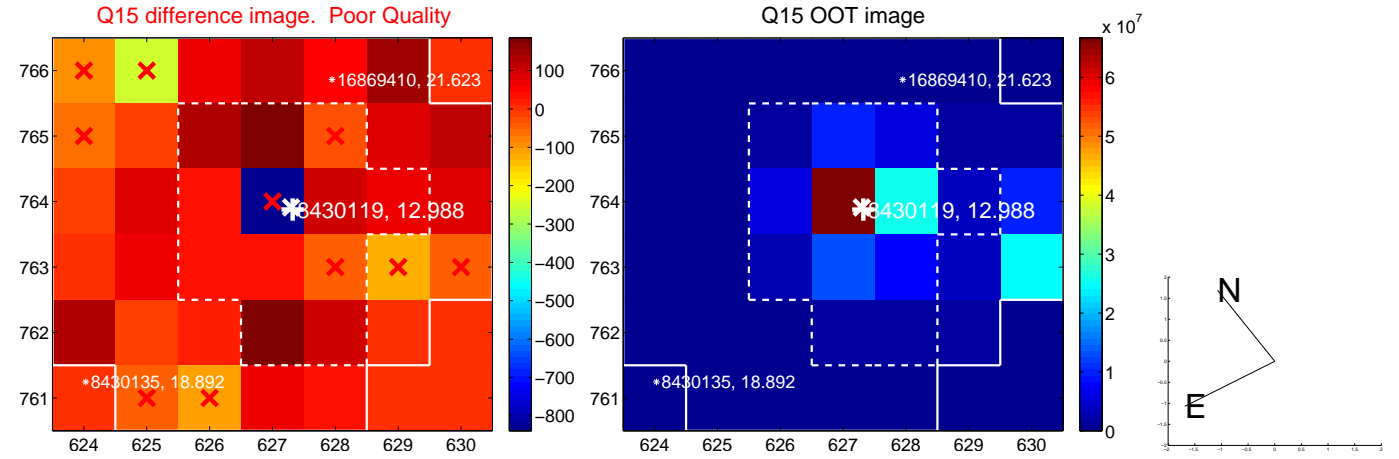
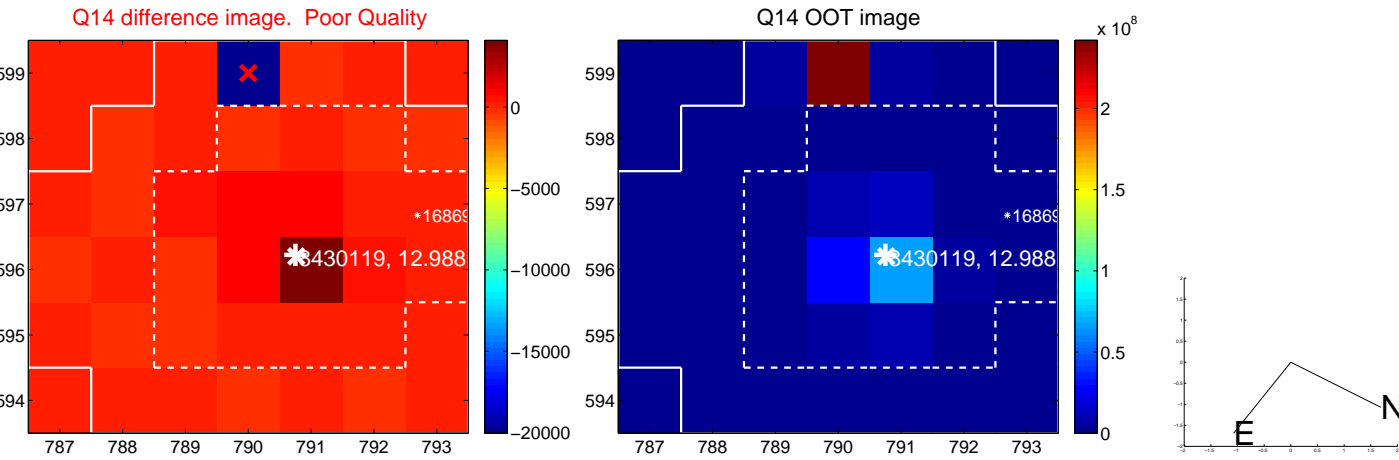
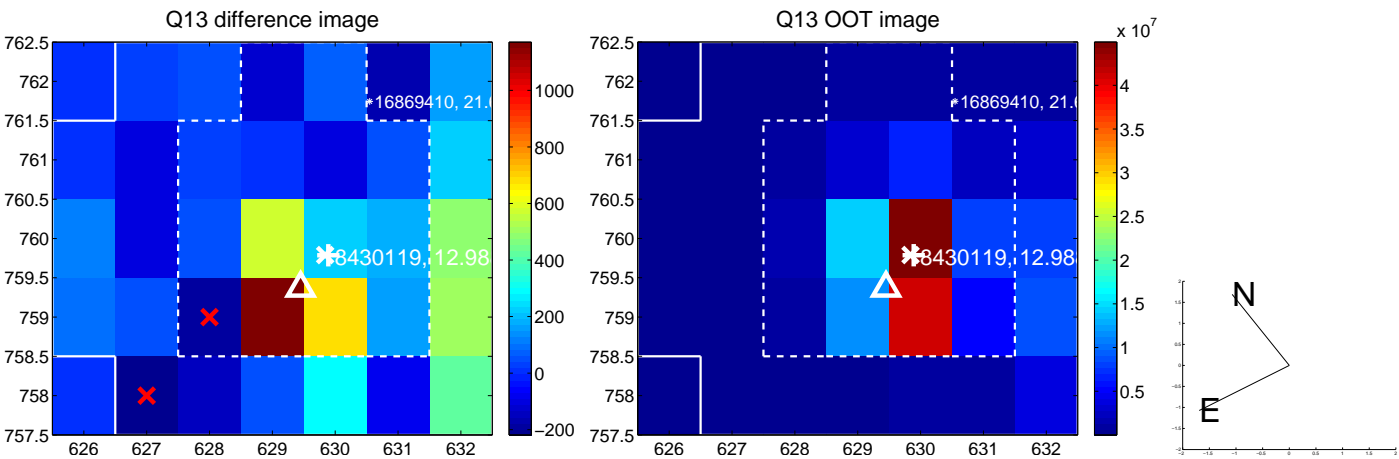
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



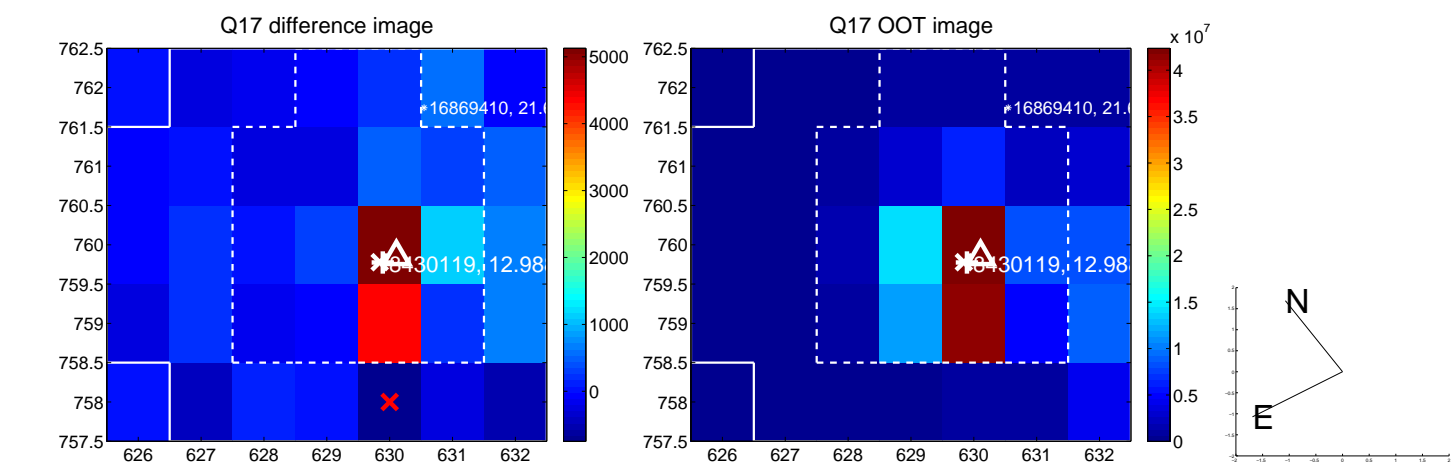
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



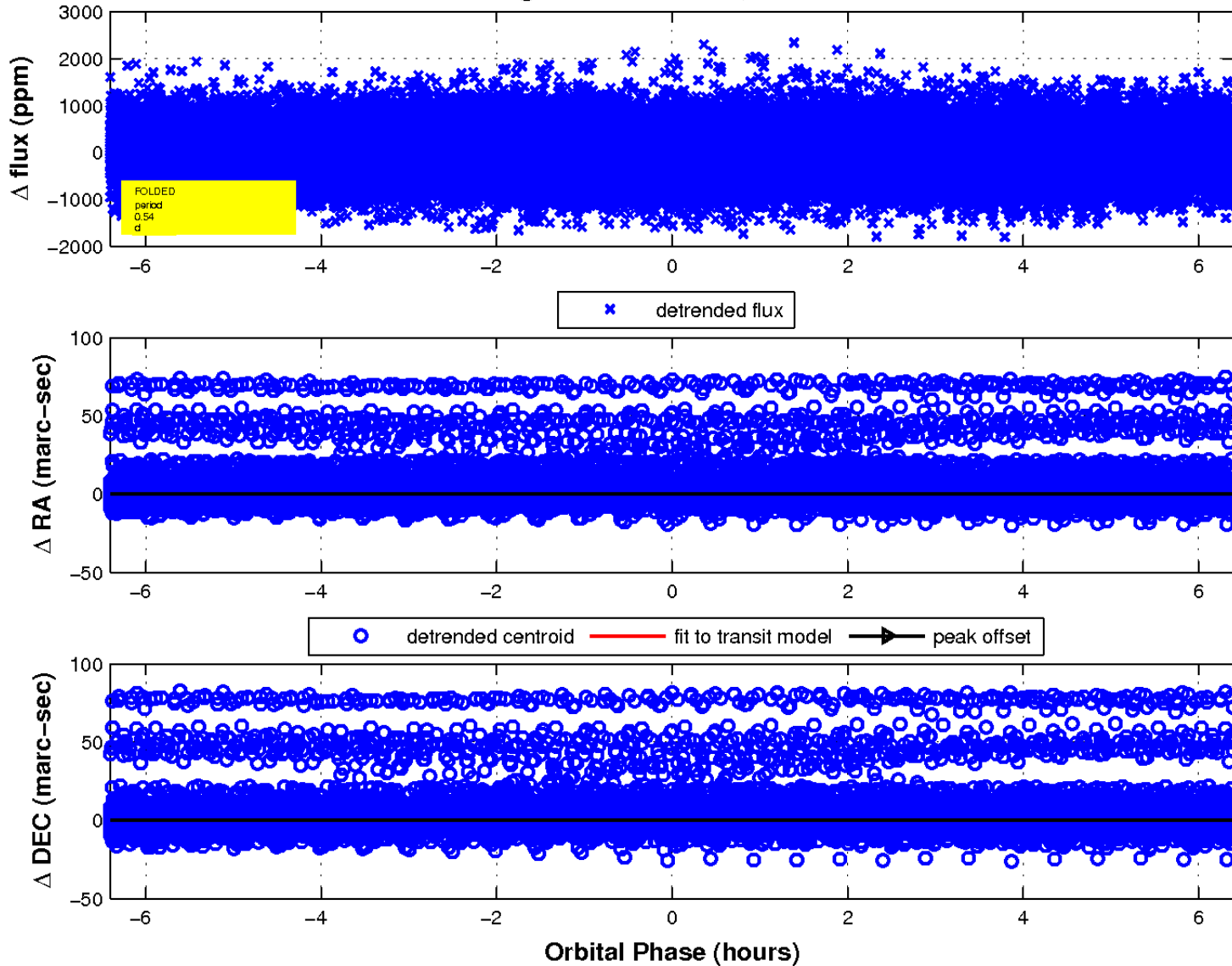
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

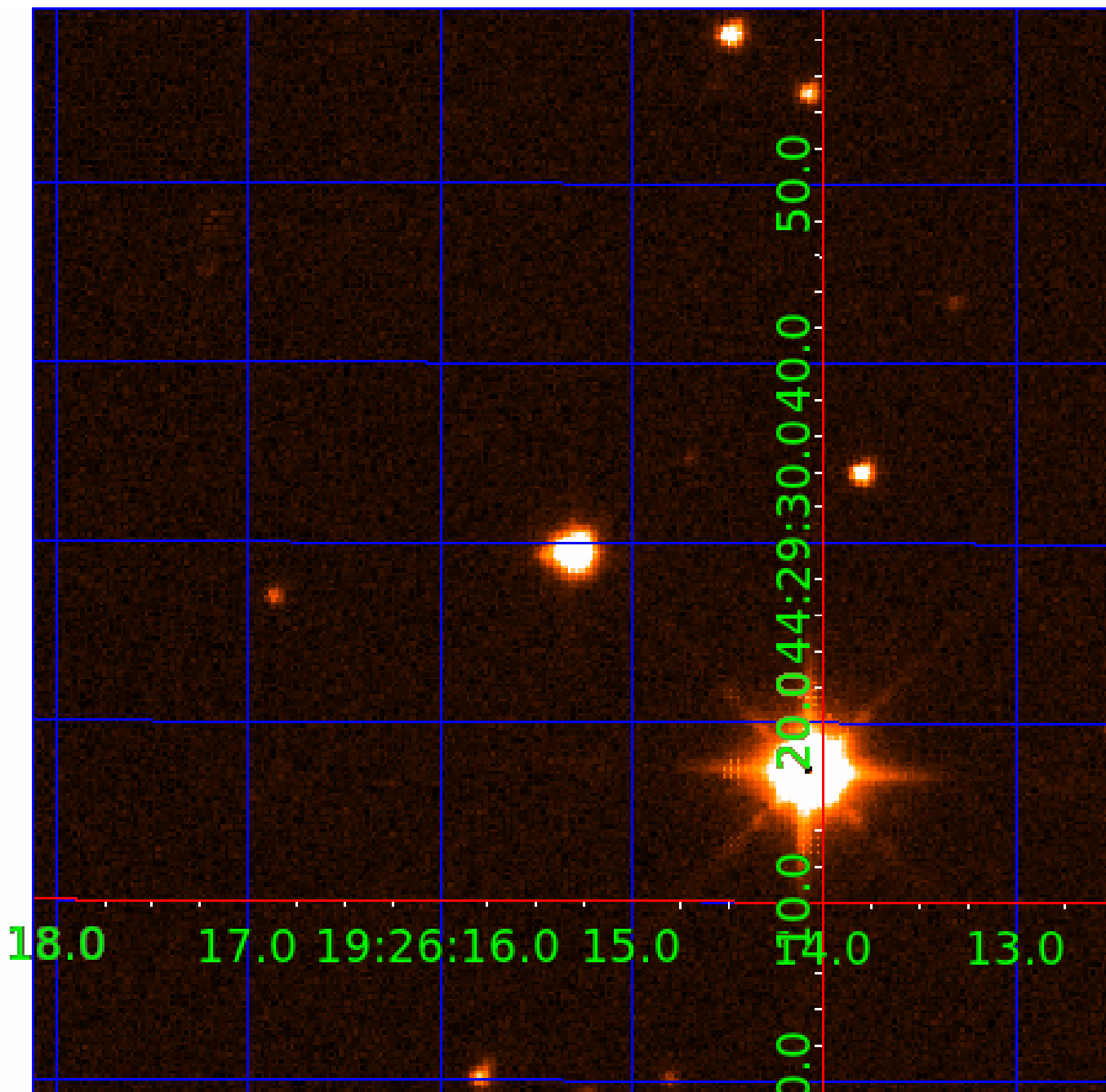


fluxWeightedCentroids, Planet 1 of 4



UKIRT Image

Declination



KIC 008430119

Q1-17 DR25 TCE Parameters

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Robovetter Results

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008430119-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST
008430119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT

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

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

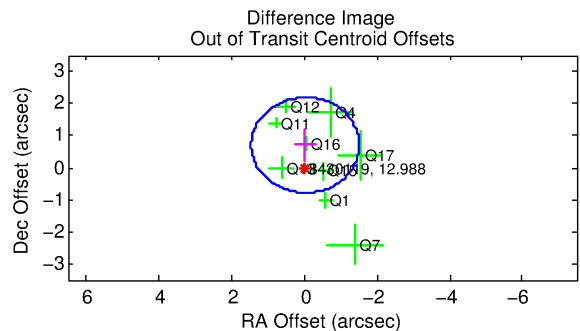
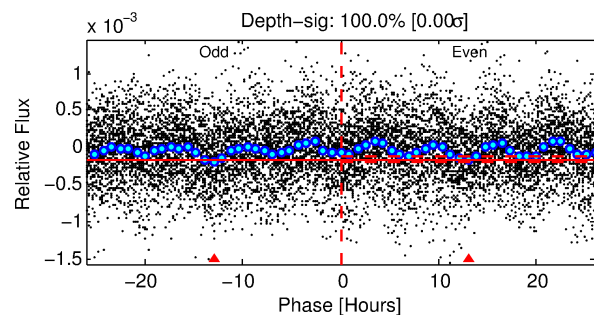
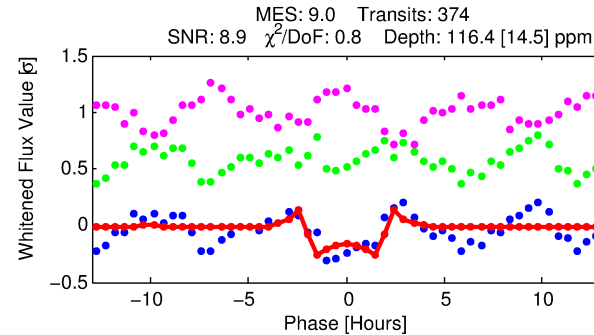
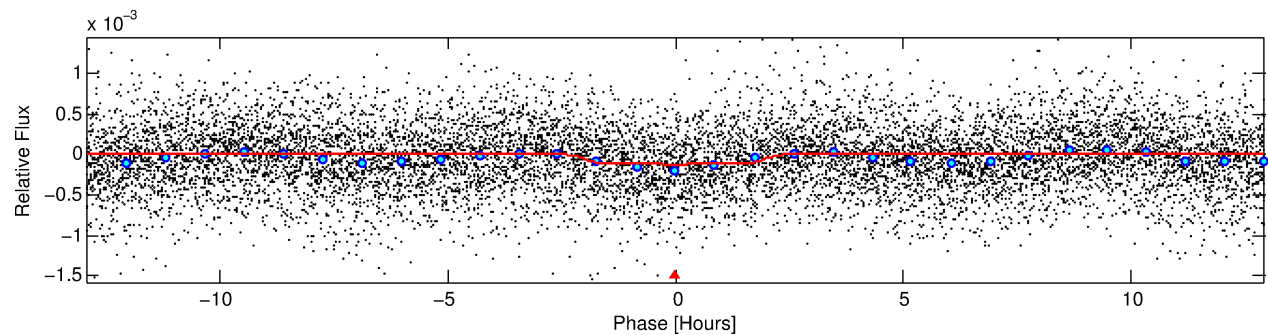
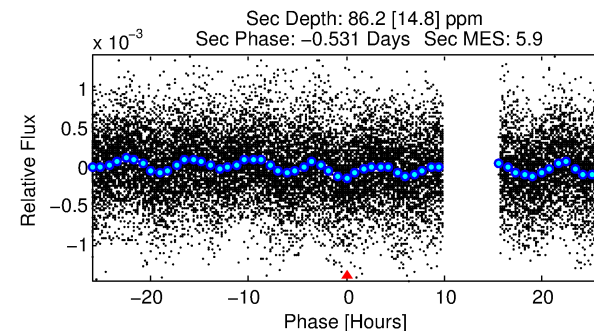
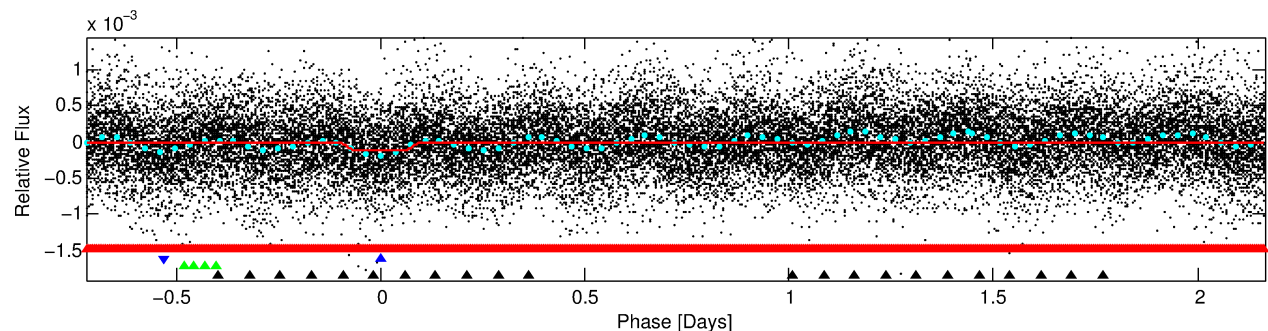
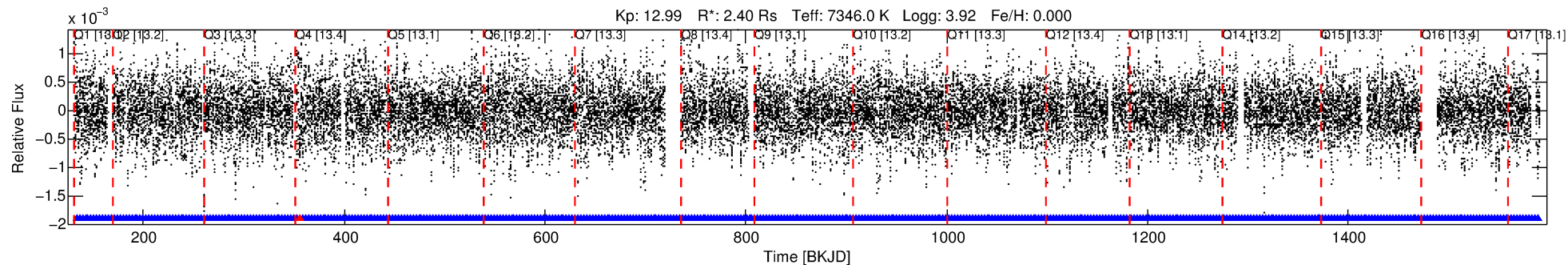
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008430119-02

No Significant Match Found

DV One-Page Summary

KIC: 8430119 Candidate: 2 of 4 Period: 2.887 d



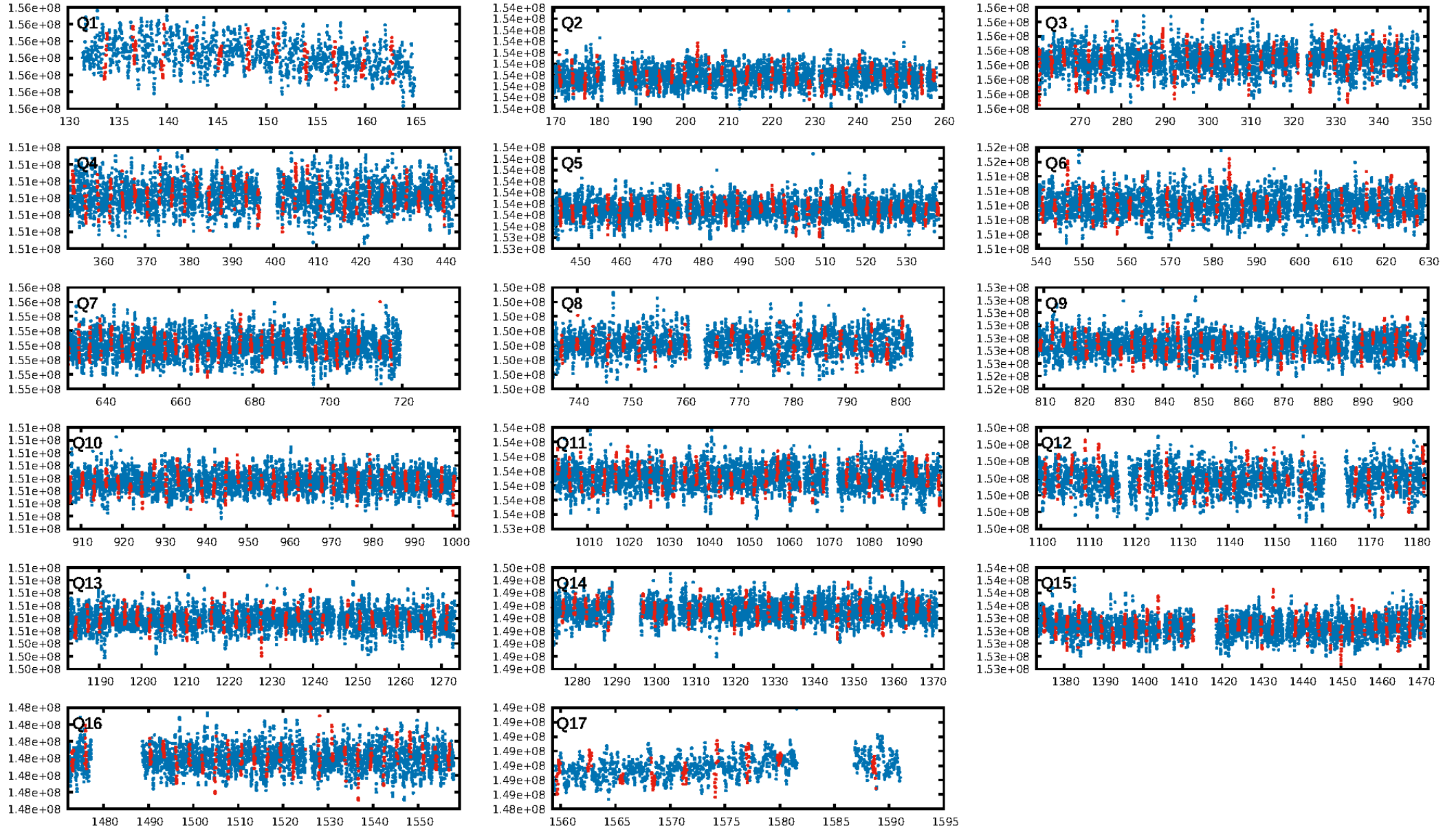
DV Fit Results:

Period = 2.88657 [0.00002] d
Epoch = 133.8039 [0.0025] BKJD
Rp/R* = 0.0115 [0.0019]
a/R* = 2.53 [1.95]
b = 0.90 [0.19]
Seff = 6523.62 [3211.12]
Teff = 2292 [282] K
Rp = 3.00 [1.12] Re
a = 0.0480 [0.0144] AU
Ag = 12.14 [7.12] [1.56σ]
Teffp = 6614 [675] K [5.91σ]

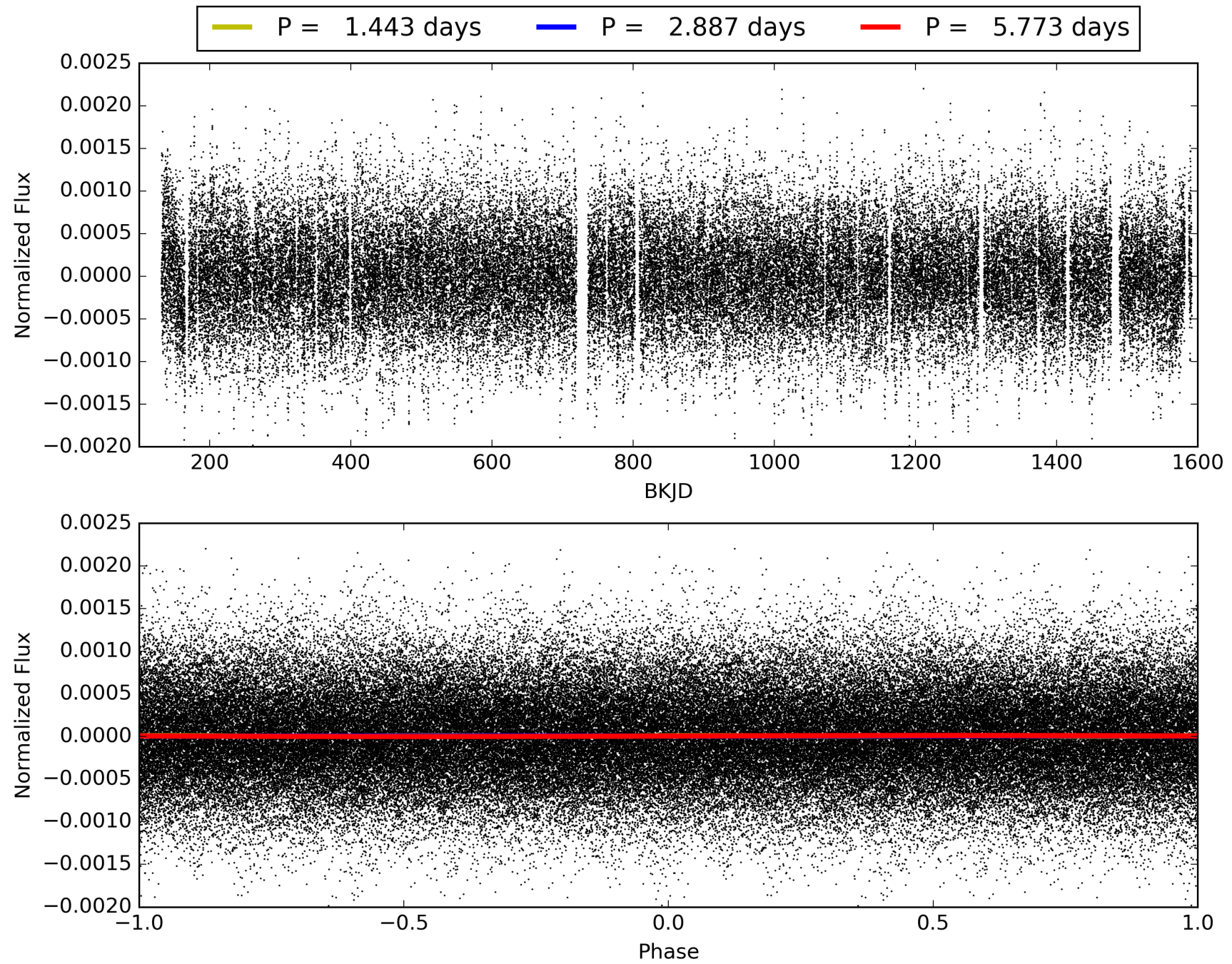
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.70σ]
LongPeriod-sig: 100.0% [225.51σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.32e-15
RollingBand-fgt: 1.00 [357/358]
GhostDiagnostic-chr: 0.3068
Centroid-sig: 41.3%
Centroid-so: 3.274 arcsec [5.66σ]
OotOffset-rm: 0.703 arcsec [1.42σ]
KicOffset-rm: 0.588 arcsec [1.42σ]
OotOffset-st: 0/3/3 [9]
KicOffset-st: 0/3/3 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 008430119-02, PDC Light Curves

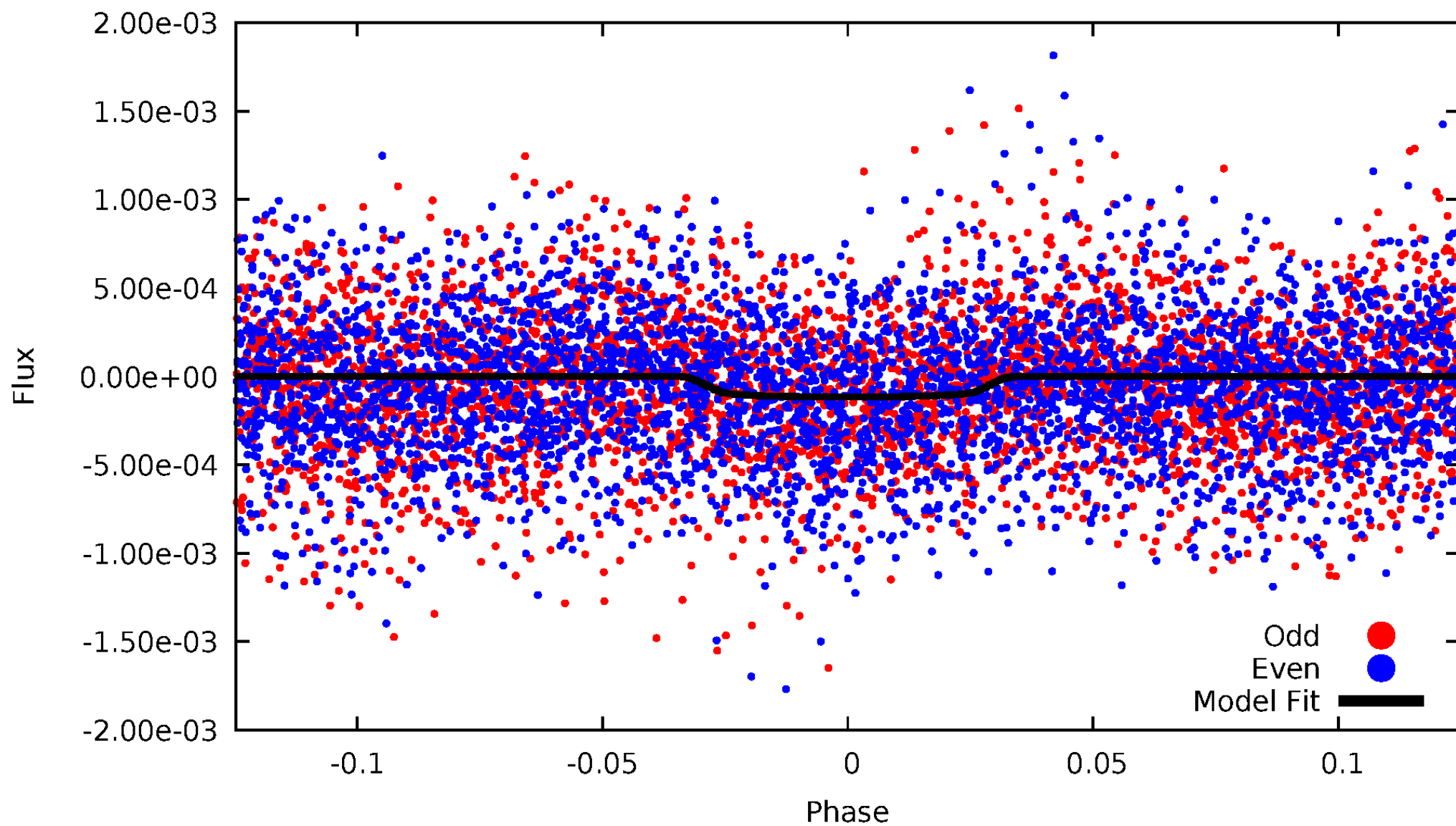


TCE 008430119-02



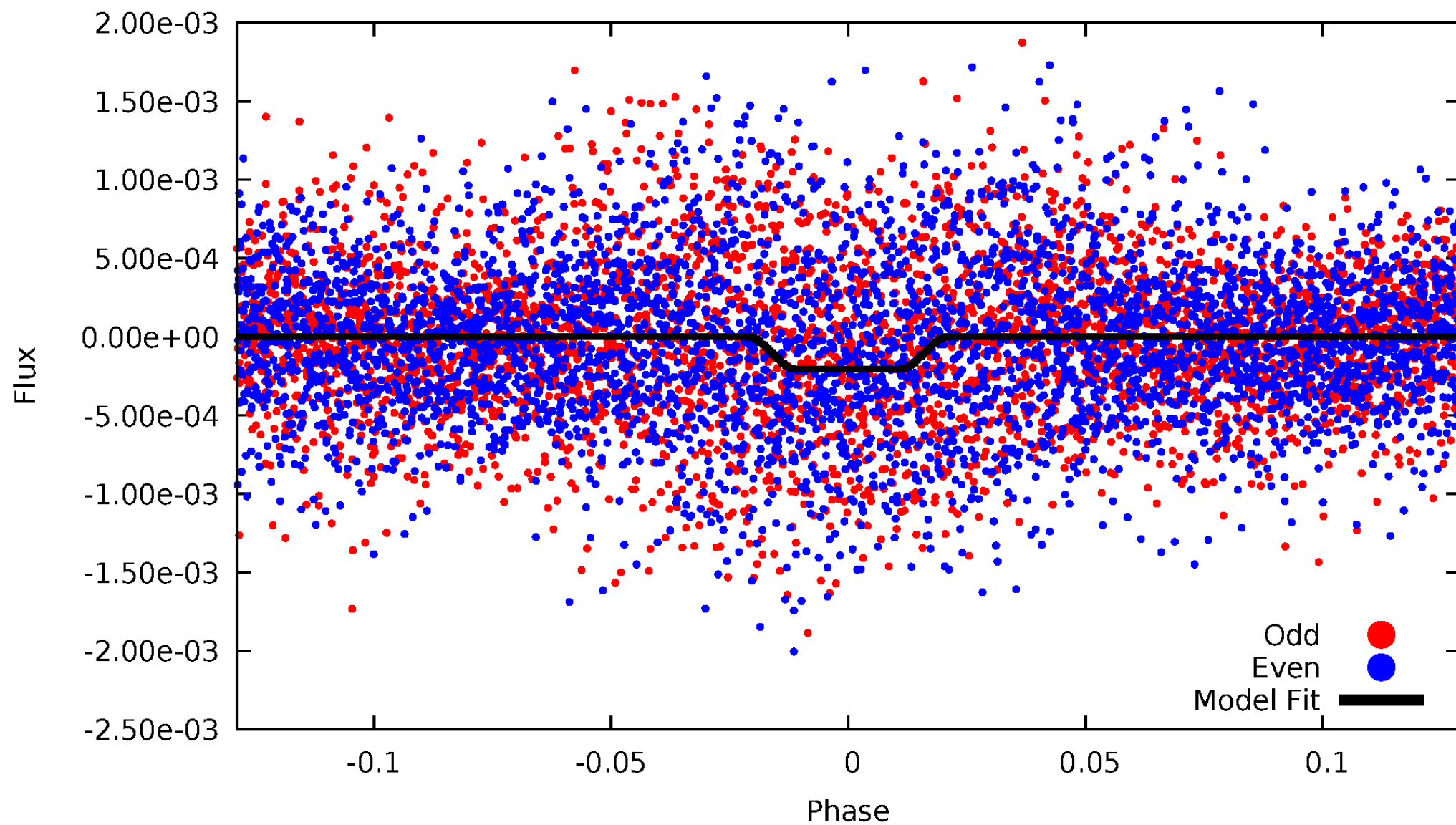
DV Odd/Even

TCE 008430119-02



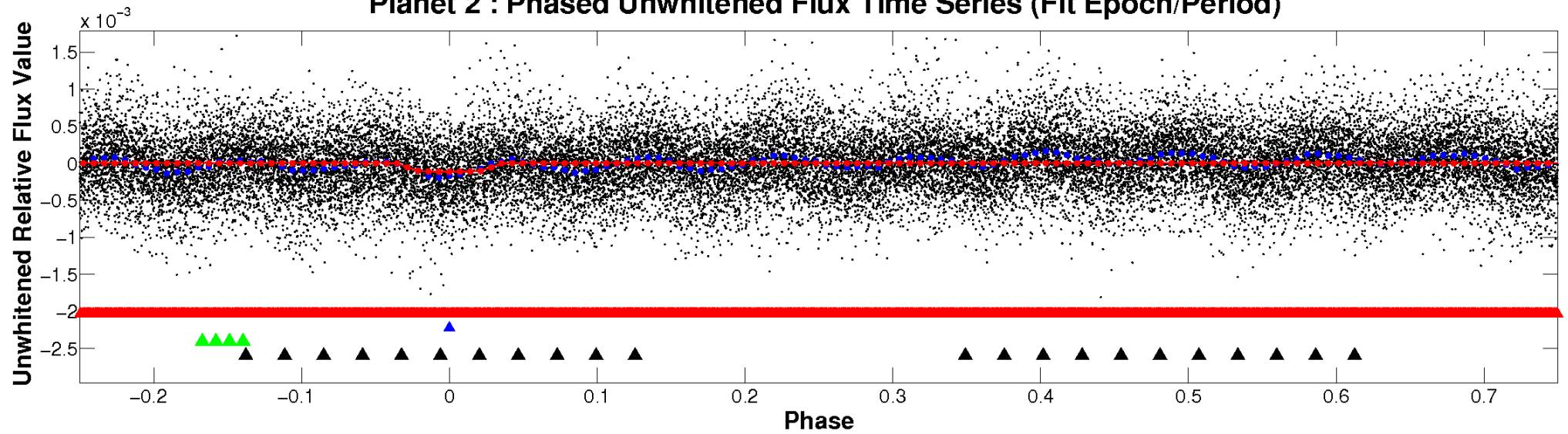
ALT Odd/Even

TCE 008430119-02

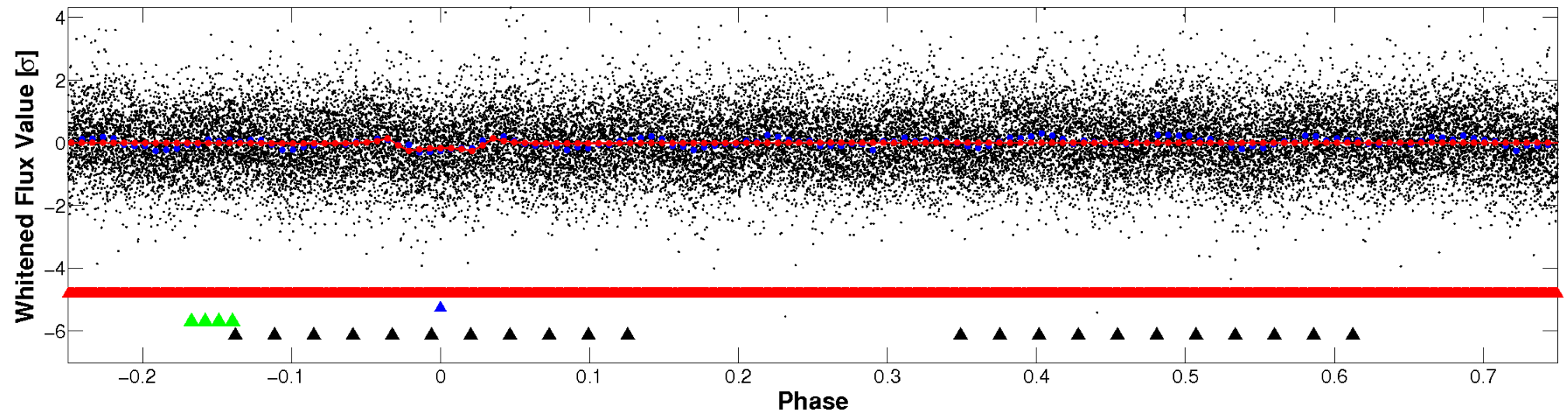


Non-Whitened Vs. Whitened Light Curve

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

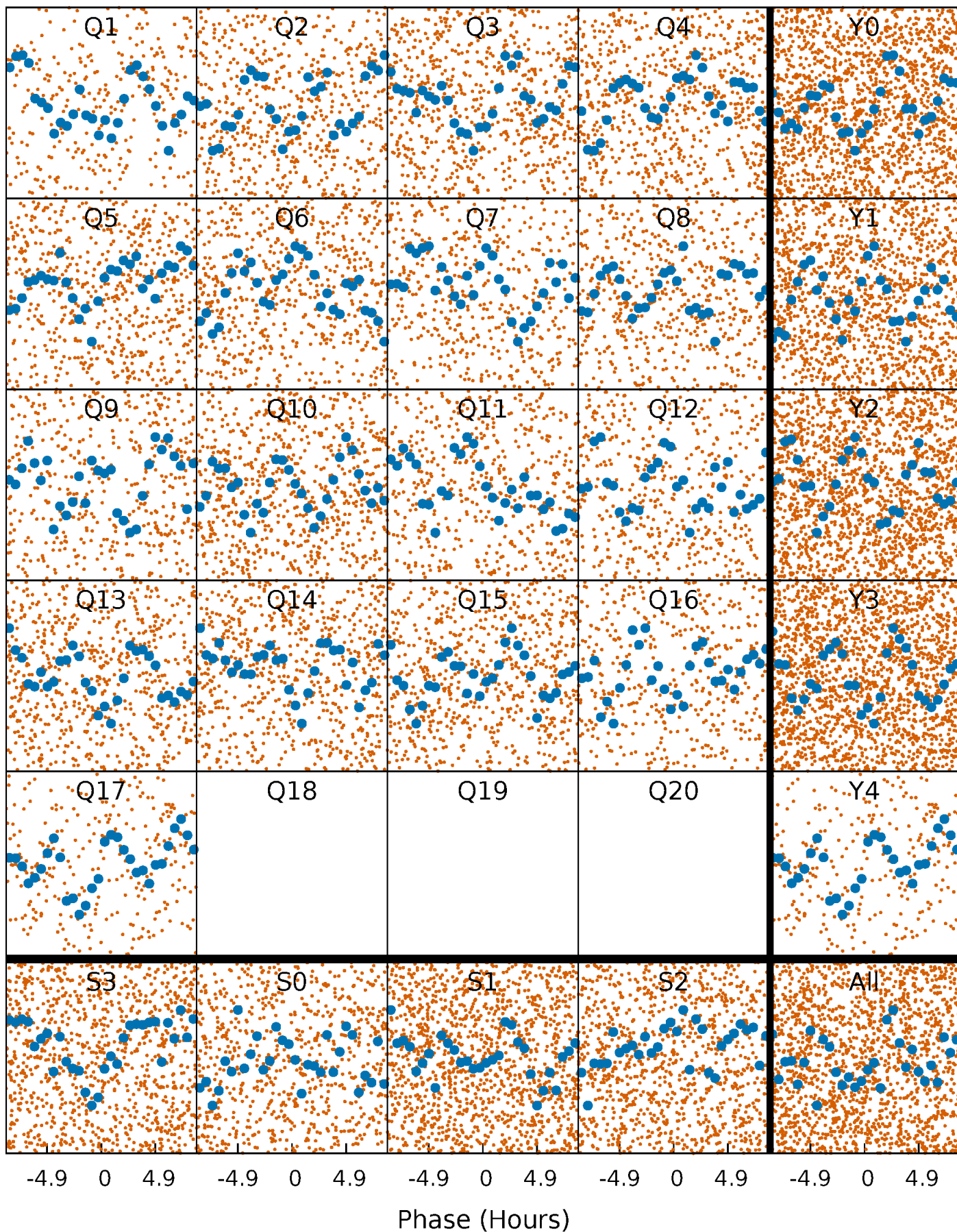


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



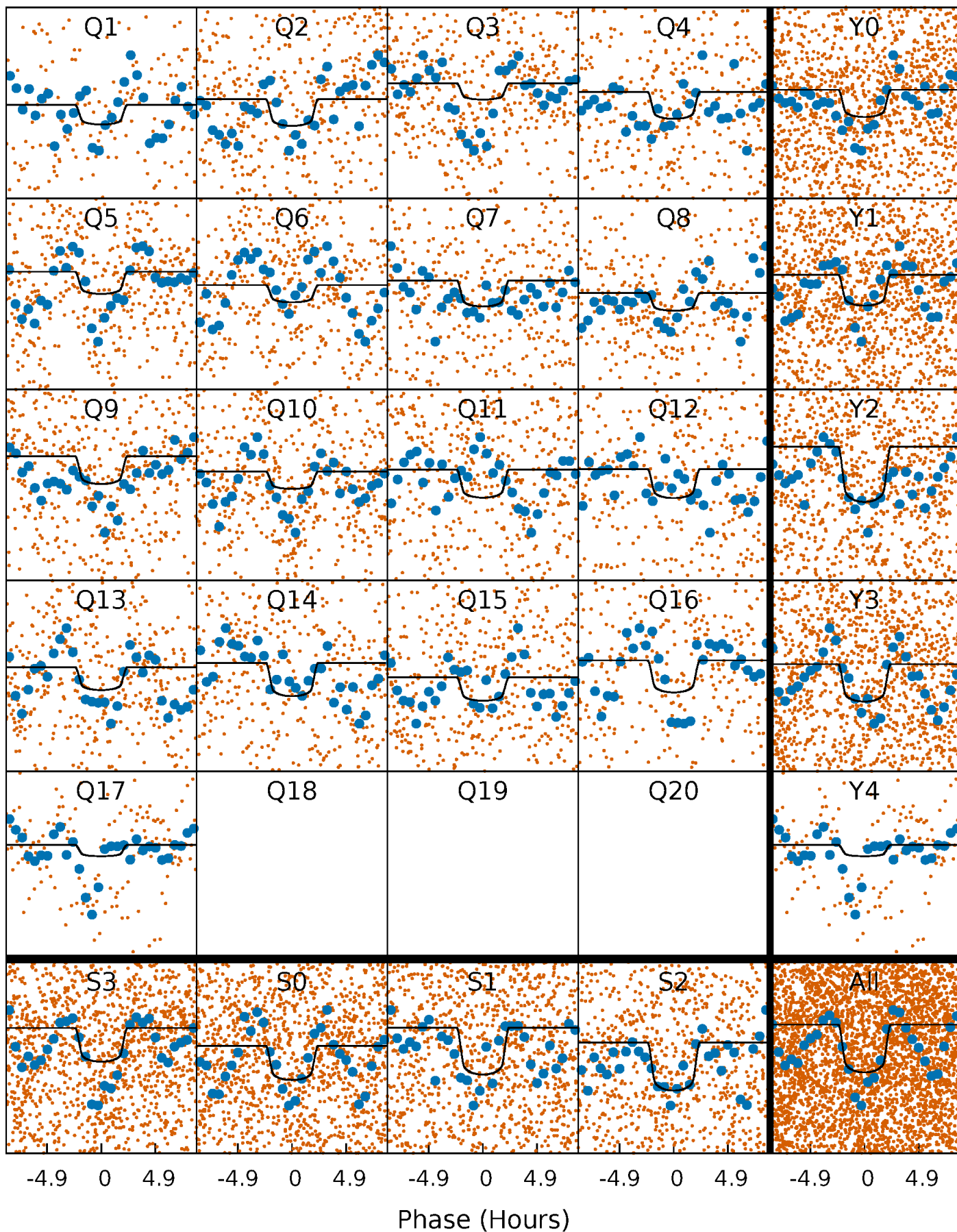
PDC Quarter-Phased Transit Curves

TCE 008430119-02 P= 2.886566 Days $T_0=133.803931$ (BKJD)



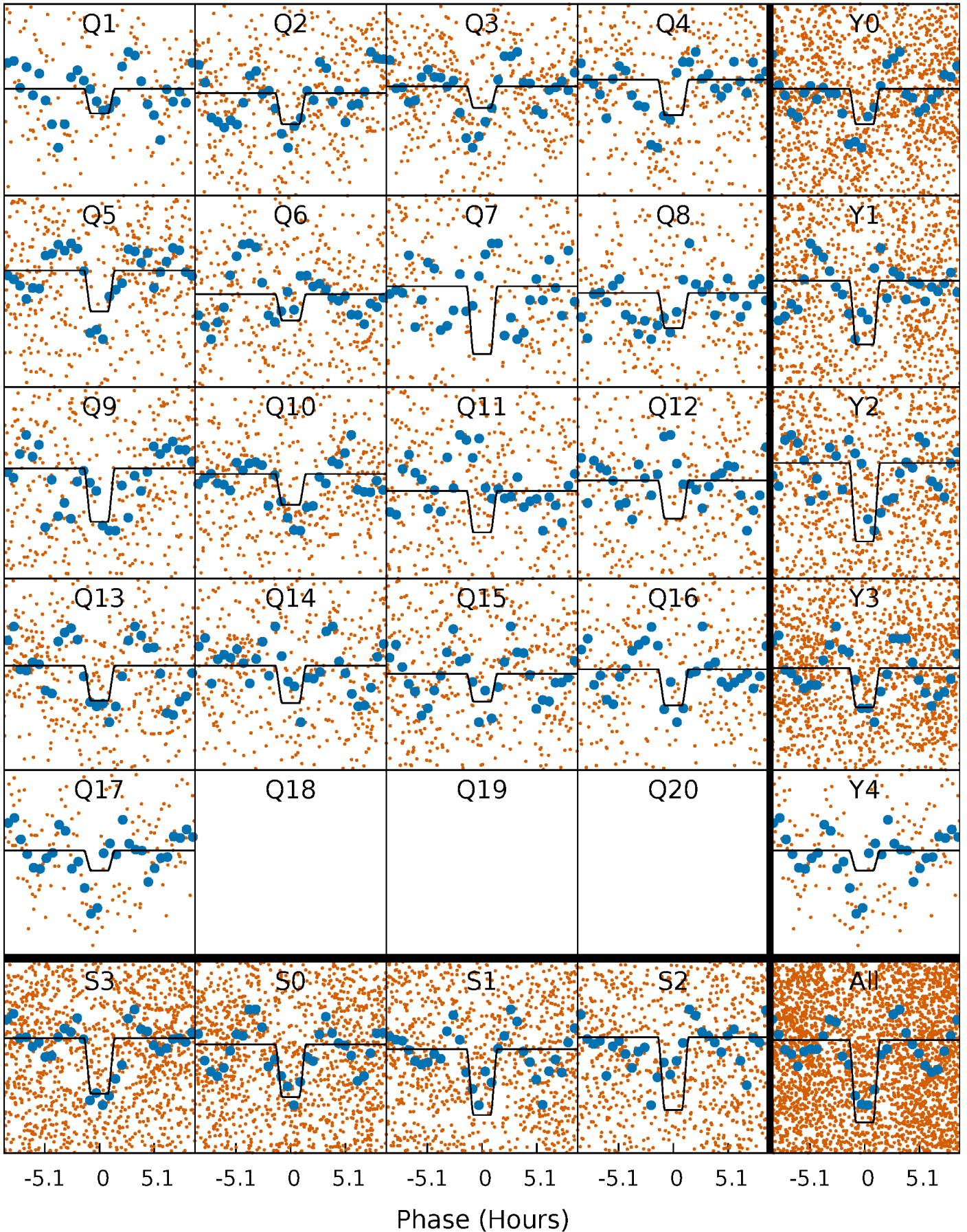
DV Quarter-Phased Transit Curves

TCE 008430119-02 P= 2.886566 Days $T_0=133.803931$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

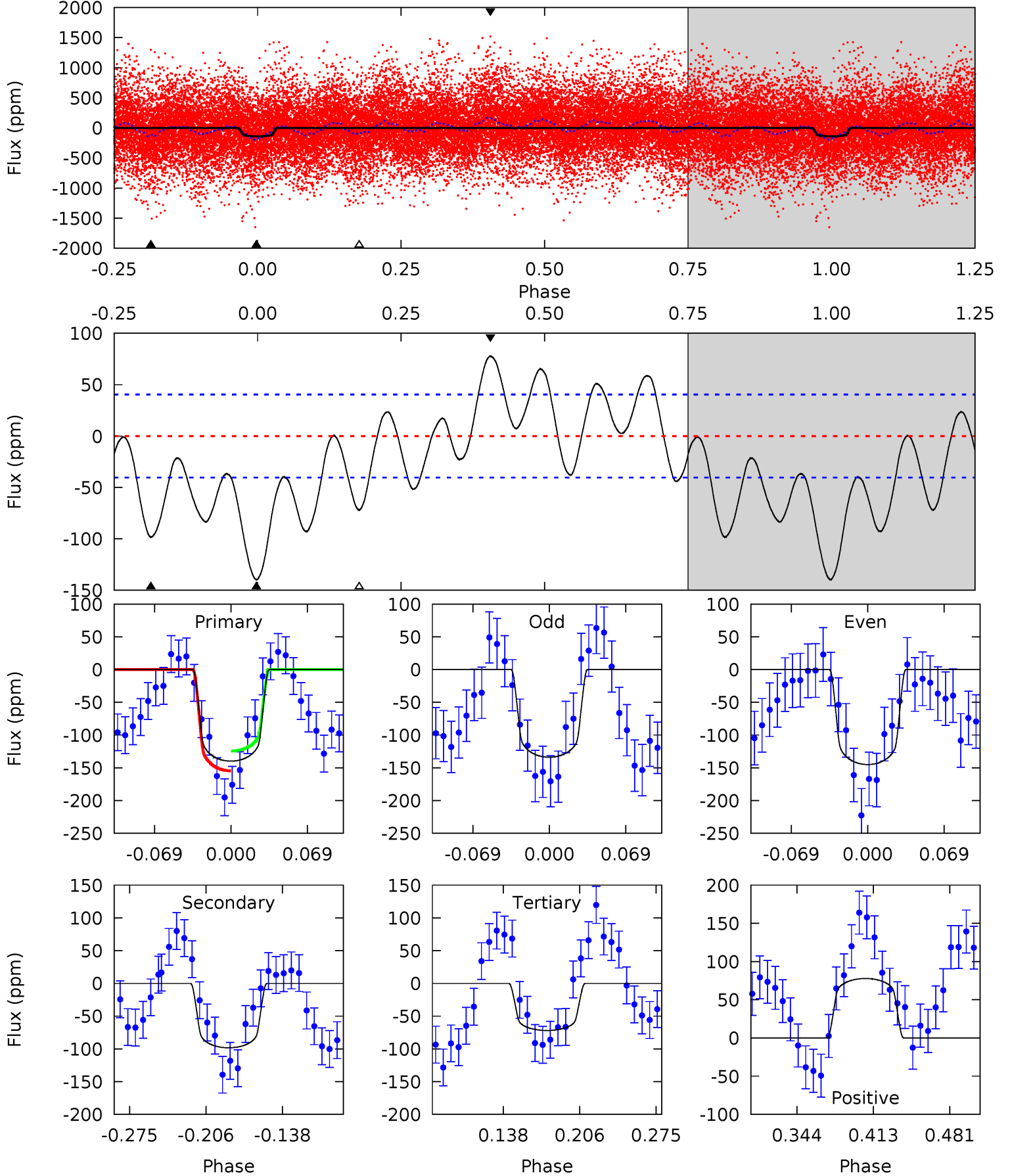
TCE 008430119-02 P= 2.886536 Days $T_0=133.802030$ (BKJD)



DV Model-Shift Uniqueness Test

008430119-02, P = 2.886566 Days, E = 130.917365 Days

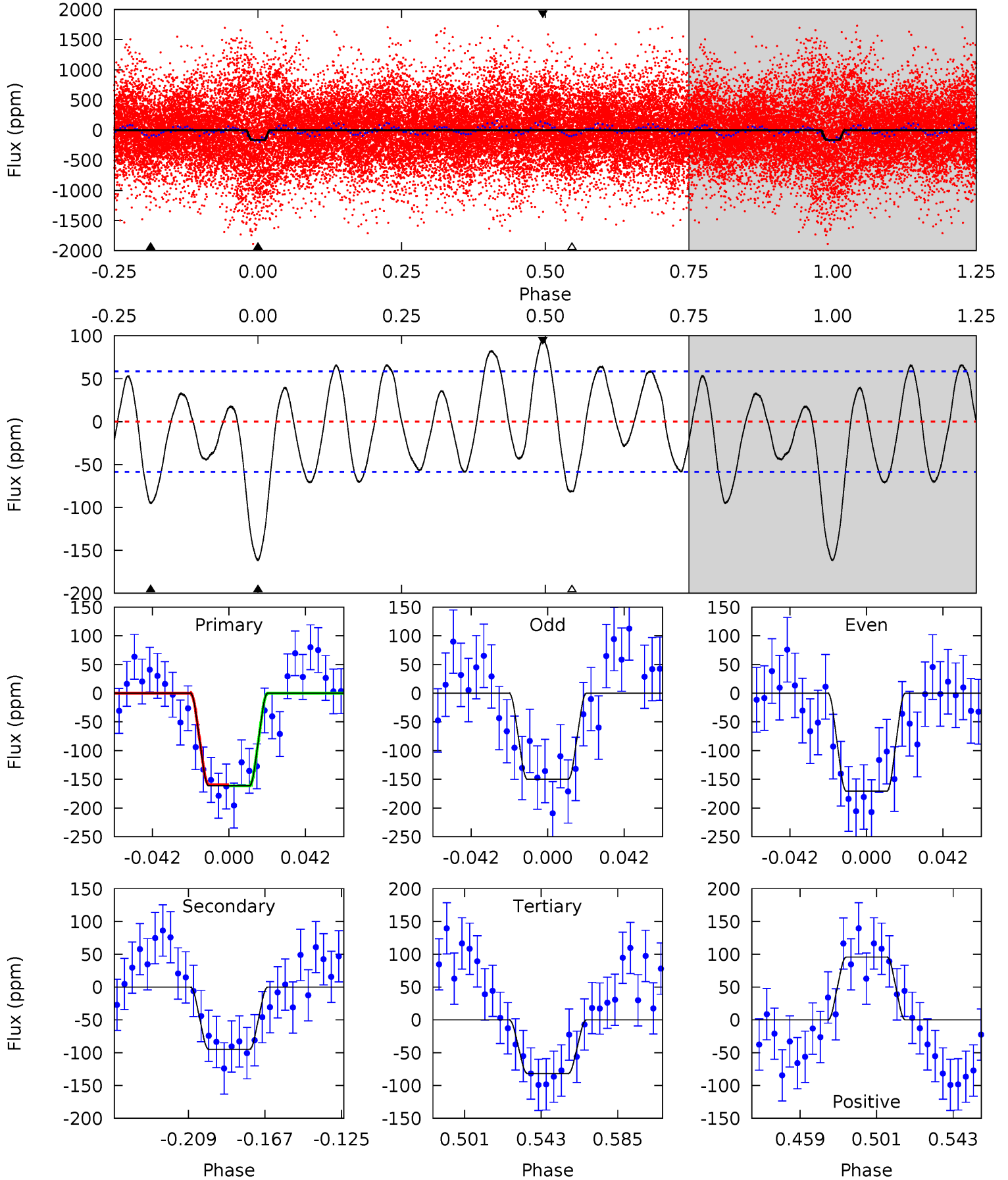
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	11.3	8.26	8.94	4.64	1.82	4.99	7.81	7.13	3.04	2.36	0.64	0.78	0.36	1.74



Alt Model-Shift Uniqueness Test

008430119-02, P = 2.886536 Days, E = 130.915494 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	7.68	6.62	7.74	4.74	2.04	3.56	6.44	5.31	1.06	-0.06	0.83	0.90	0.37	0.08



Stellar Parameters For KIC 008430119

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7346^{+203}_{-330}	$3.925^{+0.260}_{-0.140}$	$0.000^{+0.200}_{-0.350}$	$2.398^{+0.540}_{-0.810}$	$1.765^{+0.184}_{-0.368}$	$0.180^{+0.303}_{-0.073}$
	+3%/-4%	+7%/-4%	+inf%/-inf%	+23%/-34%	+10%/-21%	+168%/-41%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008430119-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-98 ± 9	$2.89^{+0.66}_{-0.67}$	3161^{+230}_{-286}	6696^{+780}_{-559}	15^{+9}_{-5}
Alt.	-95 ± 12	$3.59^{+0.80}_{-0.76}$	3135^{+255}_{-266}	5891^{+521}_{-430}	$9.235^{+5.128}_{-3.178}$

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

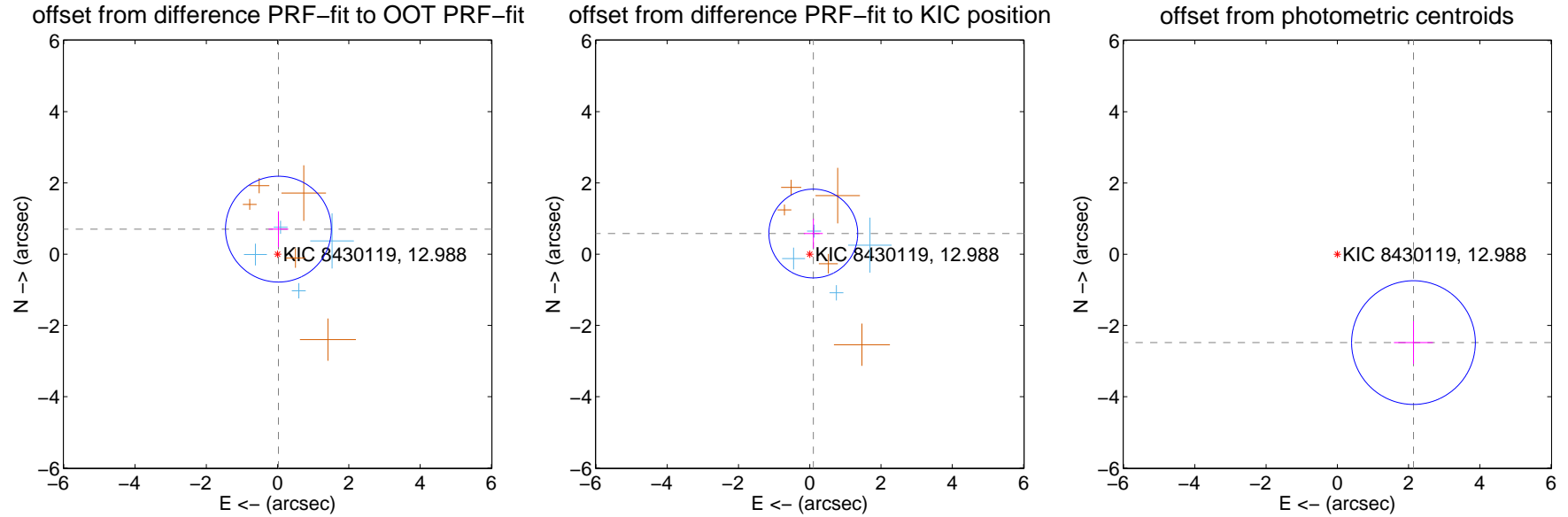
DV Centroid Data

Supplemental centroid analysis for 008430119-02. Kepler magnitude: 12.99. Transit SNR 8.88

There are 4 quarters with good PRF difference image offsets

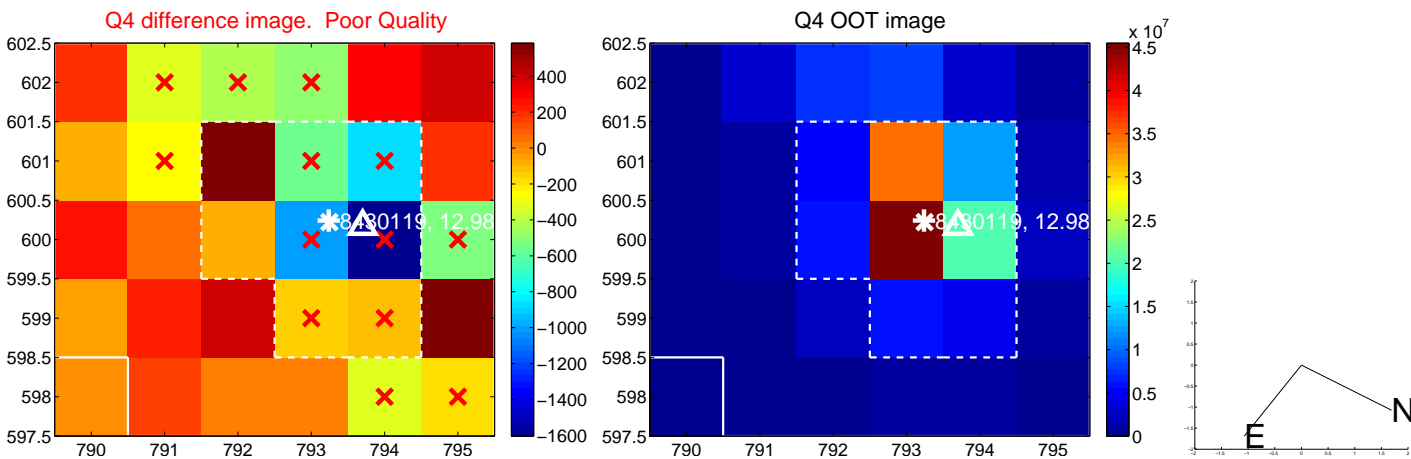
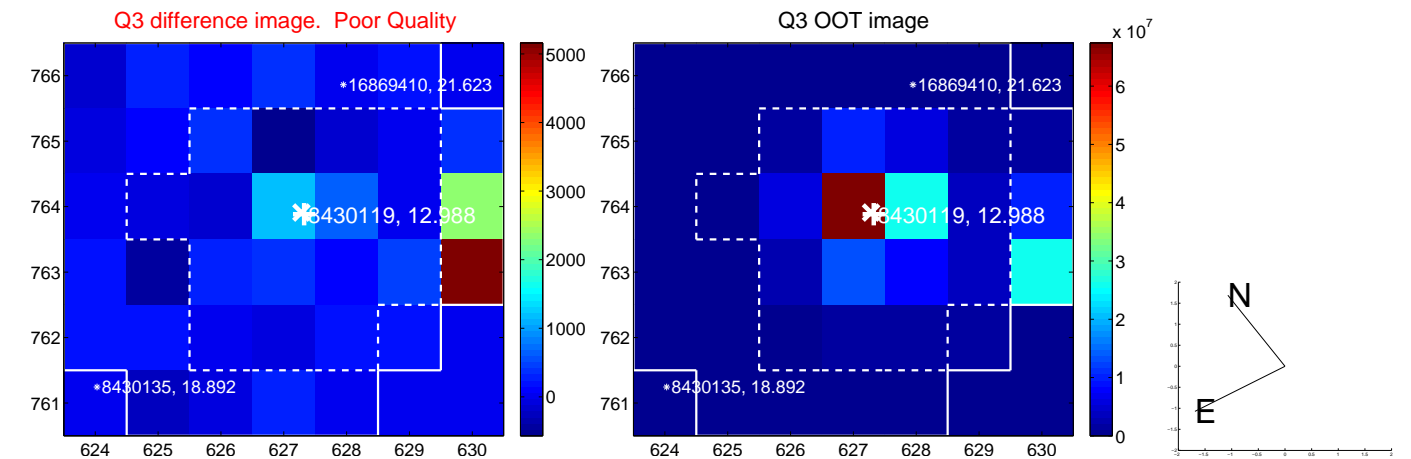
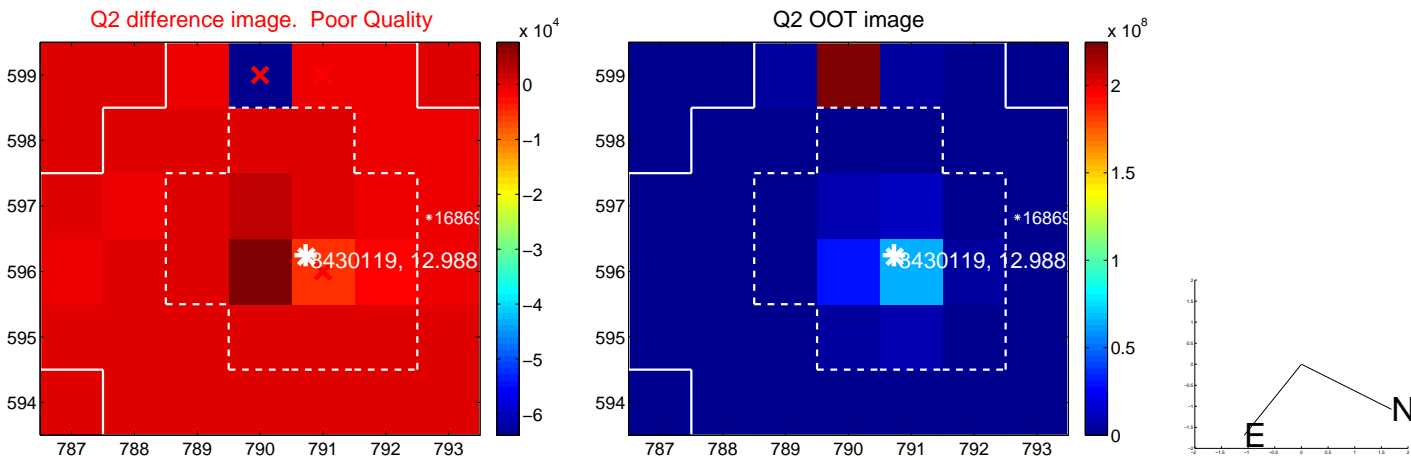
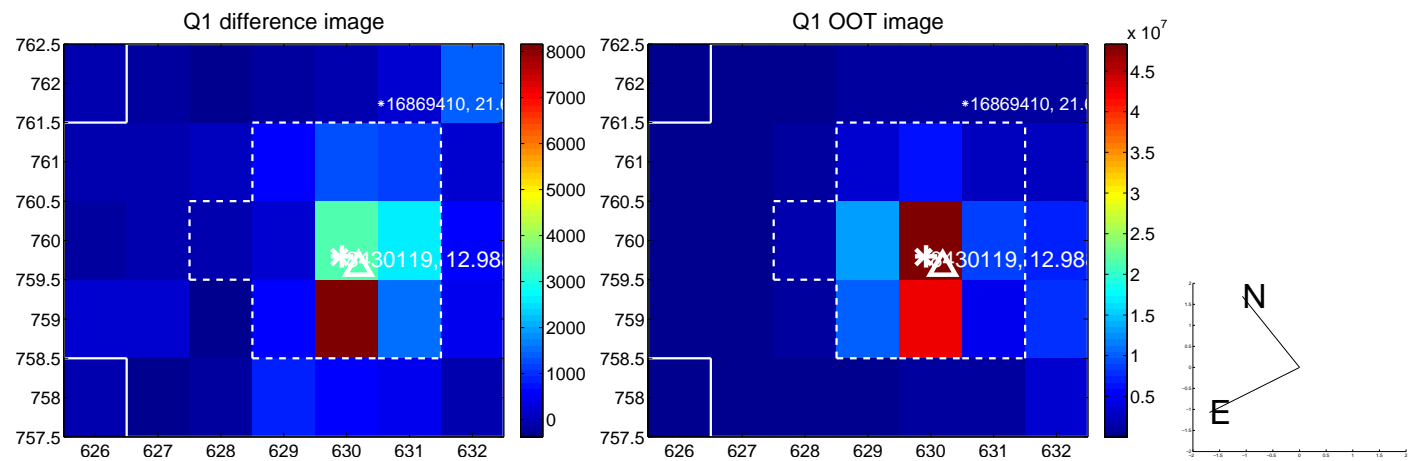
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.703 ± 0.495	1.42	-0.024 ± 0.277	0.702 ± 0.501
PRF-fit source offset from KIC position	0.588 ± 0.415	1.42	-0.100 ± 0.267	0.579 ± 0.419
photometric centroid source offset	3.27 ± 0.58	5.66	-2.14 ± 0.55	-2.48 ± 0.60

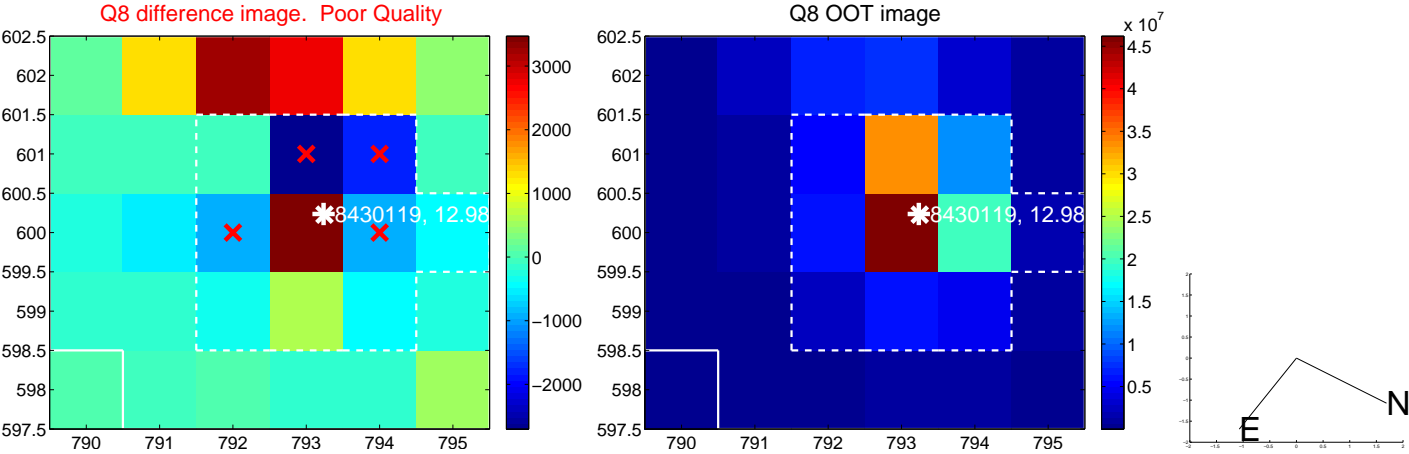
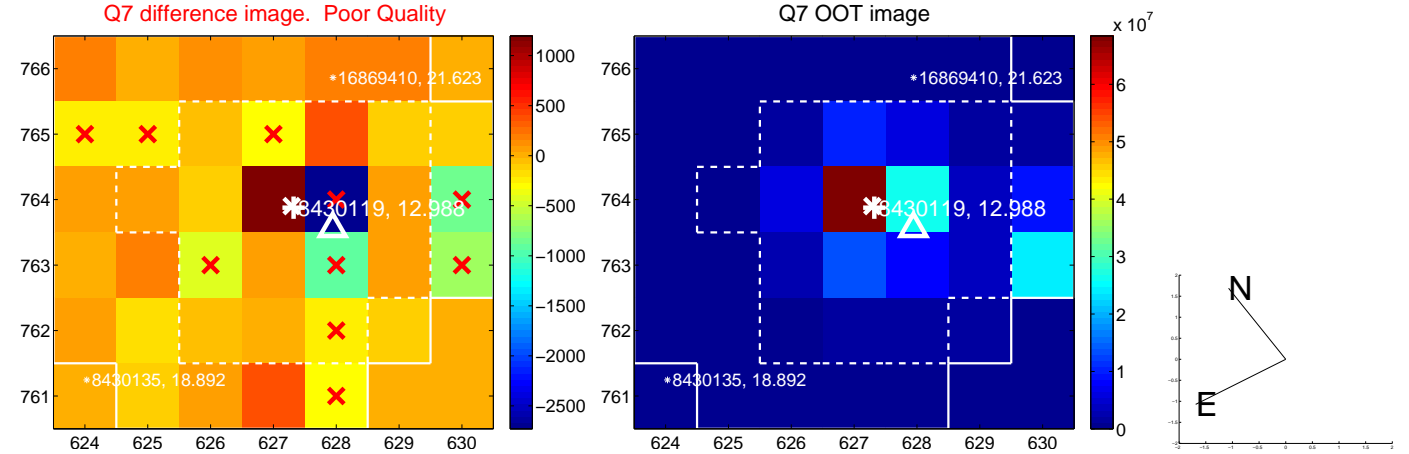
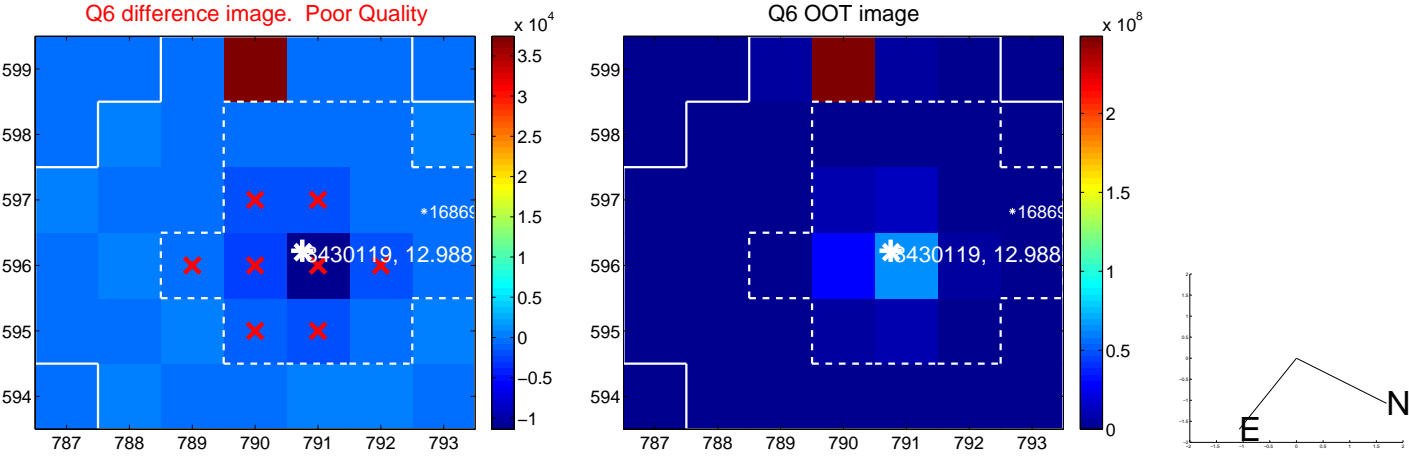
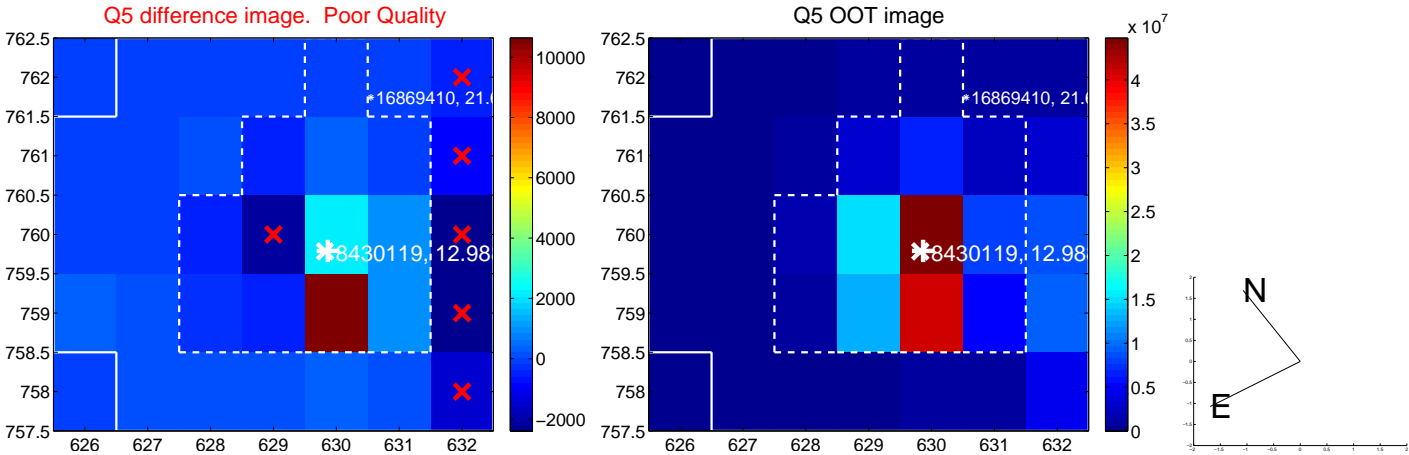


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

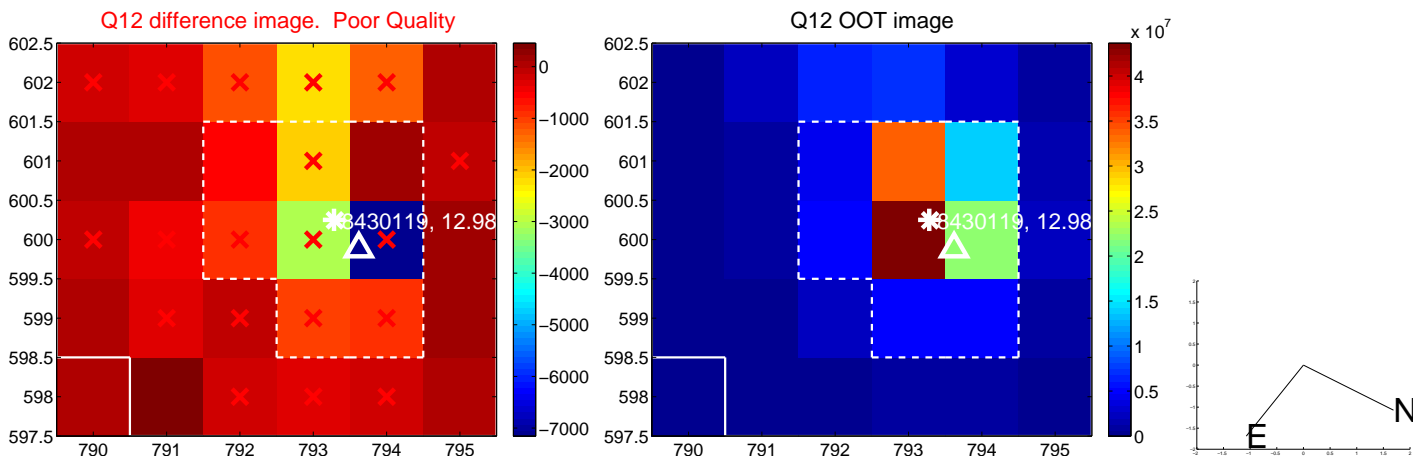
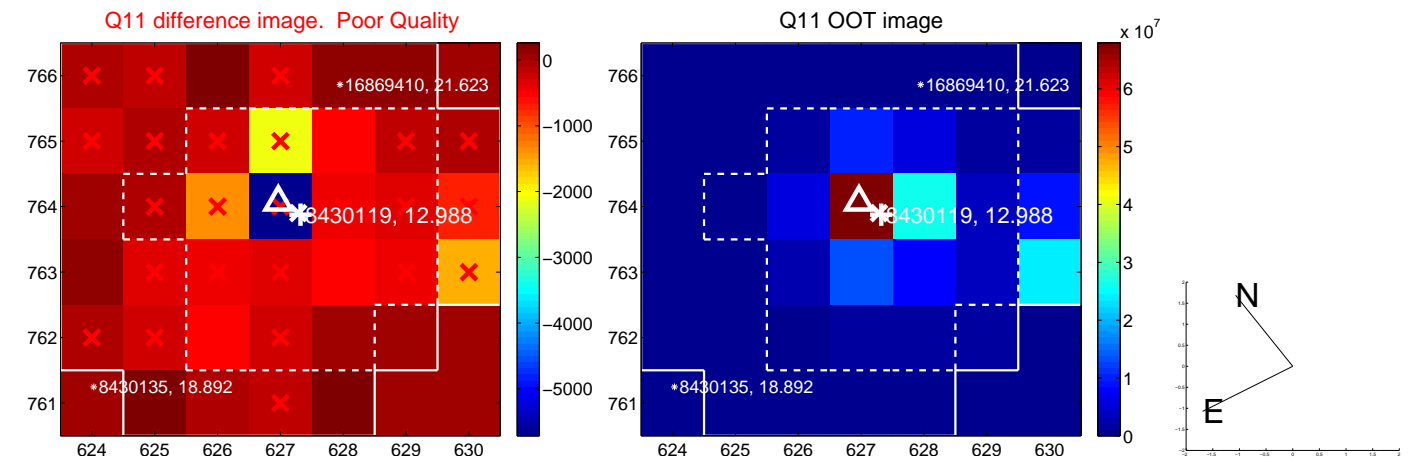
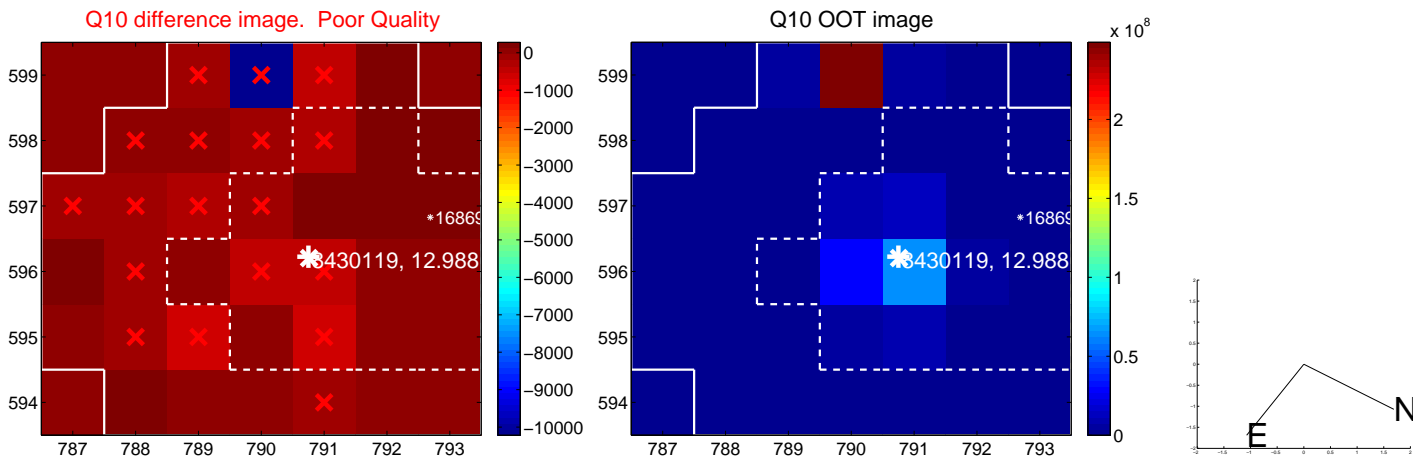
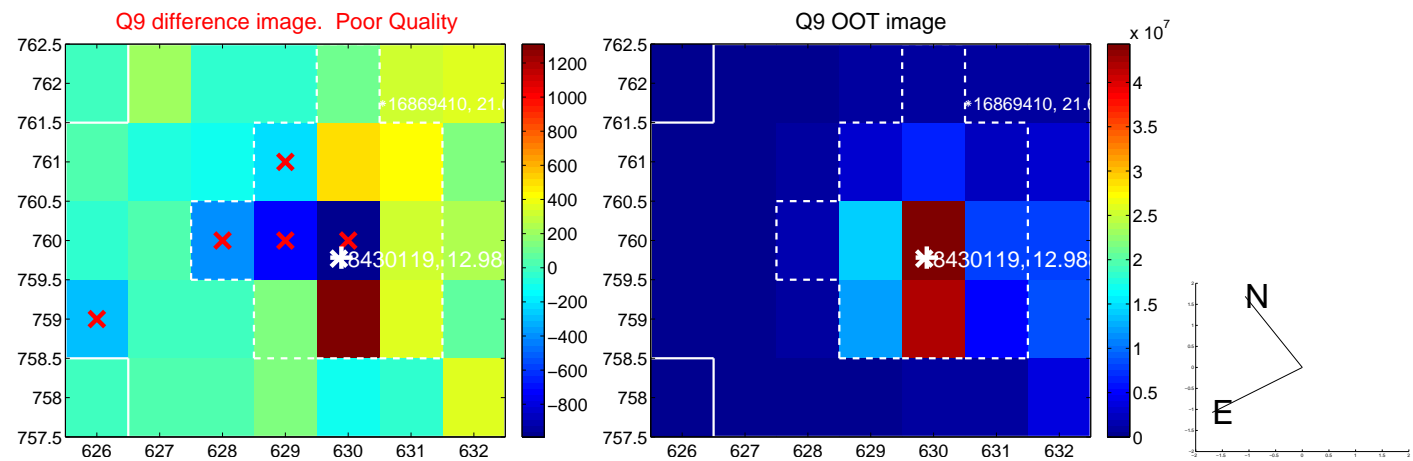
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



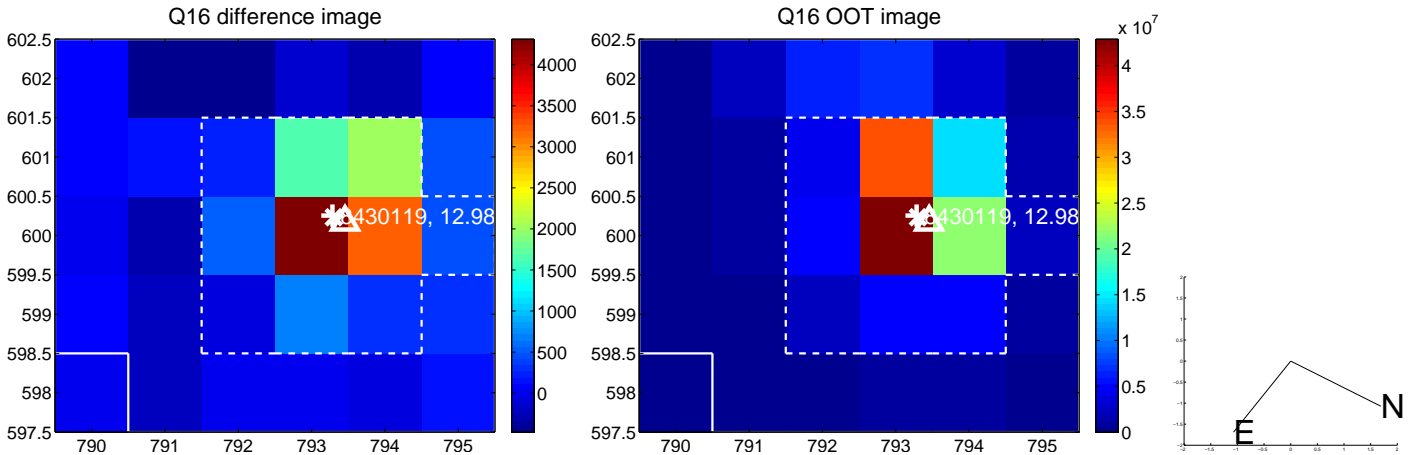
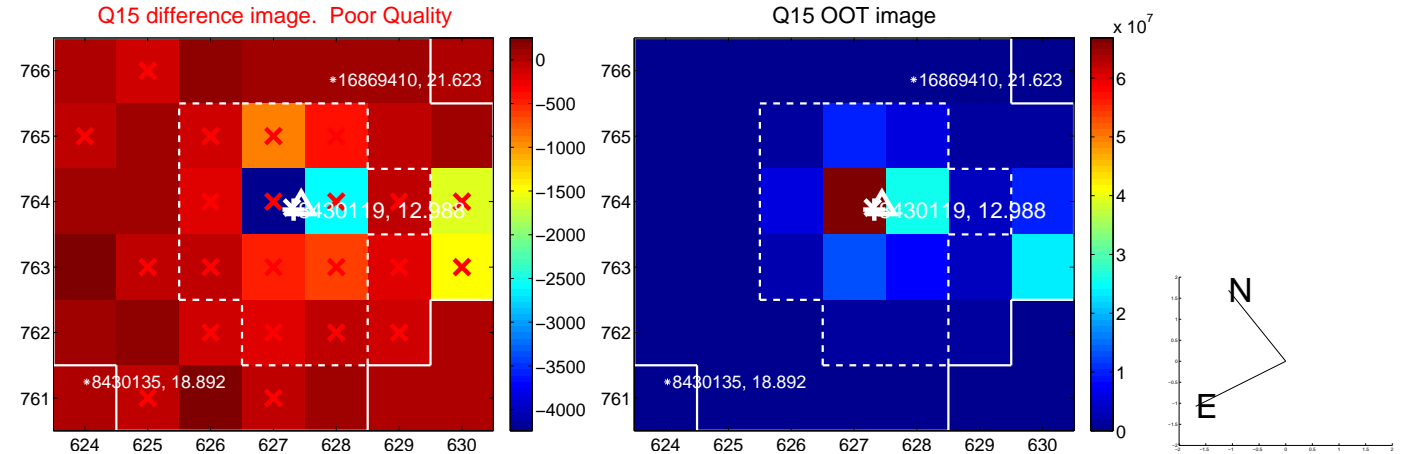
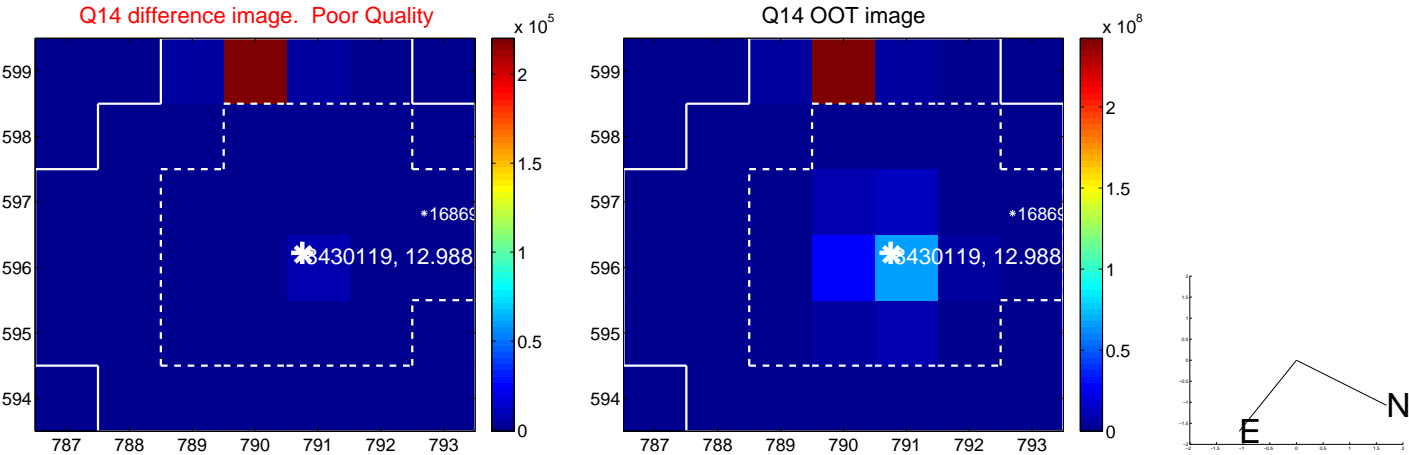
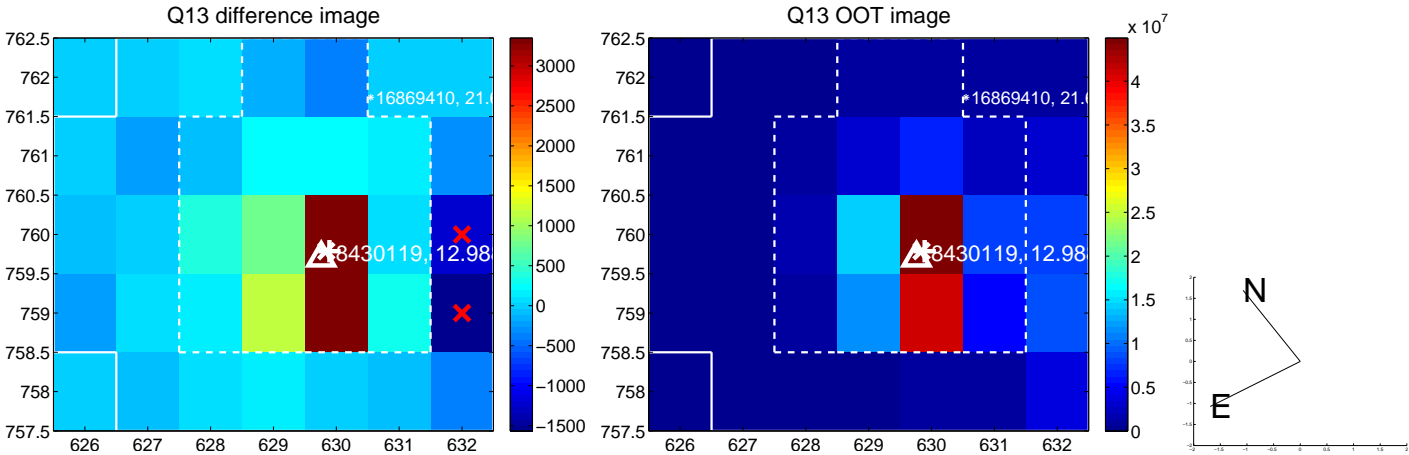
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

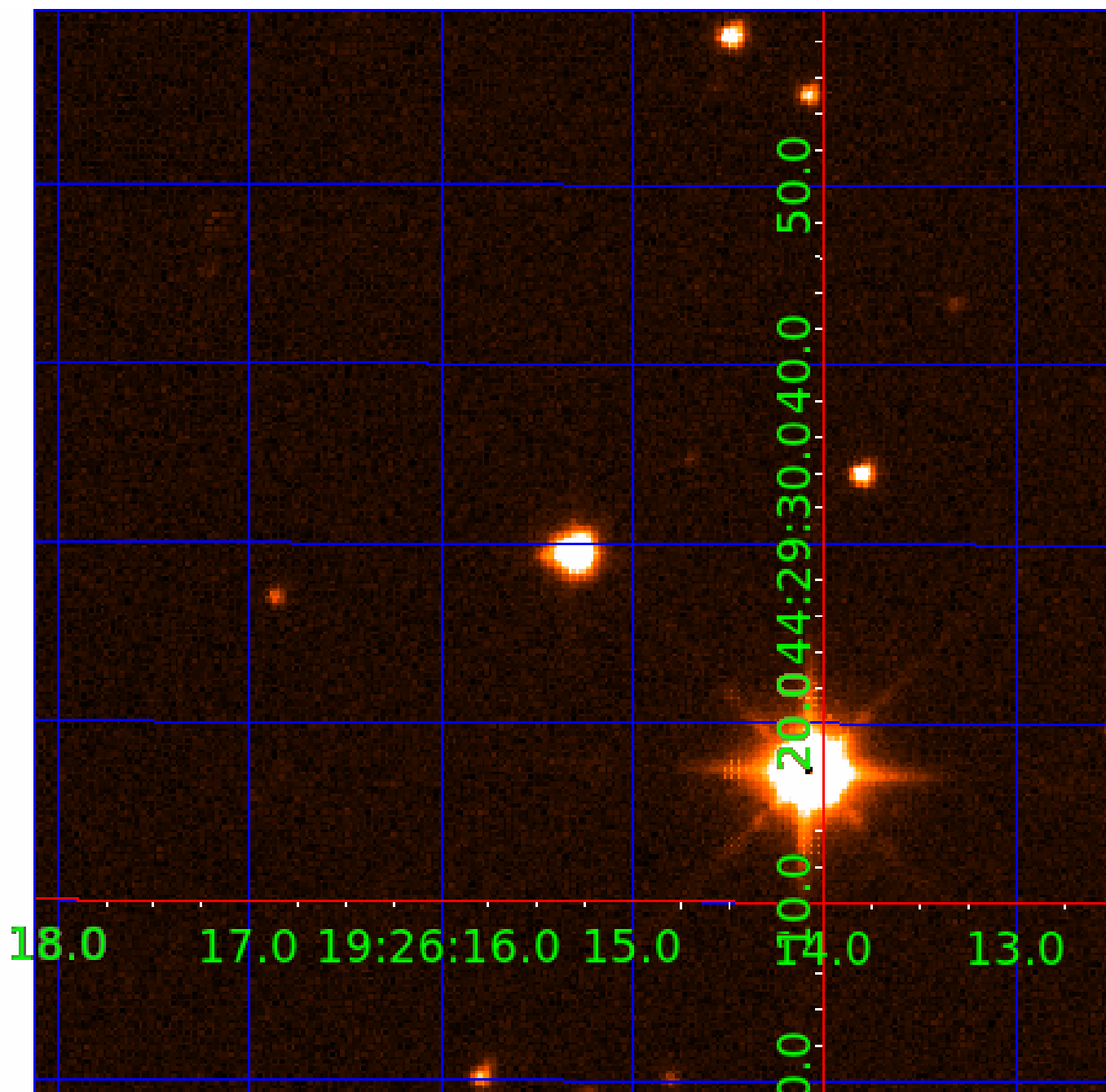


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008430119

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})
008430119-01	OBS	No	0.537417	131.592104	41.8	2.135	10.8	11.4	2.40	7346	1.80	61364.25
008430119-02	OBS	No	2.886566	133.803931	116.4	4.320	9.0	8.9	2.40	7346	3.00	6523.62
008430119-03	OBS	No	427.238288	268.990163	983.4	24.356	8.0	7.8	2.40	7346	7.96	8.33
008430119-04	OBS	No	64.909733	189.011381	682.7	4.991	7.5	8.0	2.40	7346	7.00	102.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008430119-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008430119-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008430119-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST
008430119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT

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

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

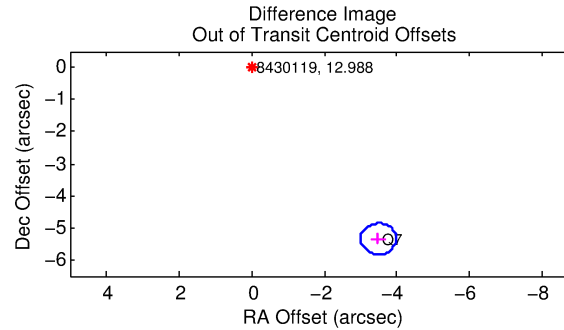
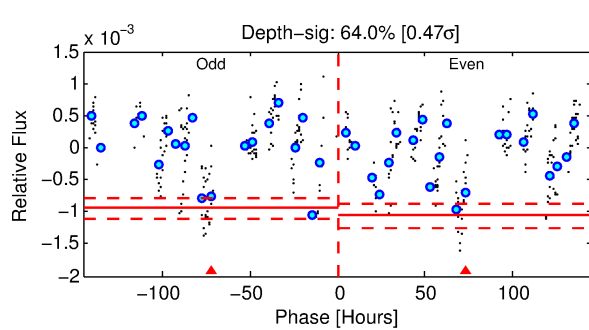
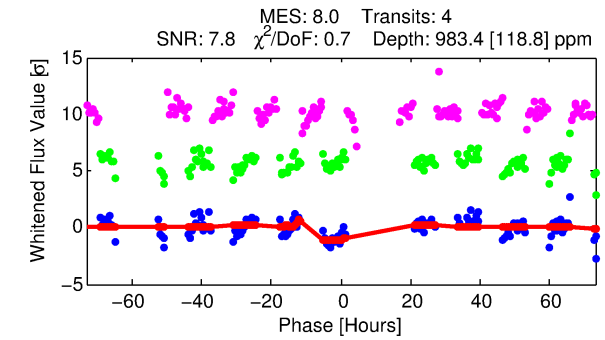
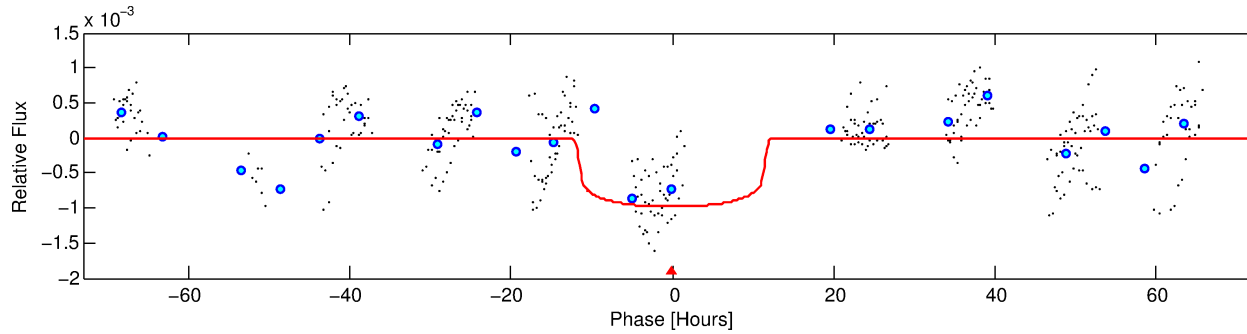
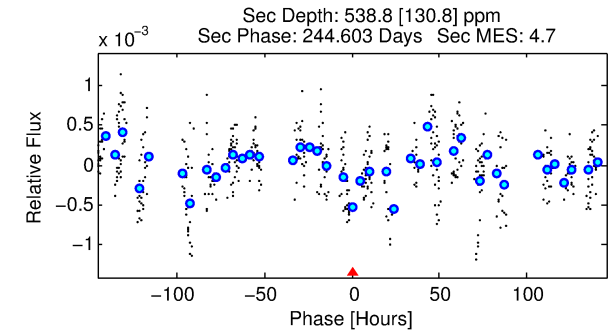
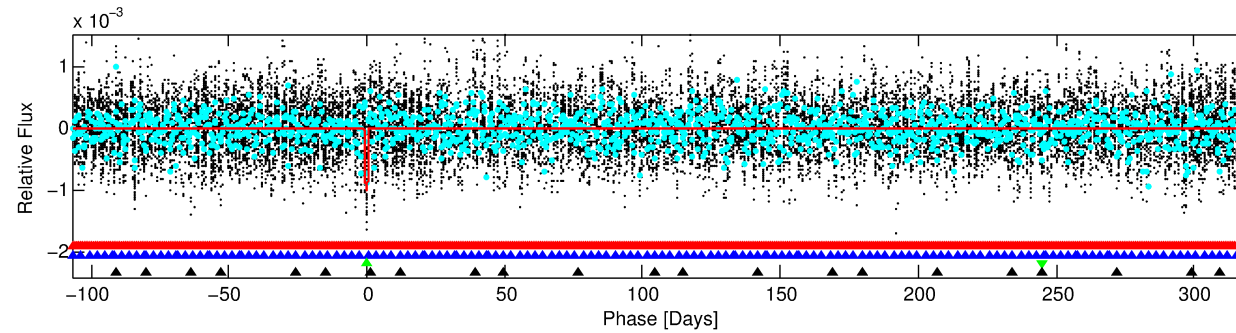
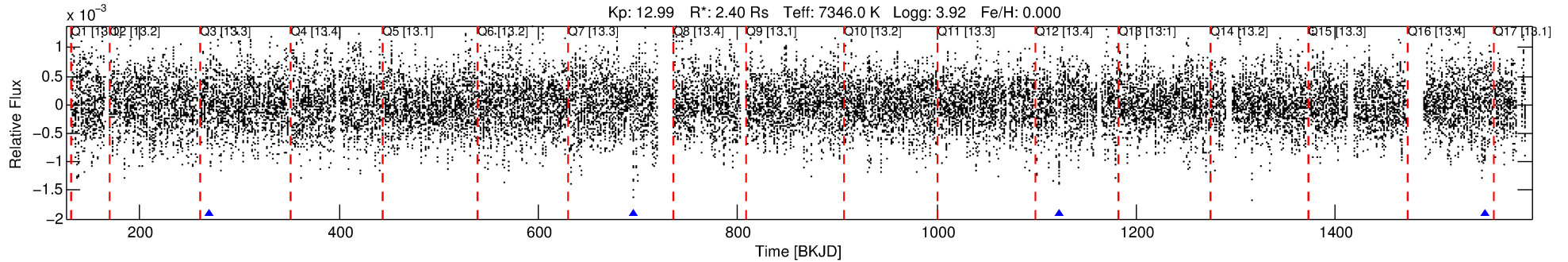
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008430119-03

No Significant Match Found

DV One-Page Summary

KIC: 8430119 Candidate: 3 of 4 Period: 427.238 d



DV Fit Results:

Period = 427.23829 [0.01370] d
Epoch = 268.9902 [0.1781] BKJD
Rp/R* = 0.0304 [0.0059]
a/R* = 108.48 [89.46]
b = 0.64 [1.08]
Seff = 8.33 [4.10]
Teq = 433 [53] K
Rp = 7.96 [3.10] Re
a = 1.3419 [0.4038] AU
Ag = 8420.50 [5447.06] [1.55σ]
Teffp = 6416 [787] K [7.58σ]

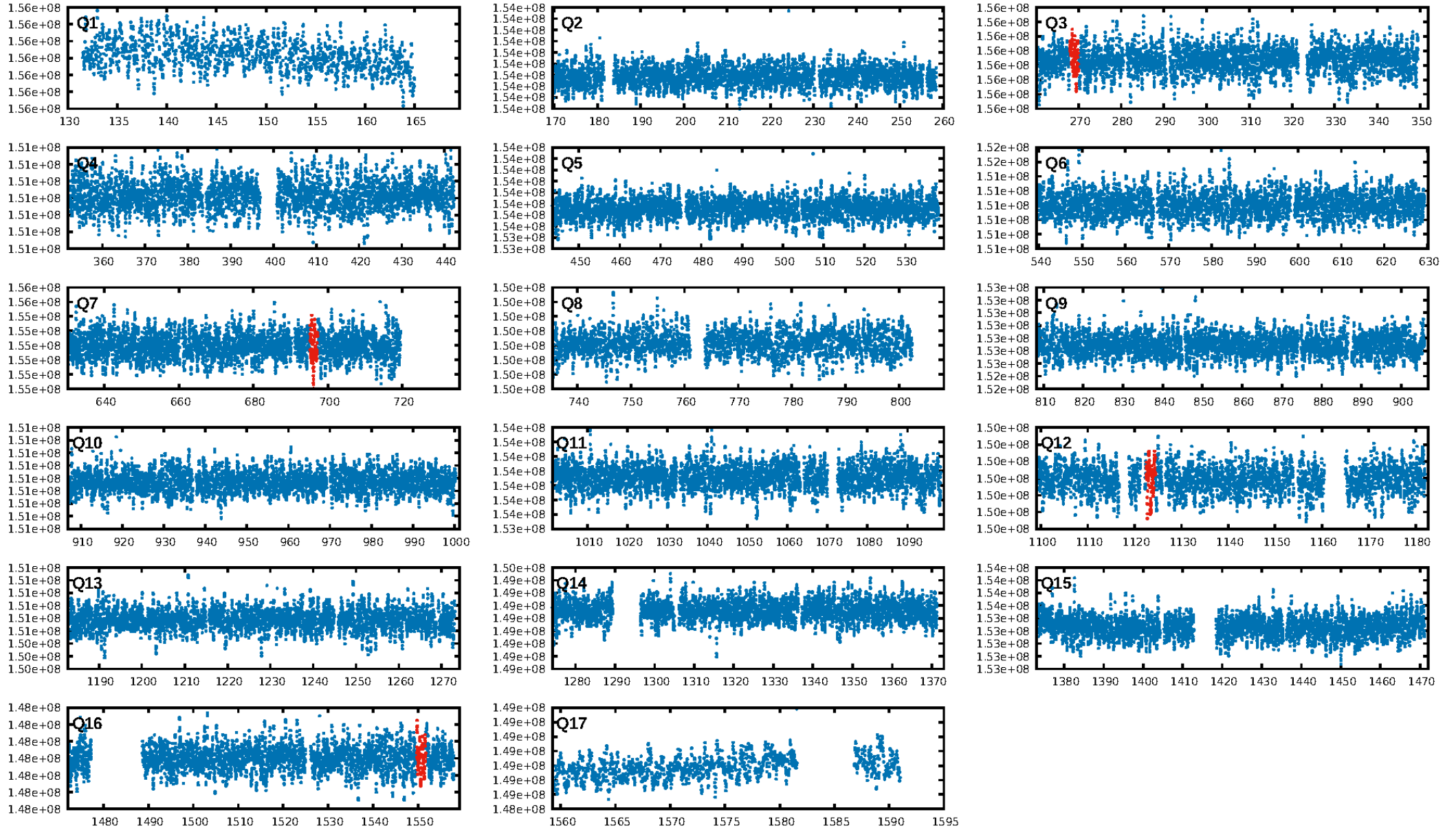
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [349.77σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 13.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.22e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.1681
Centroid-sig: 63.5%
Centroid-so: 2.376 arcsec [3.10σ]
OotOffset-rm: 6.385 arcsec [39.58σ]
KicOffset-rm: 6.557 arcsec [40.71σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.00 [0/1]

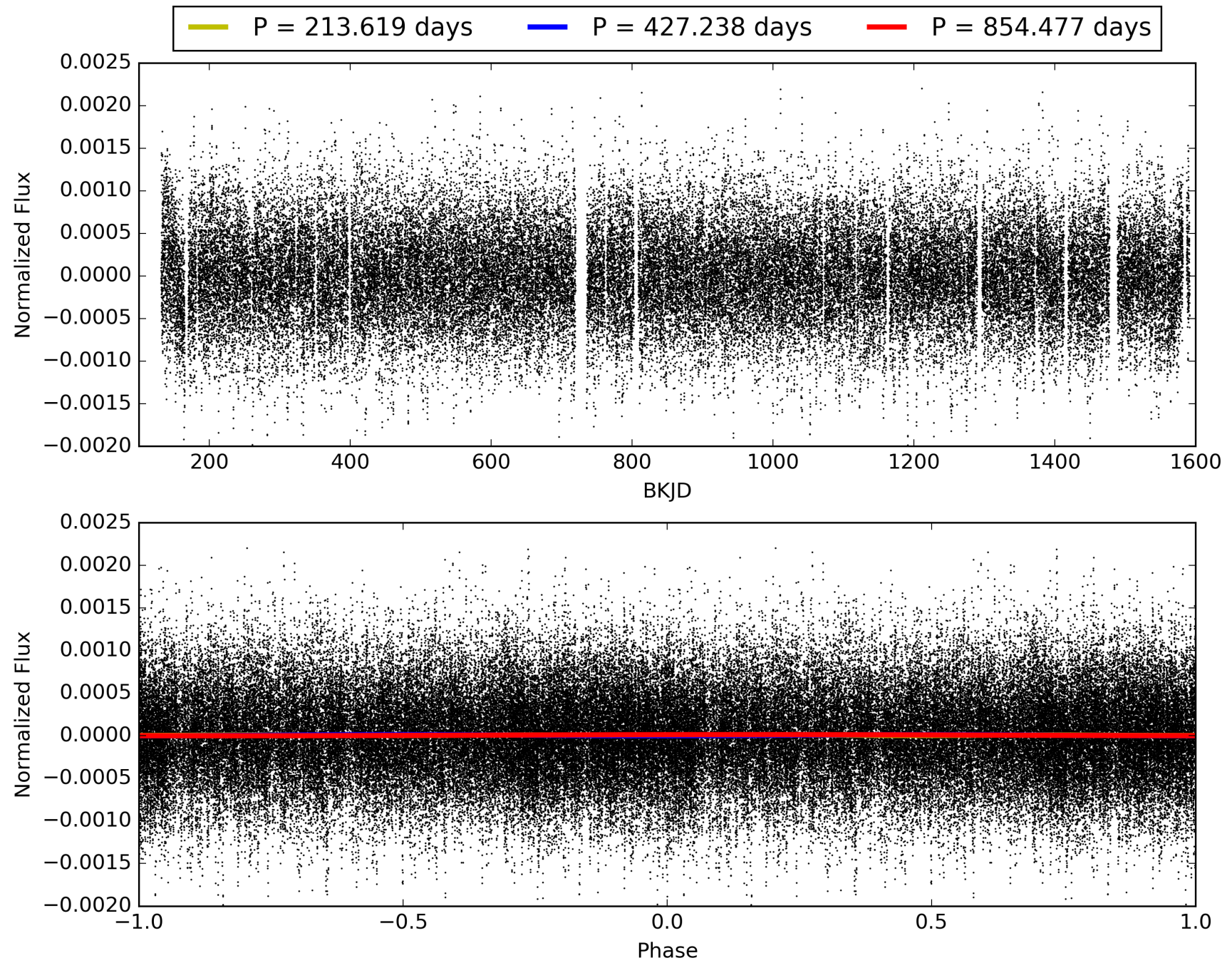
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 07:55:42 Z

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

TCE 008430119-03, PDC Light Curves

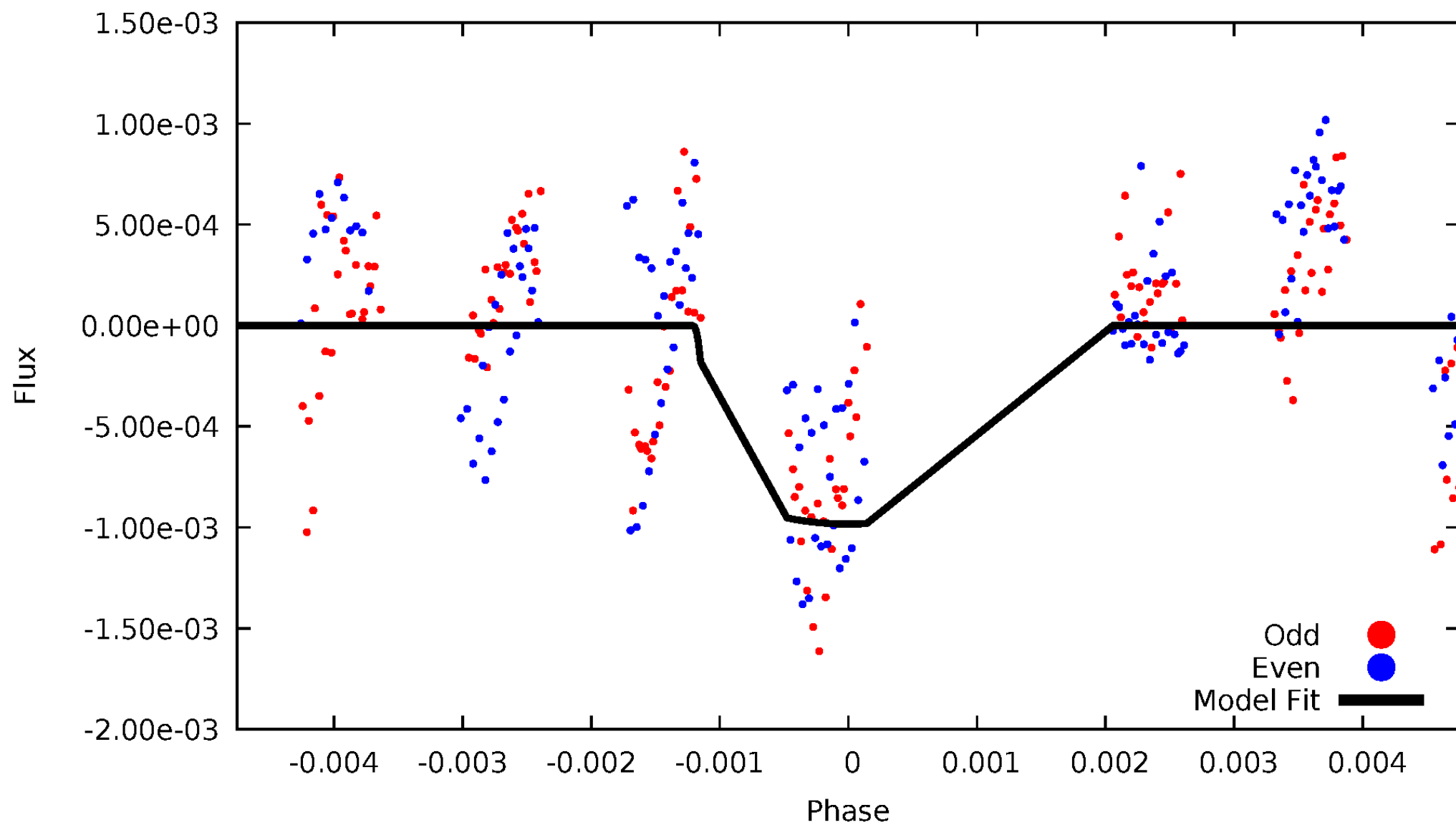


TCE 008430119-03



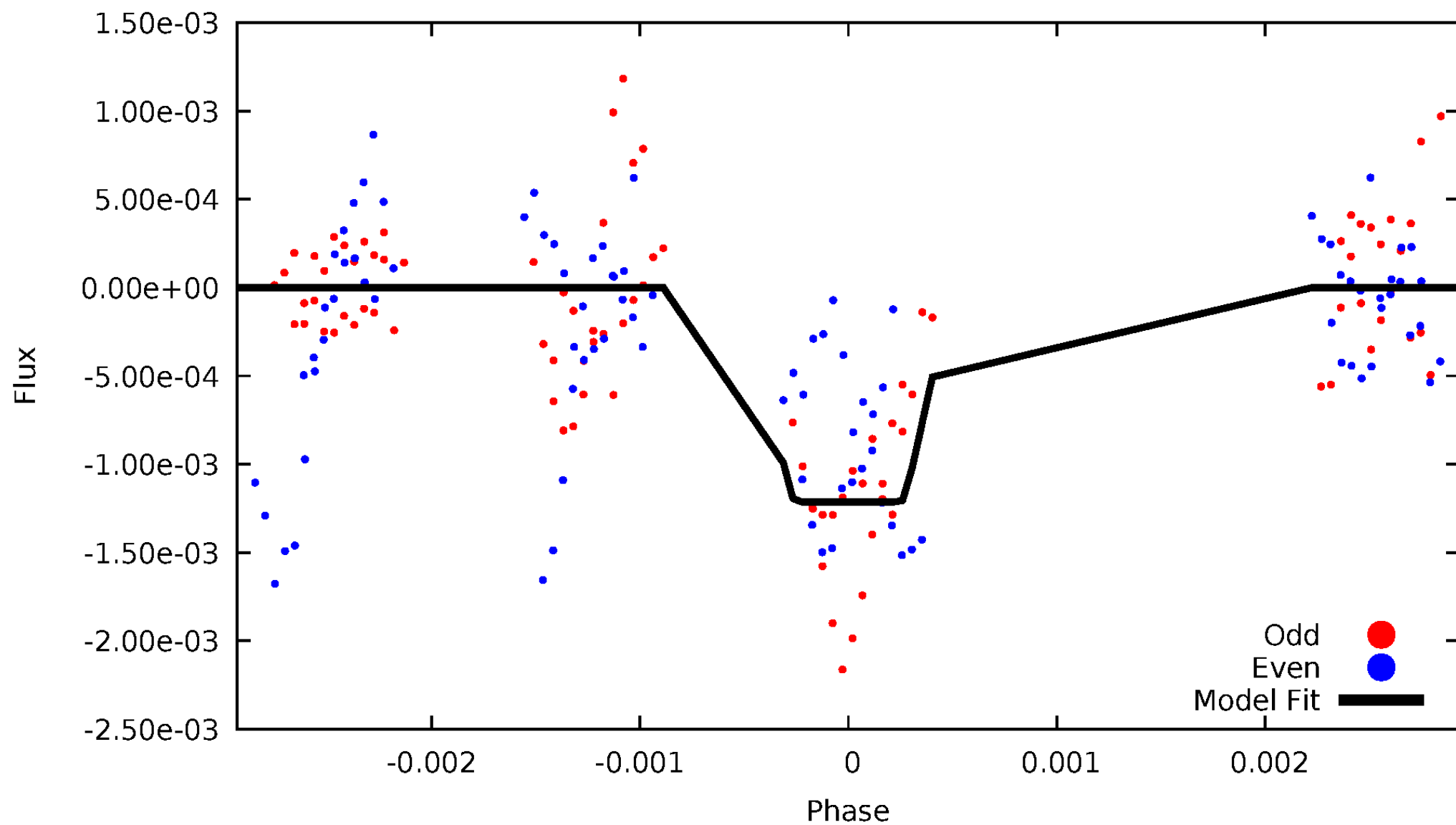
DV Odd/Even

TCE 008430119-03



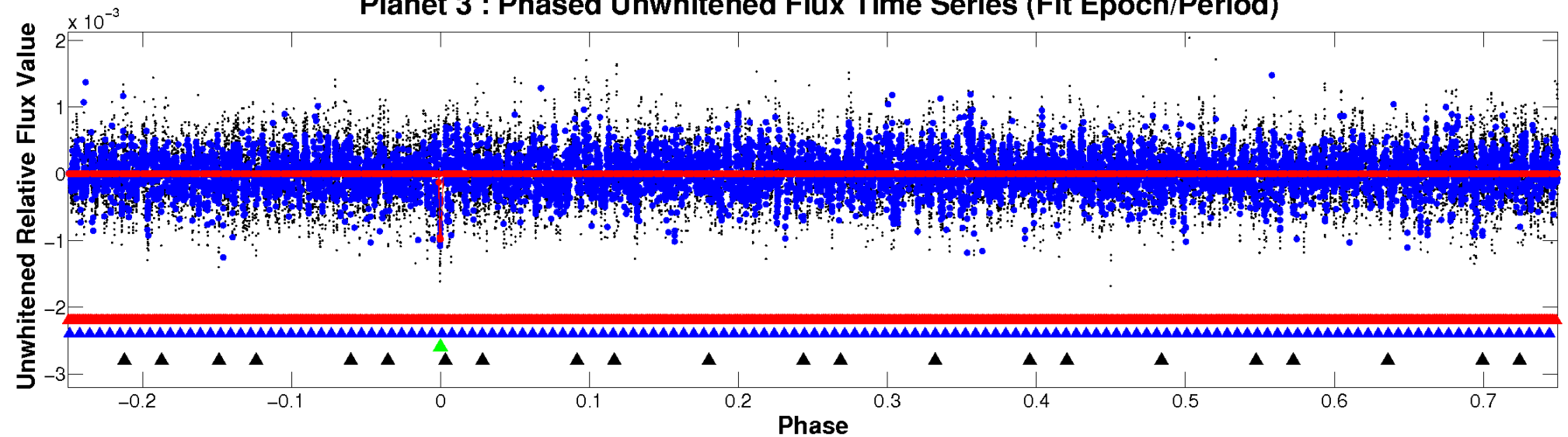
ALT Odd/Even

TCE 008430119-03

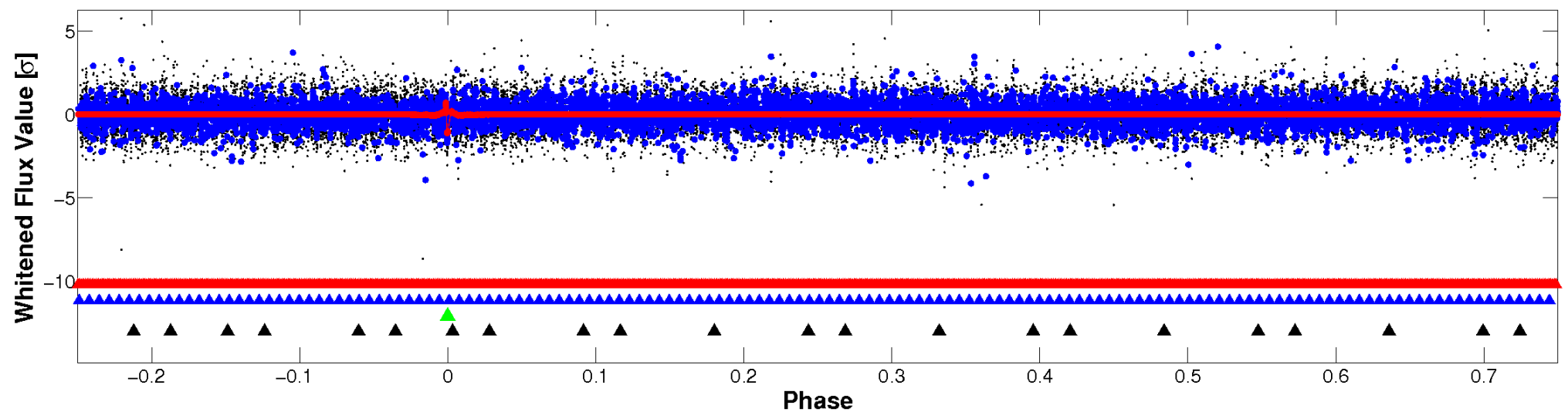


Non-Whitened Vs. Whitened Light Curve

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

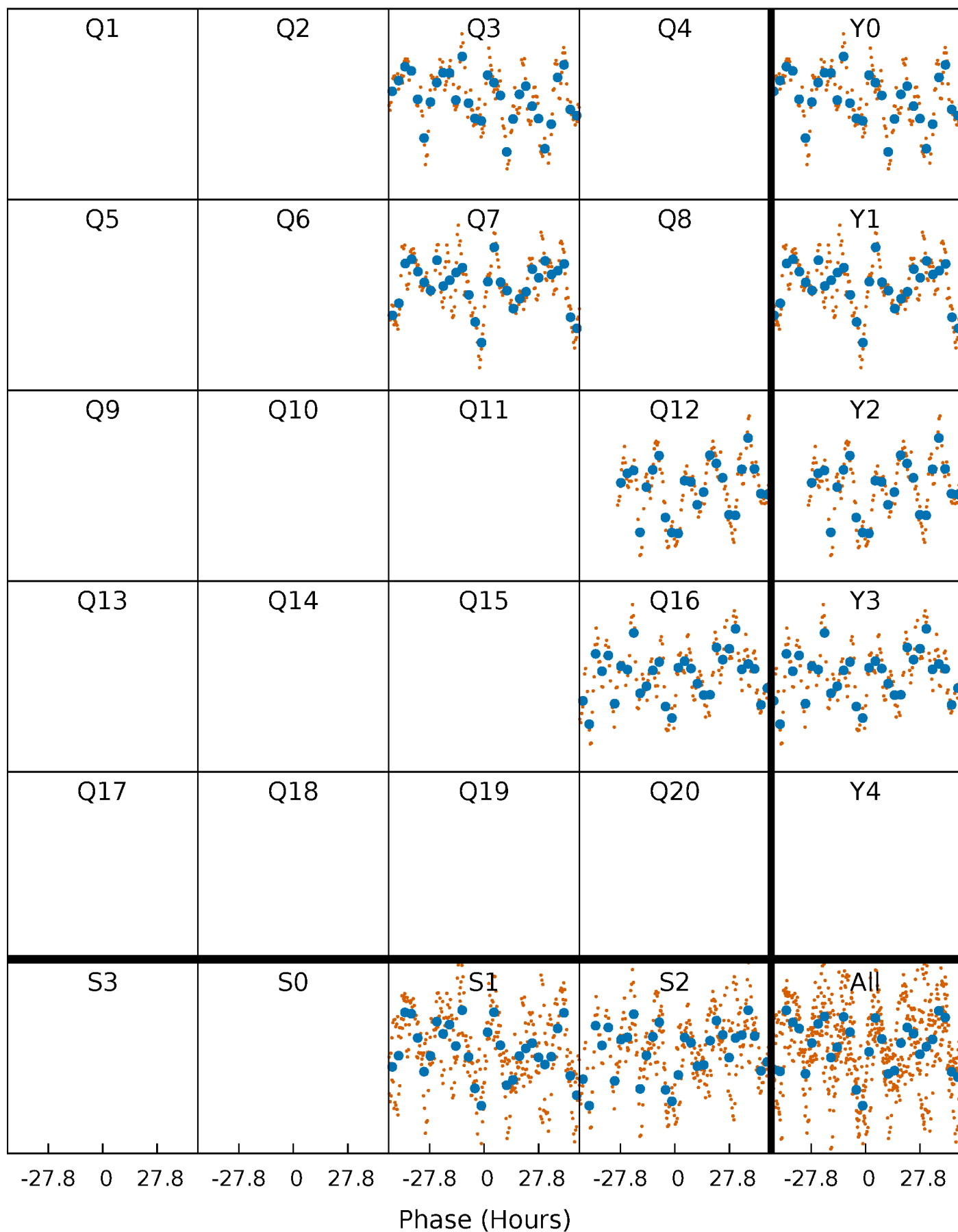


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



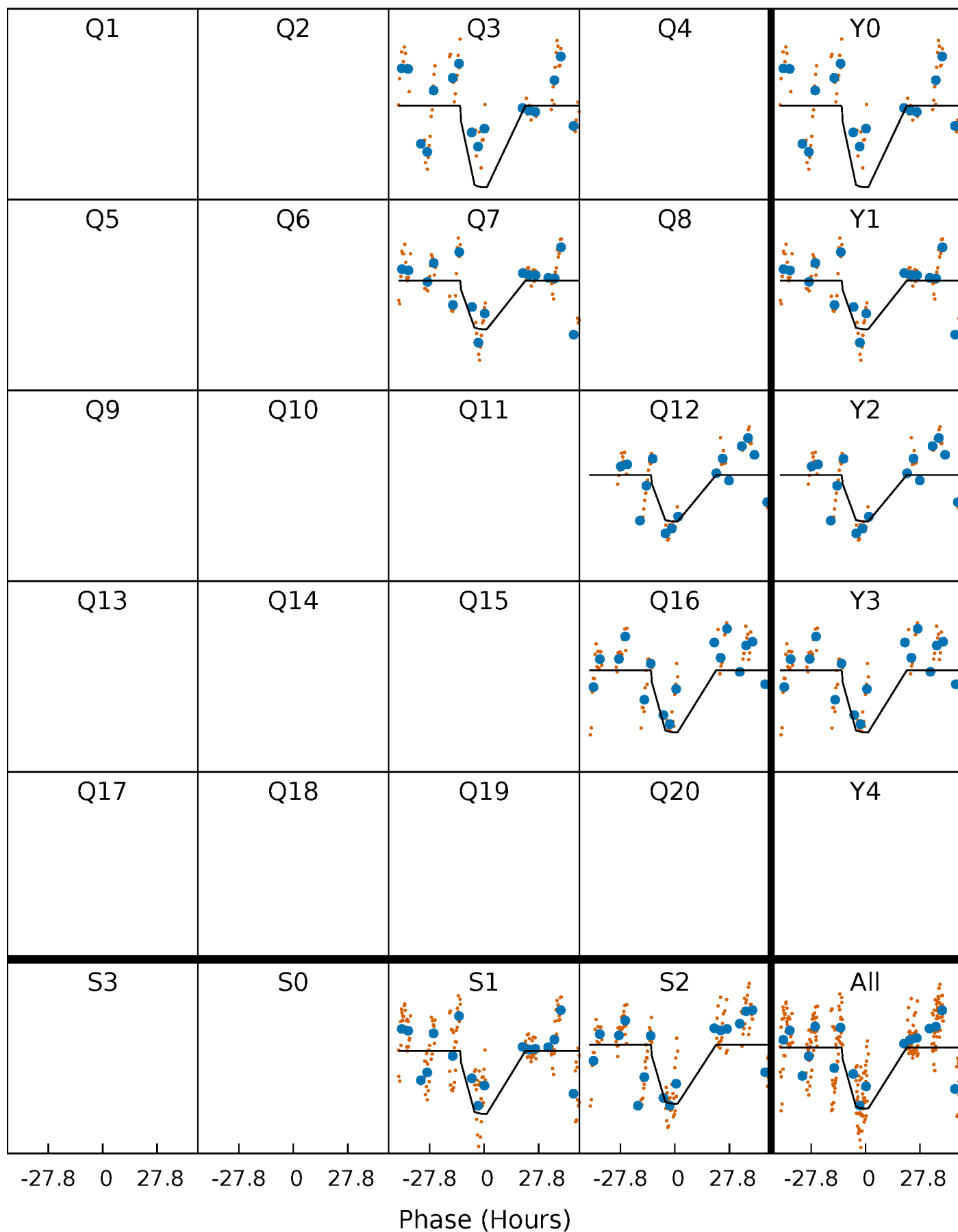
PDC Quarter-Phased Transit Curves

TCE 008430119-03 P=427.238288 Days $T_0=268.990163$ (BKJD)



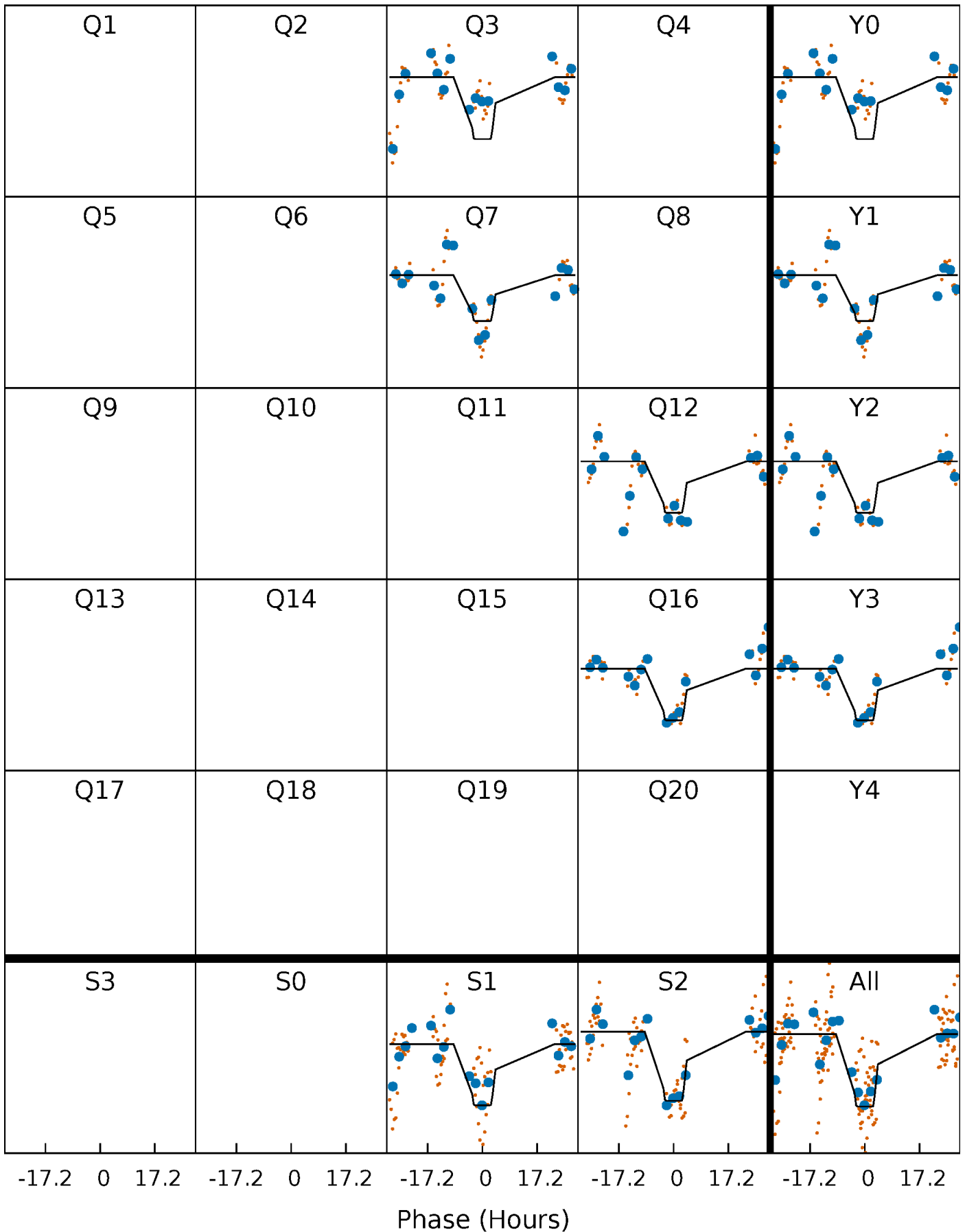
DV Quarter-Phased Transit Curves

TCE 008430119-03 P=427.238288 Days $T_0=268.990163$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

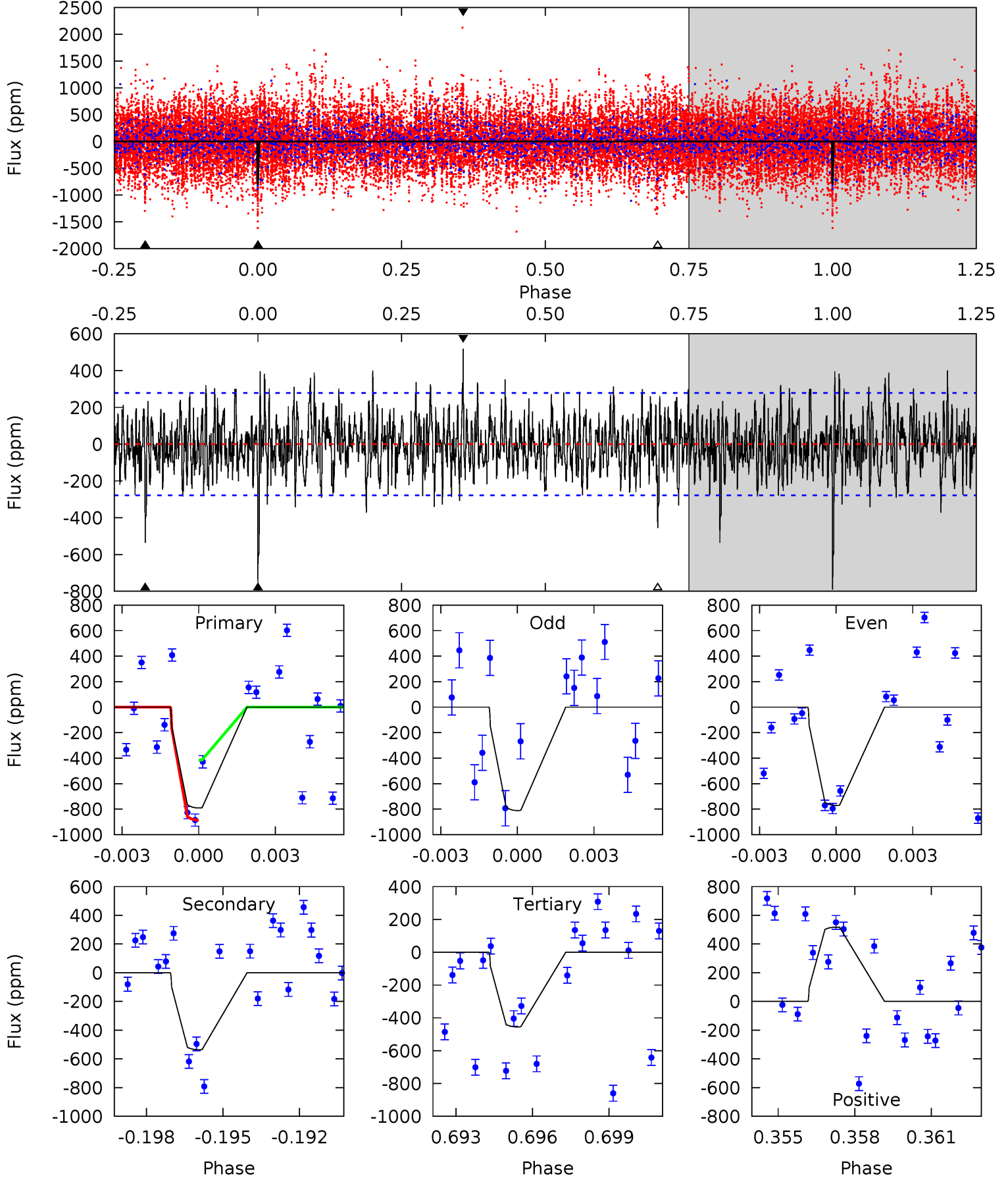
TCE 008430119-03 $P=427.224873$ Days $T_0=268.919334$ (BKJD)



DV Model-Shift Uniqueness Test

008430119-03, P = 427.238288 Days, E = 268.990163 Days

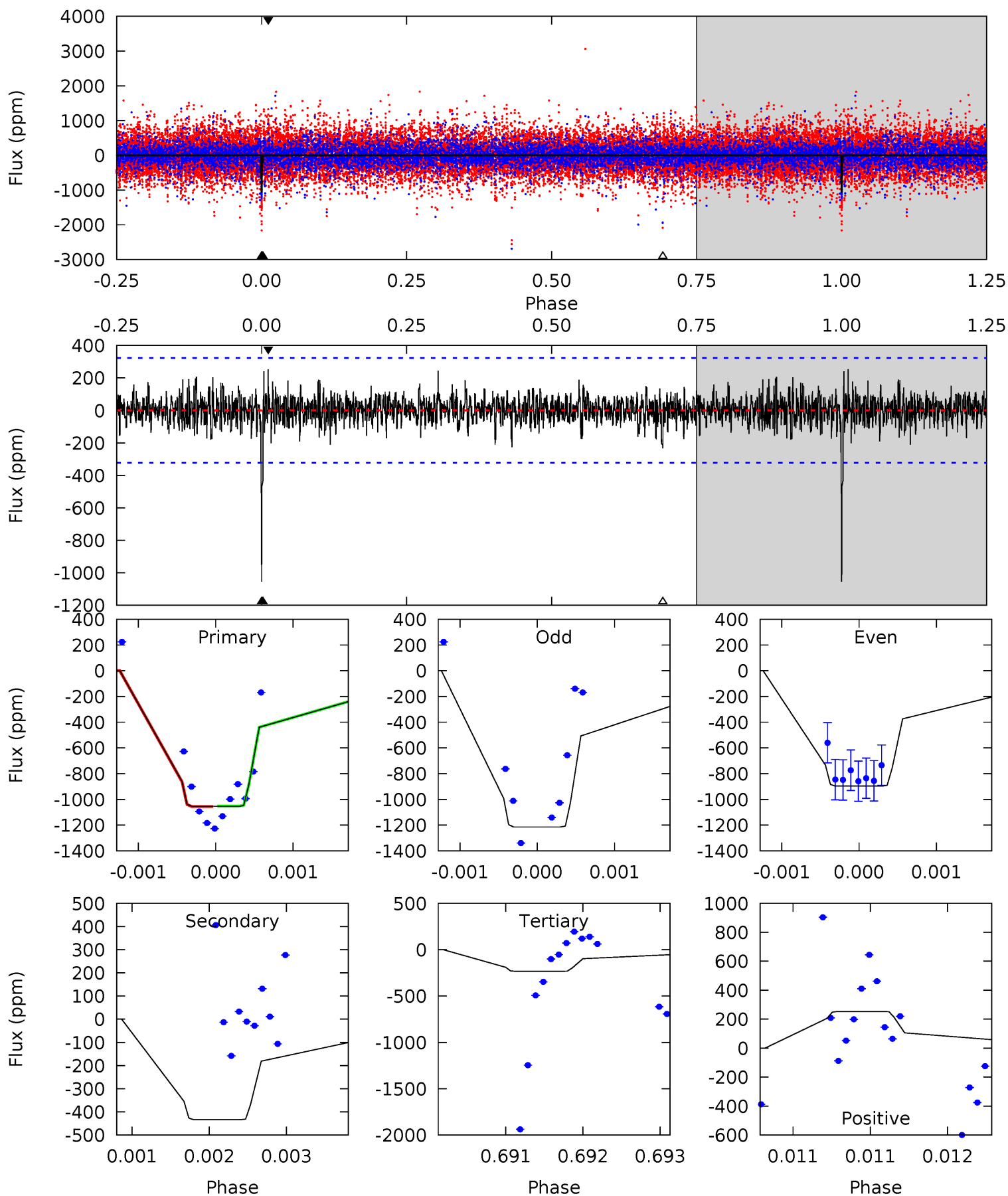
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	10.1	8.56	9.74	5.24	2.94	2.26	6.31	5.13	1.53	0.35	0.38	0.96	0.40	3.44



Alt Model-Shift Uniqueness Test

008430119-03, P = 427.224873 Days, E = 268.919334 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.0	7.40	3.98	4.32	5.51	3.38	1.04	14.0	13.7	3.42	3.09	2.70	0.89	0.19	0.03



Stellar Parameters For KIC 008430119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7346^{+203}_{-330}	$3.925^{+0.260}_{-0.140}$	$0.000^{+0.200}_{-0.350}$	$2.398^{+0.540}_{-0.810}$	$1.765^{+0.184}_{-0.368}$	$0.180^{+0.303}_{-0.073}$
	+3%/-4%	+7%/-4%	+inf%/-inf%	+23%/-34%	+10%/-21%	+168%/-41%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008430119-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-537 ± 53	$7.55^{+2.09}_{-1.73}$	595^{+44}_{-51}	6324^{+775}_{-652}	9132^{+5857}_{-3412}
Alt.	-434 ± 59	$8.71^{+2.21}_{-1.91}$	596^{+43}_{-53}	5559^{+591}_{-428}	5373^{+3531}_{-1911}

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

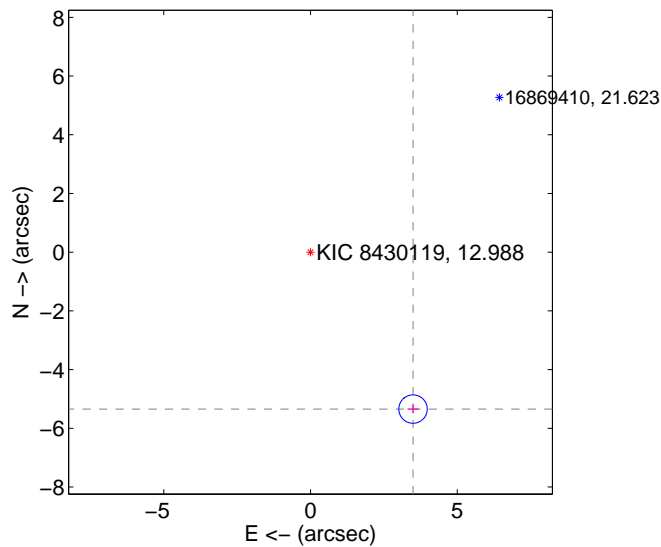
Supplemental centroid analysis for 008430119-03. Kepler magnitude: 12.99. Transit SNR 7.81

There are 0 quarters with good PRF difference image offsets

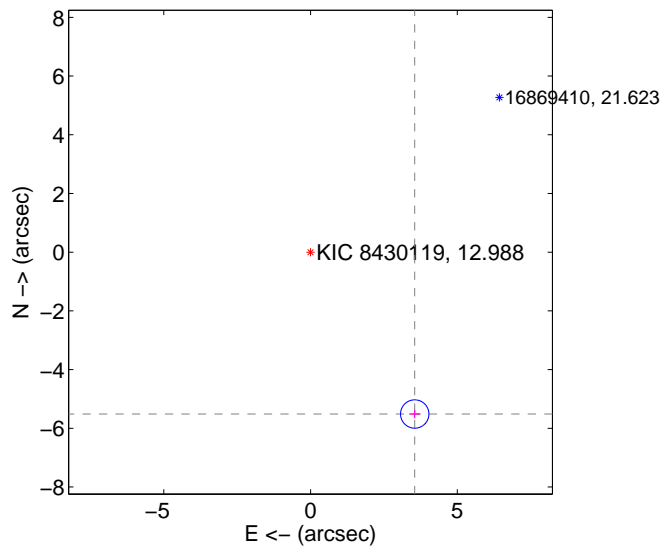
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.385 ± 0.161	39.58	-3.492 ± 0.188	-5.346 ± 0.148
PRF-fit source offset from KIC position	6.557 ± 0.161	40.71	-3.549 ± 0.188	-5.514 ± 0.148
photometric centroid source offset	2.38 ± 0.77	3.10	-1.44 ± 0.63	-1.89 ± 0.84

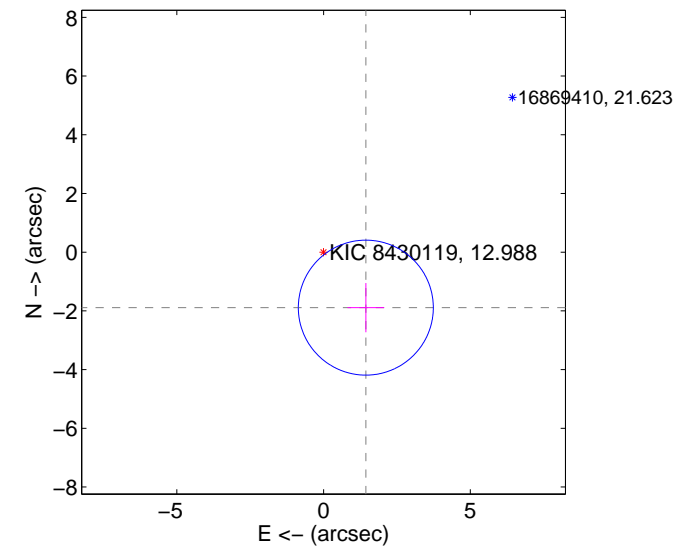
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

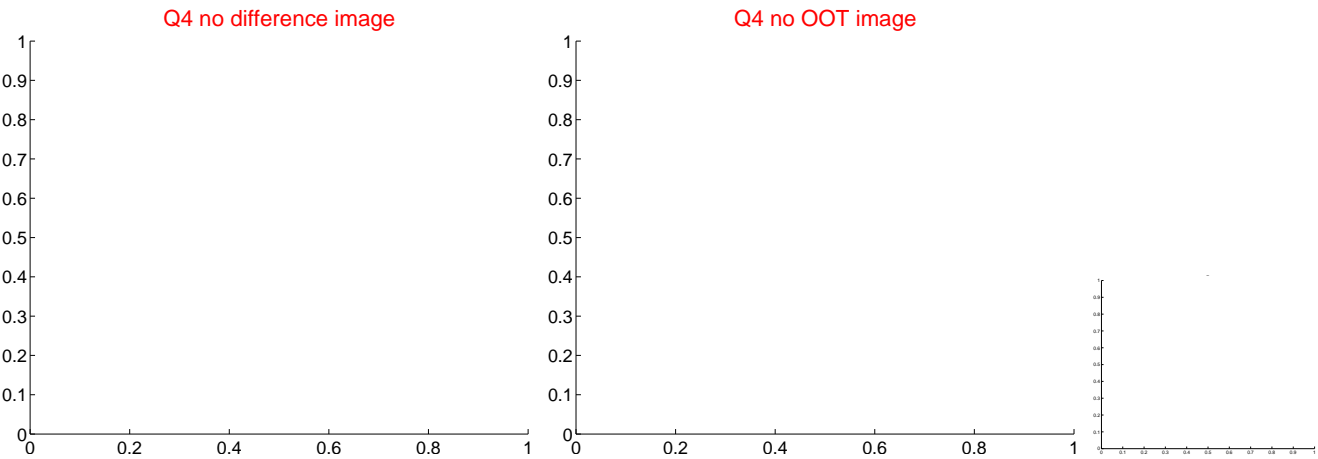
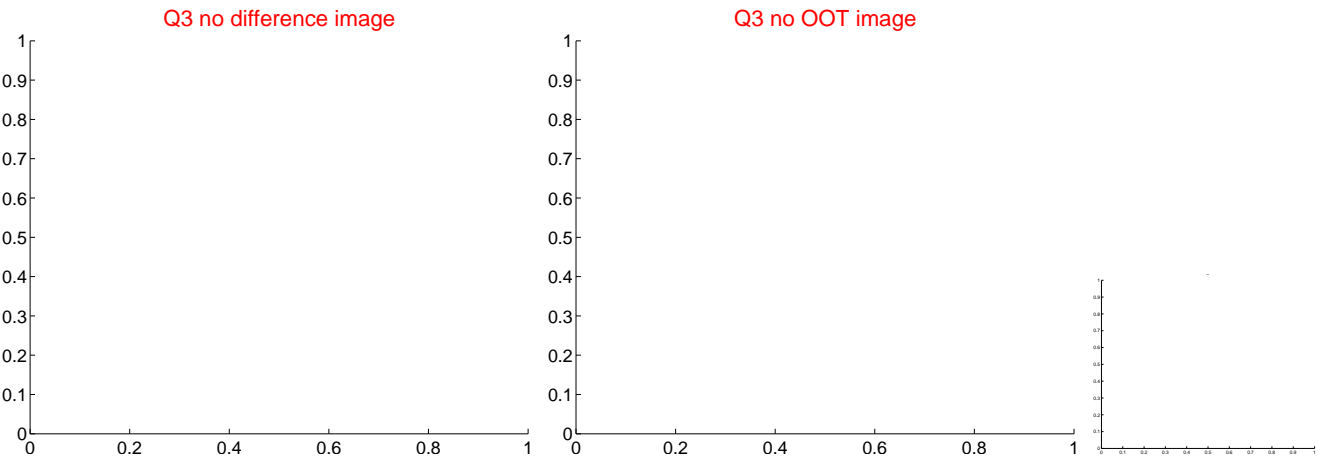
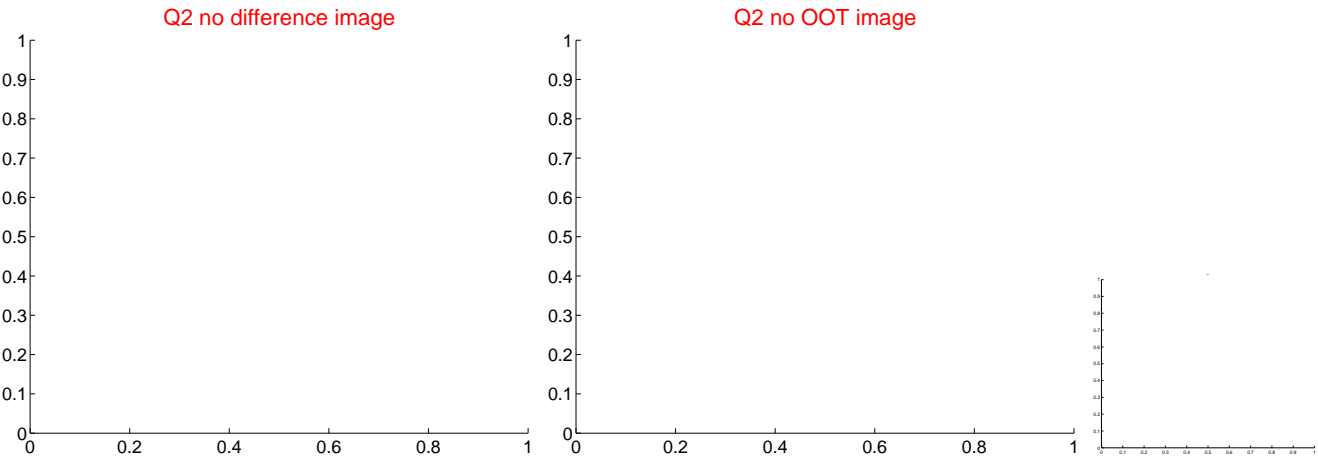
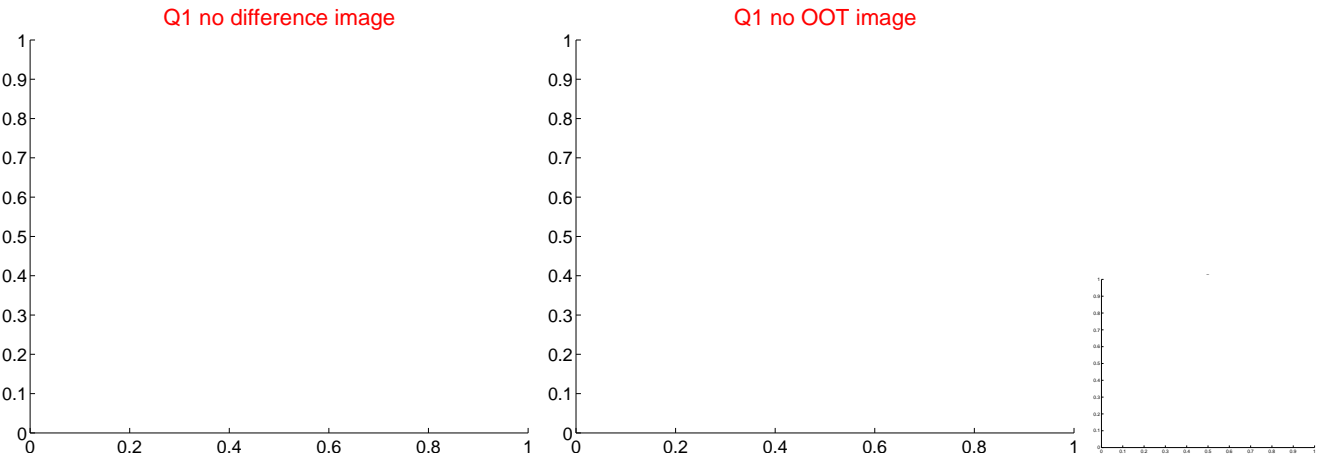


offset from photometric centroids

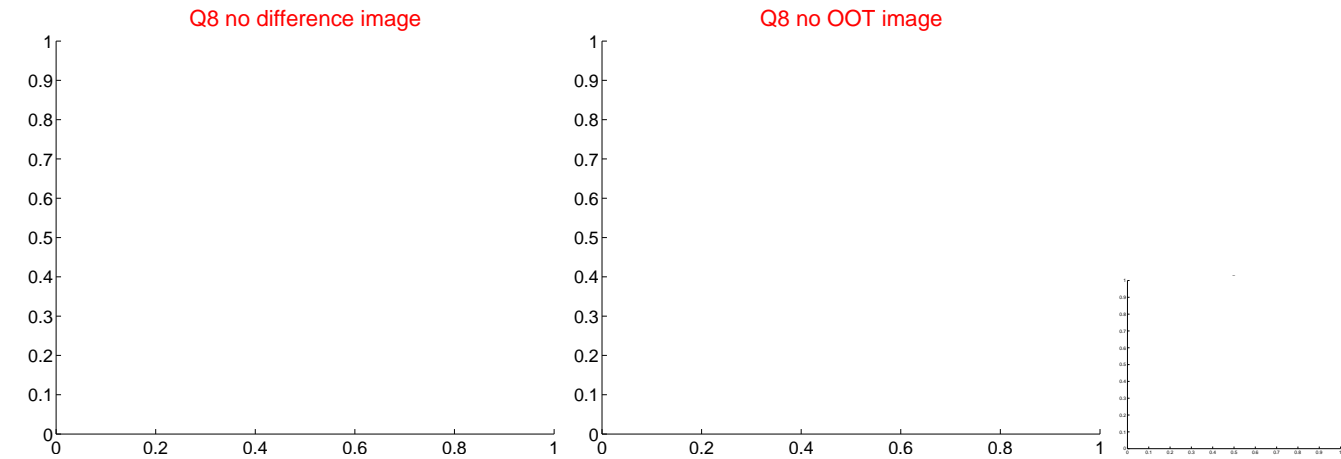
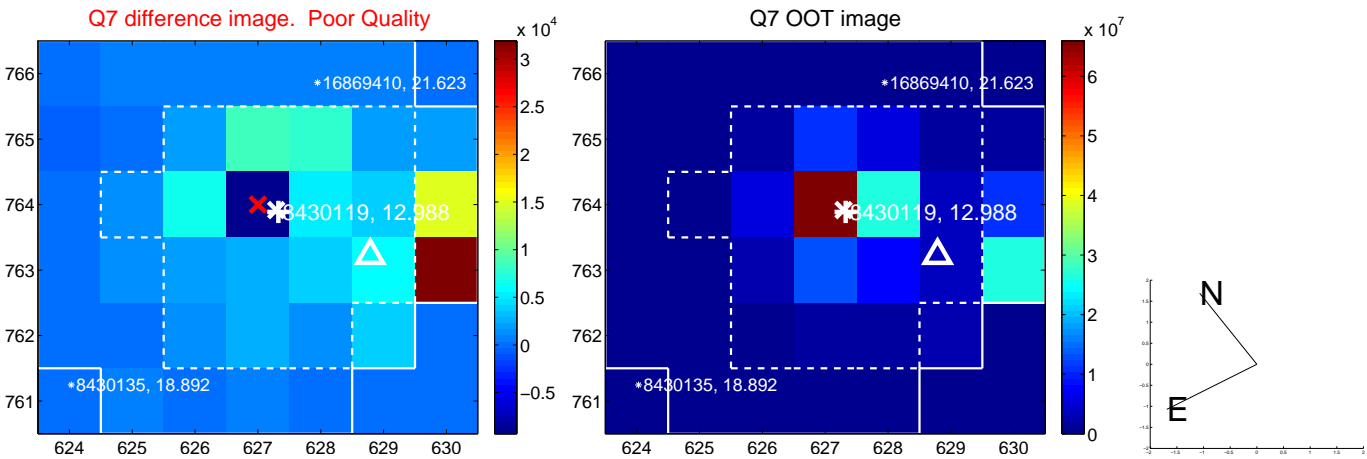
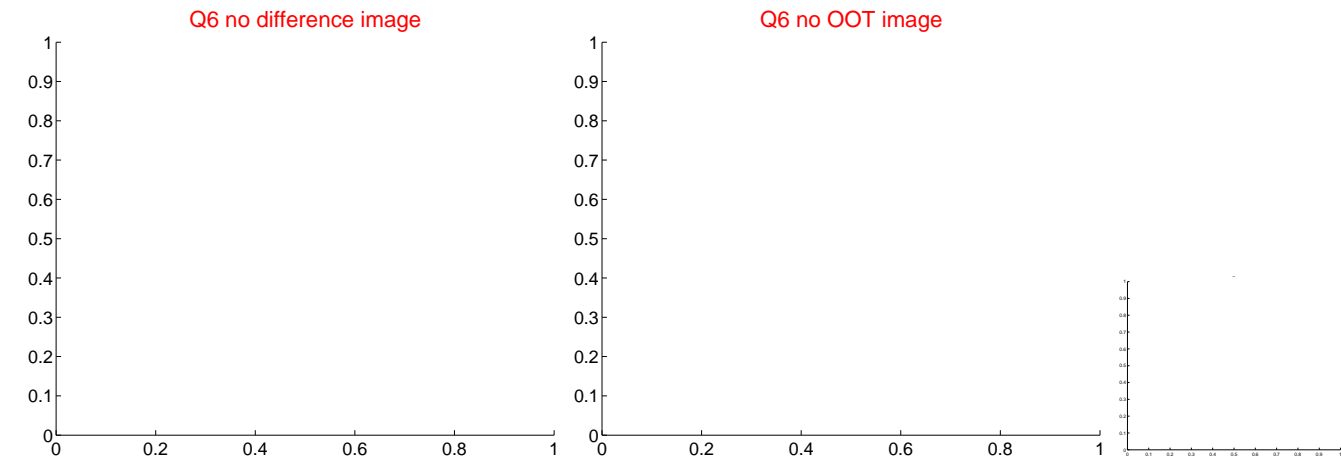
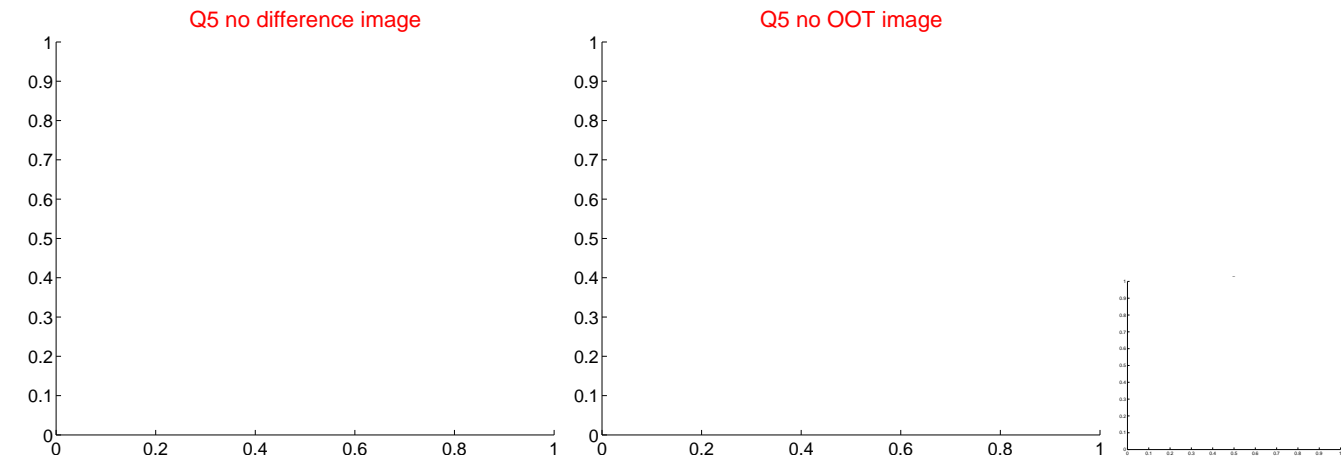


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

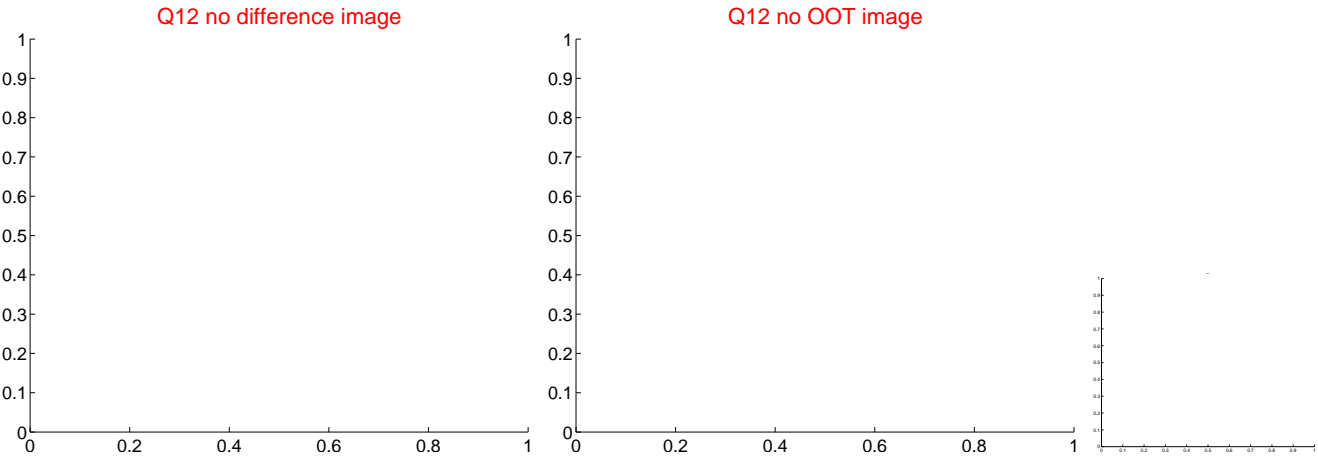
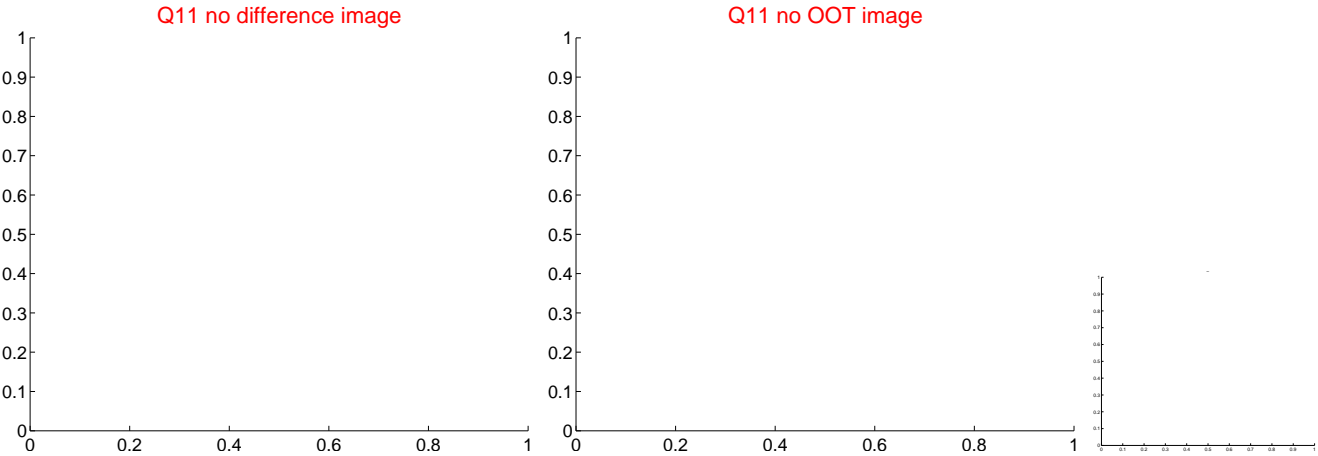
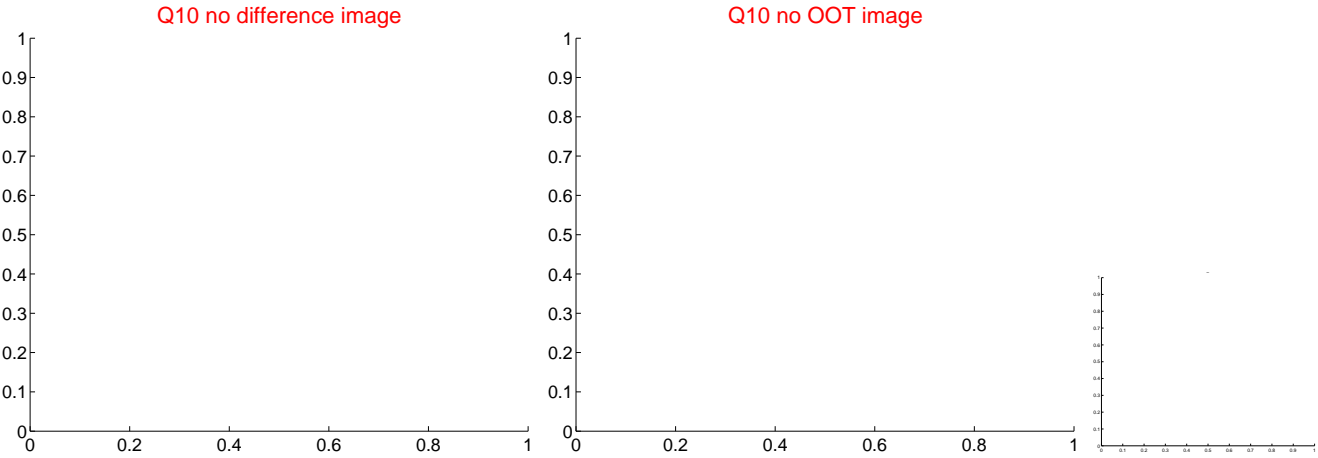
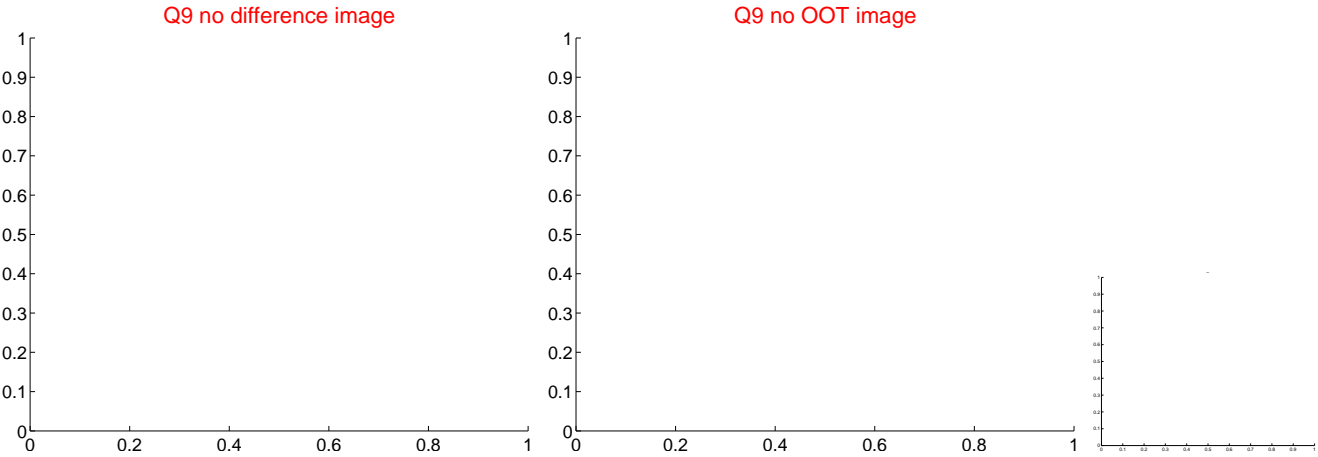
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



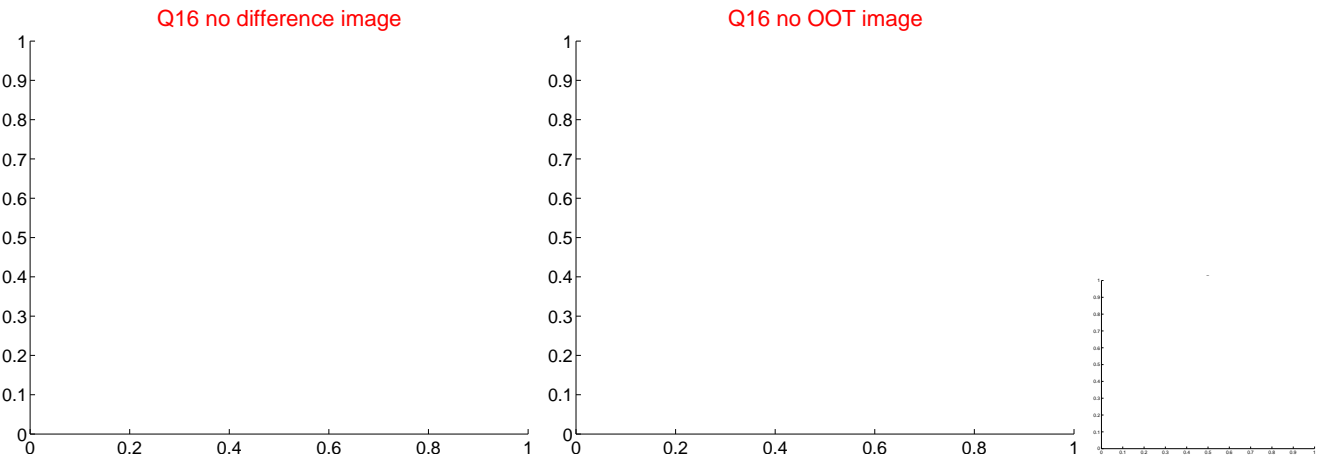
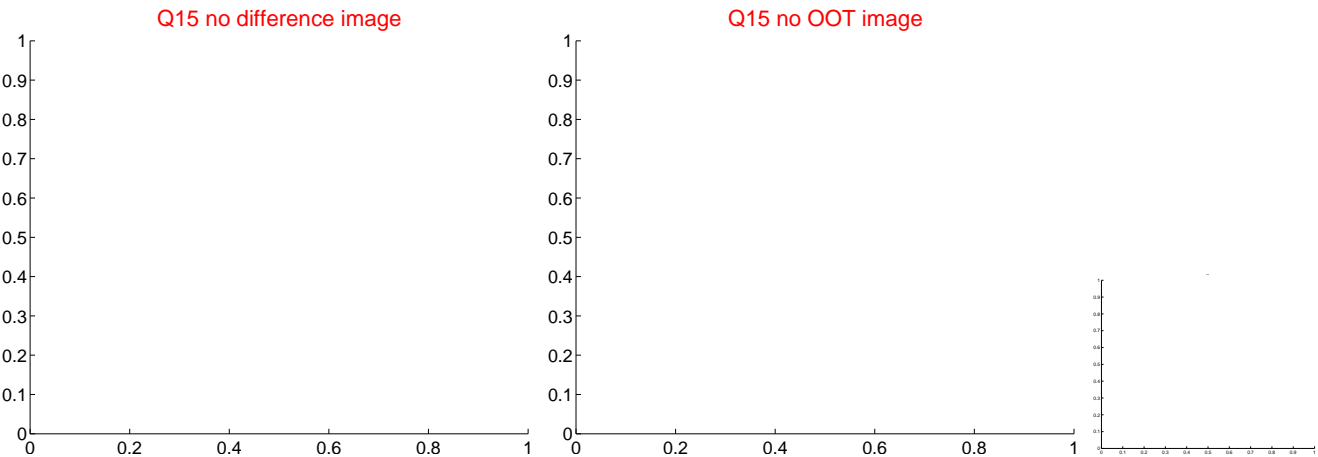
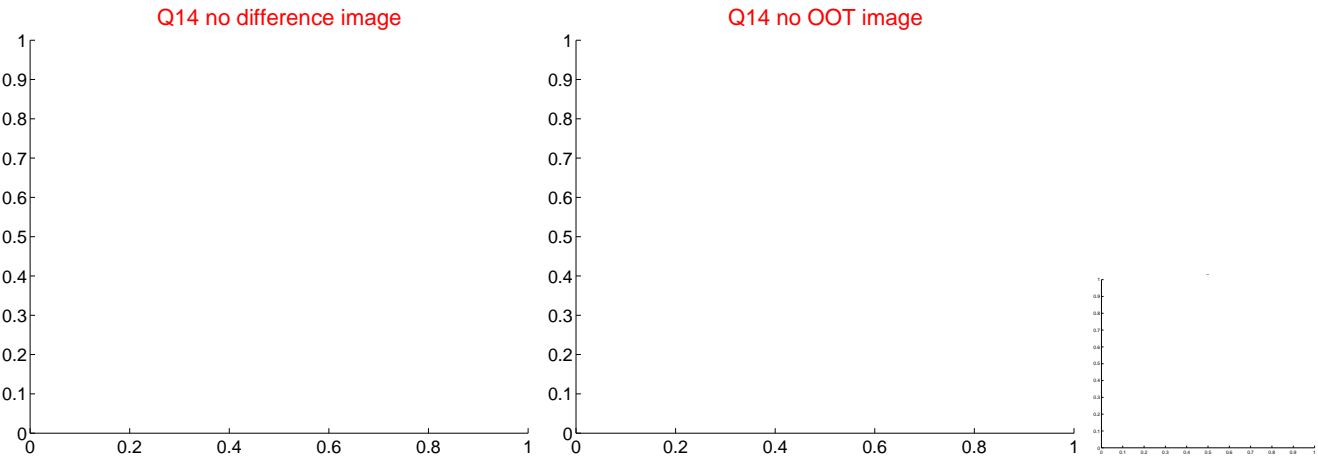
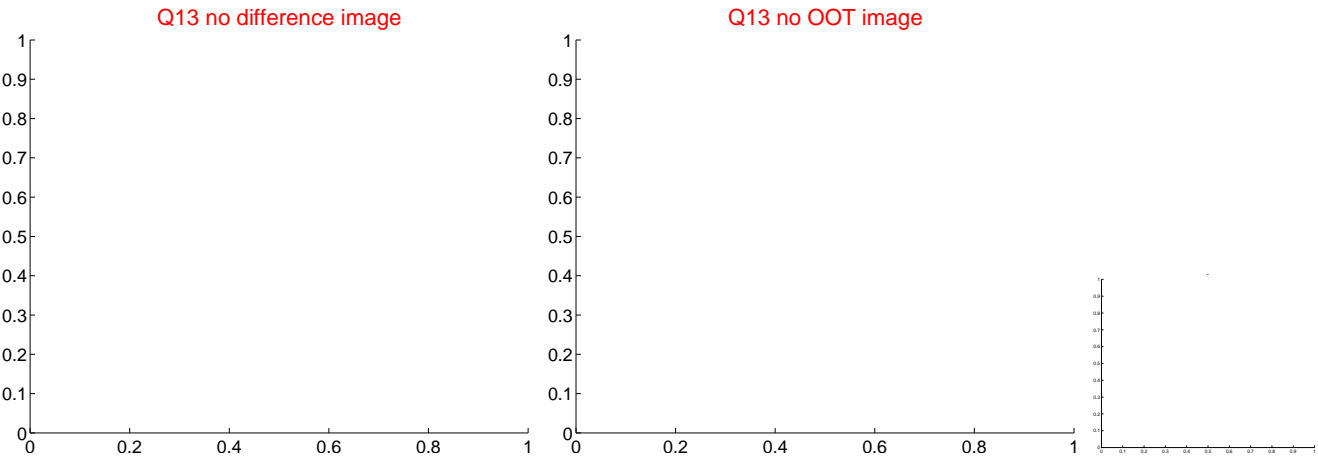
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



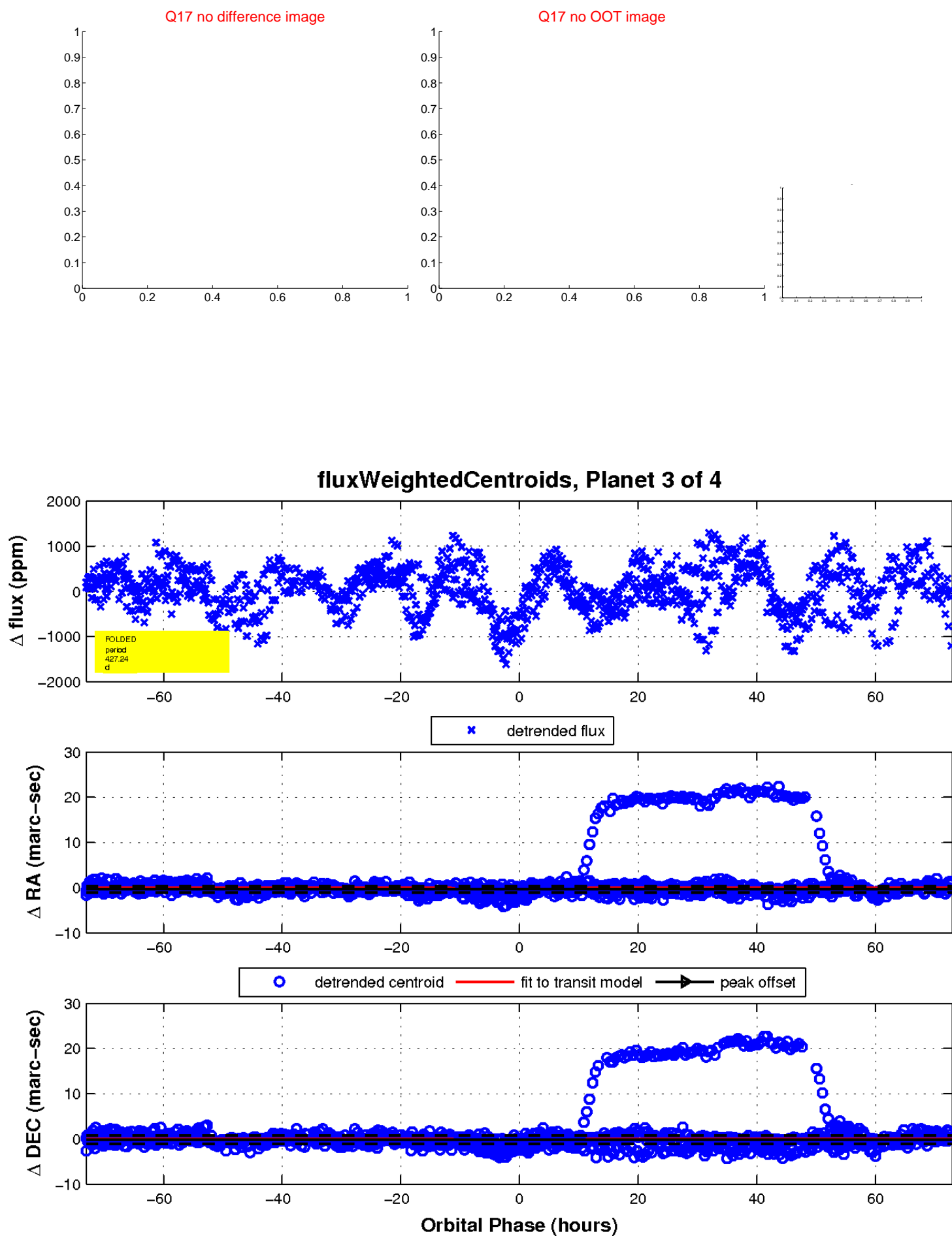
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

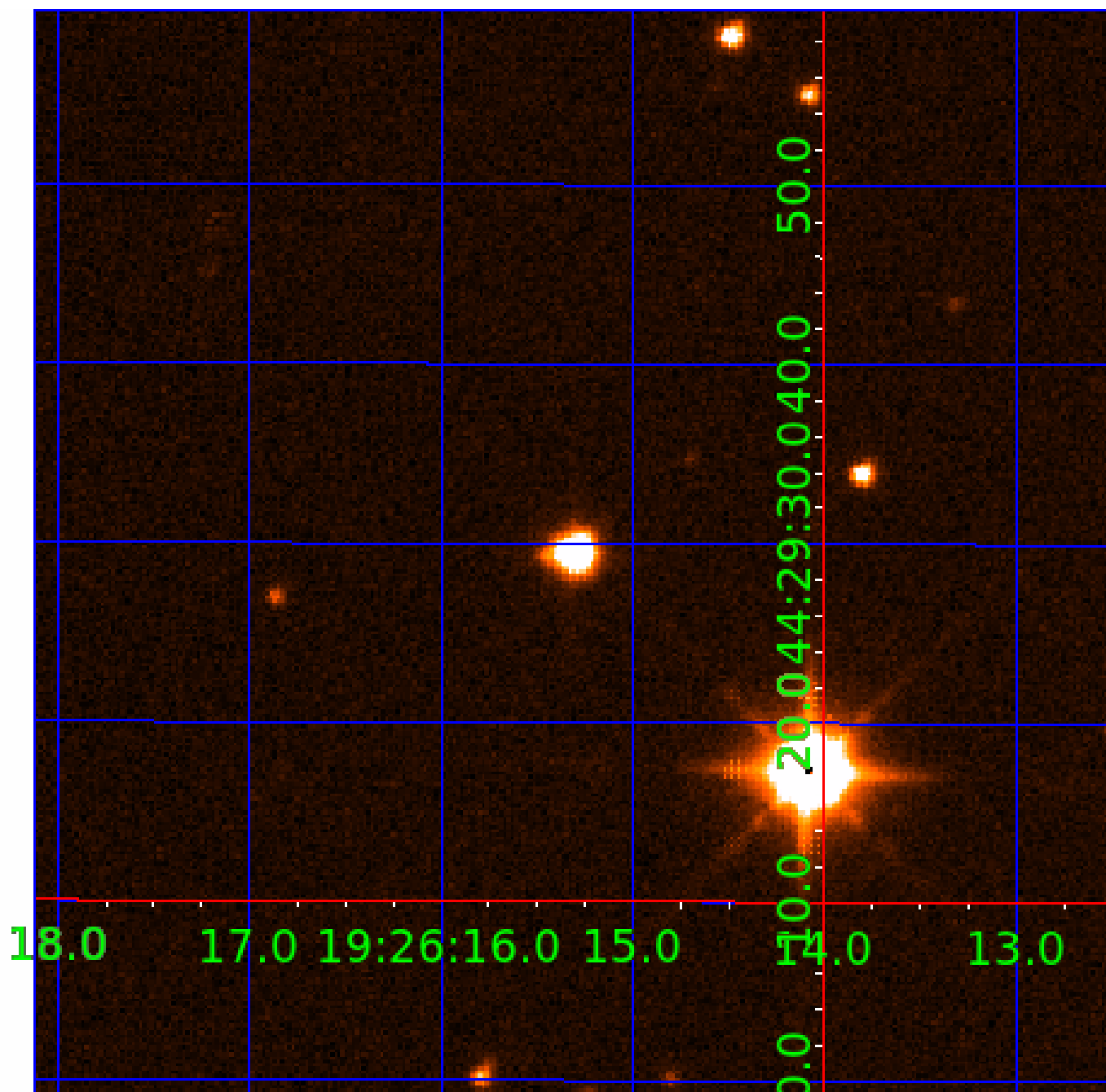


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008430119

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})
008430119-01	OBS	No	0.537417	131.592104	41.8	2.135	10.8	11.4	2.40	7346	1.80	61364.25
008430119-02	OBS	No	2.886566	133.803931	116.4	4.320	9.0	8.9	2.40	7346	3.00	6523.62
008430119-03	OBS	No	427.238288	268.990163	983.4	24.356	8.0	7.8	2.40	7346	7.96	8.33
008430119-04	OBS	No	64.909733	189.011381	682.7	4.991	7.5	8.0	2.40	7346	7.00	102.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008430119-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008430119-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008430119-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—ALL_TRANS_CHASES—CENT_FEW_DIFFS—HALO_GHOST
008430119-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT

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

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

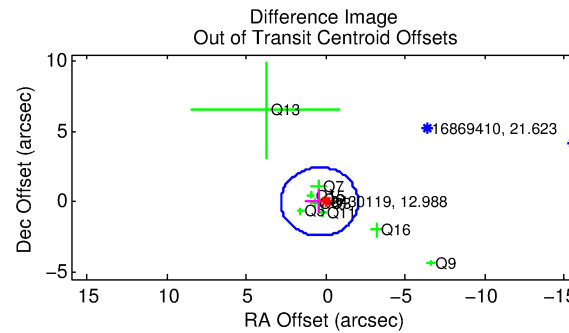
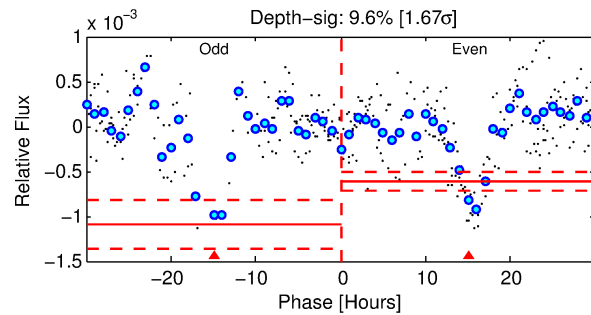
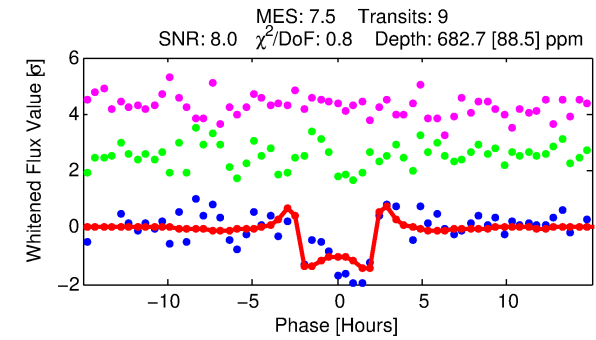
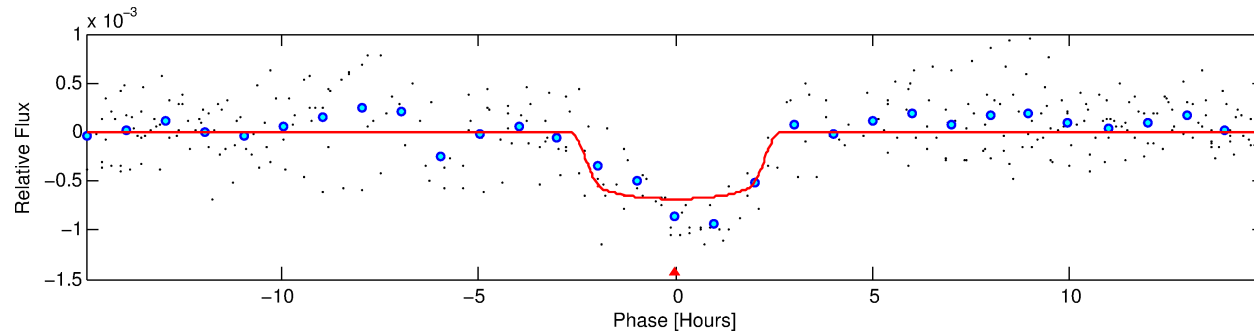
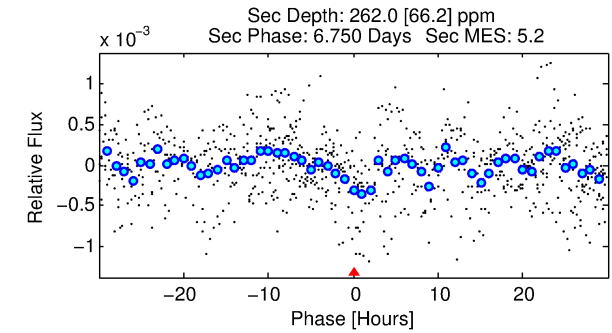
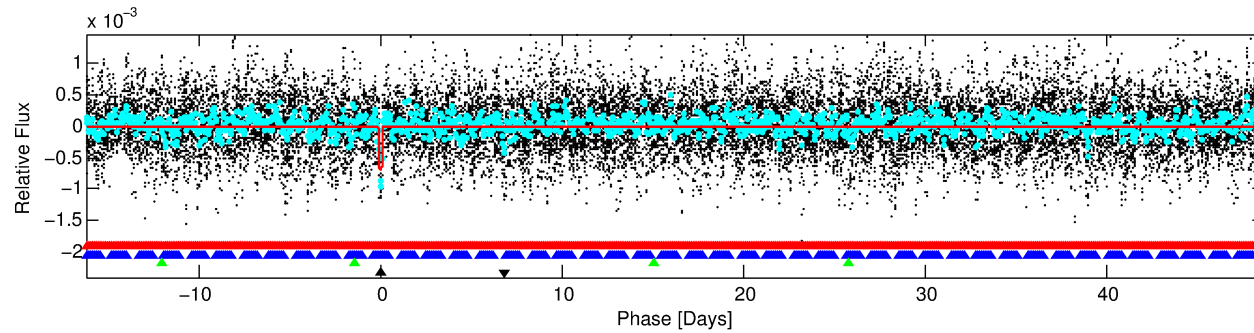
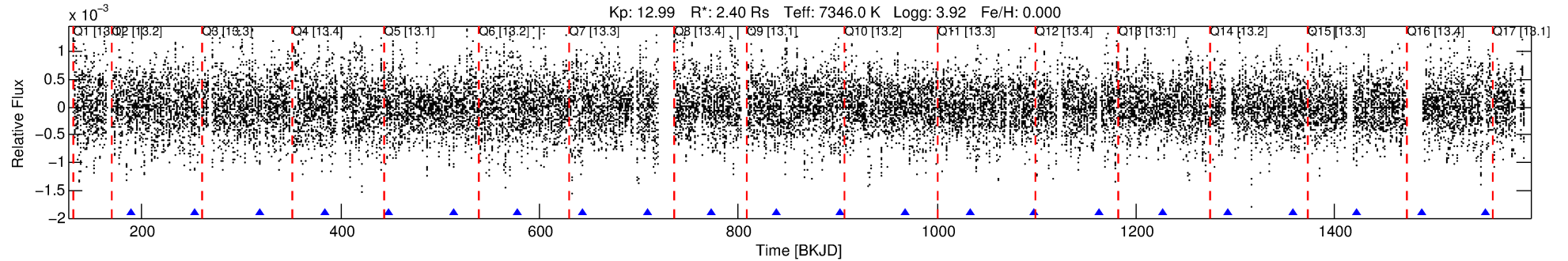
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008430119-04

No Significant Match Found

DV One-Page Summary

KIC: 8430119 Candidate: 4 of 4 Period: 64.910 d



DV Fit Results:

Period = 64.90973 [0.00046] d
Epoch = 189.0114 [0.0050] BKJD
Rp/R* = 0.0267 [0.0045]
a/R* = 59.54 [53.41]
b = 0.83 [0.33]
Seff = 102.78 [50.59]
Teff = 812 [100] K
Rp = 7.00 [2.64] Re
a = 0.3821 [0.1150] AU
Ag = 429.78 [267.68] [1.60 σ]
Teffp = 5716 [655] K [7.40 σ]

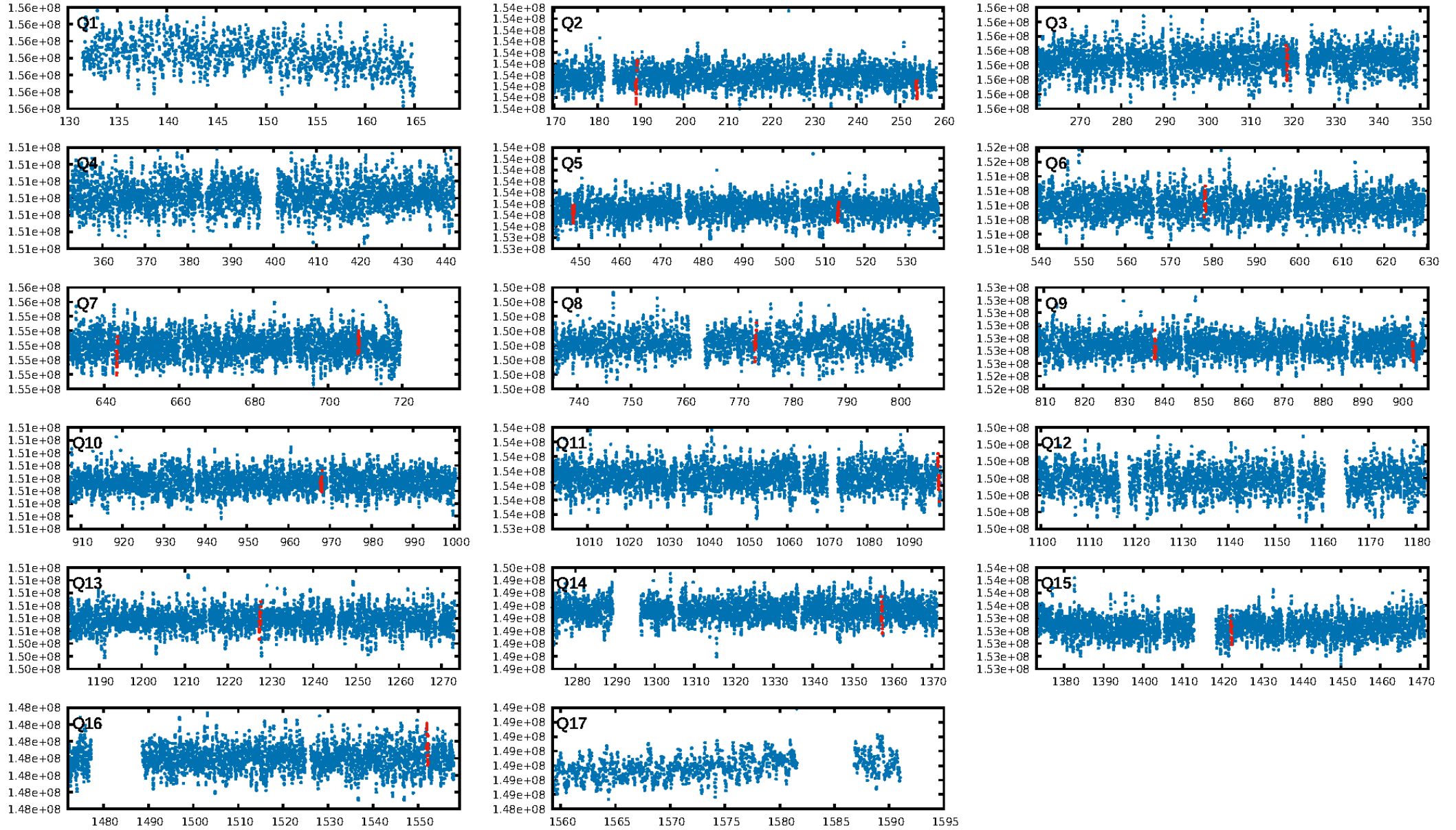
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [225.51 σ]
LongPeriod-sig: 100.0% [349.77 σ]
ModelChiSquare2-sig: 60.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.30e-09
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 2.736
Centroid-sig: 0.1%
Centroid-so: 2.078 arcsec [3.84 σ]
OotOffset-rm: 0.385 arcsec [0.47 σ]
KicOffset-rm: 0.361 arcsec [0.58 σ]
OotOffset-st: 1/4/2/3 [10]
KicOffset-st: 1/4/2/3 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 0.00 [0/13]

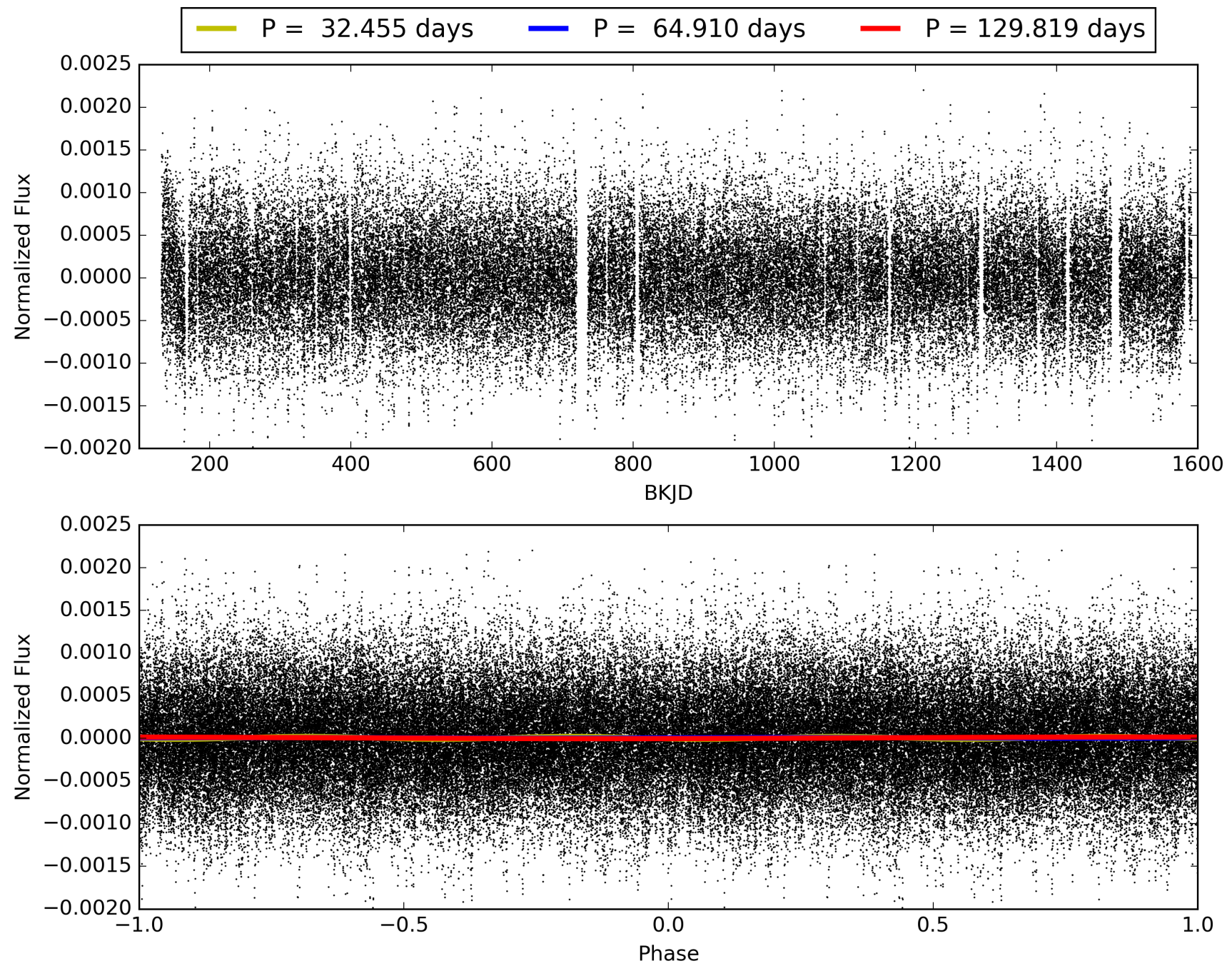
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 07:55:47 Z

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

TCE 008430119-04, PDC Light Curves

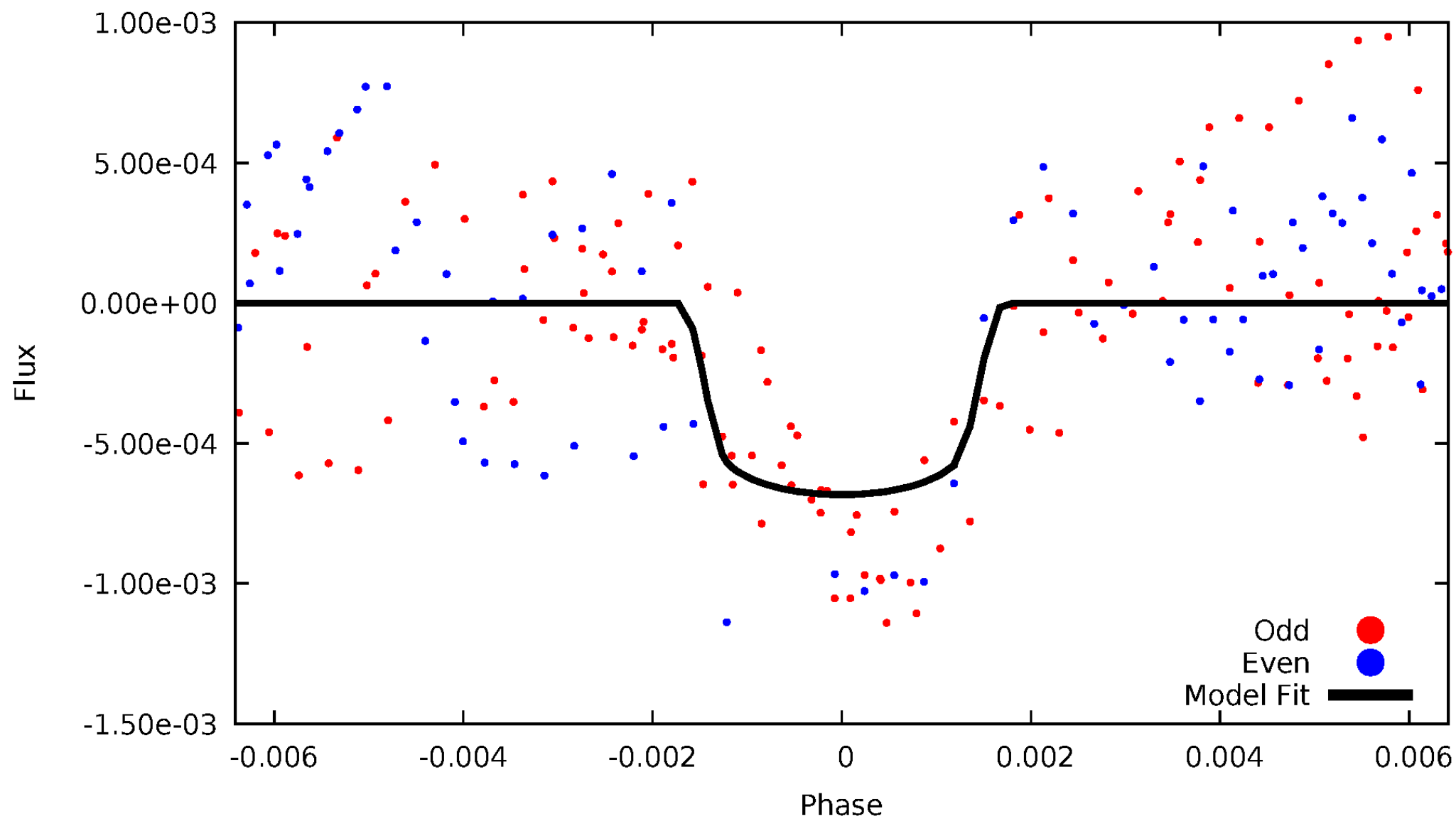


TCE 008430119-04



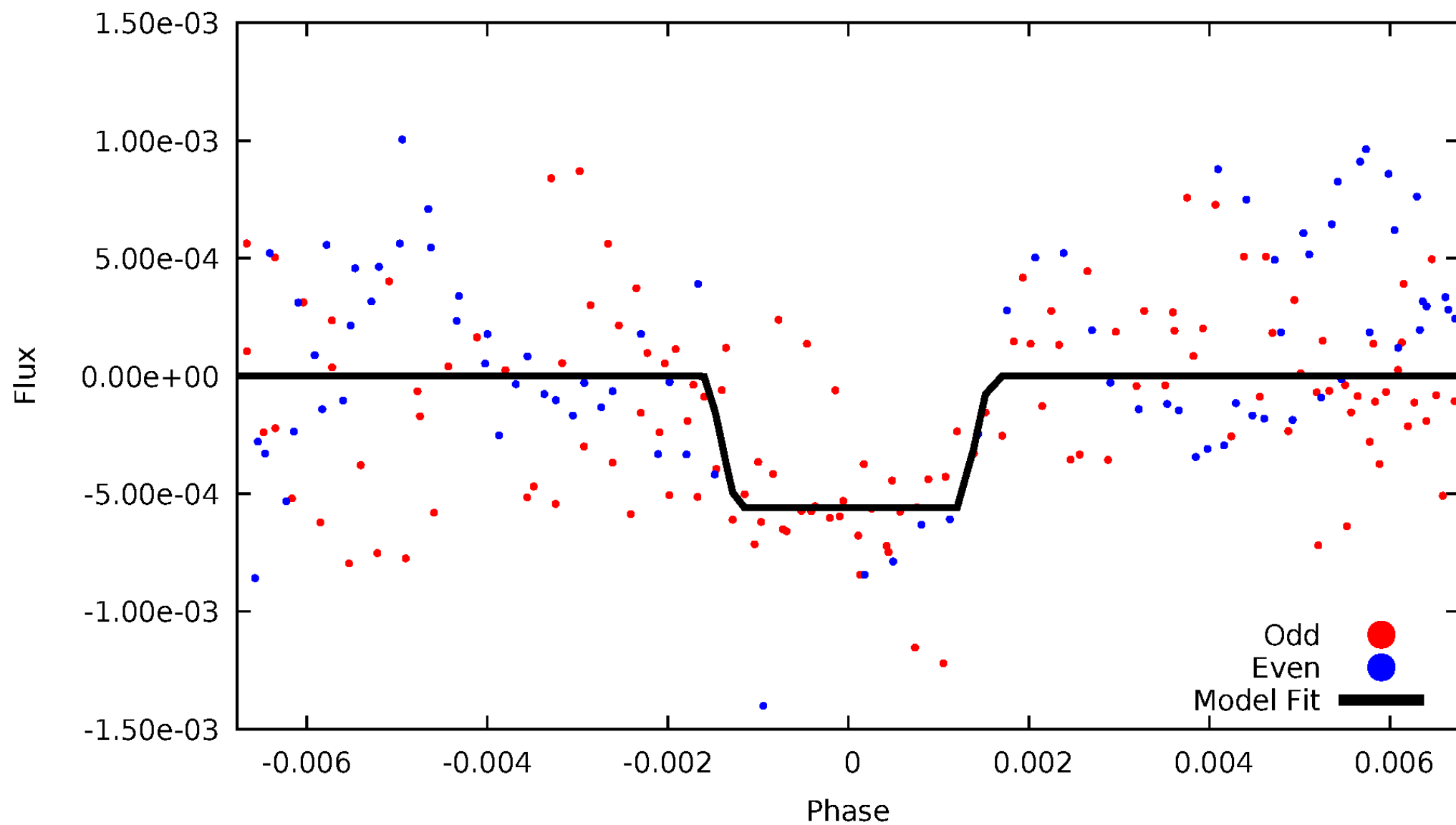
DV Odd/Even

TCE 008430119-04



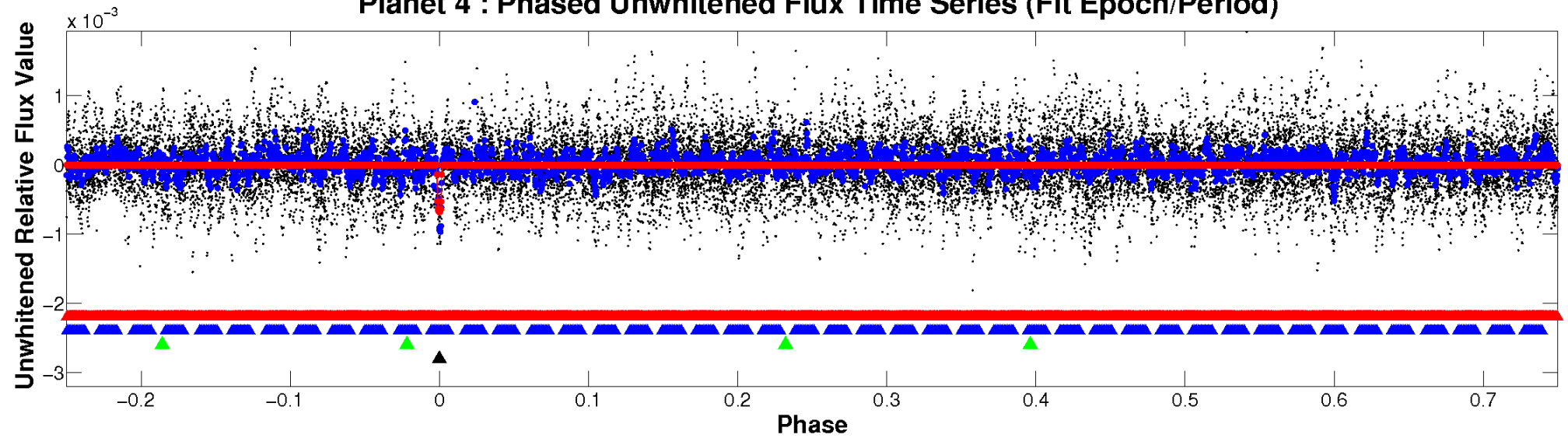
ALT Odd/Even

TCE 008430119-04

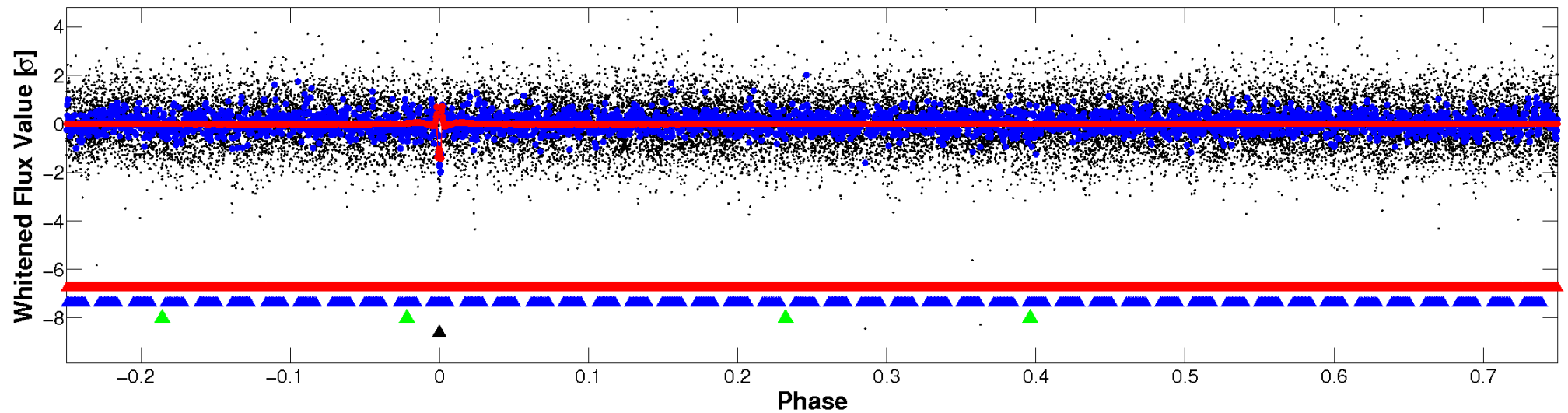


Non-Whitened Vs. Whitened Light Curve

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

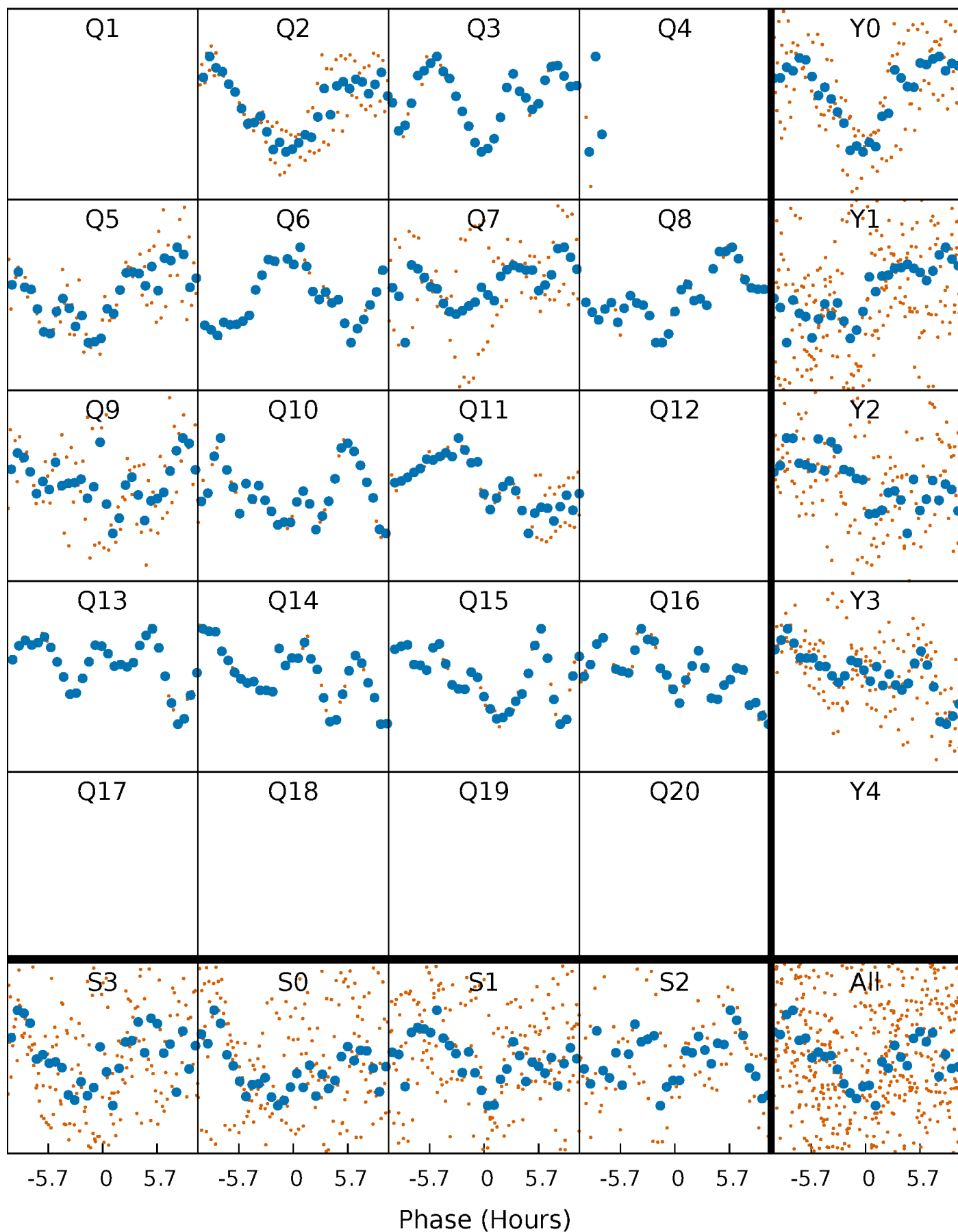


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



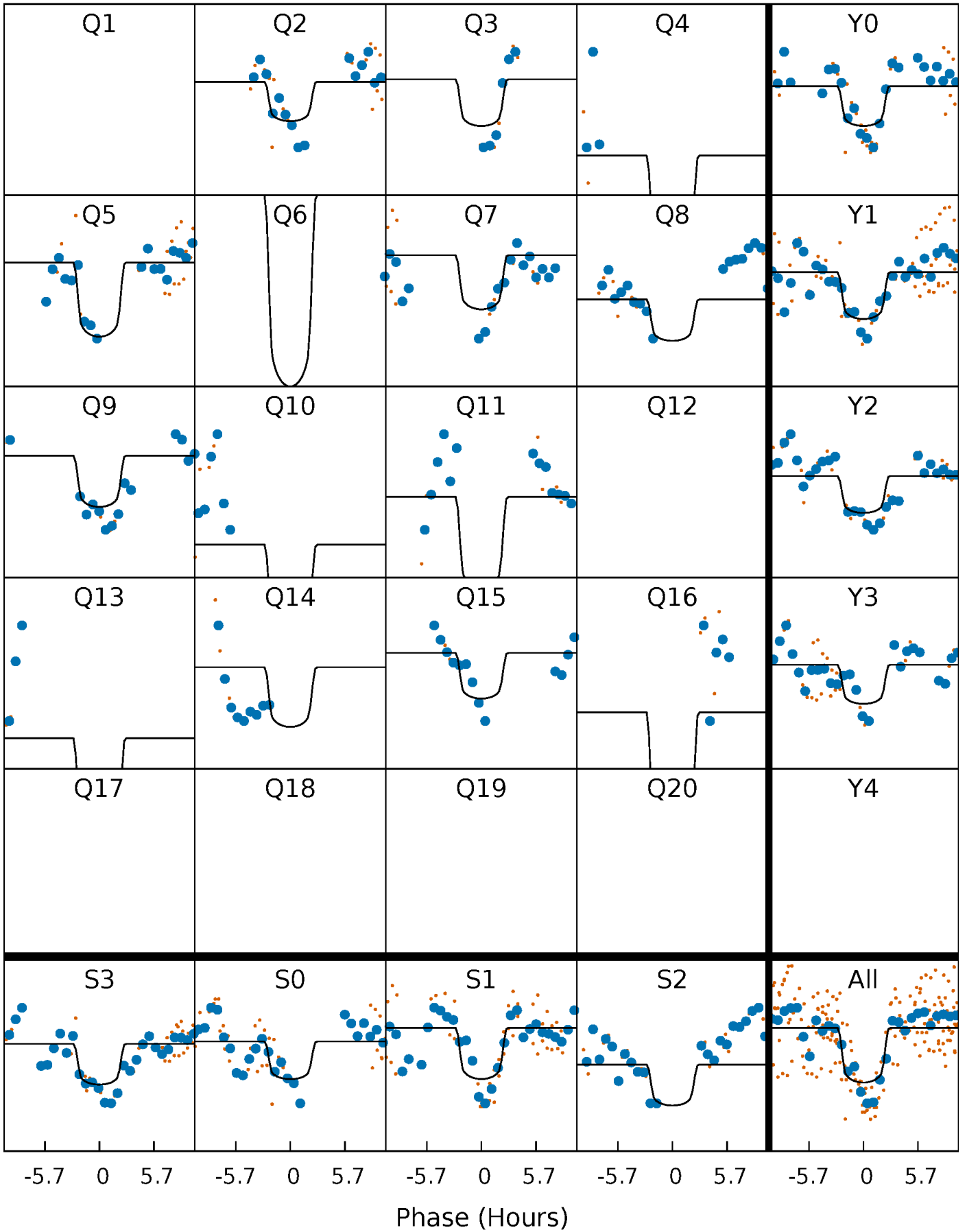
PDC Quarter-Phased Transit Curves

TCE 008430119-04 P= 64.909733 Days $T_0=189.011381$ (BKJD)



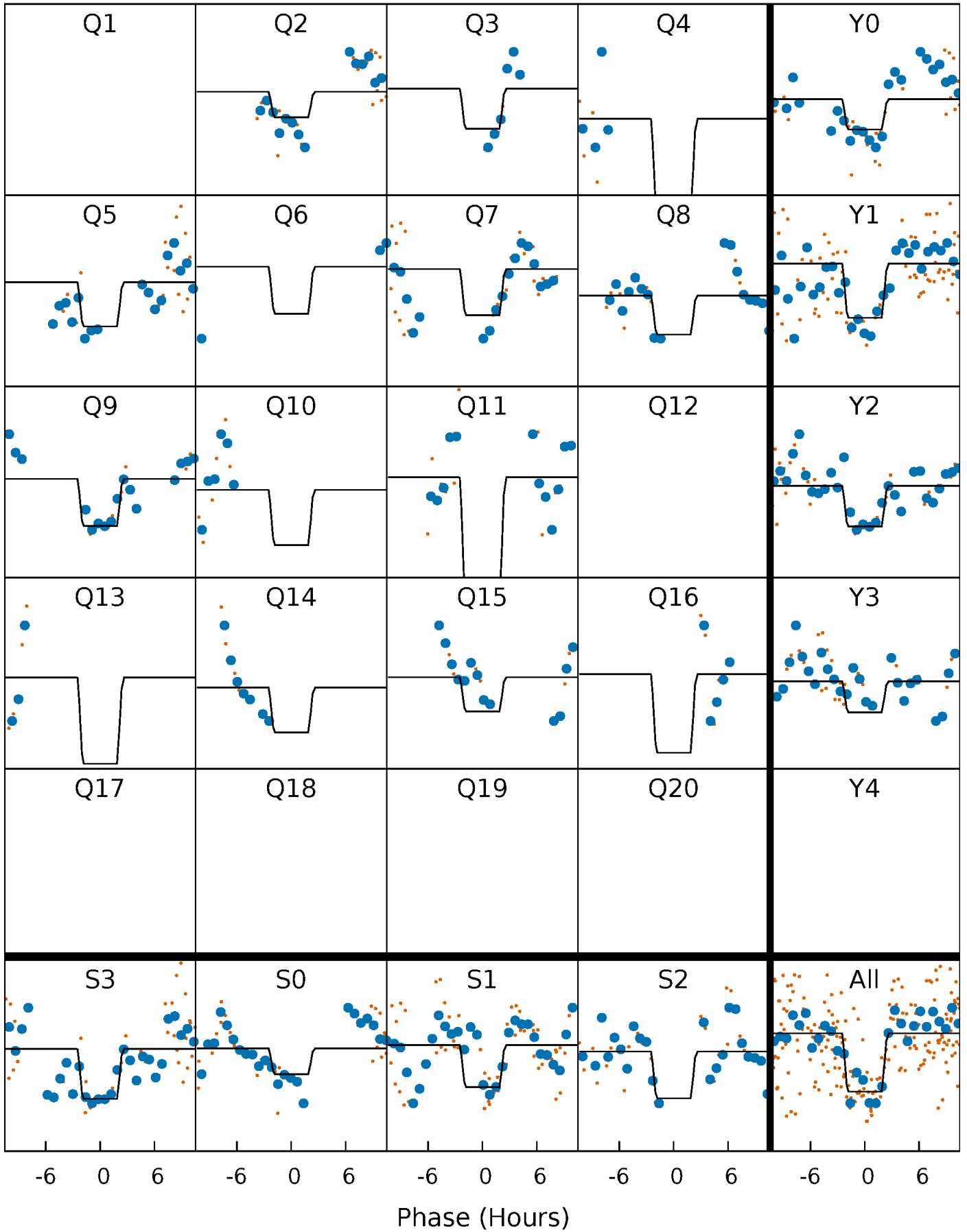
DV Quarter-Phased Transit Curves

TCE 008430119-04 P= 64.909733 Days $T_0=189.011381$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

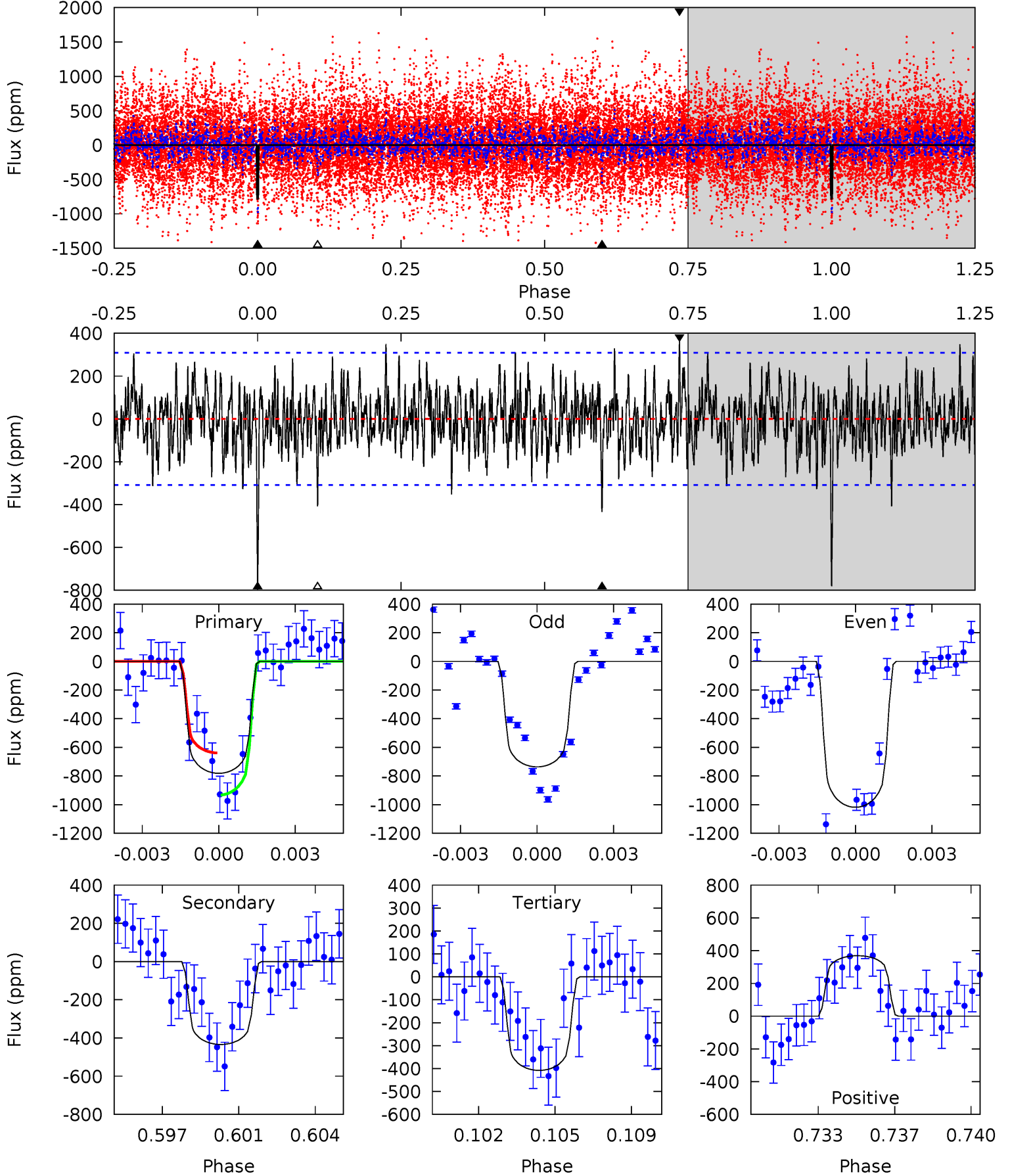
TCE 008430119-04 P= 64.910405 Days $T_0=188.993478$ (BKJD)



DV Model-Shift Uniqueness Test

008430119-04, P = 64.909733 Days, E = 124.101648 Days

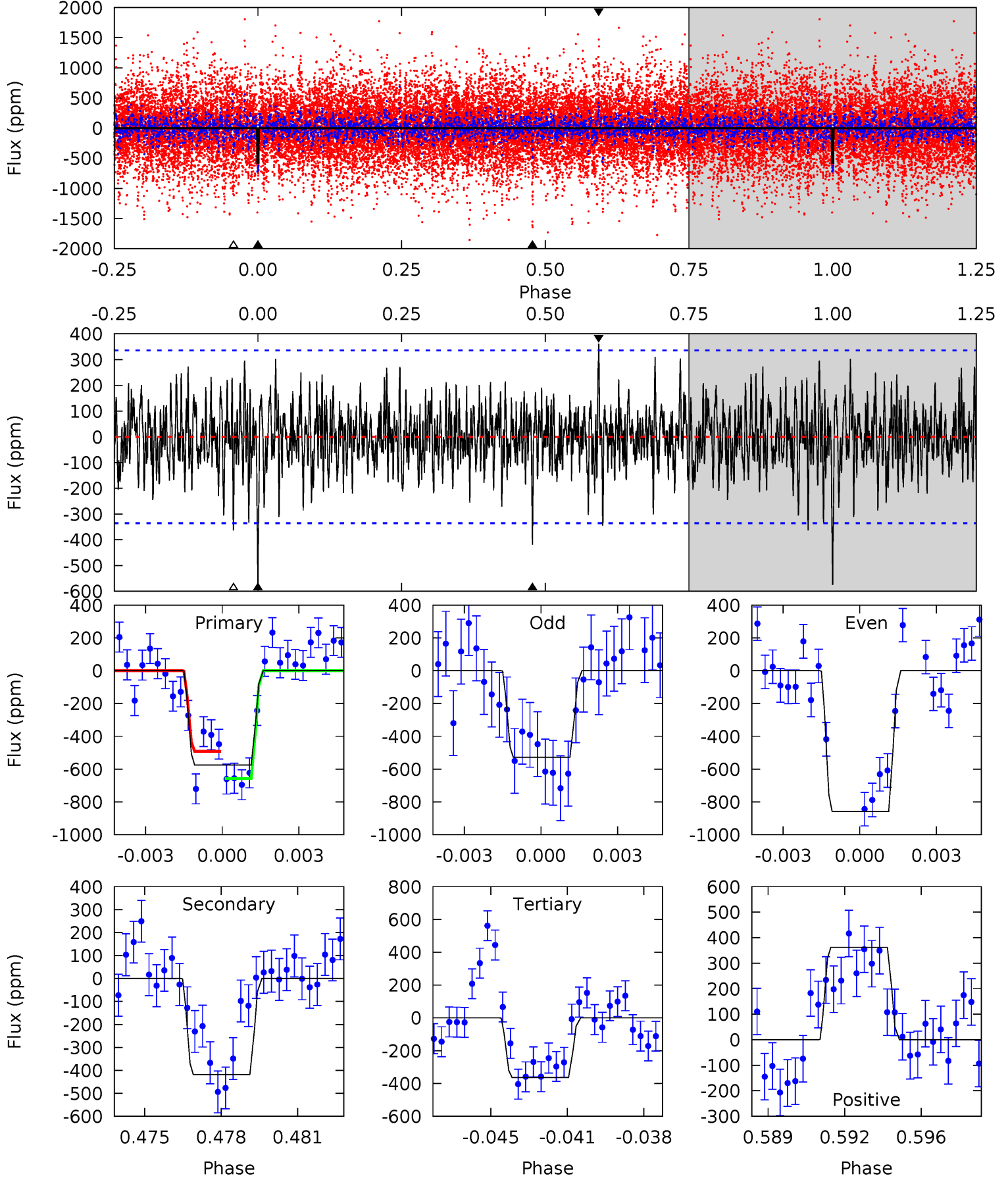
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	7.35	6.92	6.25	5.23	2.93	1.88	6.32	6.99	0.44	1.10	1.85	0.97	0.32	2.49



Alt Model-Shift Uniqueness Test

008430119-04, P = 64.910405 Days, E = 124.083073 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.97	6.54	5.66	5.65	5.24	2.95	1.51	3.30	3.32	0.87	0.88	1.79	0.87	0.39	1.30



Stellar Parameters For KIC 008430119

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7346^{+203}_{-330}	$3.925^{+0.260}_{-0.140}$	$0.000^{+0.200}_{-0.350}$	$2.398^{+0.540}_{-0.810}$	$1.765^{+0.184}_{-0.368}$	$0.180^{+0.303}_{-0.073}$
	+3%/-4%	+7%/-4%	+inf%/-inf%	+23%/-34%	+10%/-21%	+168%/-41%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008430119-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-434 ± 59	$6.78^{+1.70}_{-1.46}$	1122^{+79}_{-92}	6332^{+796}_{-564}	745^{+472}_{-270}
Alt.	-419 ± 64	$5.92^{+1.50}_{-1.50}$	1119^{+84}_{-94}	6814^{+826}_{-731}	941^{+702}_{-345}

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 $A_{obs} \gg 1.0$

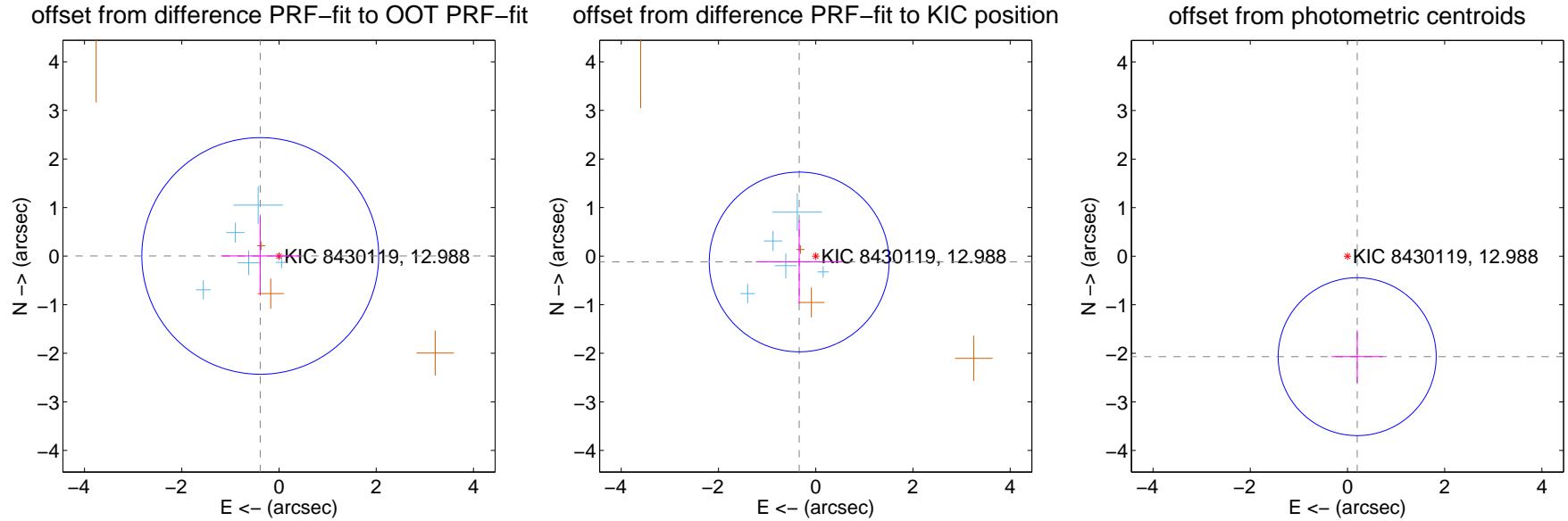
DV Centroid Data

Supplemental centroid analysis for 008430119-04. Kepler magnitude: 12.99. Transit SNR 8.02

There are 6 quarters with good PRF difference image offsets

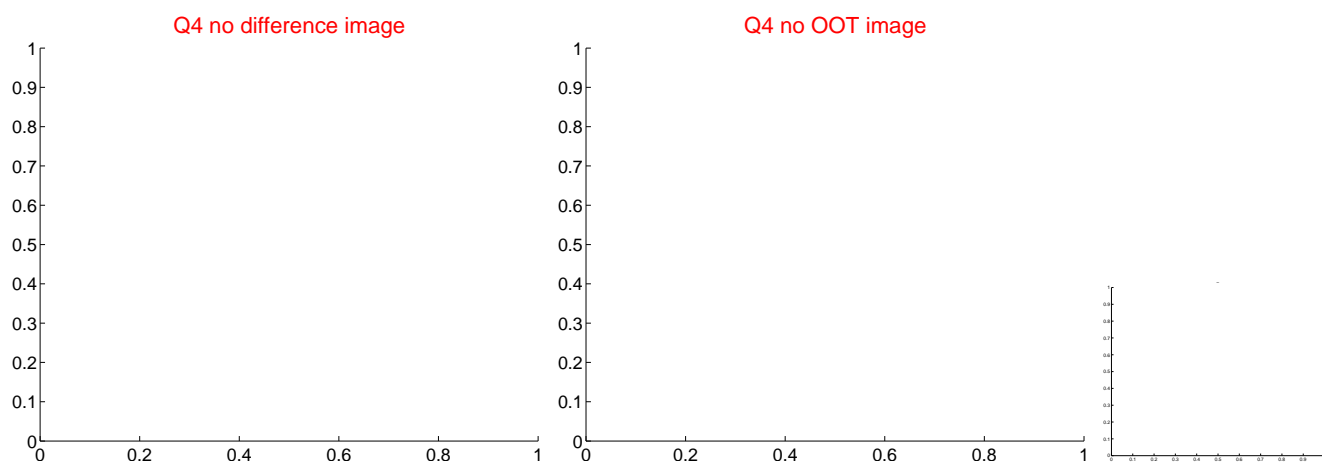
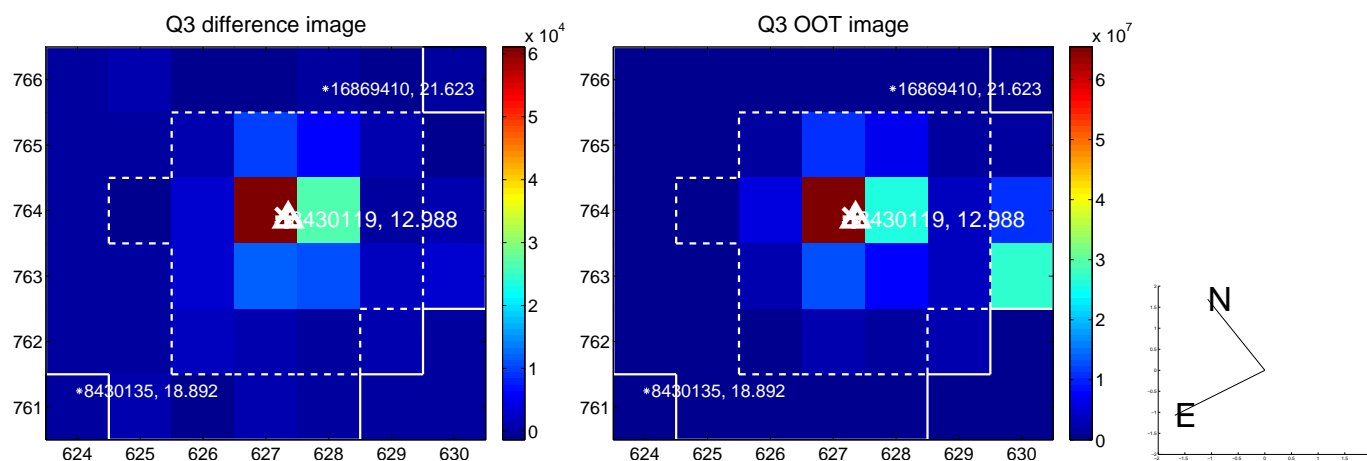
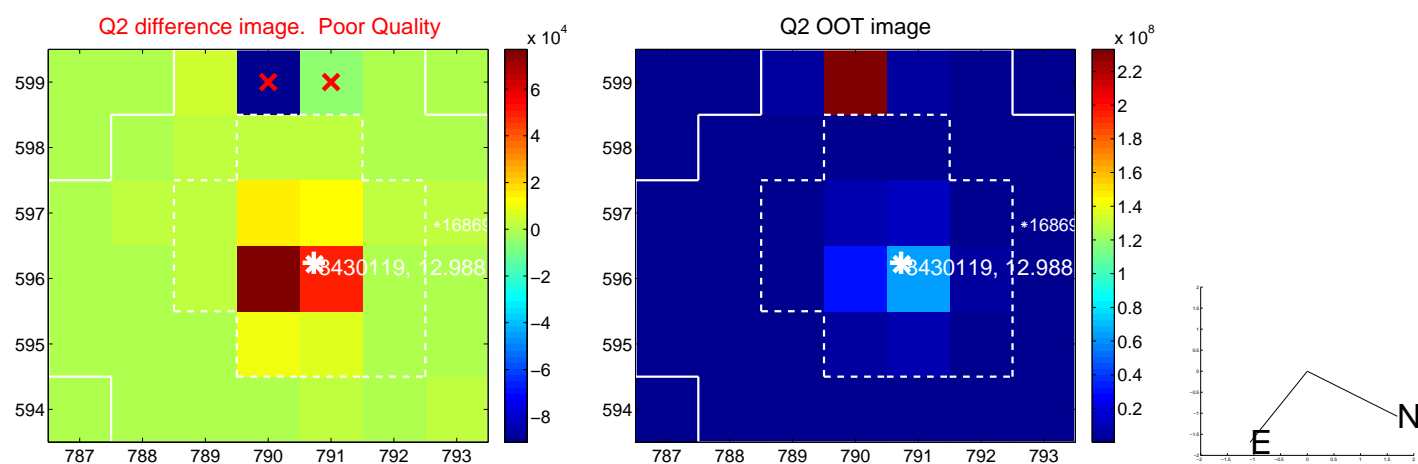
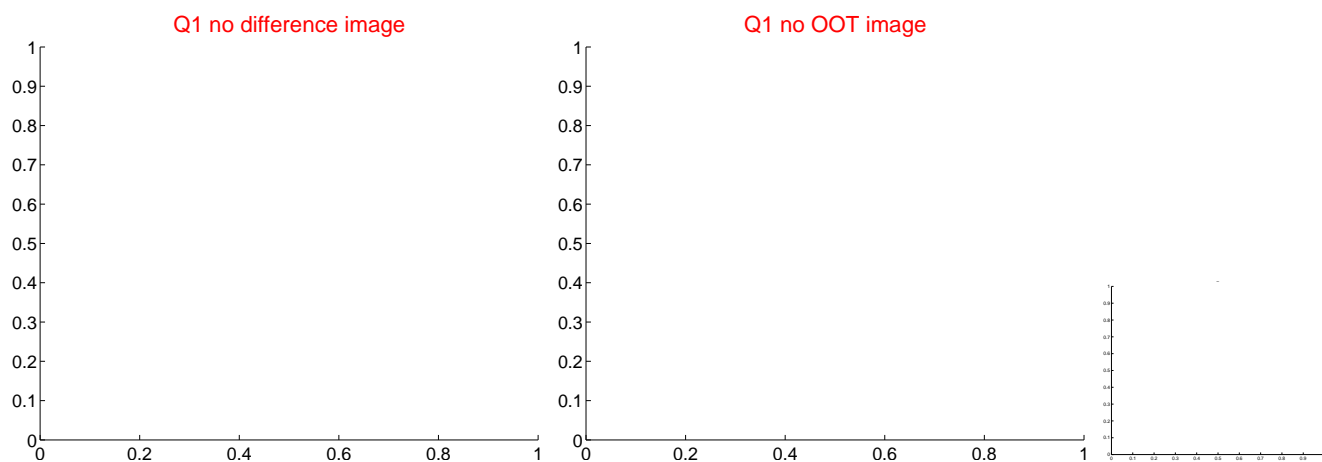
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.385 ± 0.812	0.47	0.385 ± 0.805	0.004 ± 0.810
PRF-fit source offset from KIC position	0.361 ± 0.617	0.58	0.340 ± 0.891	-0.120 ± 0.852
photometric centroid source offset	2.08 ± 0.54	3.84	-0.20 ± 0.53	-2.07 ± 0.54

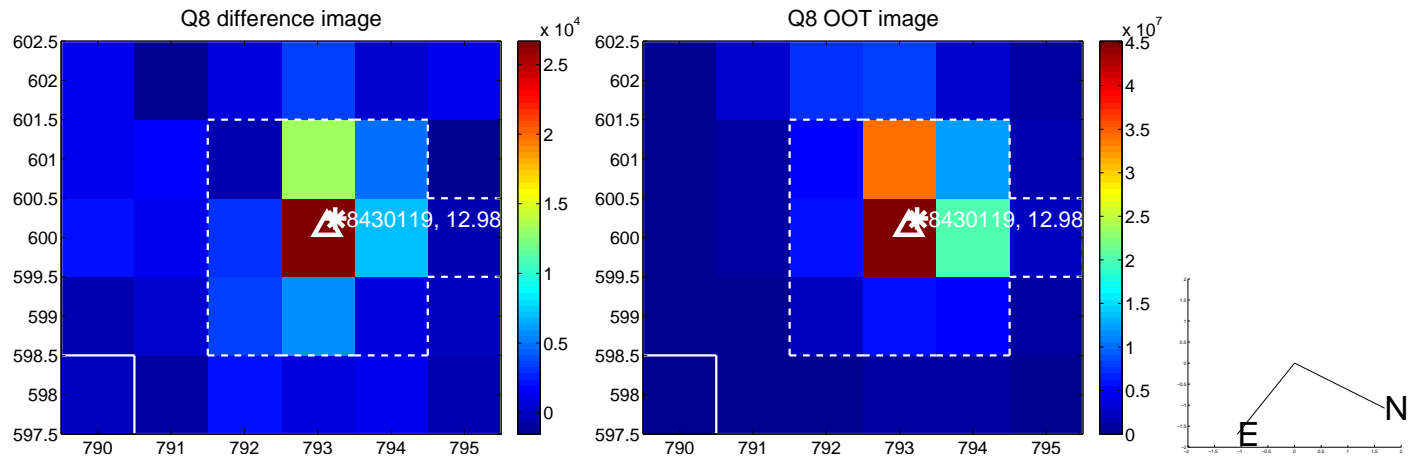
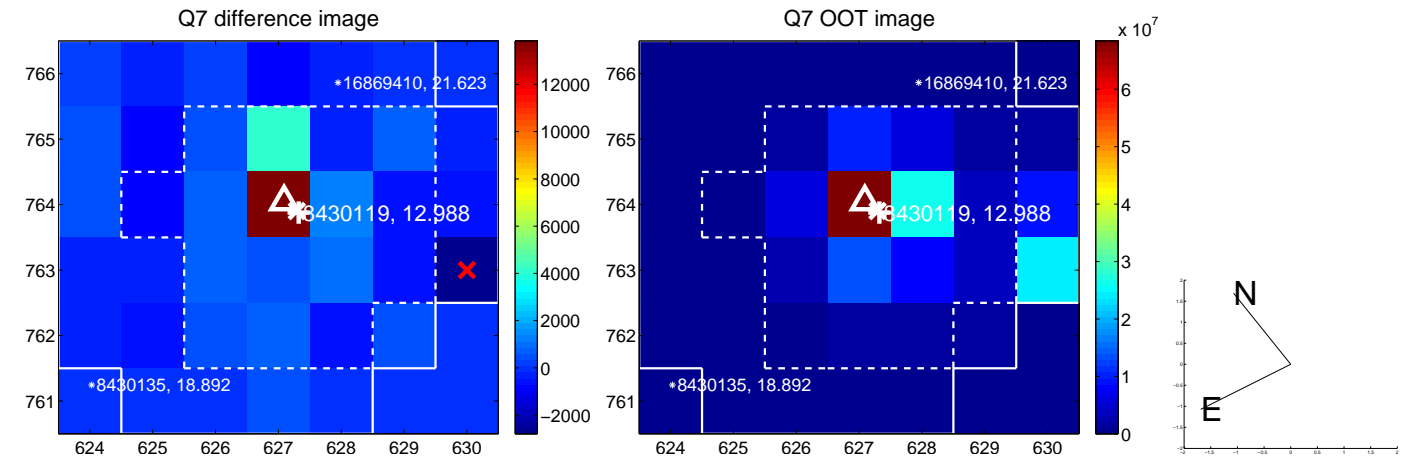
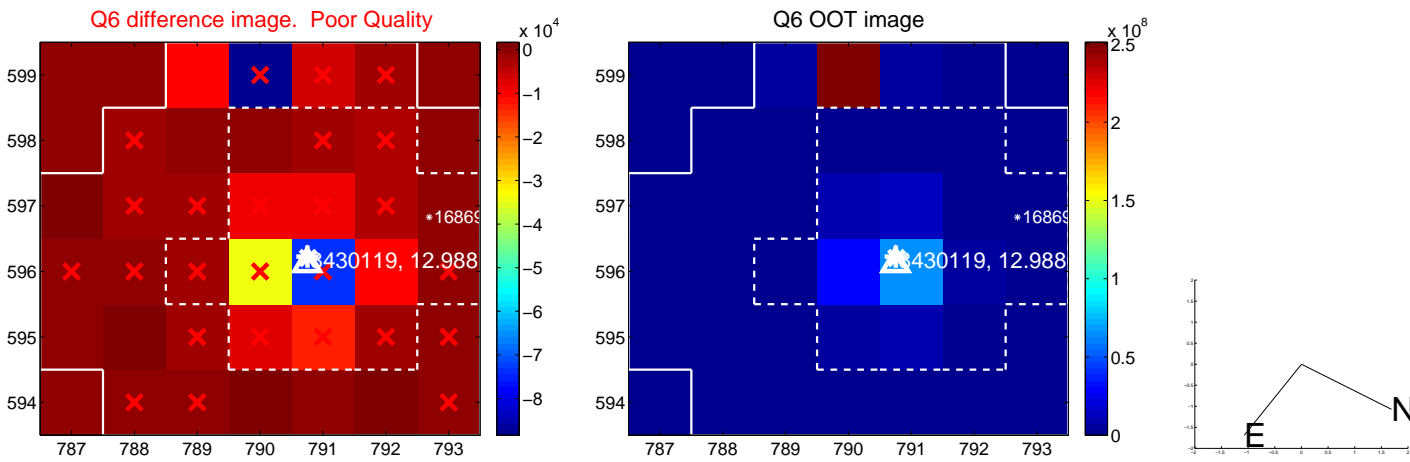
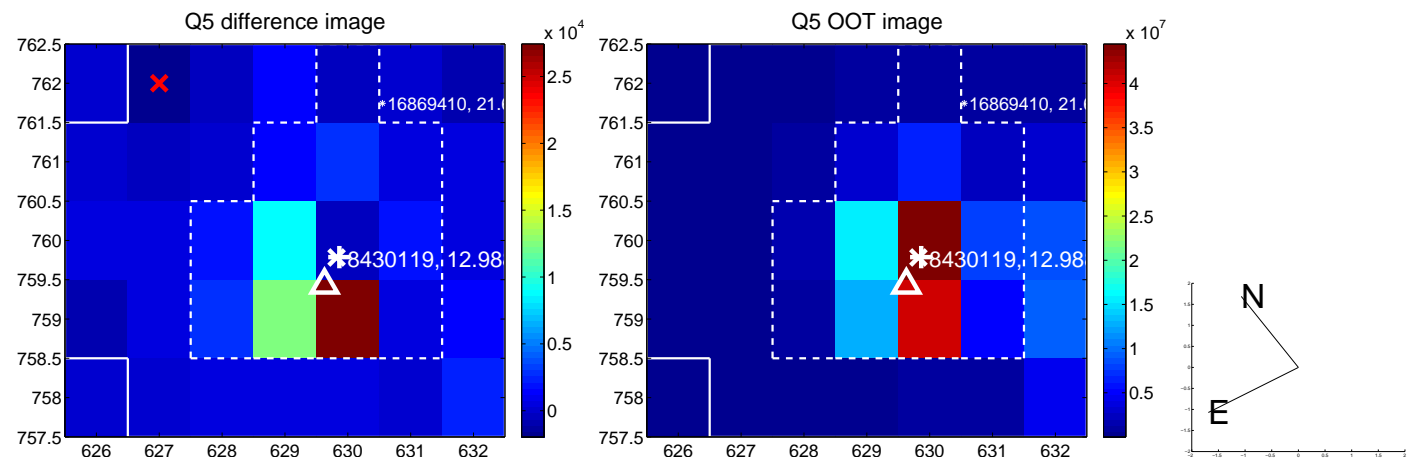


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

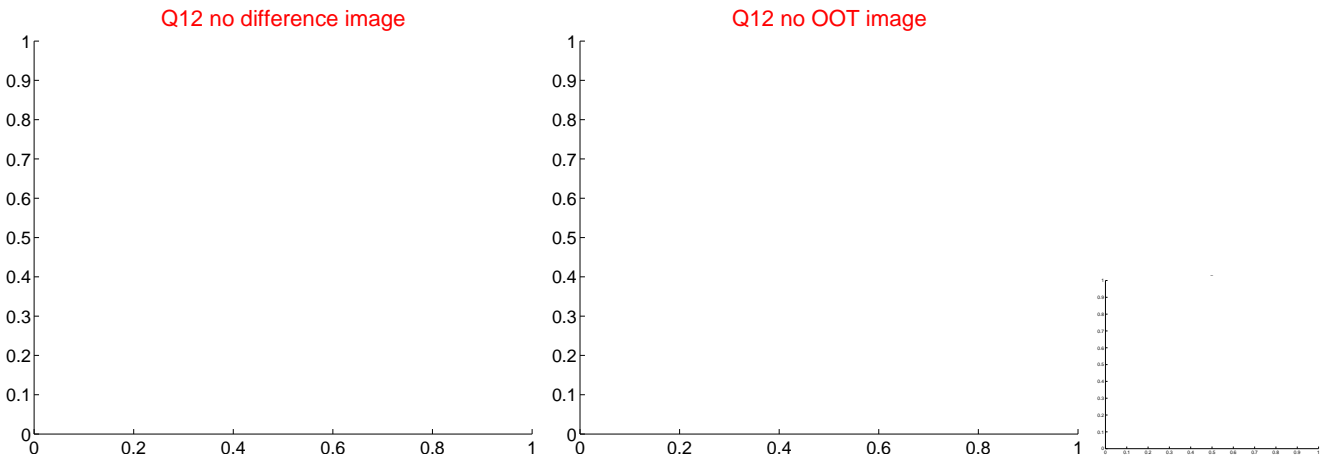
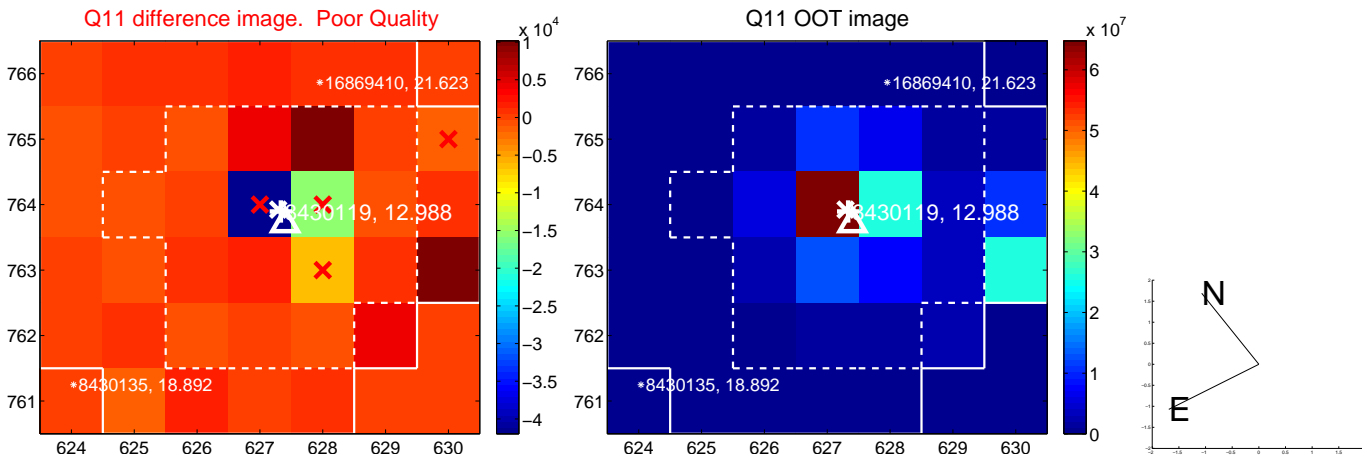
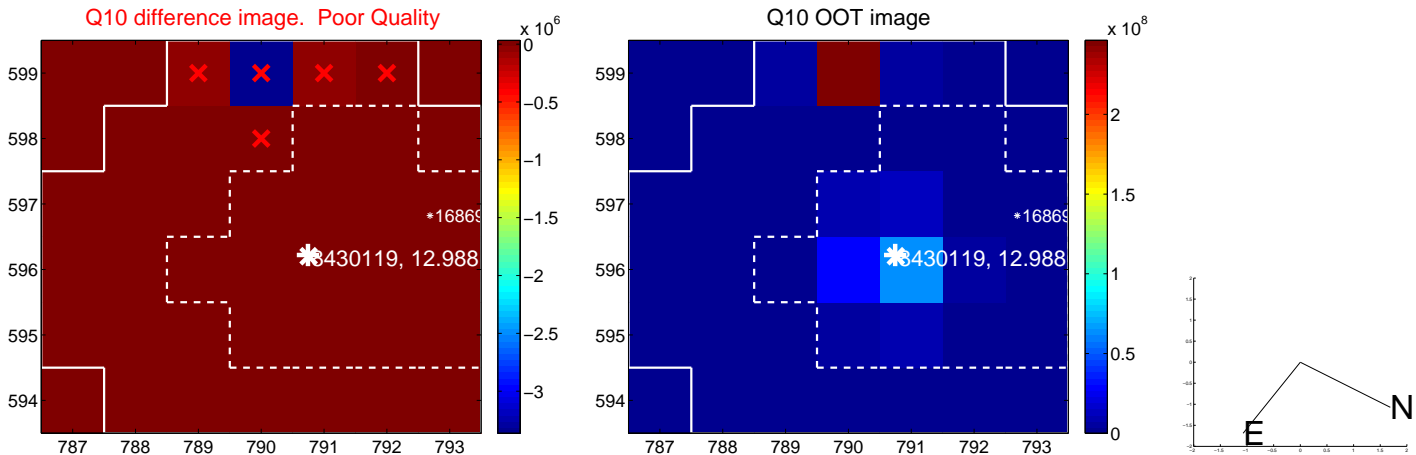
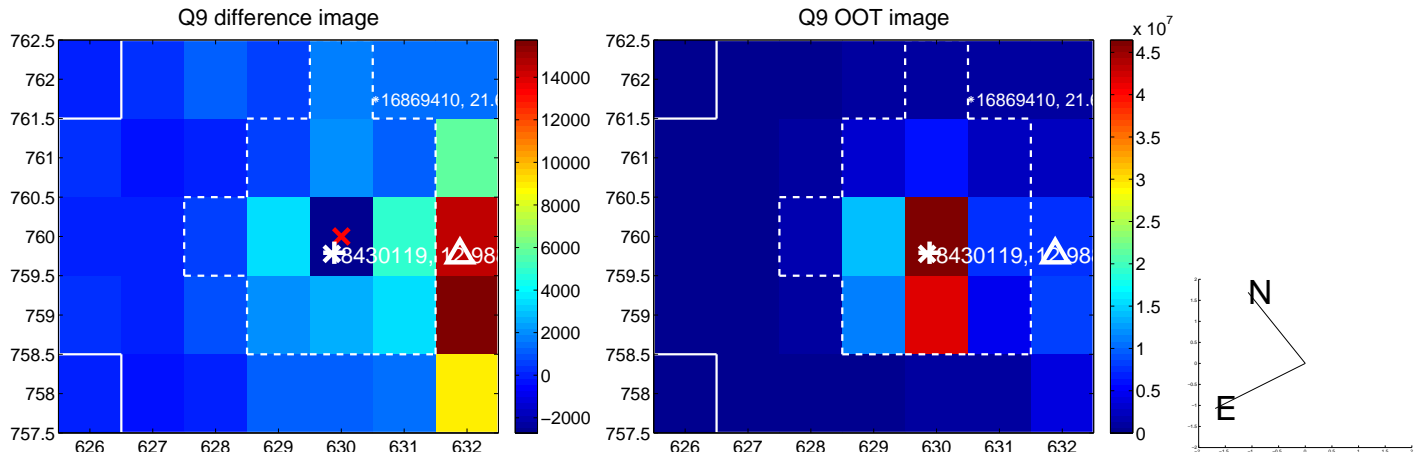
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



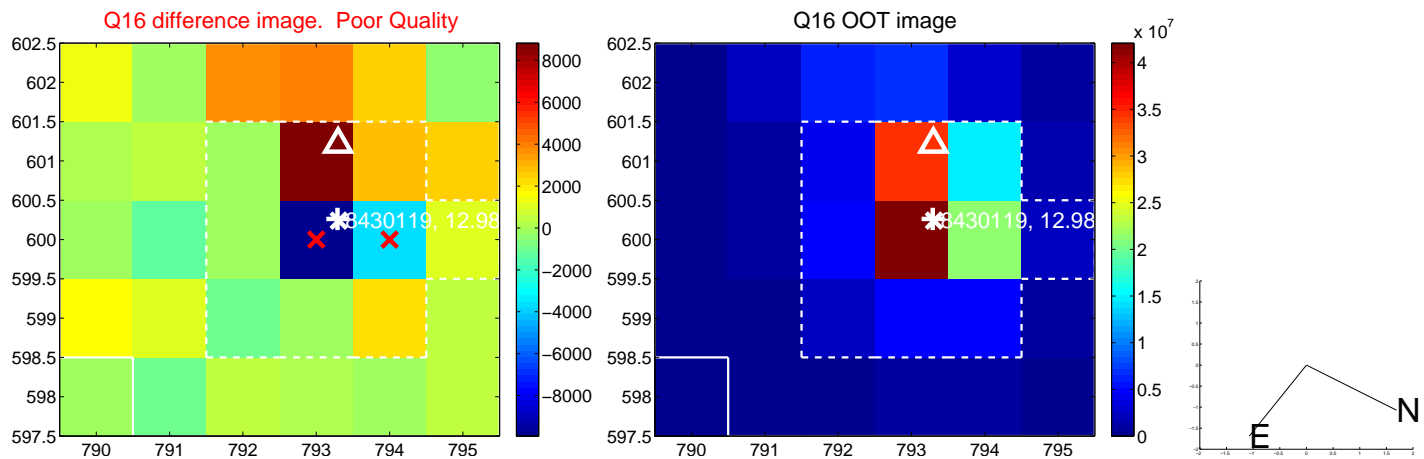
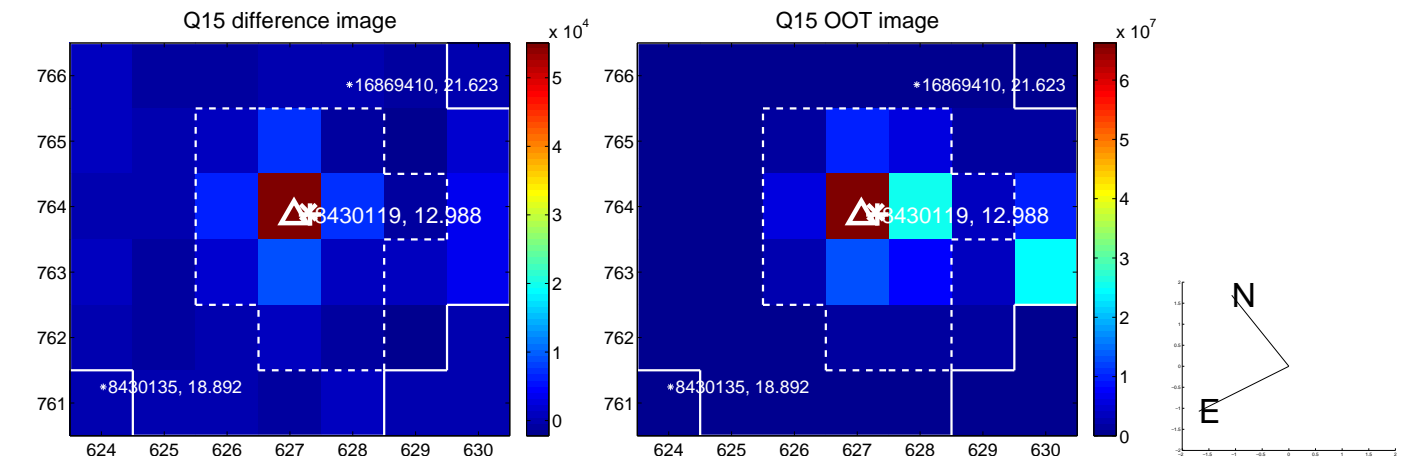
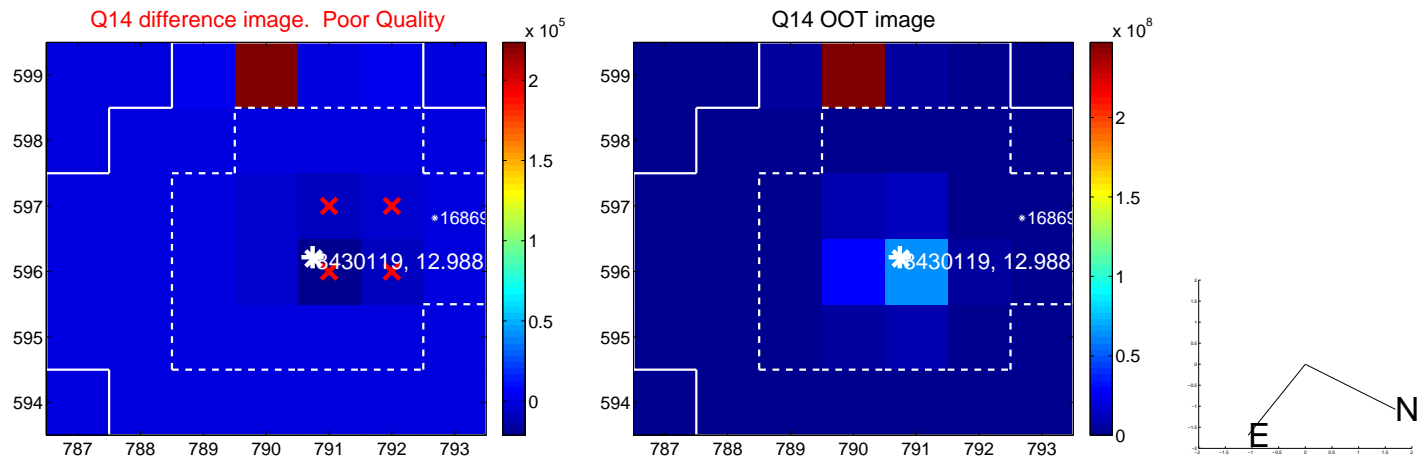
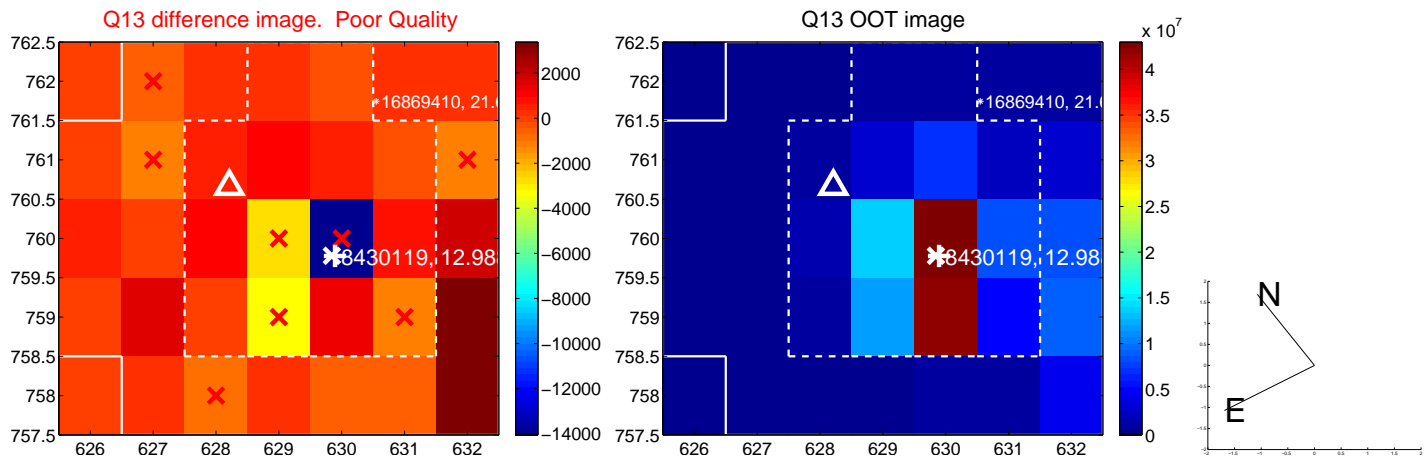
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



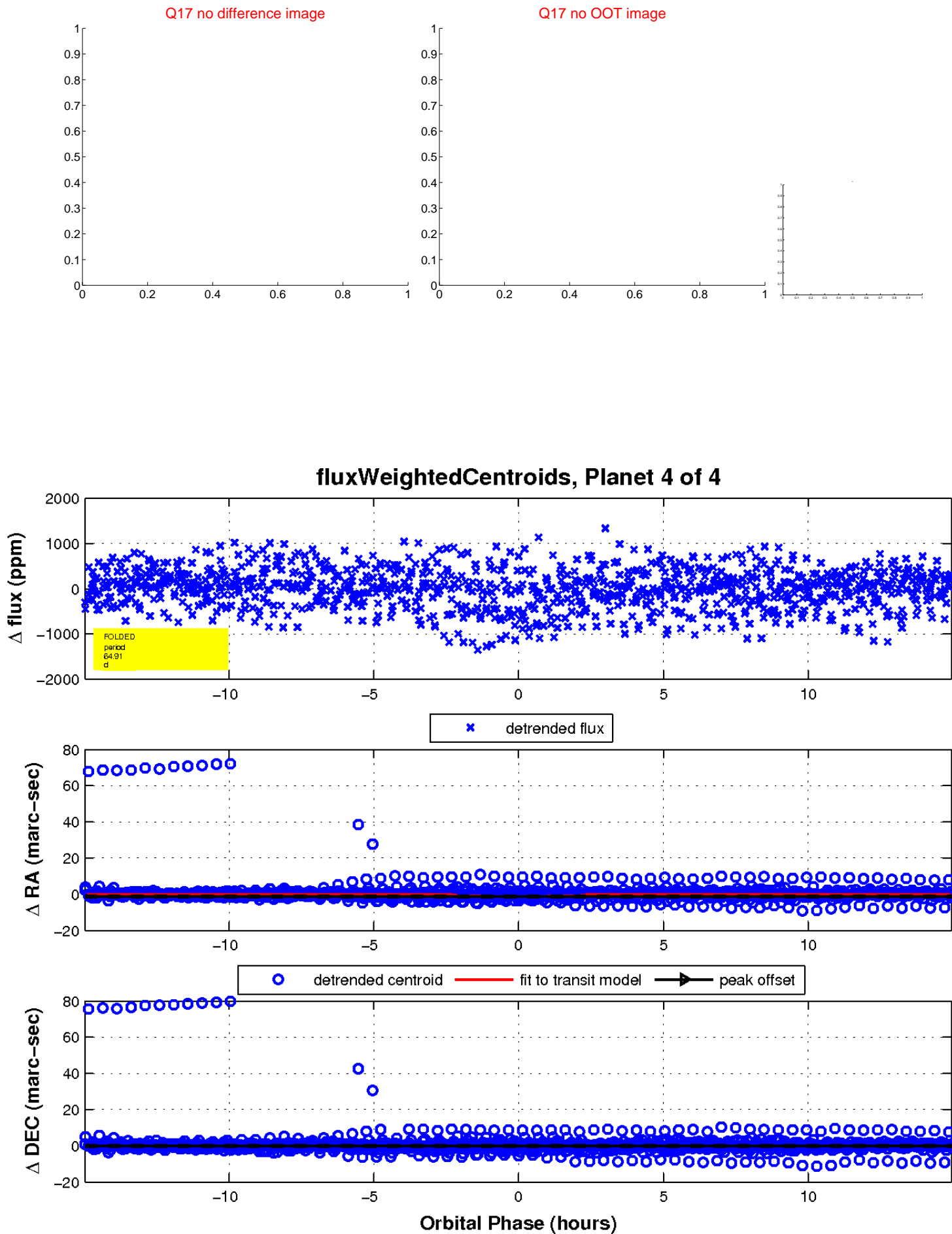
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

