

KIC 011401767

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})
011401767-01	OBS	2195.01	20.054625	136.561701	297.9	6.914	22.6	24.5	1.21	6056	2.52	77.08
011401767-02	OBS	2195.02	30.090000	149.063366	244.2	6.315	14.9	15.6	1.21	6056	2.15	44.88
011401767-03	OBS	2195.03	6.849638	134.683071	126.6	4.708	14.3	14.7	1.21	6056	1.59	322.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011401767-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011401767-02	OBS	PC	0.98	0	0	0	0	NO_COMMENT
011401767-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

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

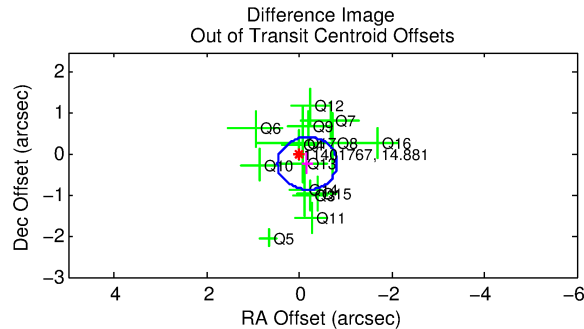
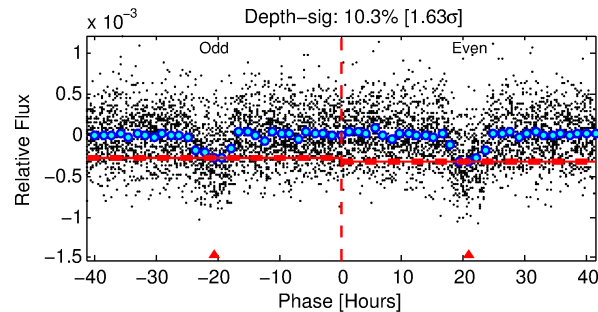
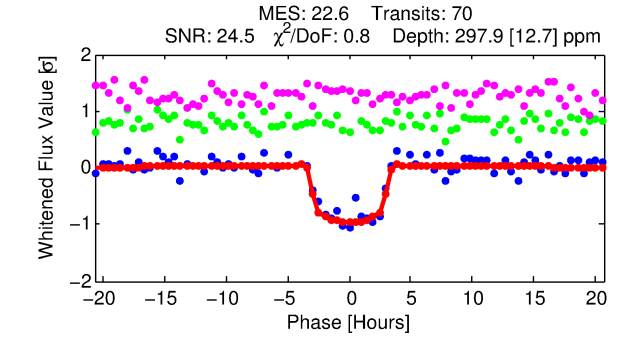
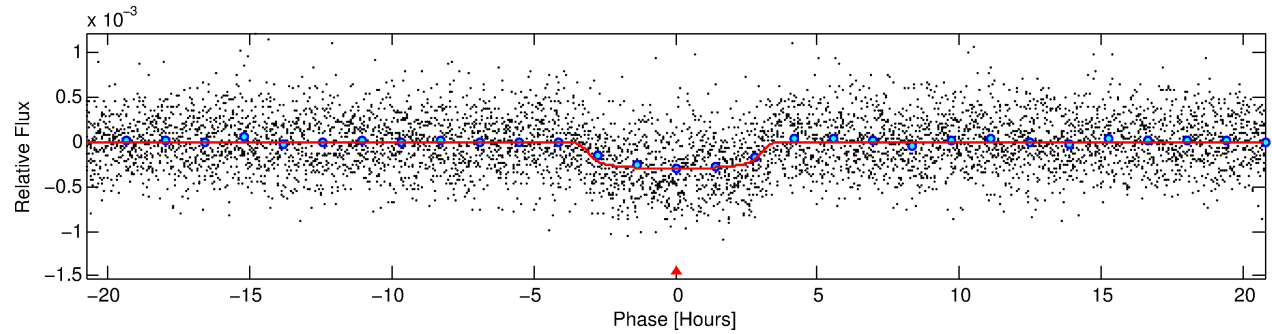
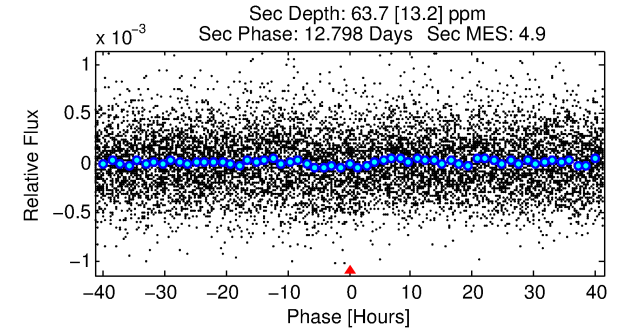
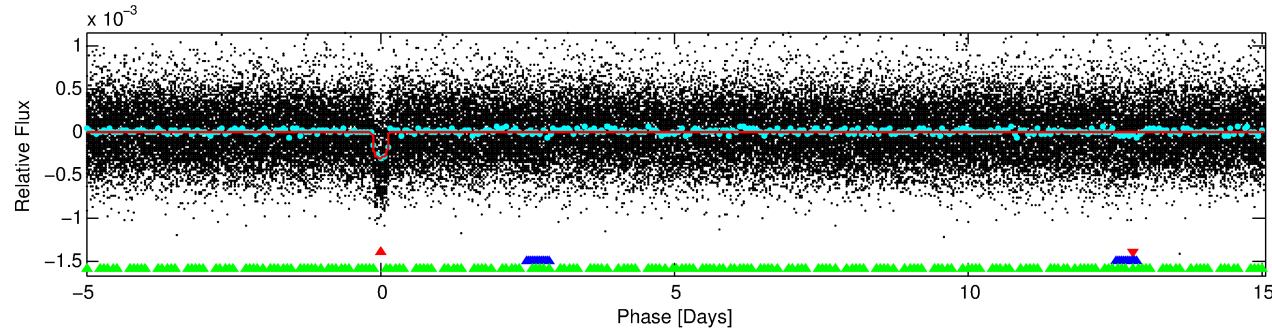
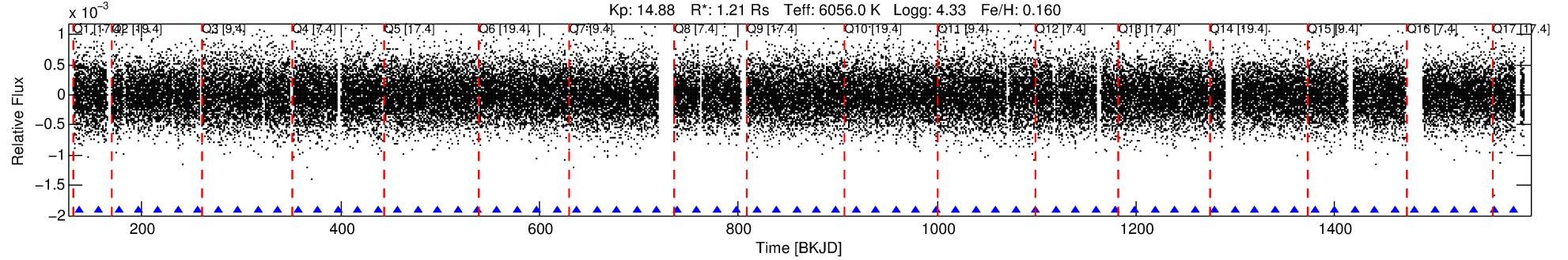
Ephemeris Match Information For 011401767-01

No Significant Match Found

DV One-Page Summary

KIC: 11401767 Candidate: 1 of 3 Period: 20.055 d
KOI: K02195.01 Name: Kepler-372c Corr: 0.993

Kp: 14.88 R*: 1.21 Rs Teff: 6056.0 K Logg: 4.33 Fe/H: 0.160



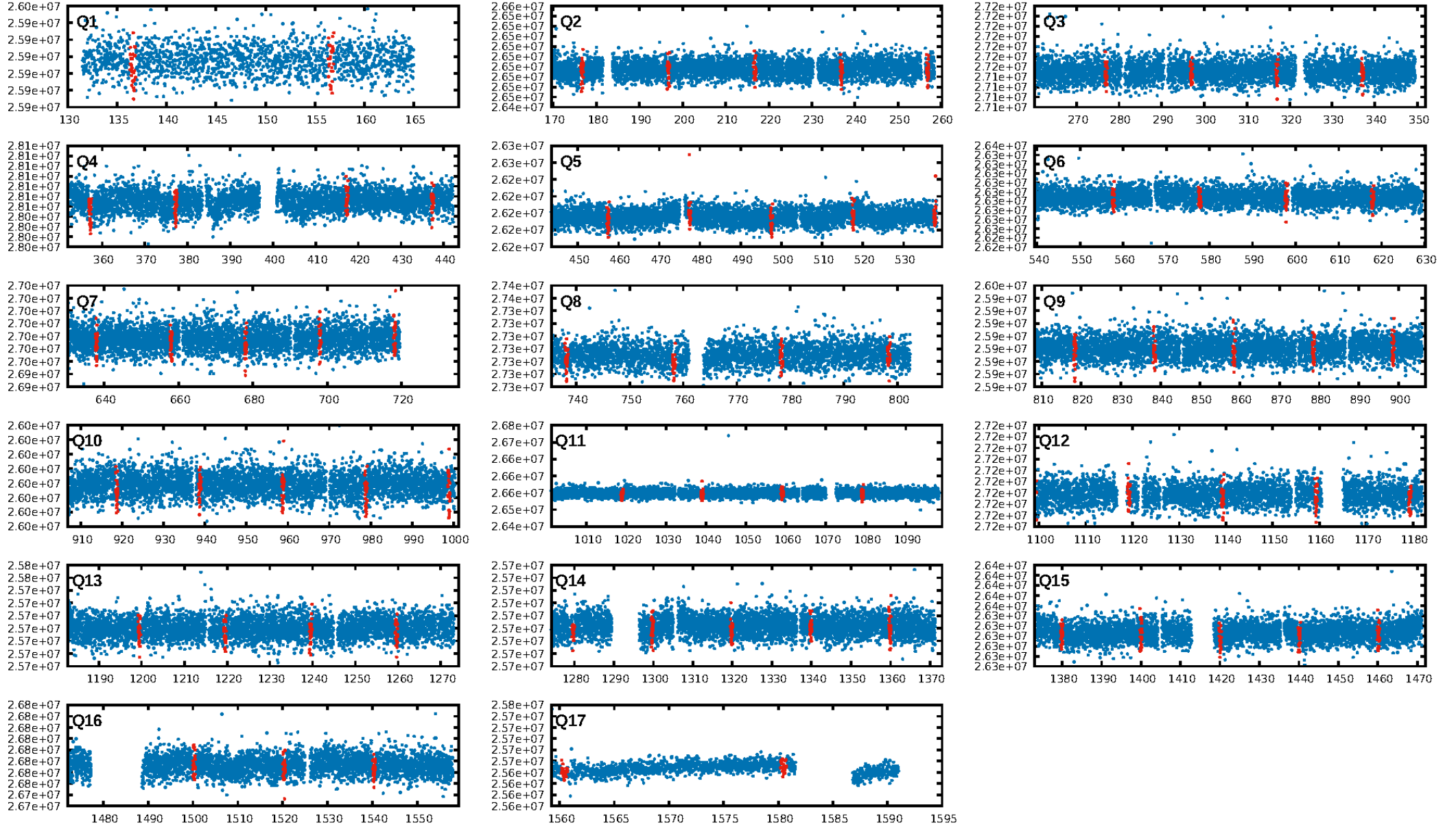
DV Fit Results:

Period = 20.05462 [0.00014] d
Epoch = 136.5617 [0.0058] BKJD
Rp/R* = 0.0191 [0.0011]
a/R* = 9.65 [2.64]
b = 0.92 [0.05]
Seff = 77.08 [17.21]
Teff = 756 [42] K
Rp = 2.53 [0.45] Re
a = 0.1512 [0.0218] AU
Ag = 125.47 [40.39] [3.08σ]
Teffp = 3910 [241] K [12.89σ]

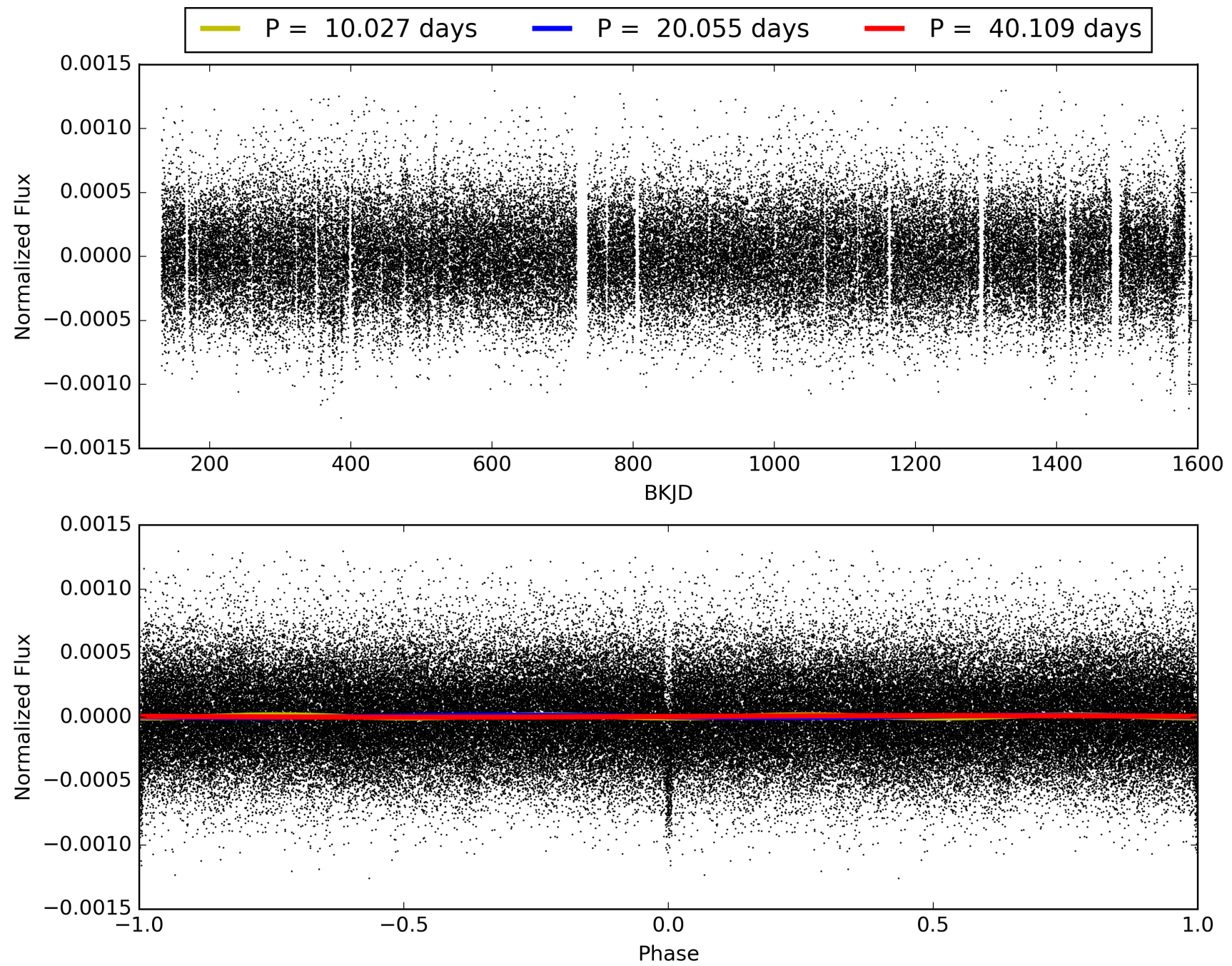
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [37.89σ]
LongPeriod-sig: 100.0% [25.72σ]
ModelChiSquare2-sig: 94.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.10e-110
RollingBand-fgt: 1.00 [66/66]
GhostDiagnostic-chr: 16.48
Centroid-sig: 0.0%
Centroid-so: 1.430 arcsec [2.51σ]
OotOffset-rm: 0.278 arcsec [1.30σ]
KicOffset-rm: 0.304 arcsec [1.34σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 0.94 [16/17]

TCE 011401767-01, PDC Light Curves

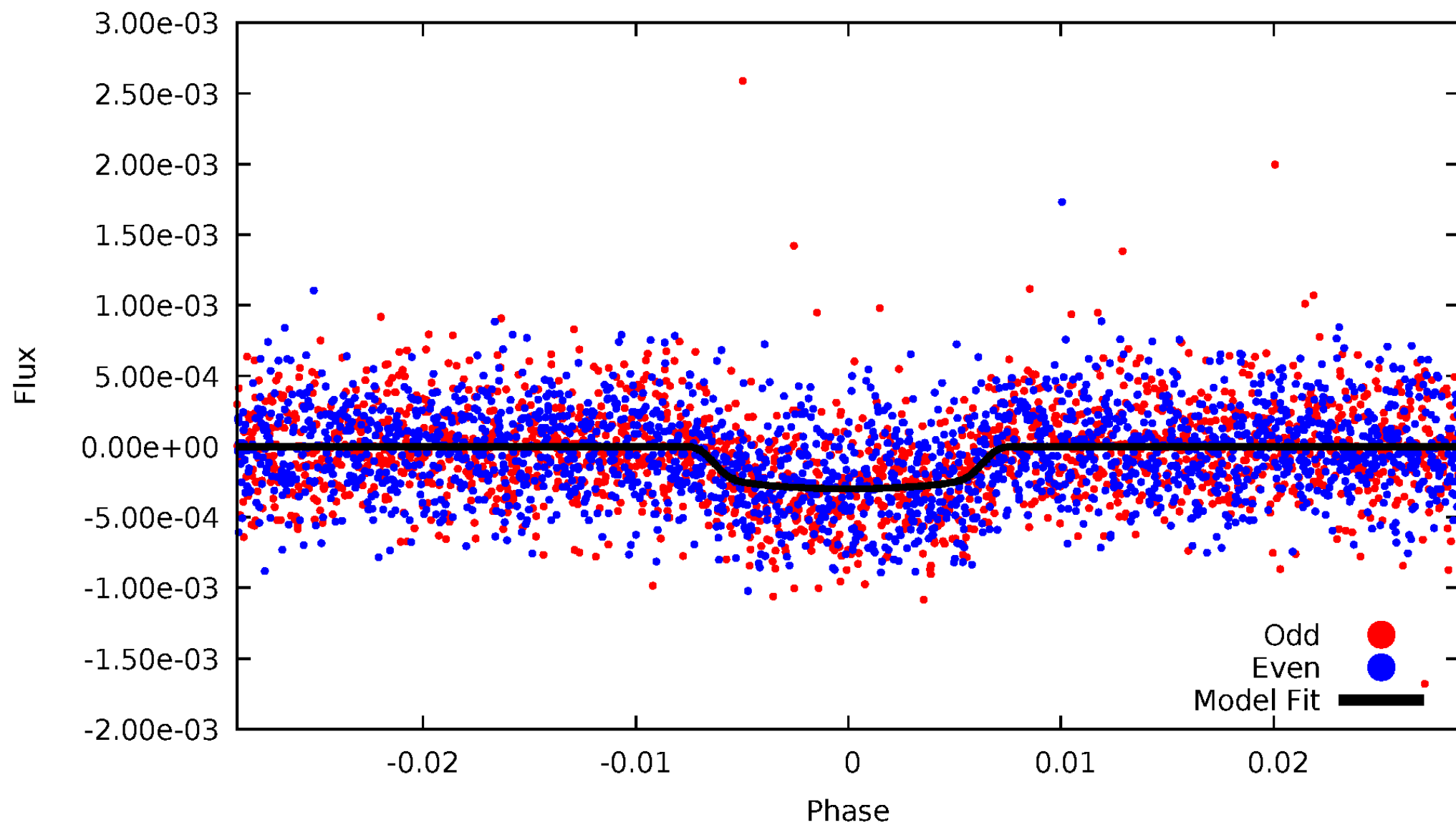


TCE 011401767-01



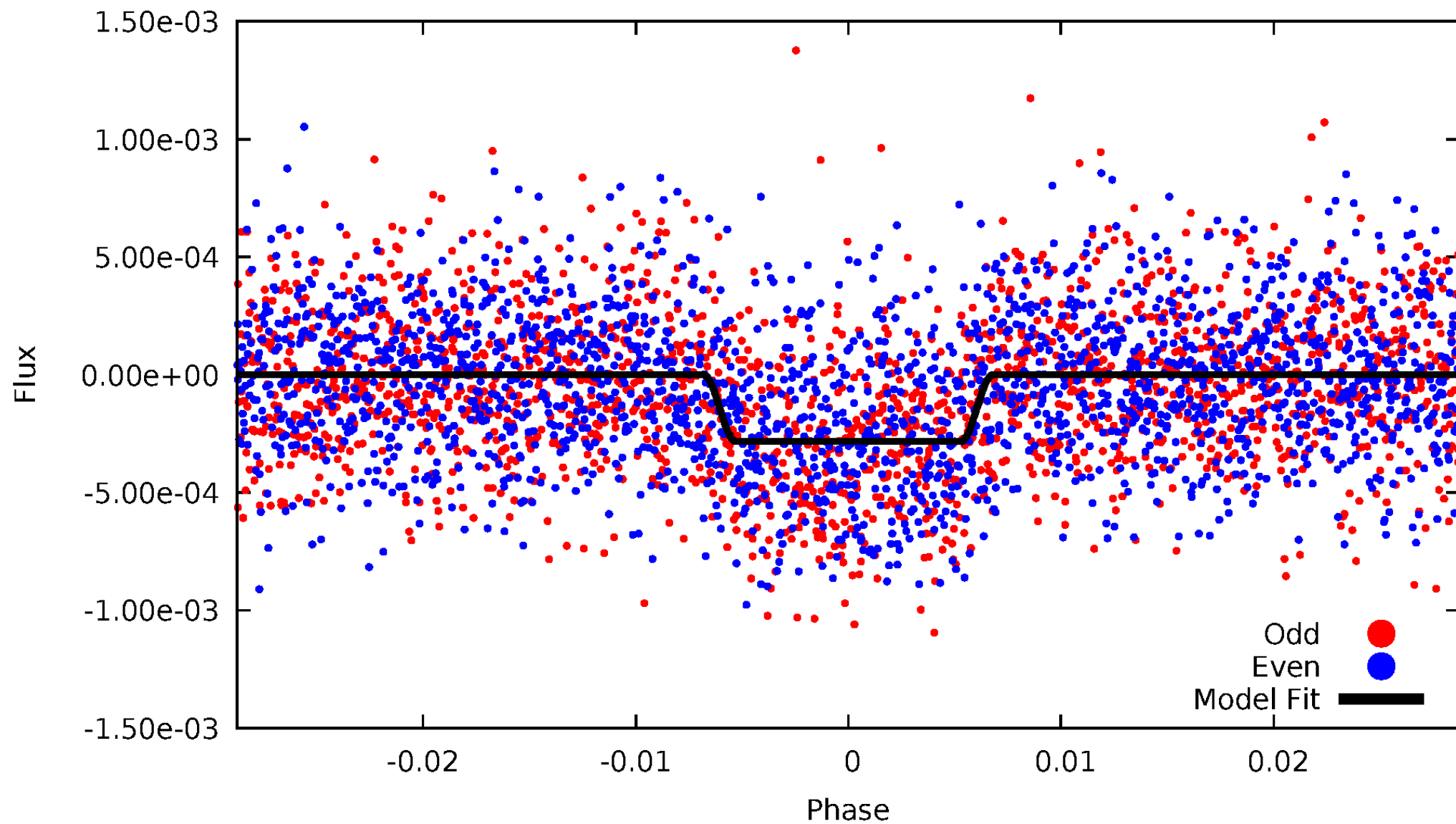
DV Odd/Even

TCE 011401767-01

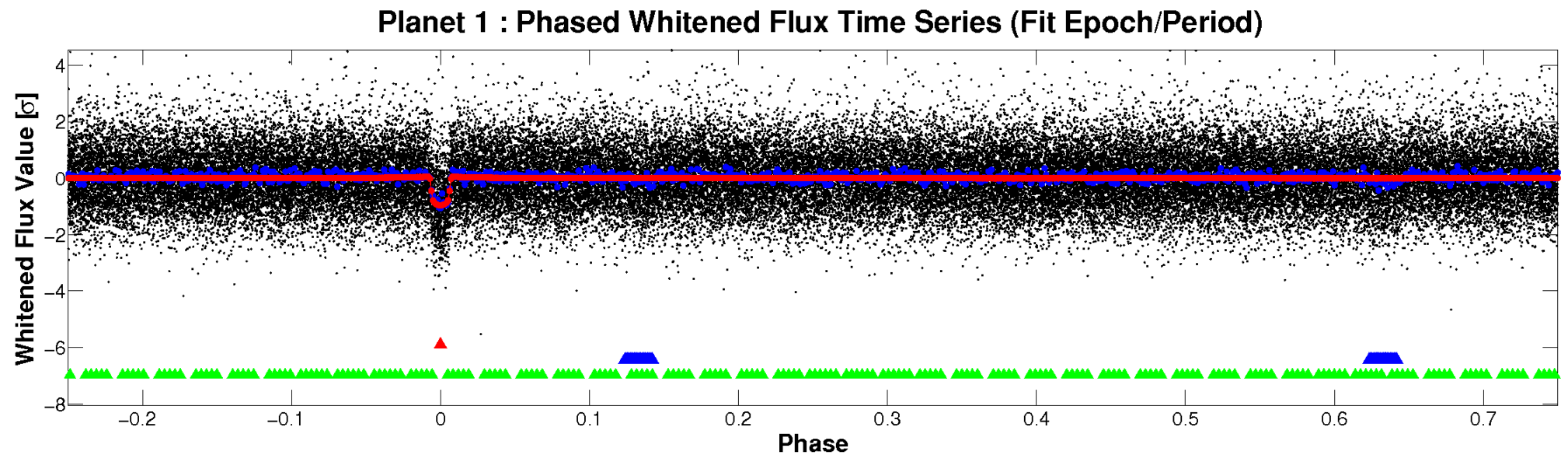
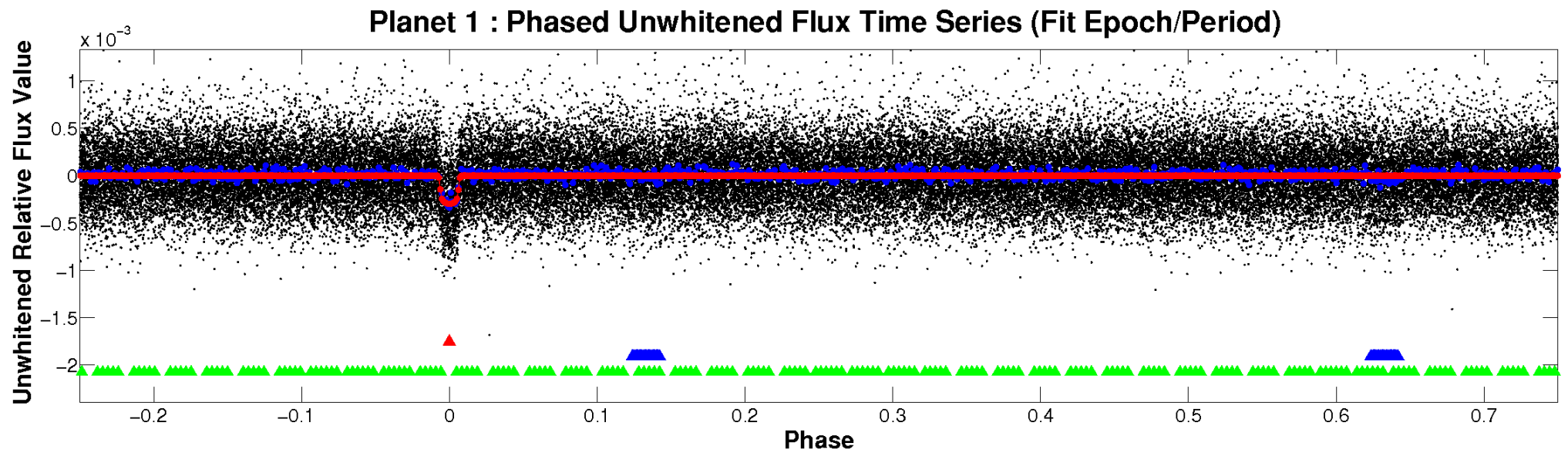


ALT Odd/Even

TCE 011401767-01

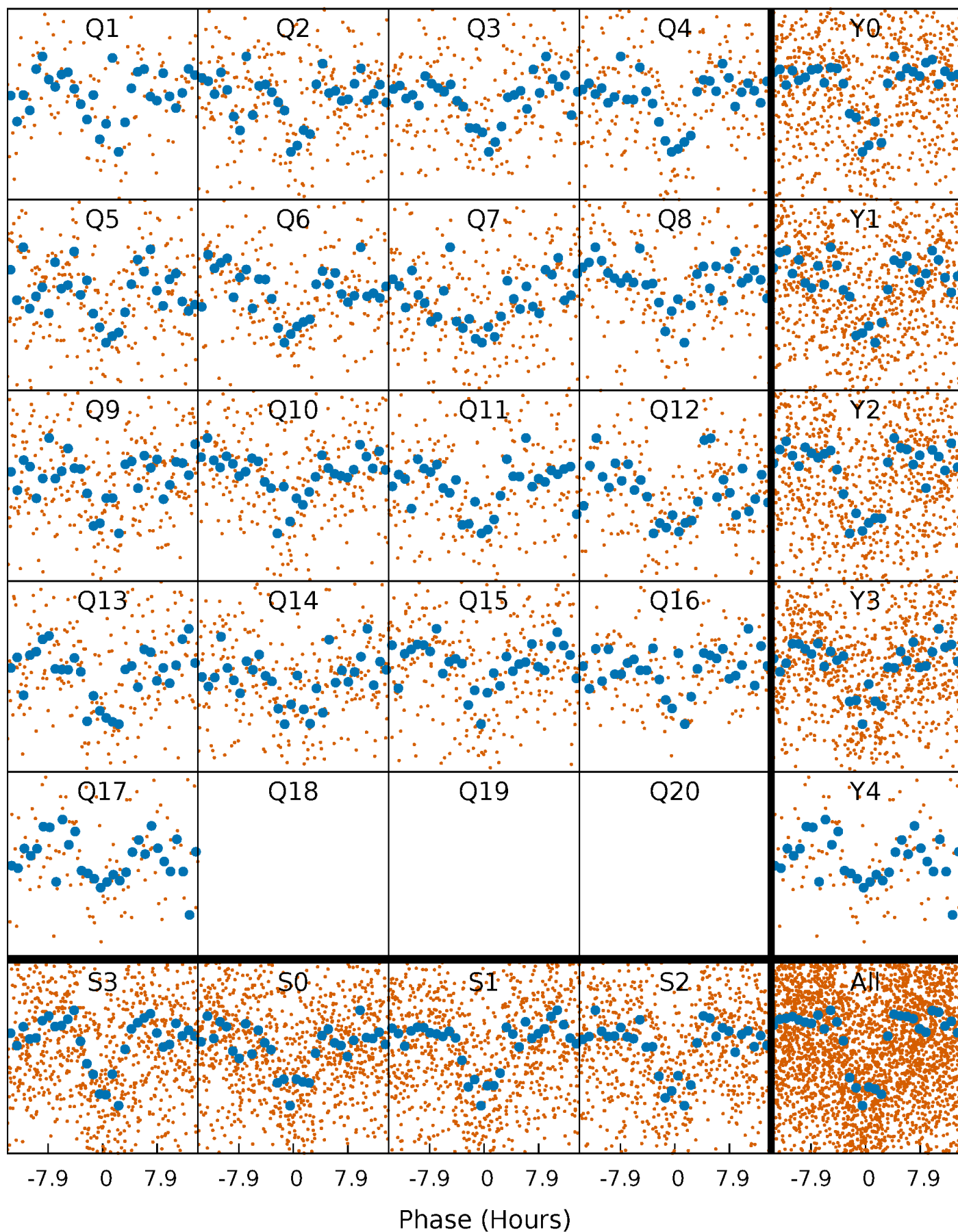


Non-Whitened Vs. Whitened Light Curve



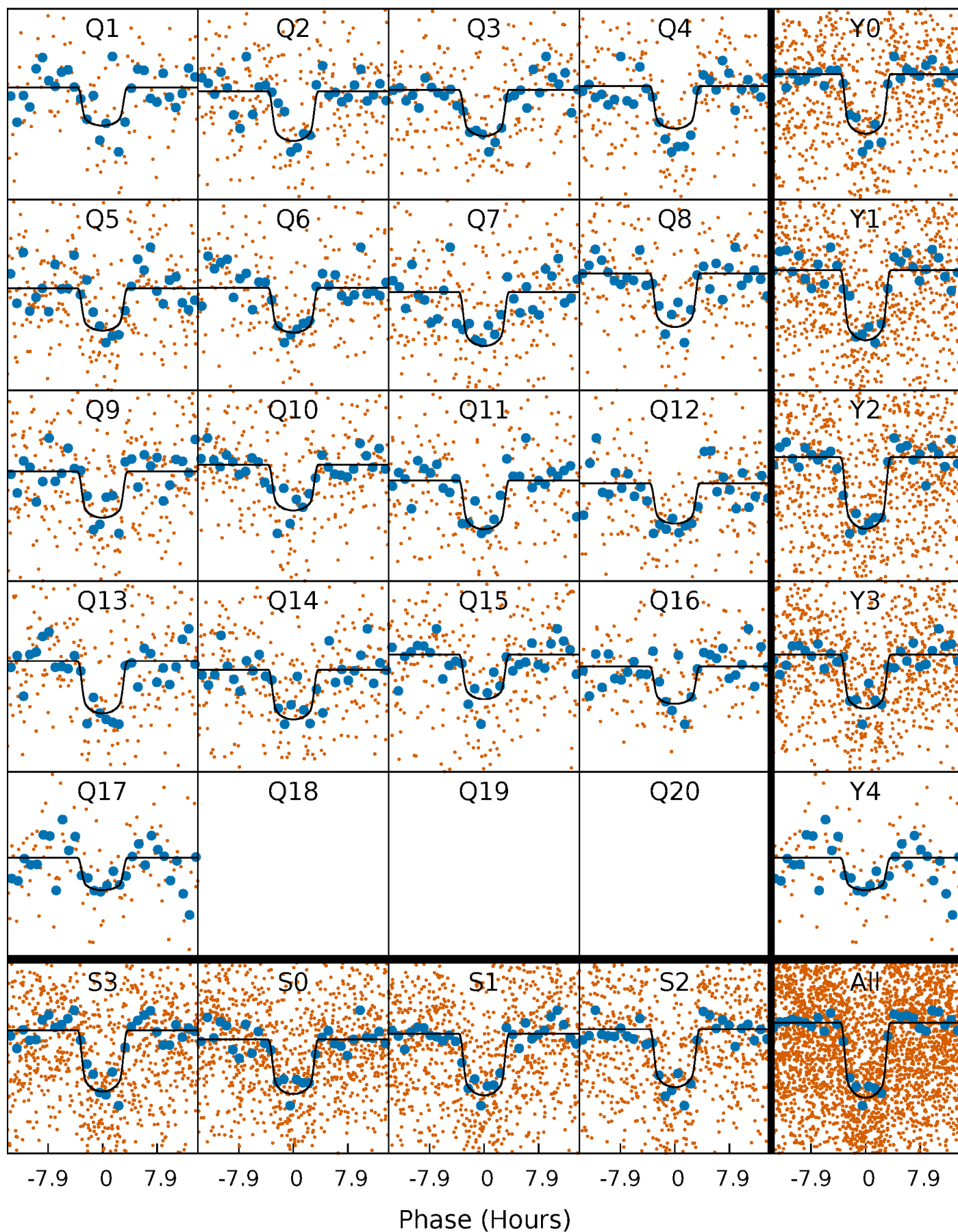
PDC Quarter-Phased Transit Curves

TCE 011401767-01 P= 20.054625 Days $T_0=136.561701$ (BKJD)



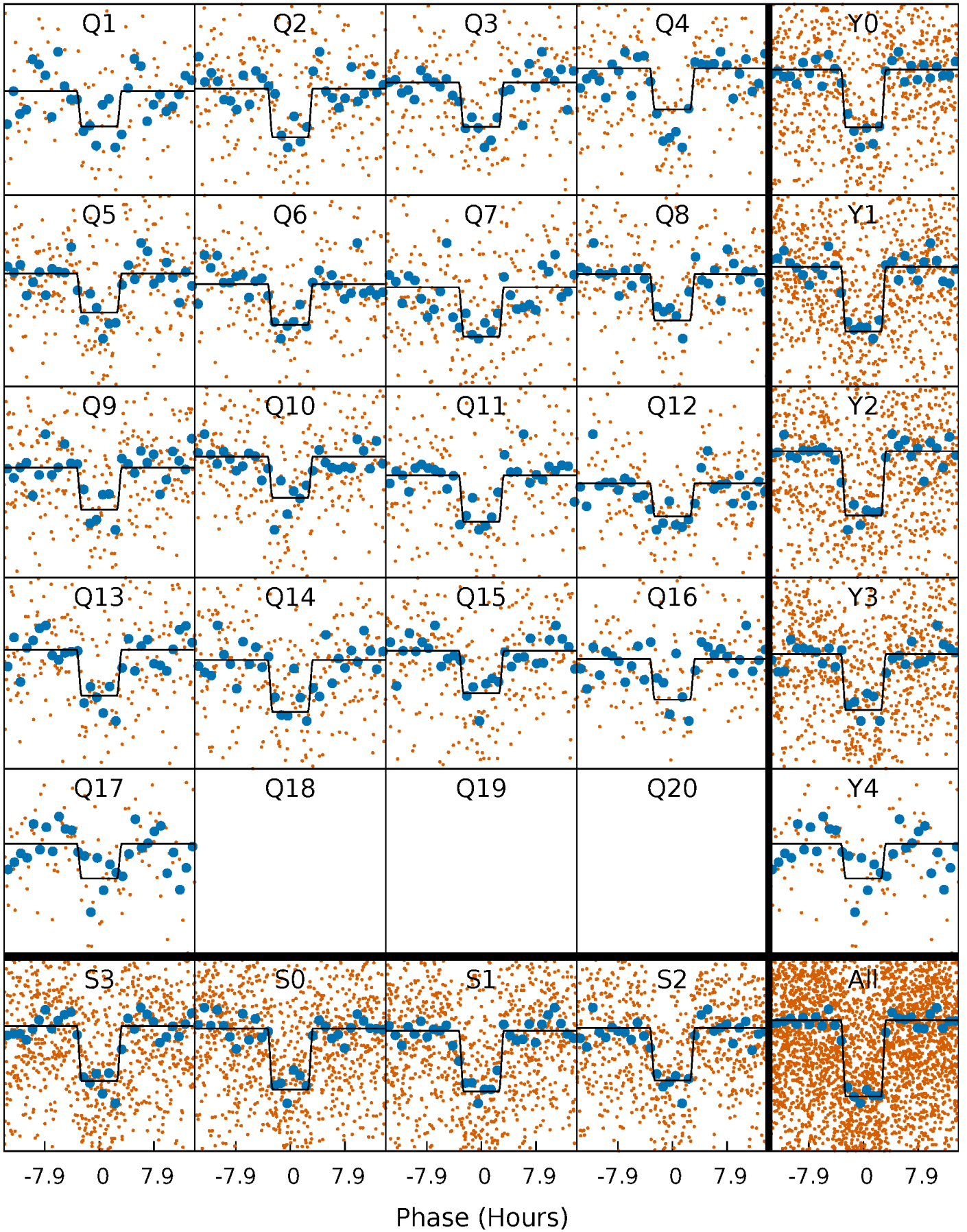
DV Quarter-Phased Transit Curves

TCE 011401767-01 P= 20.054625 Days $T_0=136.561701$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

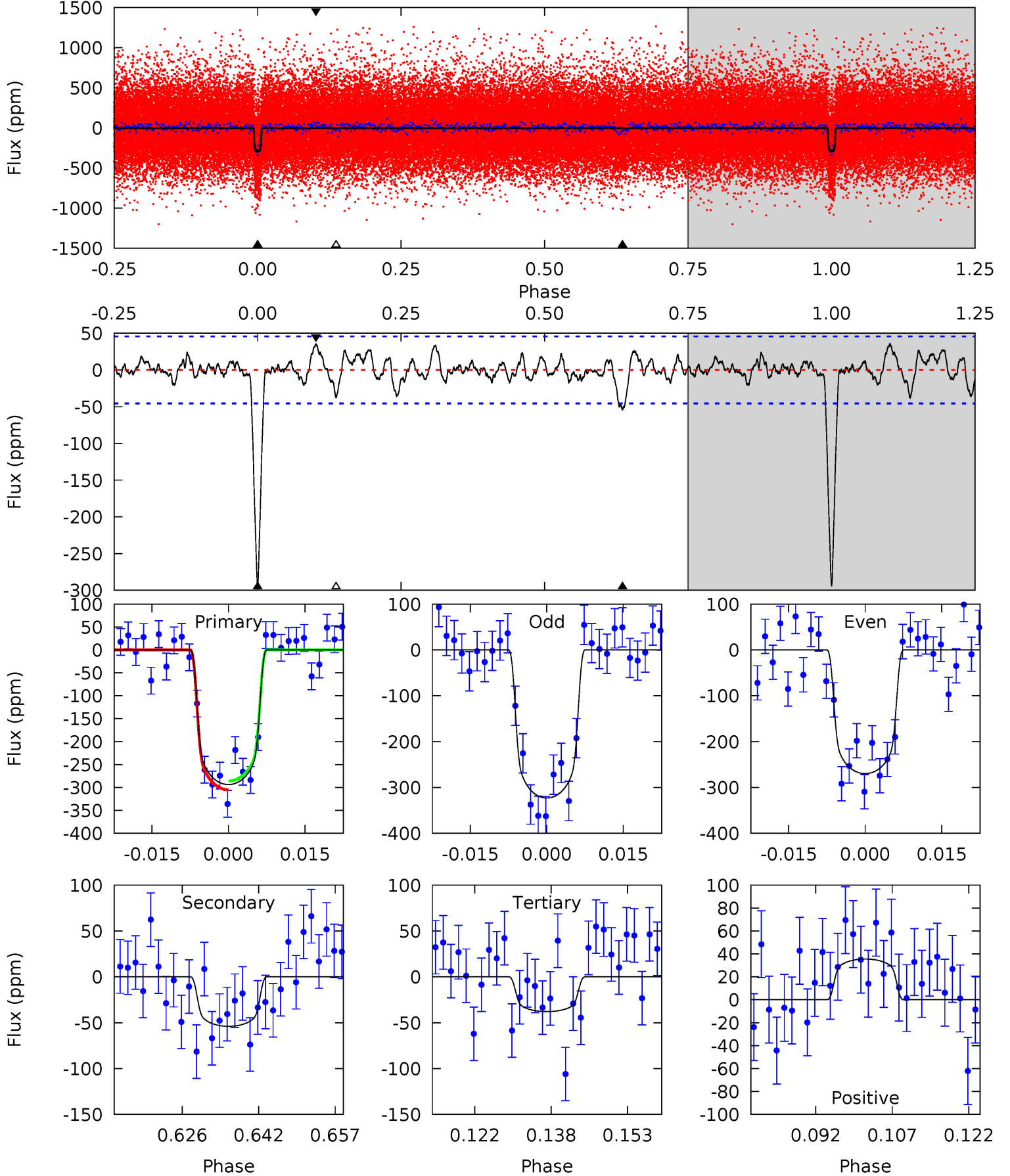
TCE 011401767-01 P= 20.054289 Days $T_0=136.574758$ (BKJD)



DV Model-Shift Uniqueness Test

011401767-01, $P = 20.054625$ Days, $E = 116.507076$ Days

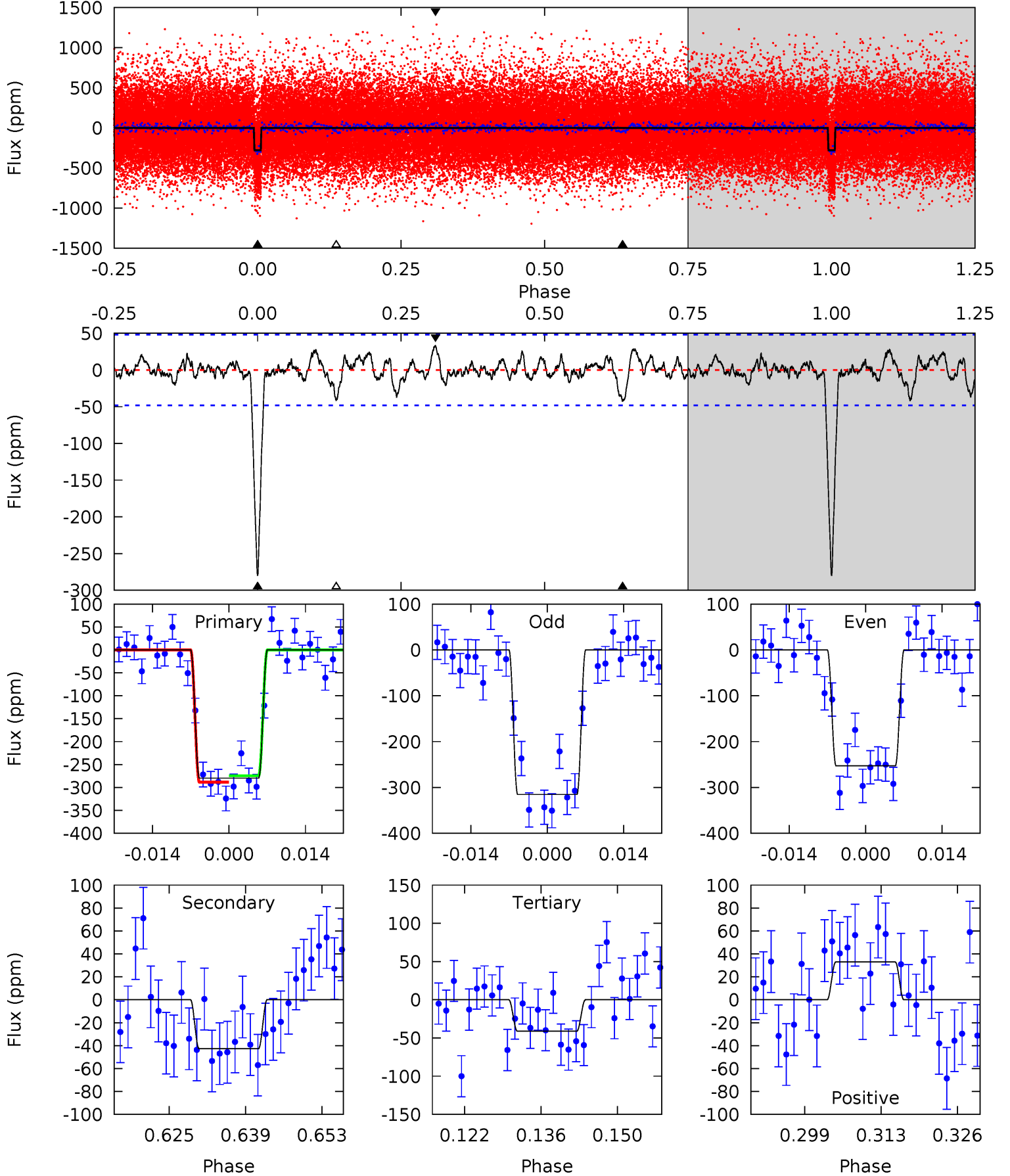
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.9	5.86	4.11	3.85	4.94	2.43	1.26	27.7	28.0	1.74	2.01	2.89	0.97	0.11	1.04



Alt Model-Shift Uniqueness Test

011401767-01, $P = 20.054289$ Days, $E = 116.520469$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.8	4.41	4.24	3.40	4.97	2.47	1.14	24.6	25.4	0.17	1.01	3.23	0.98	0.11	0.72



Stellar Parameters For KIC 011401767

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6056^{+81}_{-90}	$4.332^{+0.080}_{-0.120}$	$0.160^{+0.150}_{-0.150}$	$1.209^{+0.202}_{-0.134}$	$1.147^{+0.076}_{-0.083}$	$0.915^{+0.318}_{-0.331}$
	+1%/-1%	+2%/-3%	+94%/-94%	+17%/-11%	+7%/-7%	+35%/-36%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011401767-01 / KOI 2195.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-54 ± 9	$2.55^{+0.28}_{-0.25}$	1059^{+44}_{-36}	4056^{+158}_{-155}	104^{+29}_{-24}
Alt.	-43 ± 10	$2.26^{+0.24}_{-0.21}$	1063^{+45}_{-37}	4069^{+196}_{-207}	105^{+34}_{-28}

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

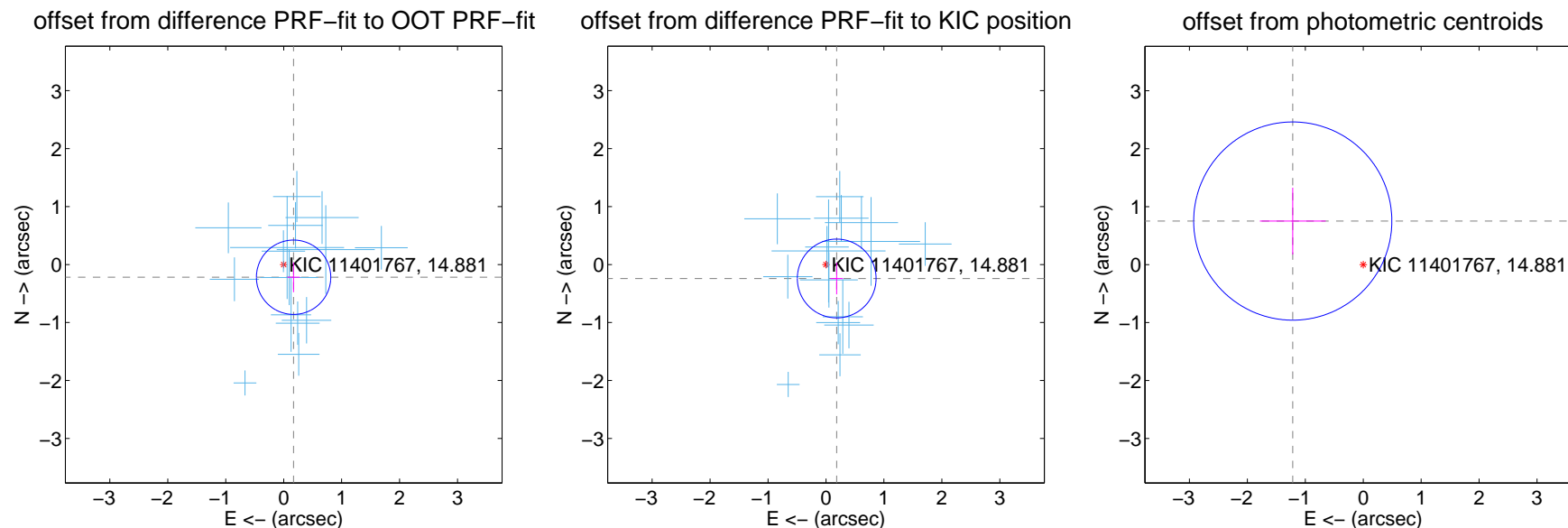
DV Centroid Data

Supplemental centroid analysis for 011401767-01. Kepler magnitude: 14.88. Transit SNR 24.49

There are 15 quarters with good PRF difference image offsets

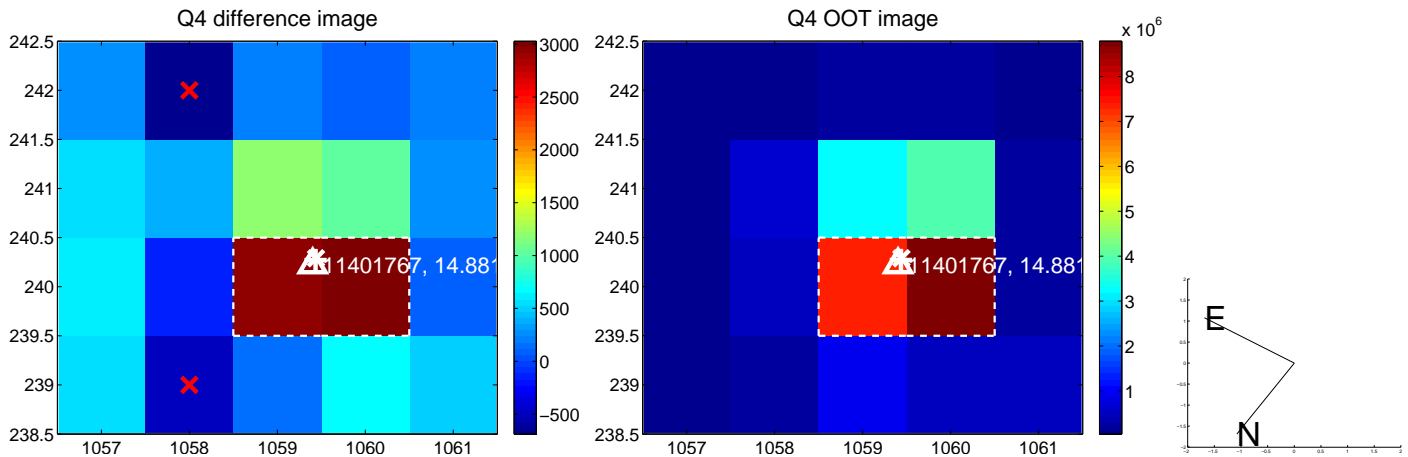
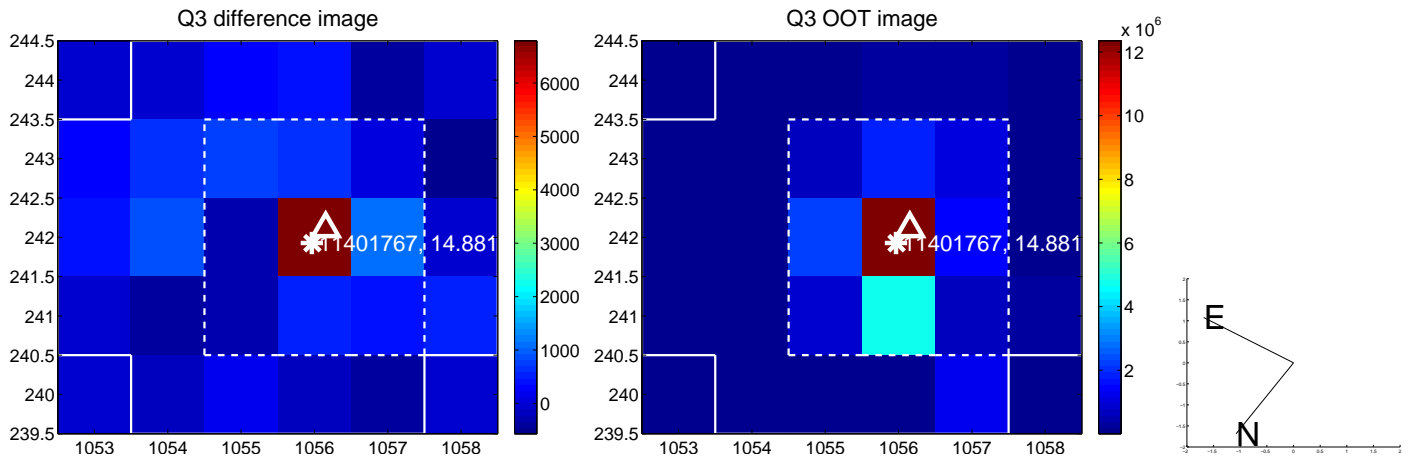
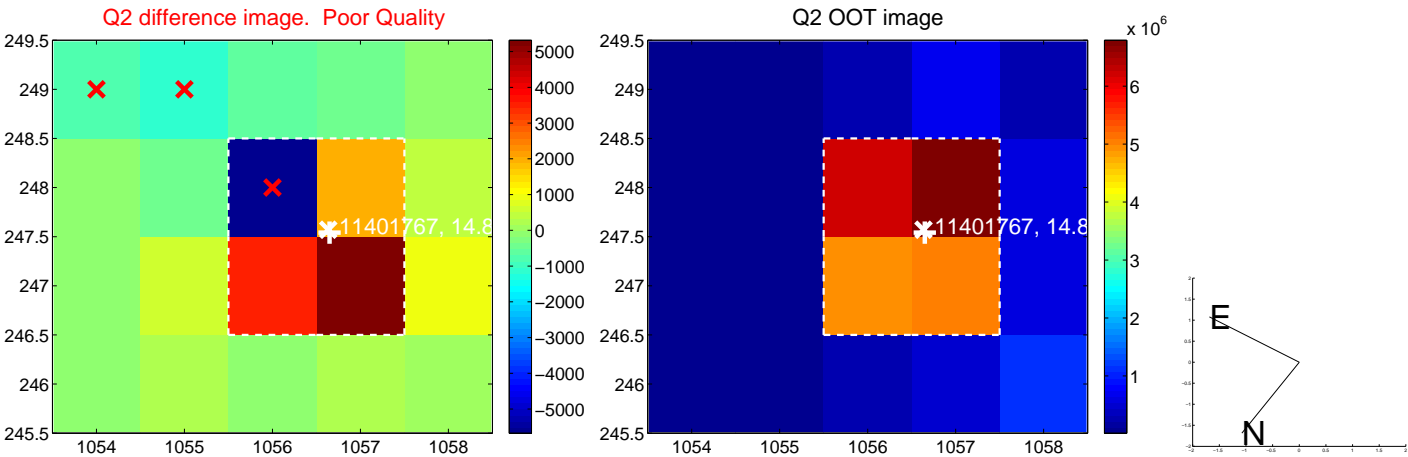
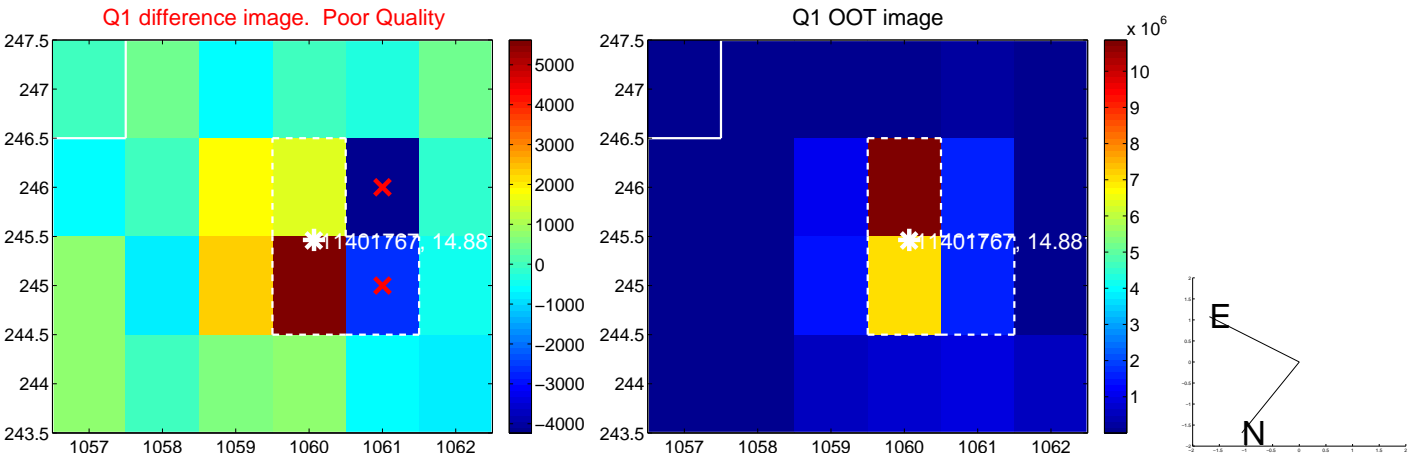
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.278 ± 0.214	1.30	-0.171 ± 0.108	-0.219 ± 0.258
PRF-fit source offset from KIC position	0.304 ± 0.227	1.34	-0.185 ± 0.108	-0.241 ± 0.273
photometric centroid source offset	1.43 ± 0.57	2.51	1.22 ± 0.57	0.75 ± 0.58

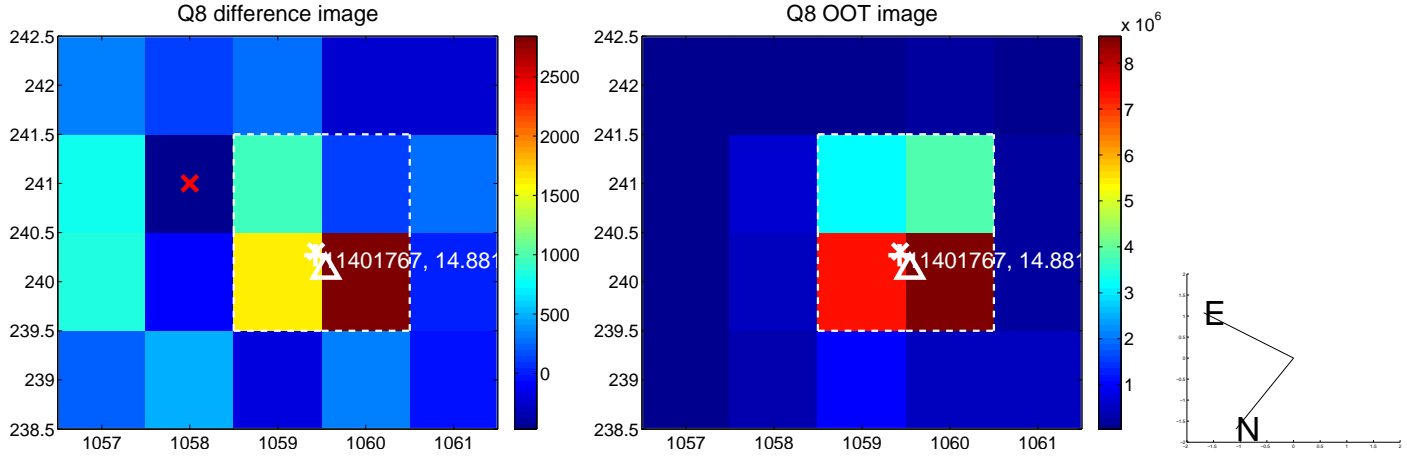
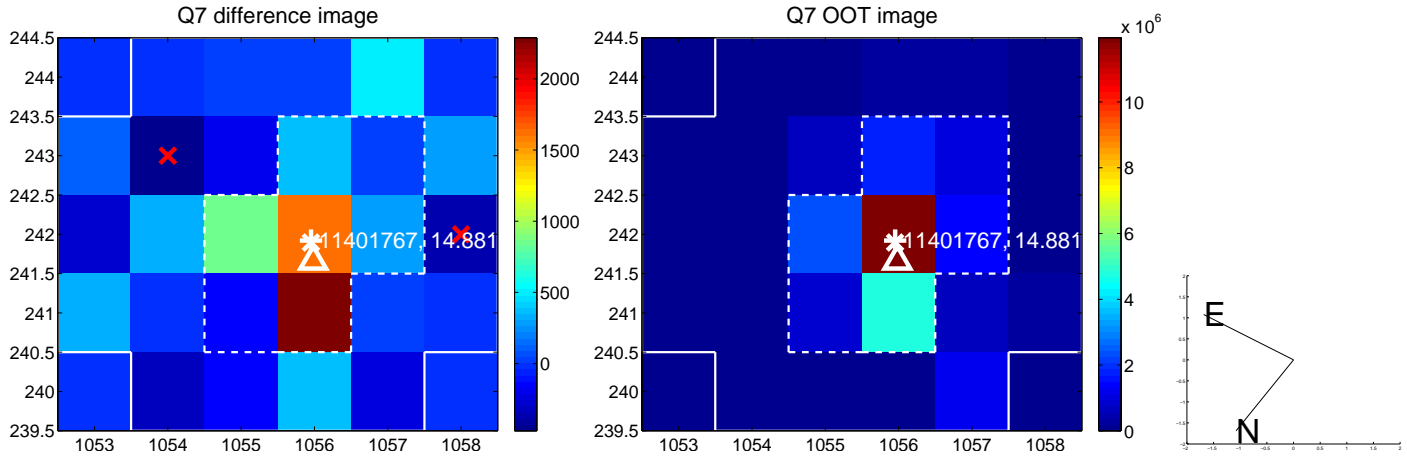
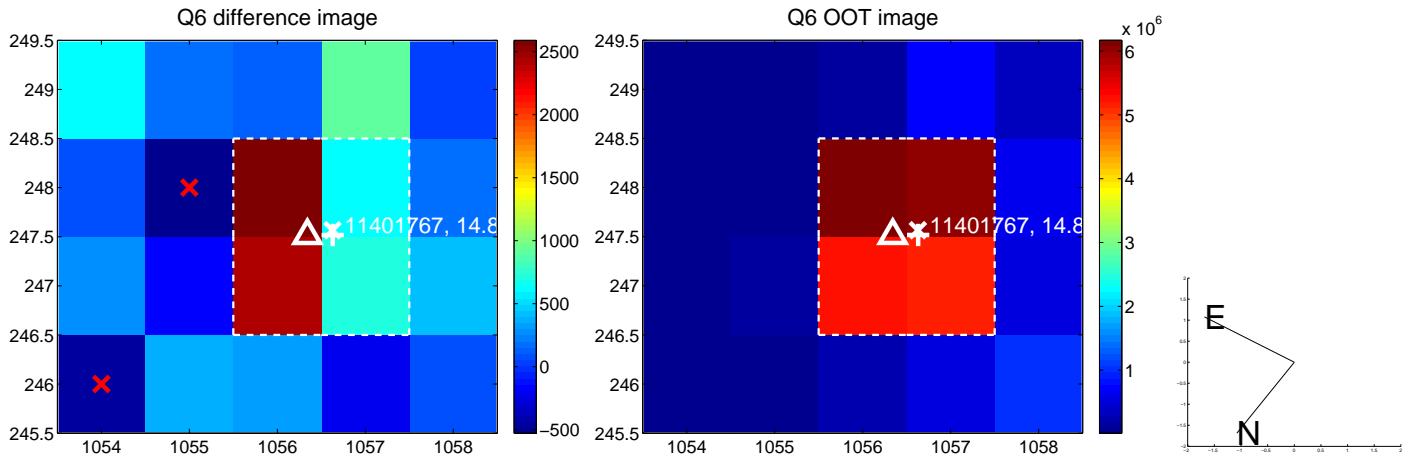
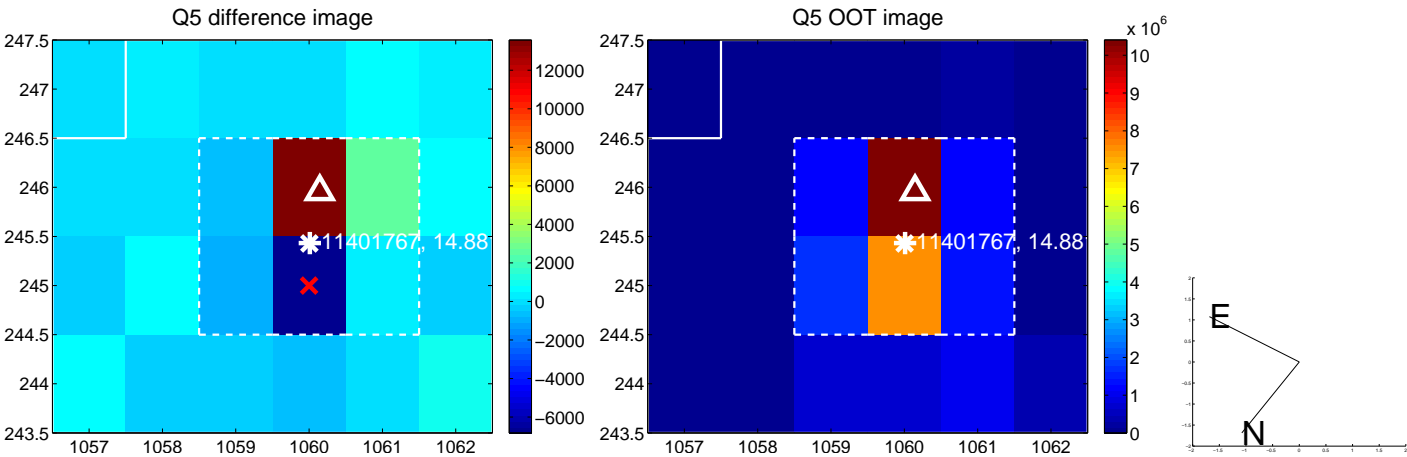


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

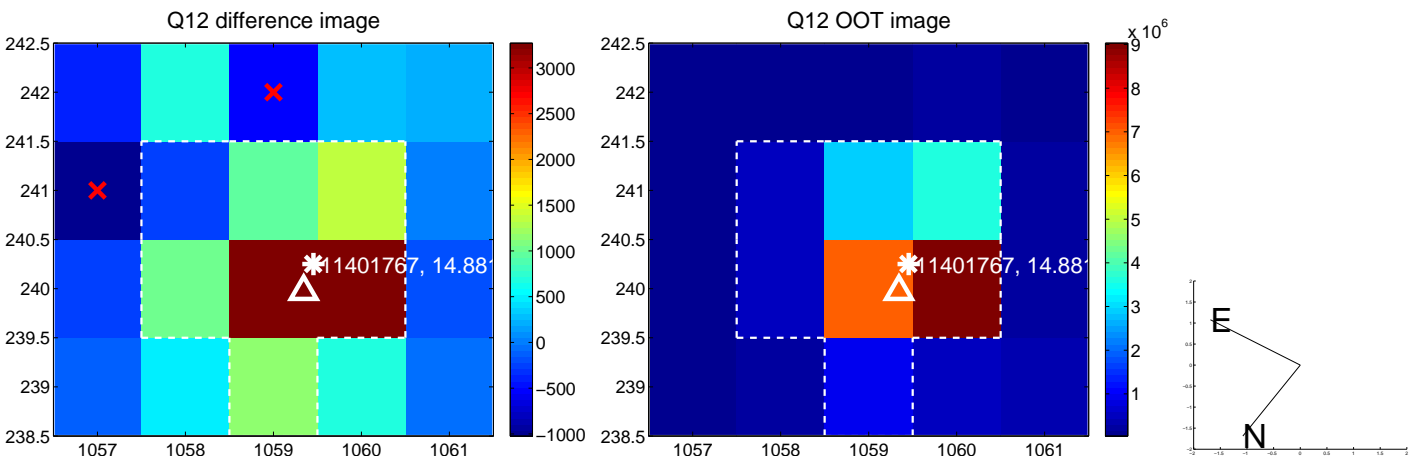
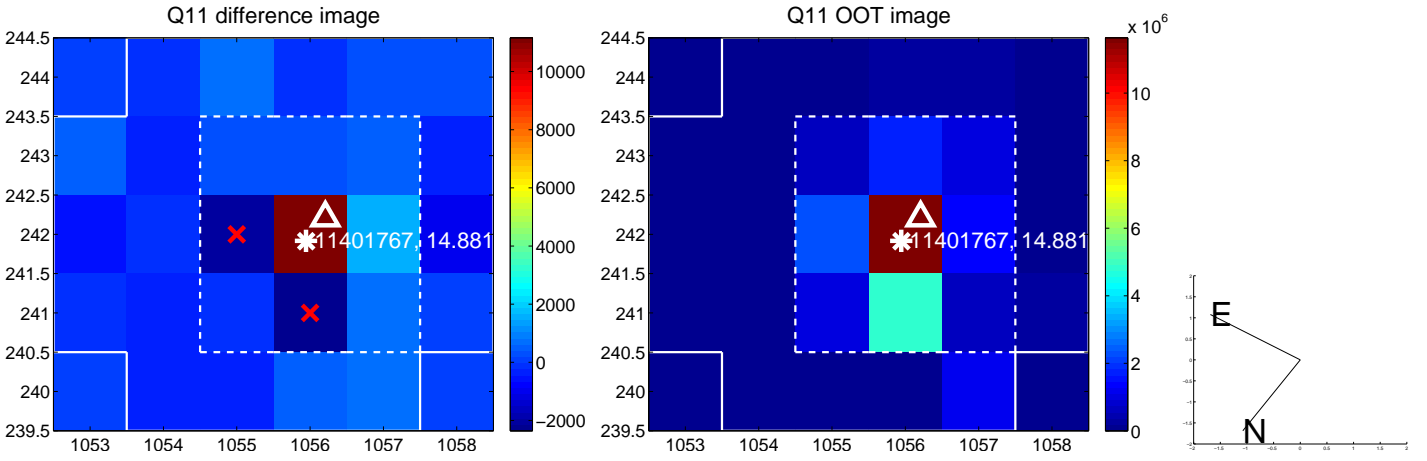
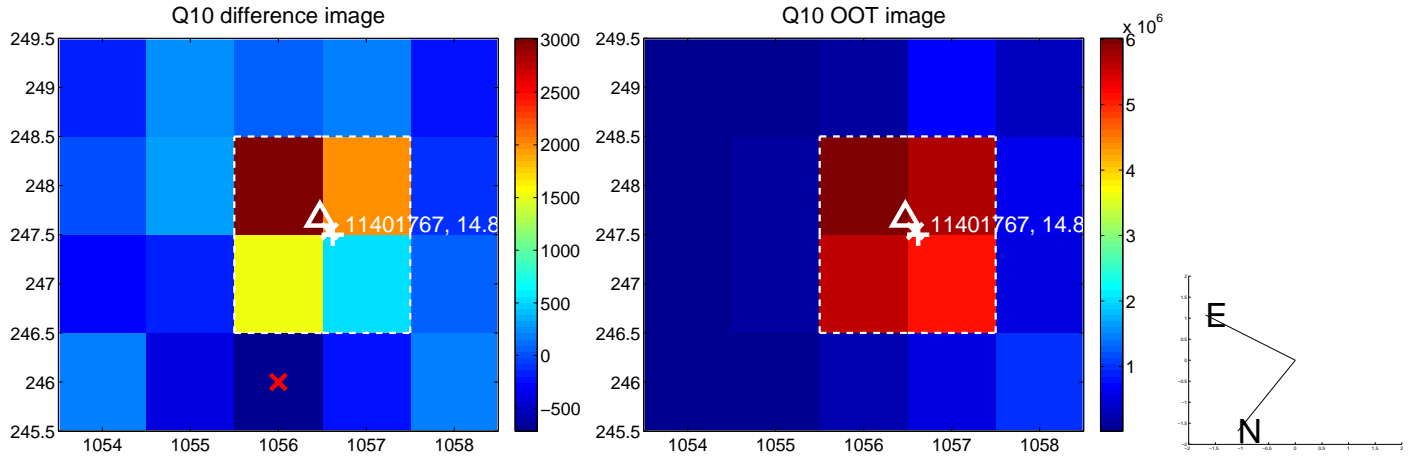
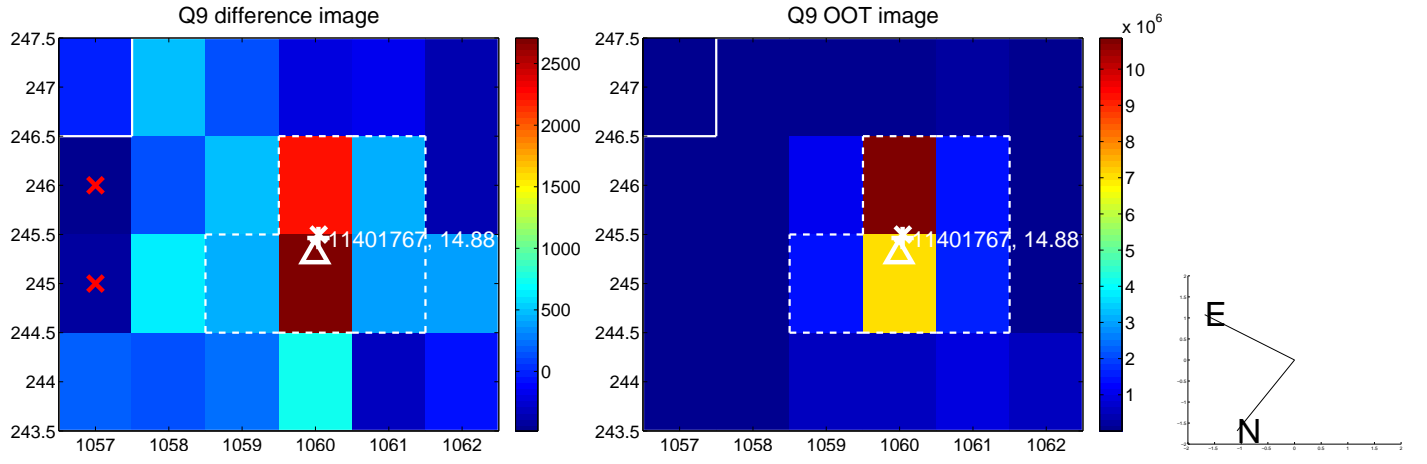
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



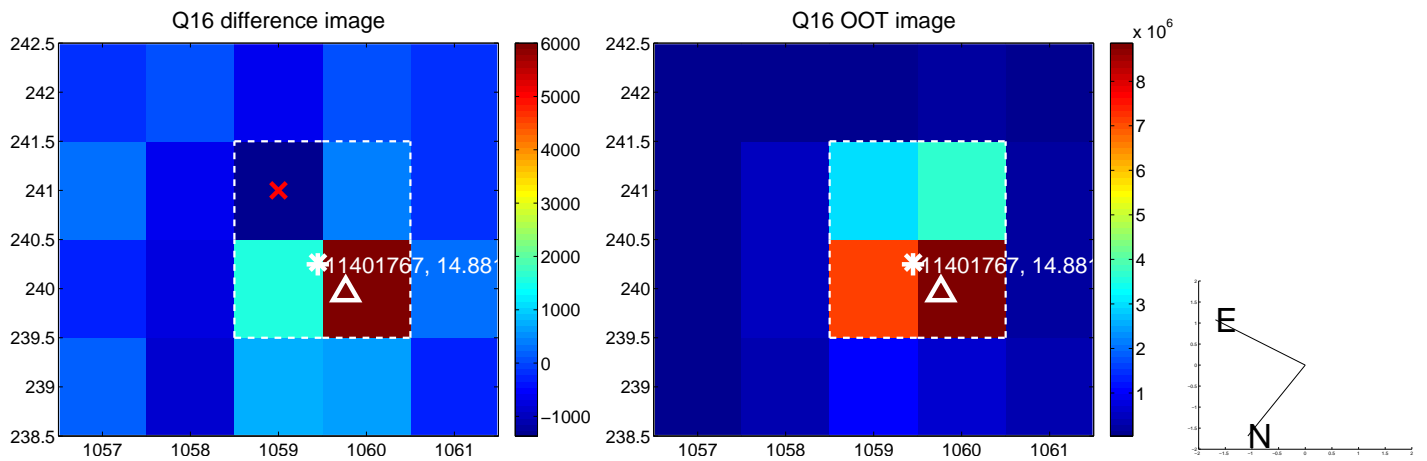
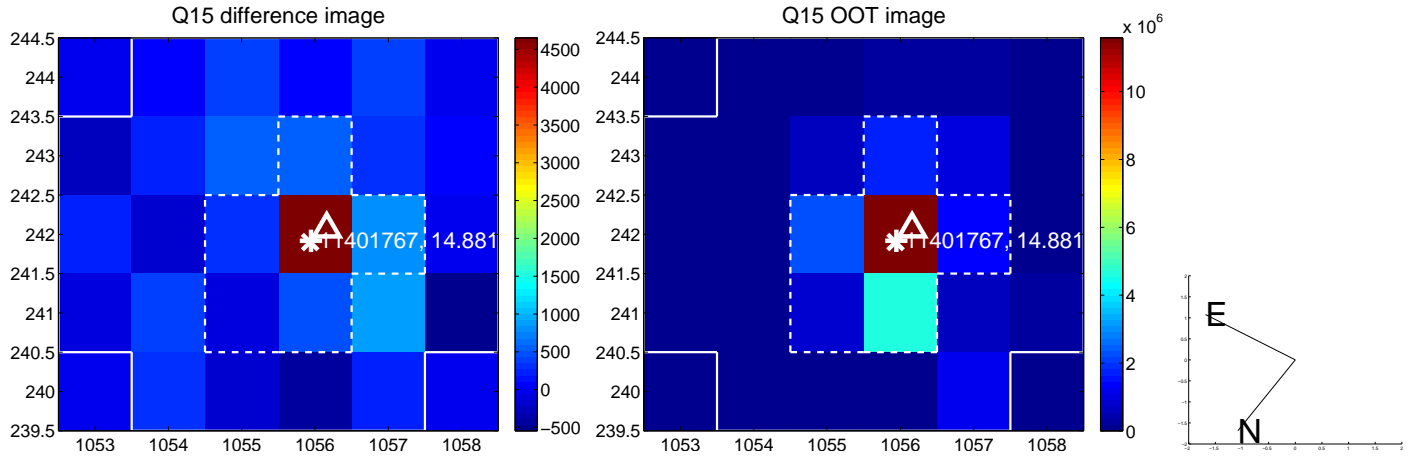
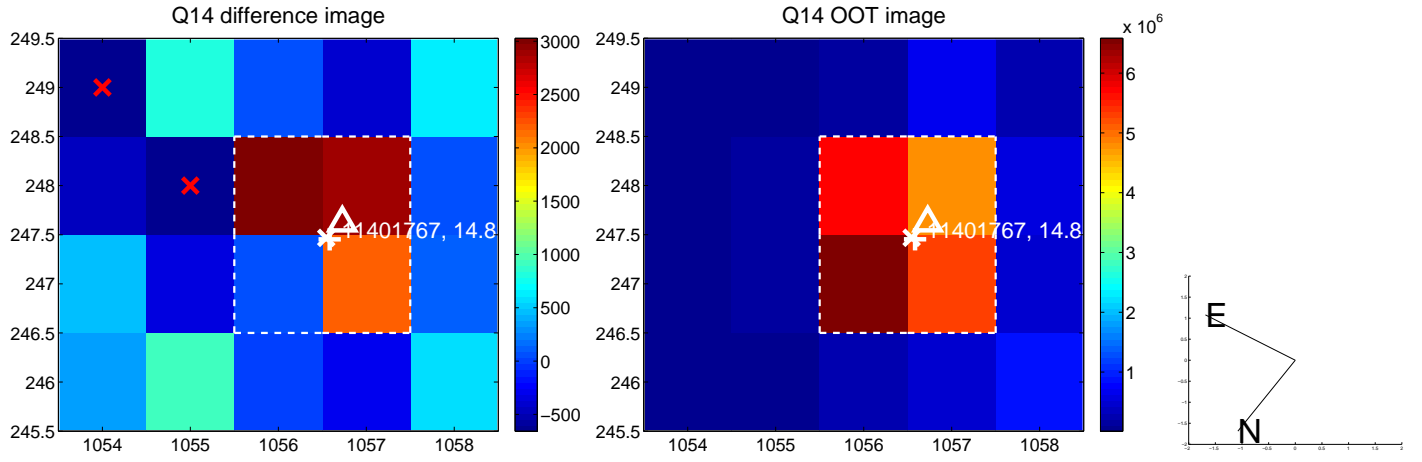
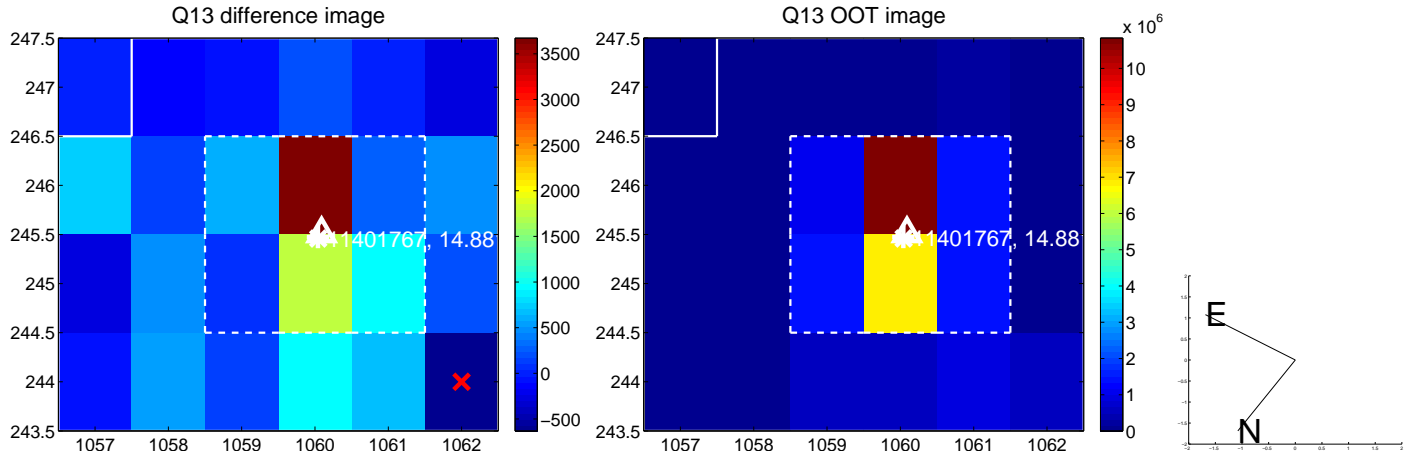
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



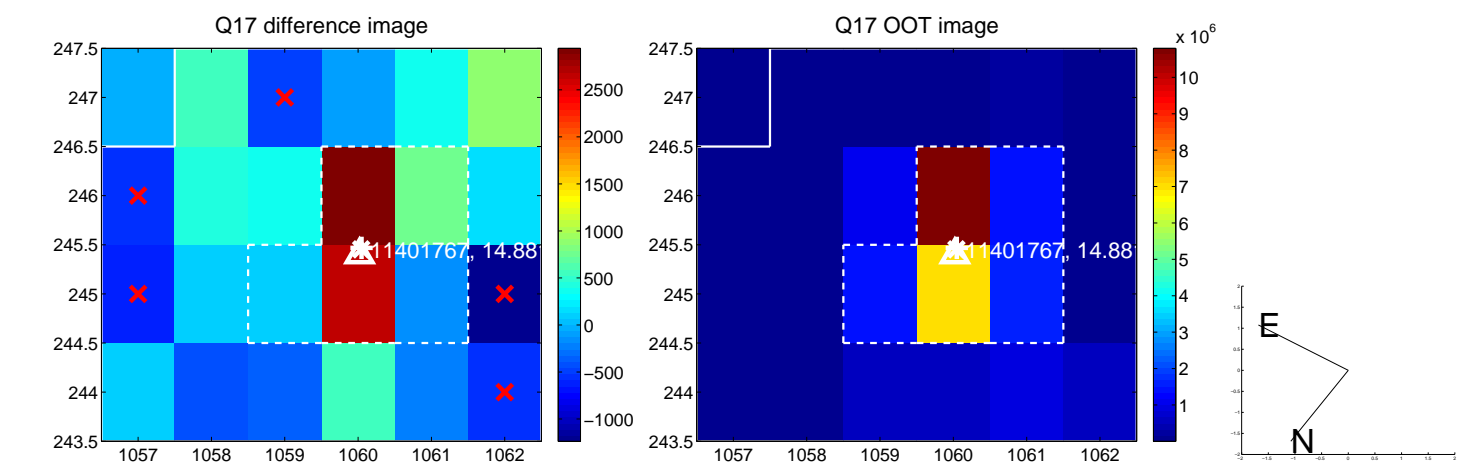
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



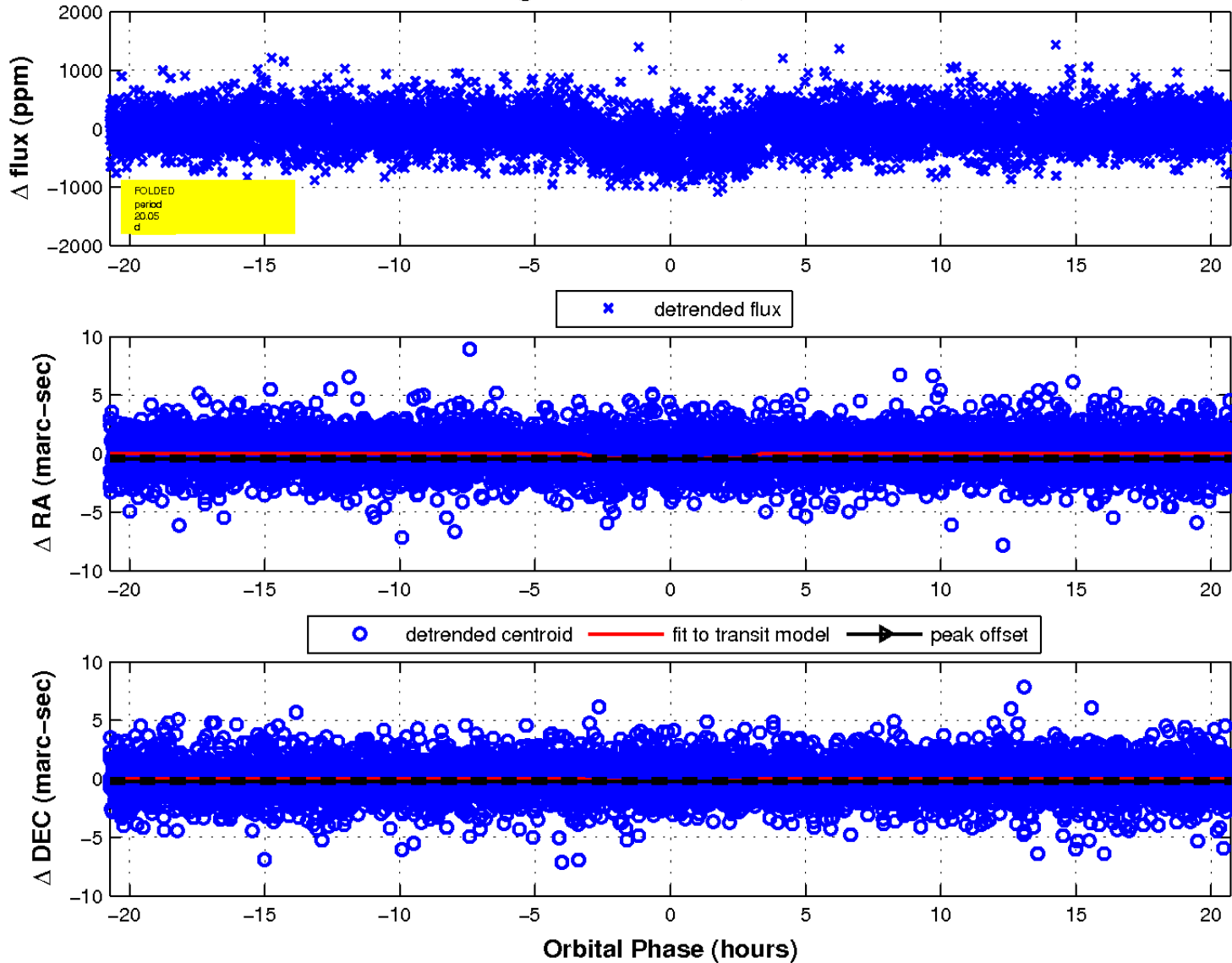
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

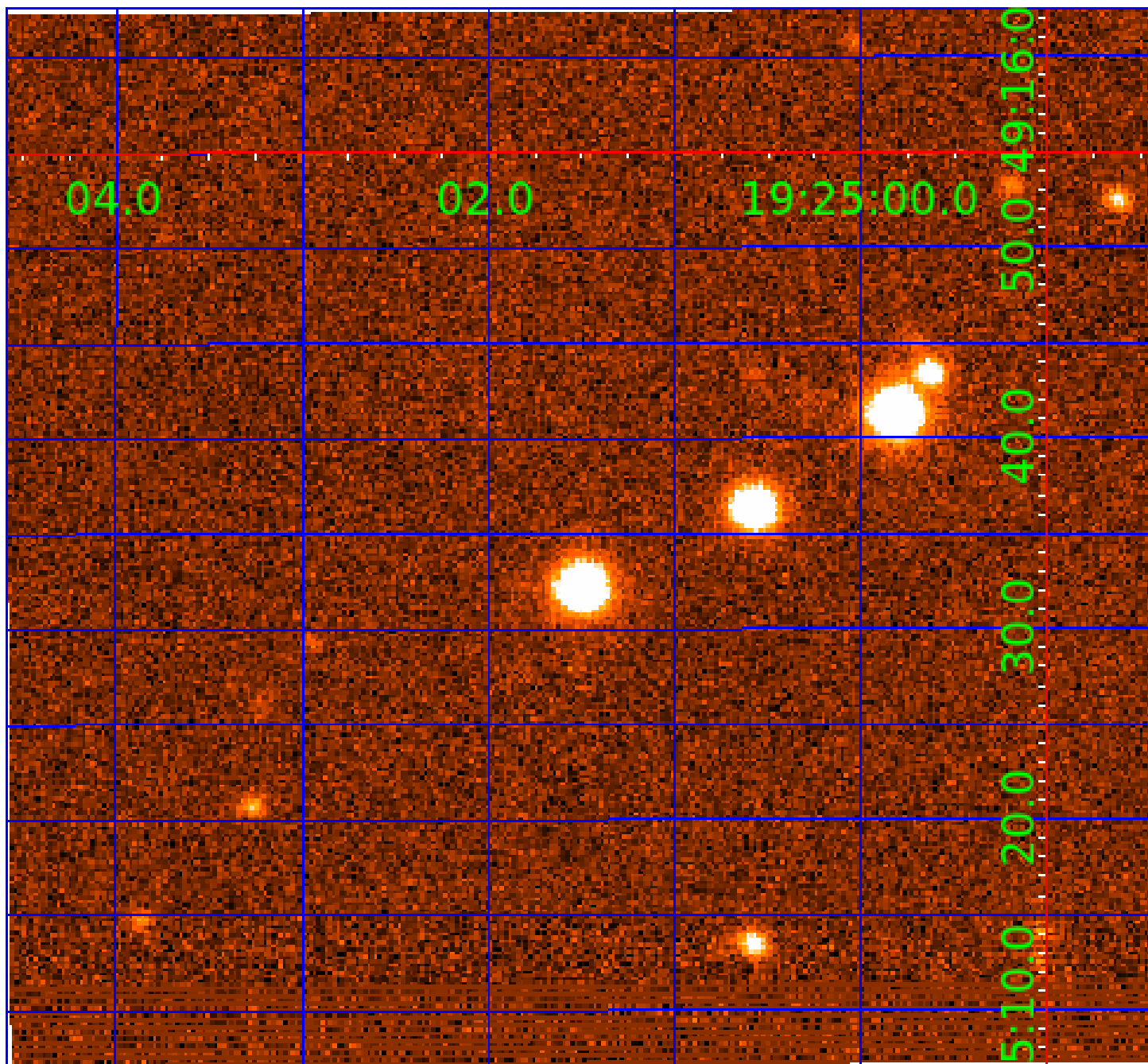


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 011401767

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011401767-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011401767-02	OBS	PC	0.98	0	0	0	0	NO_COMMENT
011401767-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

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

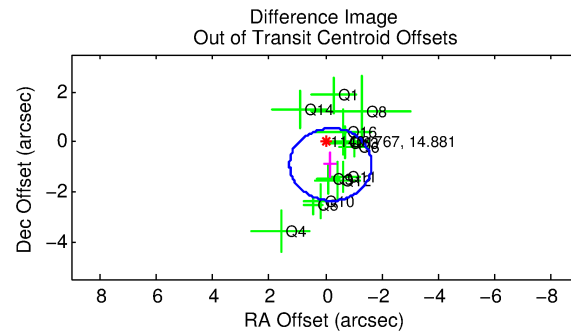
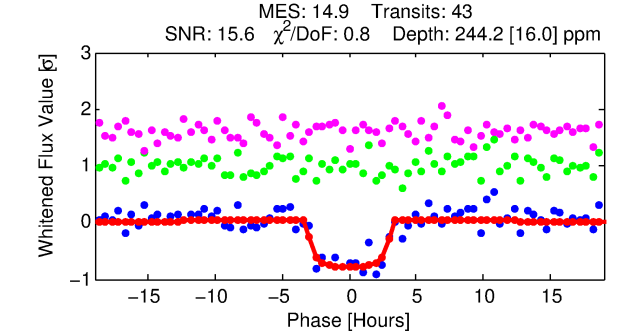
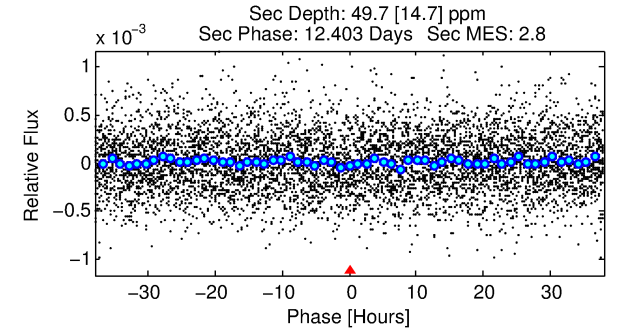
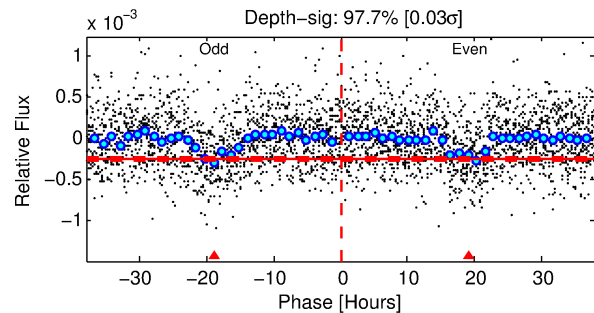
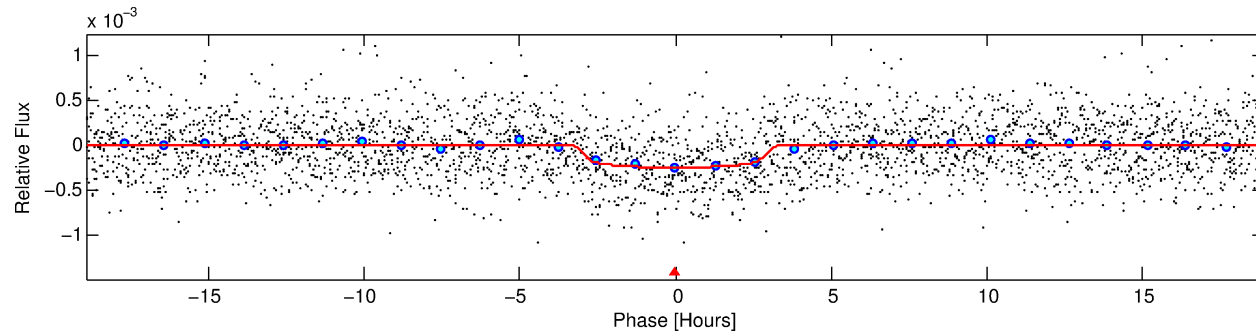
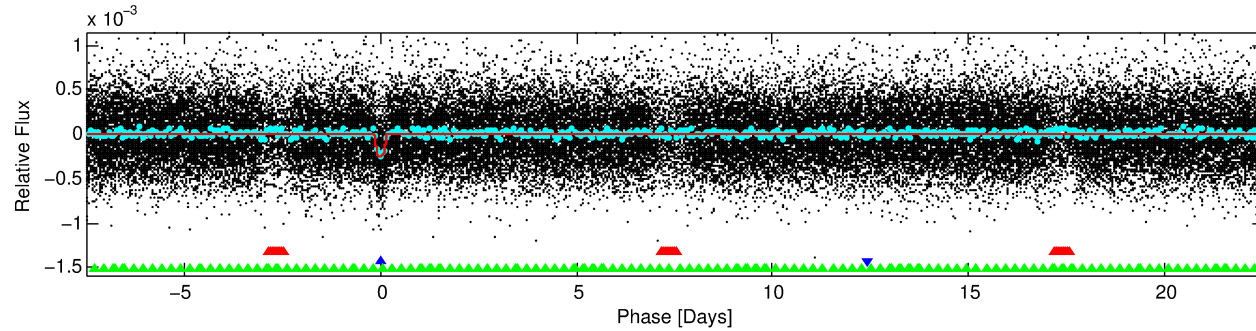
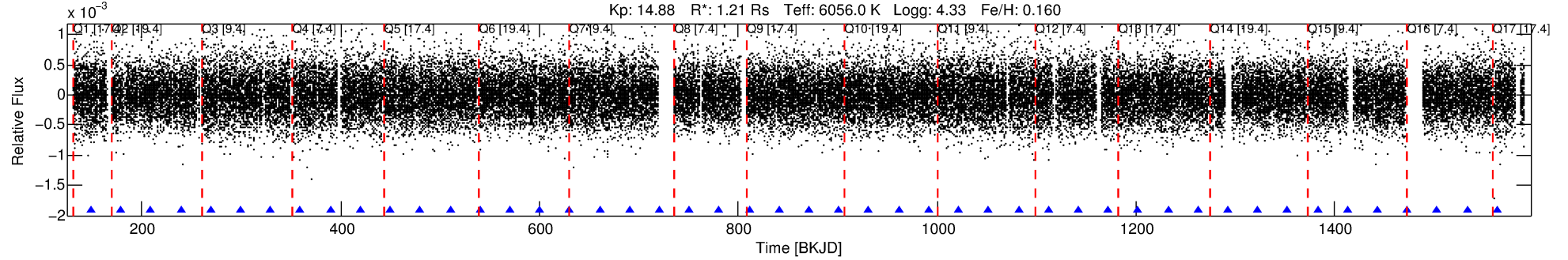
Ephemeris Match Information For 011401767-02

No Significant Match Found

DV One-Page Summary

KIC: 11401767 Candidate: 2 of 3 Period: 30.090 d
KOI: K02195.02 Name: Kepler-372d Corr: 0.892

Kp: 14.88 R*: 1.21 Rs Teff: 6056.0 K Logg: 4.33 Fe/H: 0.160



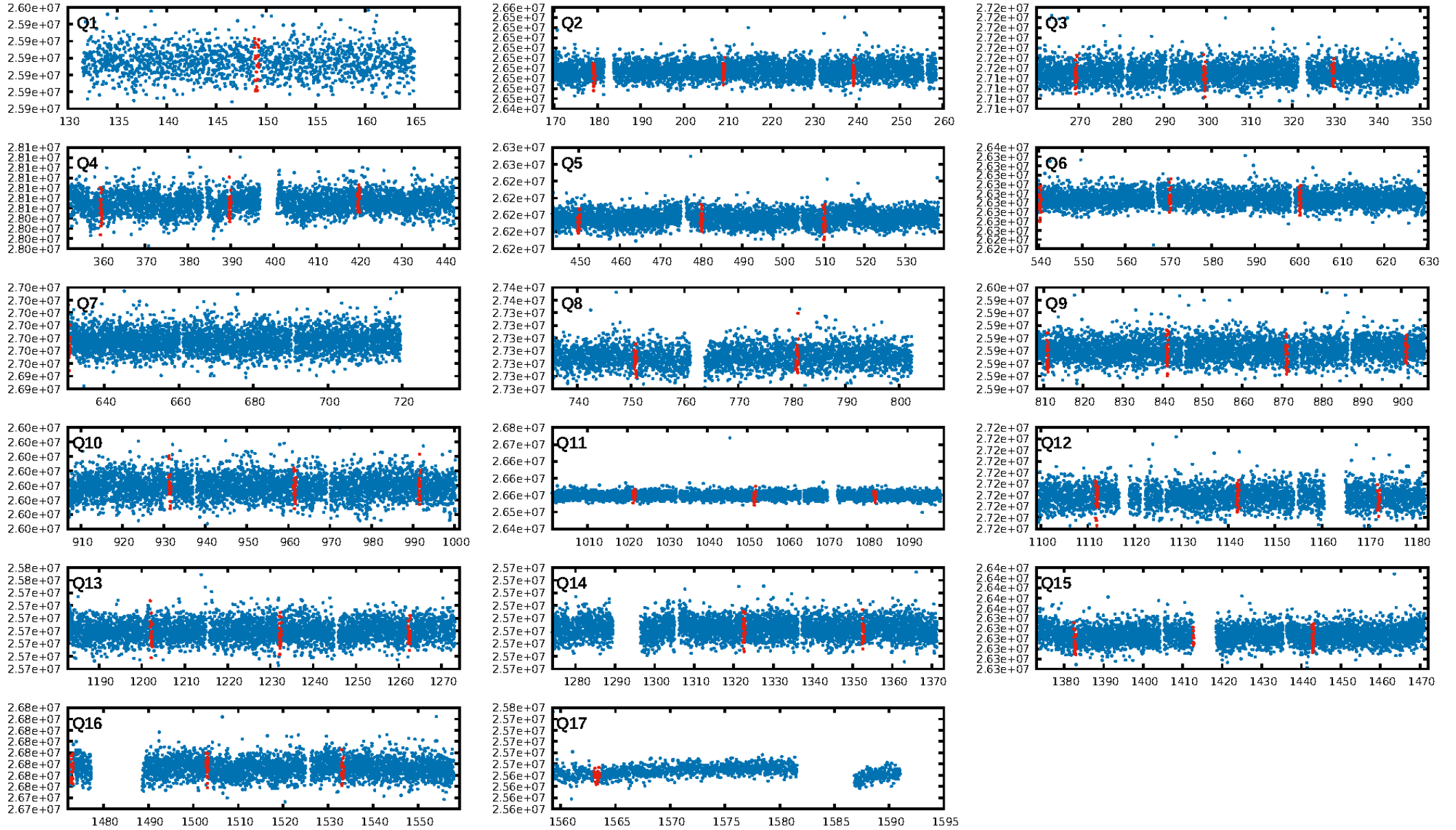
DV Fit Results:

Period = 30.09000 [0.00029] d
Epoch = 149.0634 [0.0078] BKJD
Rp/R* = 0.0163 [0.0042]
a/R* = 20.22 [25.44]
b = 0.85 [0.41]
Seff = 44.88 [10.02]
Teff = 660 [37] K
Rp = 2.15 [0.67] Re
a = 0.1981 [0.0286] AU
Ag = 231.50 [147.09] [1.57σ]
Teffp = 3980 [598] K [5.54σ]

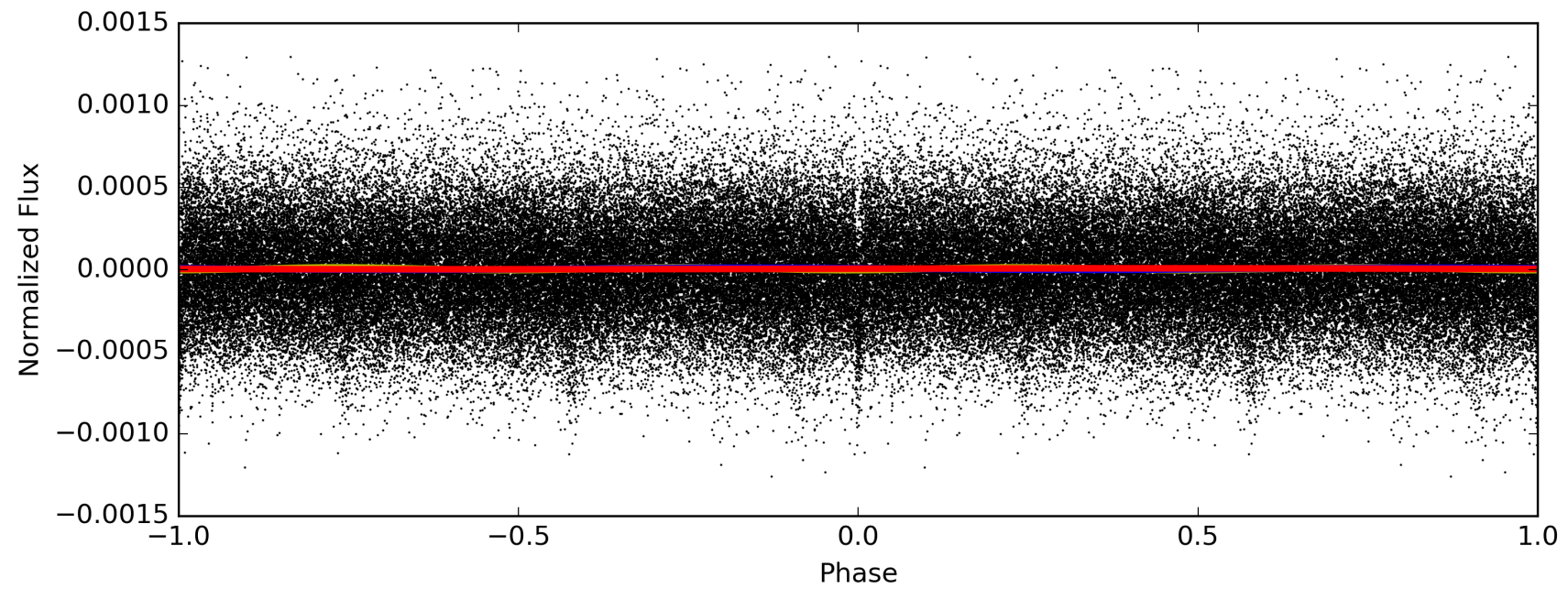
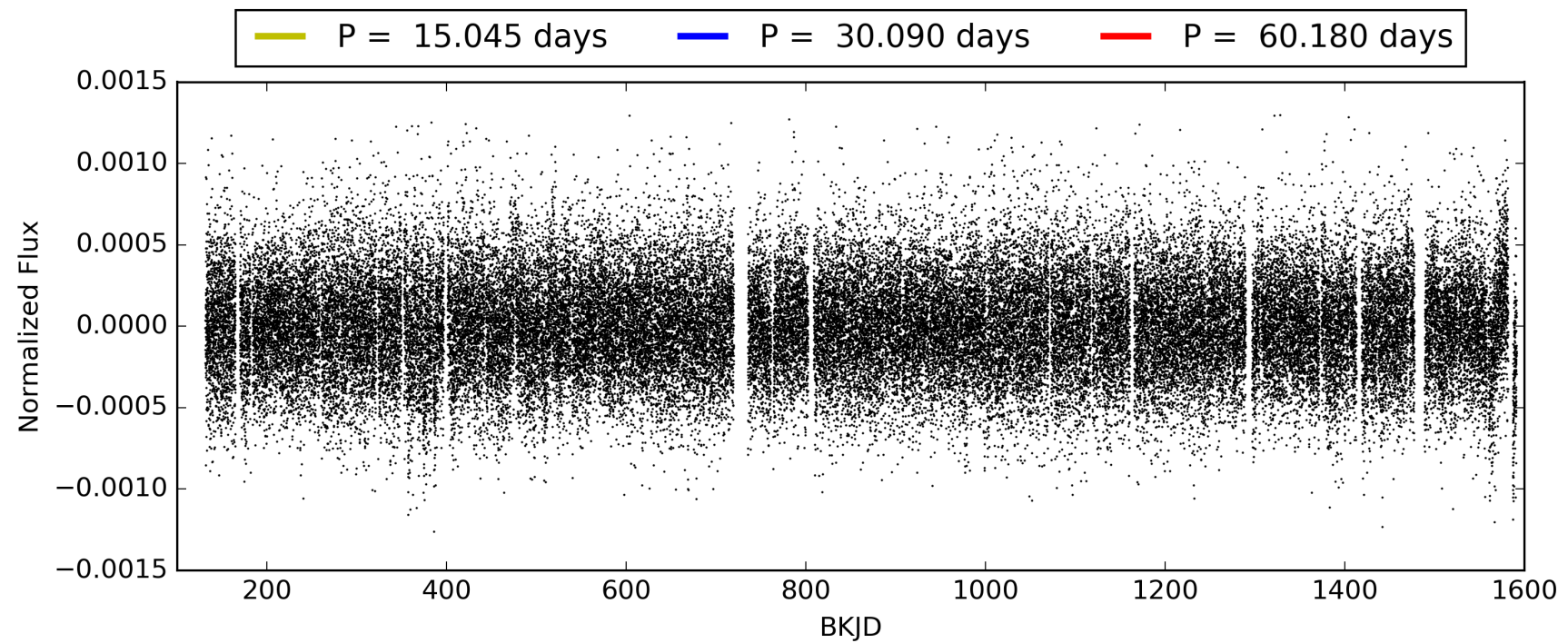
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [25.72σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.94e-49
RollingBand-fgt: 1.00 [41/41]
GhostDiagnostic-chr: 3.595
Centroid-sig: 11.1%
Centroid-so: 0.989 arcsec [1.08σ]
OotOffset-rm: 0.936 arcsec [1.94σ]
KicOffset-rm: 0.886 arcsec [1.87σ]
OotOffset-st: 3/2/4/4 [13]
KicOffset-st: 3/2/4/4 [13]
DiffImageQuality-fgm: 0.77 [10/13]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 011401767-02, PDC Light Curves

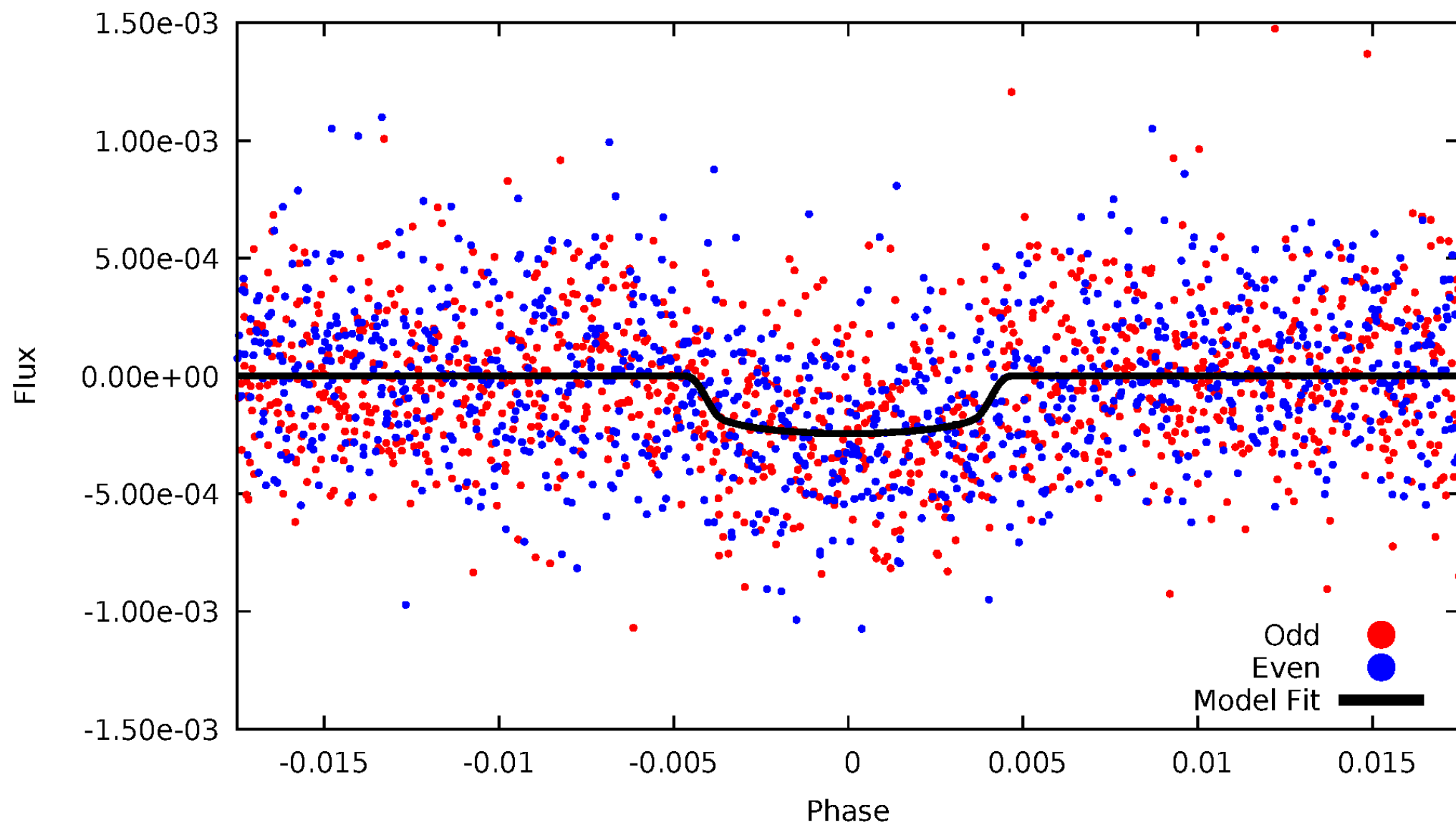


TCE 011401767-02



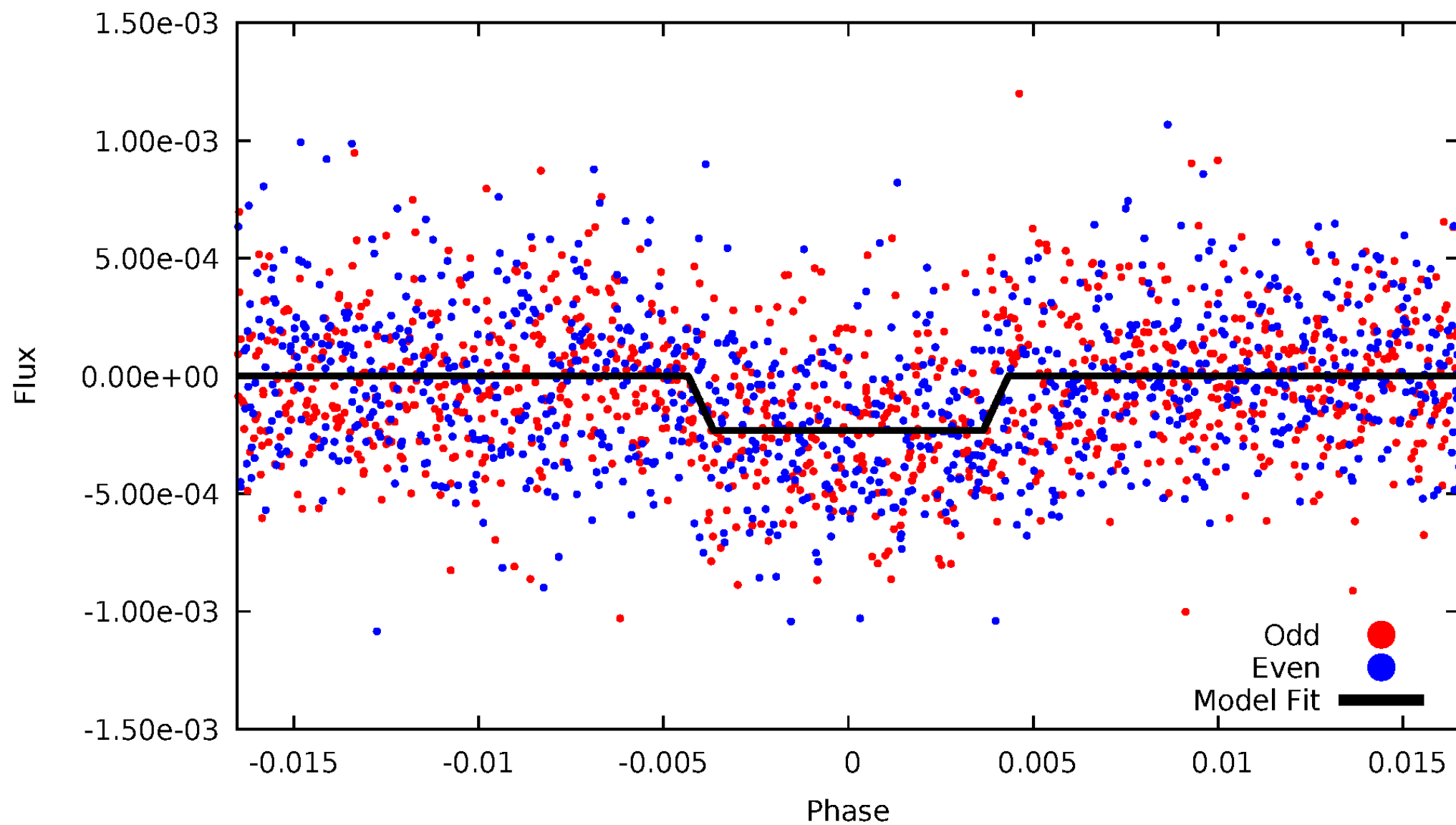
DV Odd/Even

TCE 011401767-02



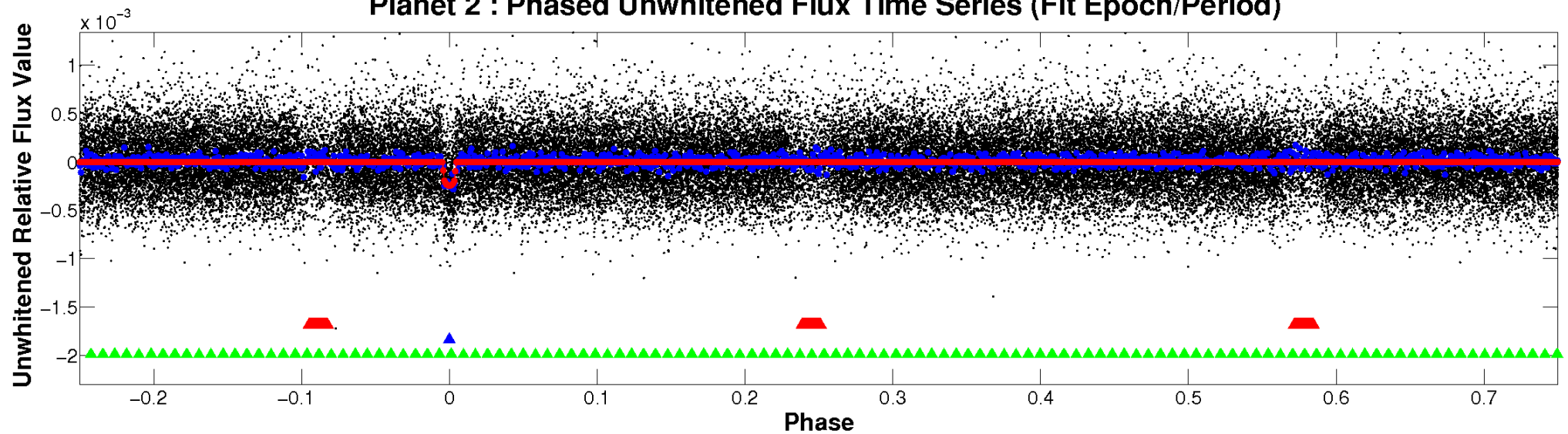
ALT Odd/Even

TCE 011401767-02

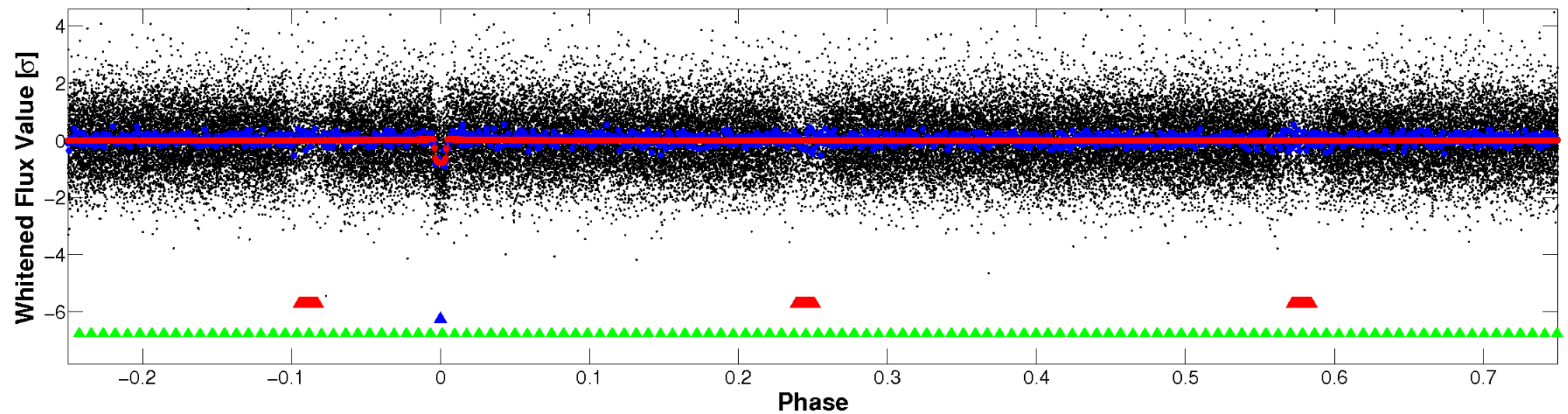


Non-Whitened Vs. Whitened Light Curve

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

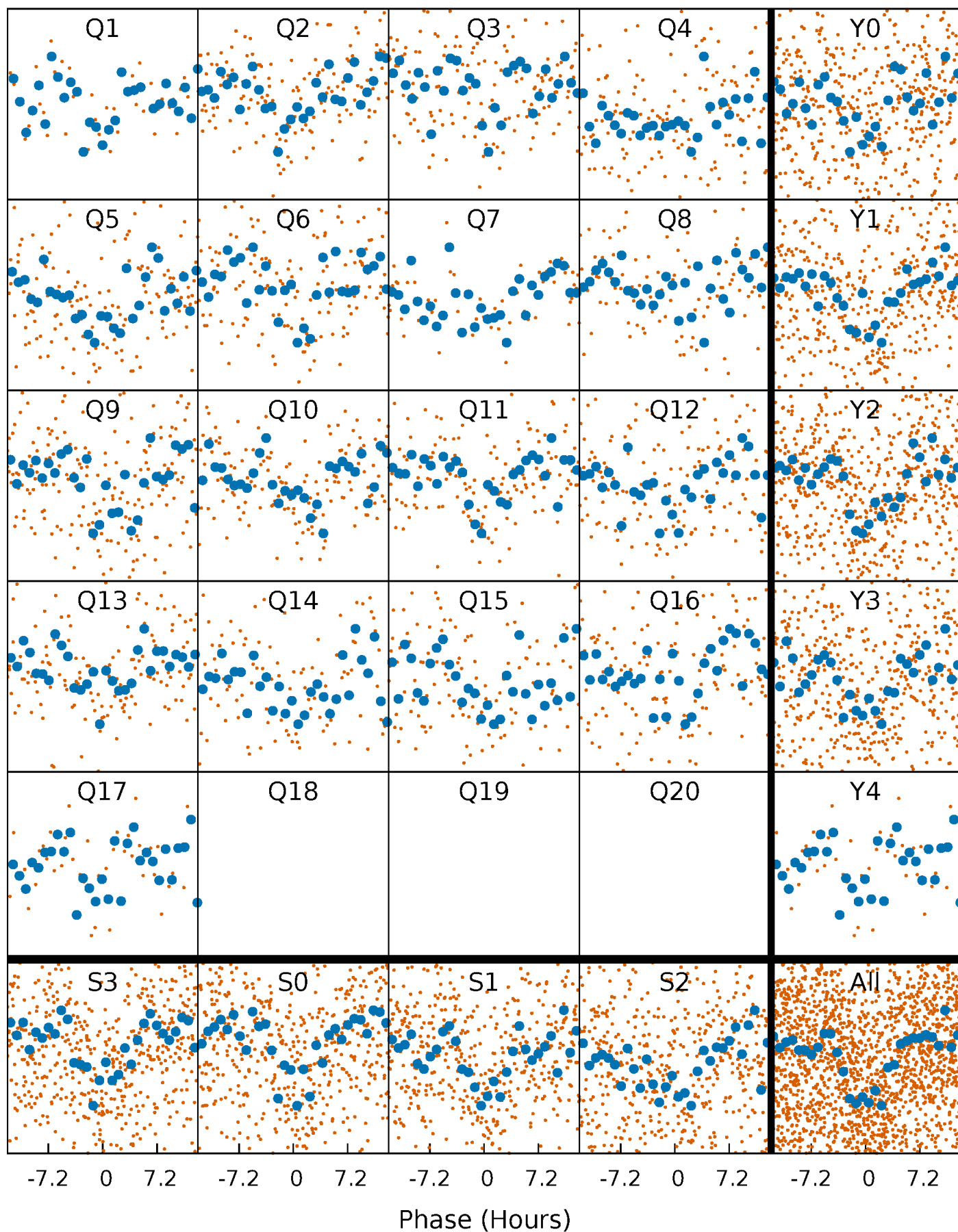


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



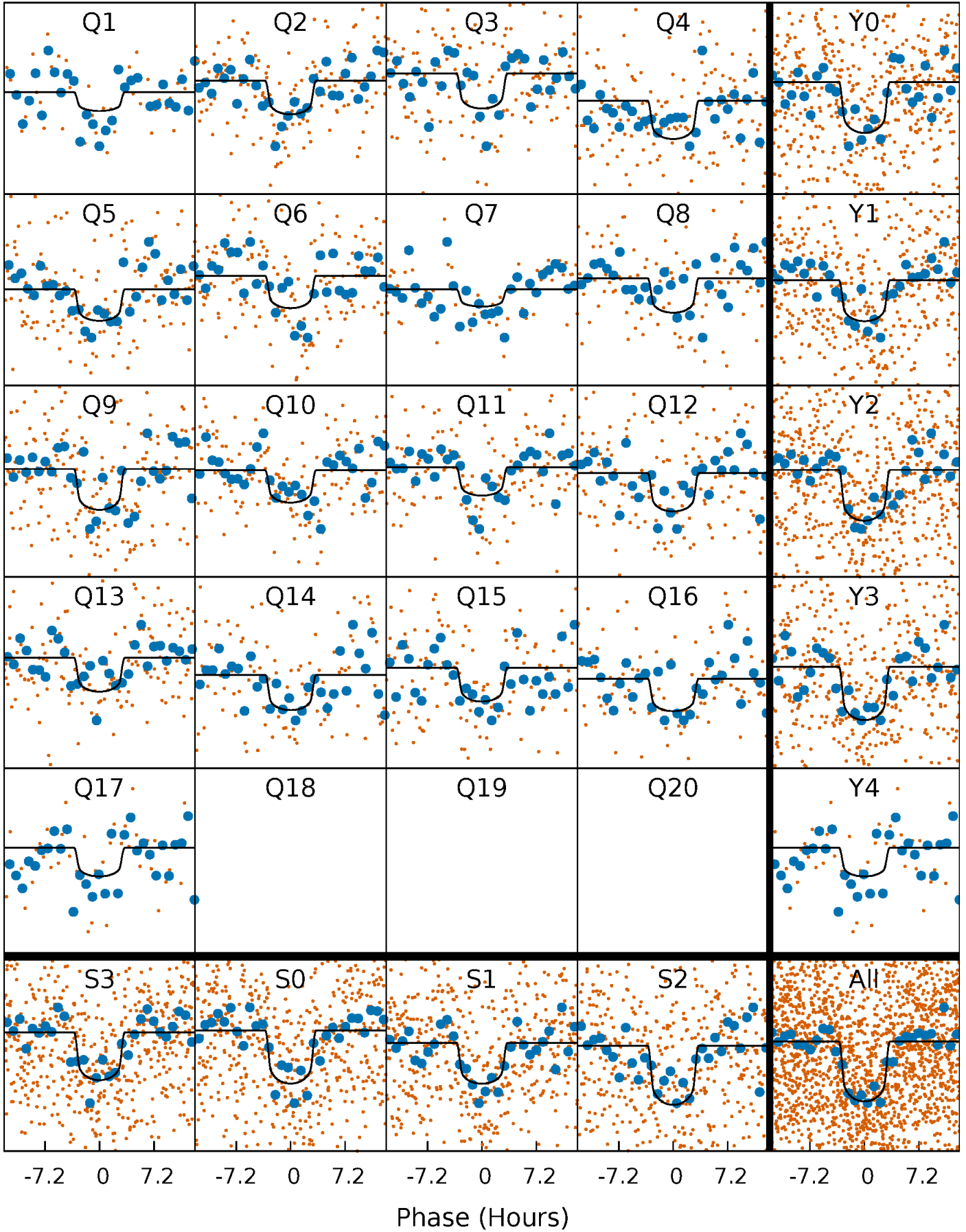
PDC Quarter-Phased Transit Curves

TCE 011401767-02 P= 30.090000 Days $T_0=149.063366$ (BKJD)



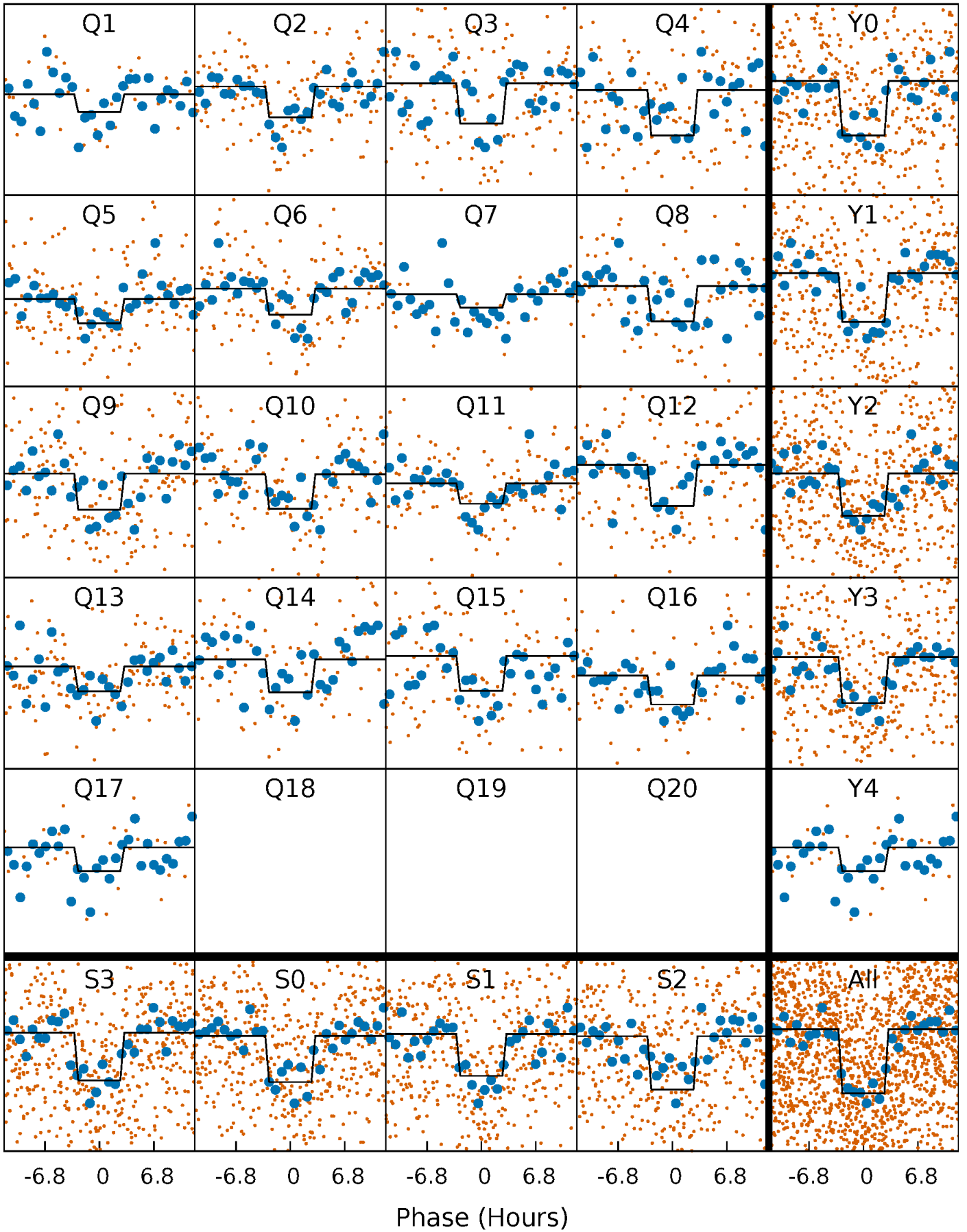
DV Quarter-Phased Transit Curves

TCE 011401767-02 P= 30.090000 Days $T_0=149.063366$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

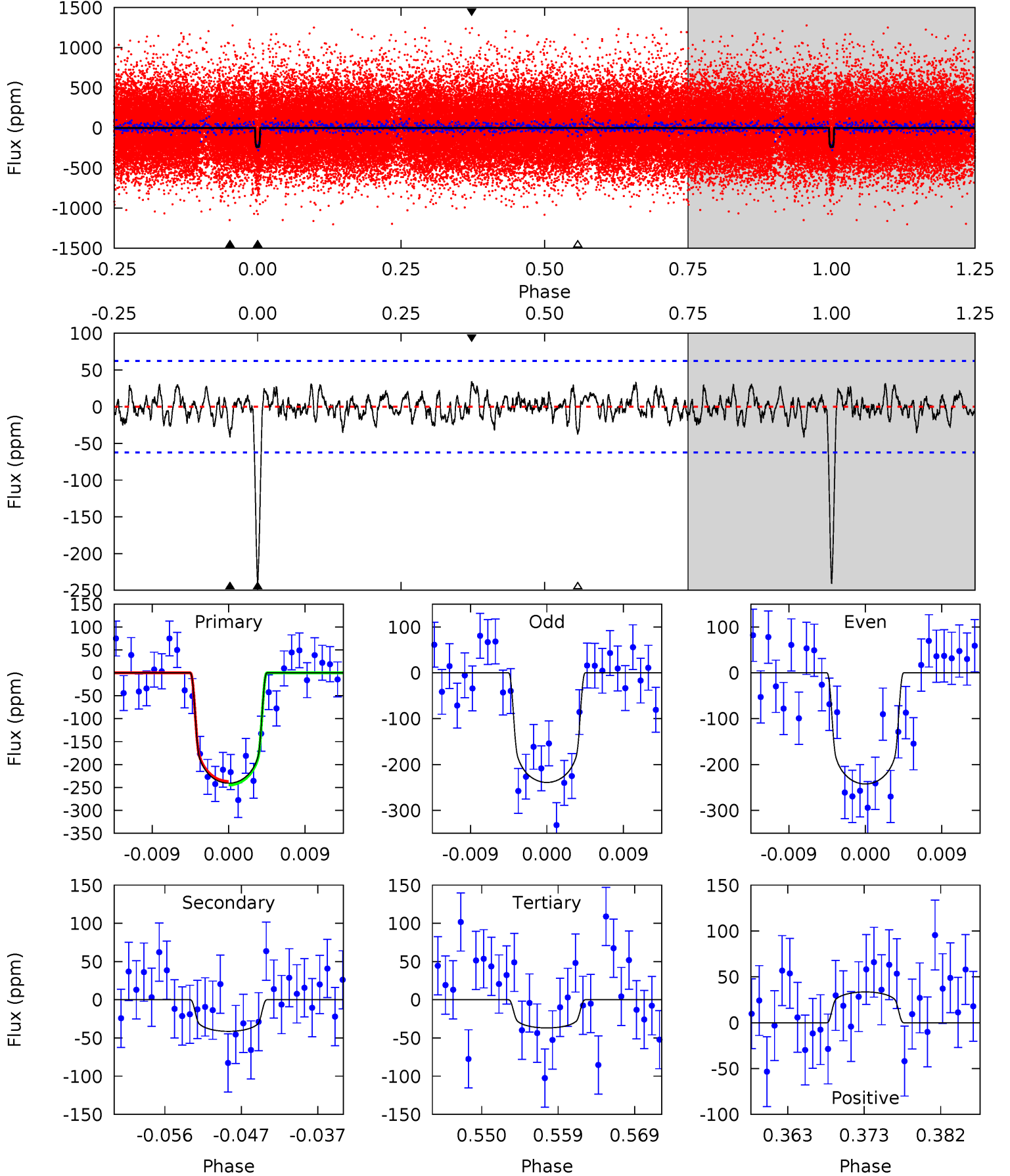
TCE 011401767-02 P= 30.090060 Days $T_0=149.063485$ (BKJD)



DV Model-Shift Uniqueness Test

011401767-02, $P = 30.090000$ Days, $E = 118.973366$ Days

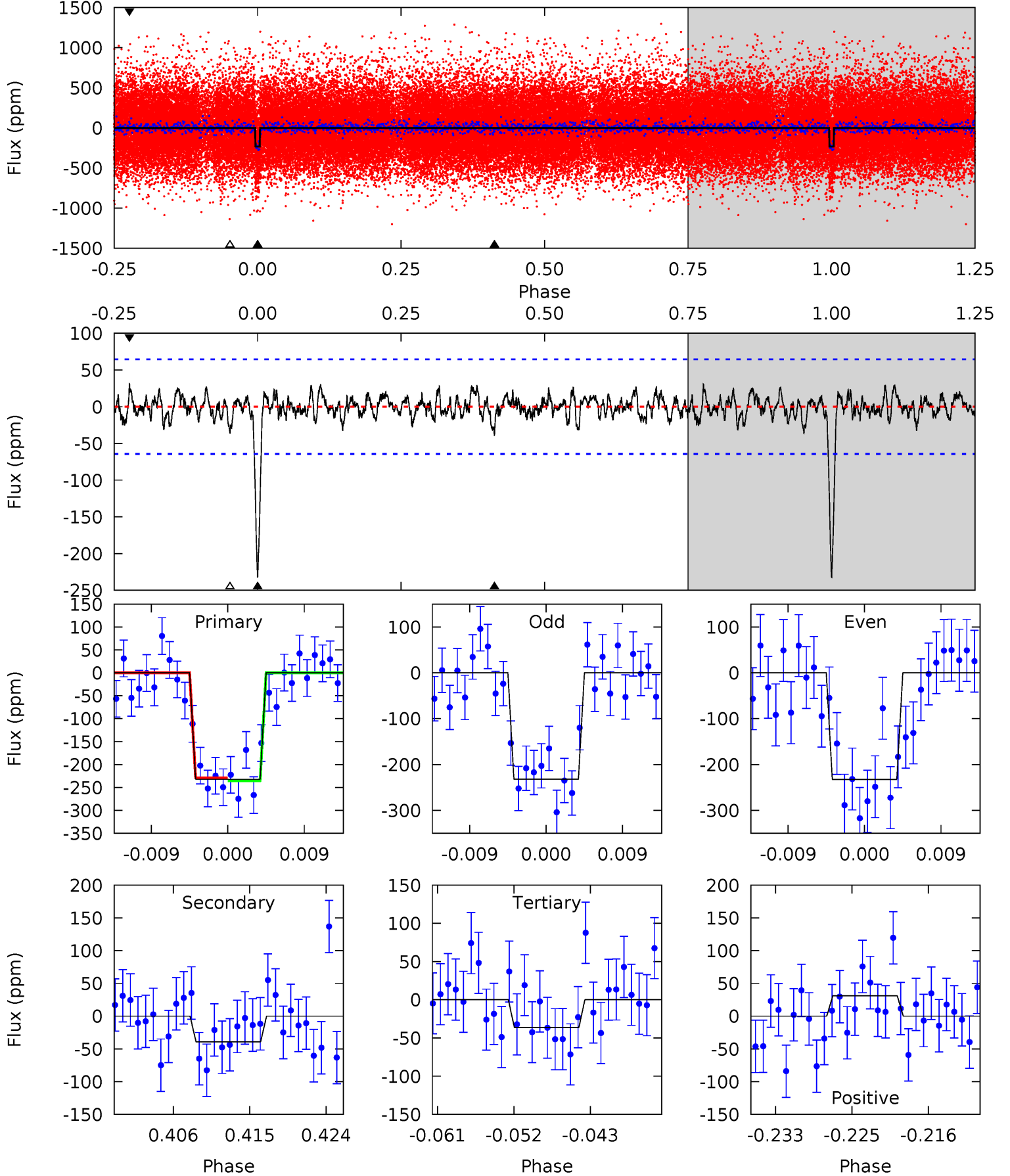
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	3.34	2.98	2.71	5.04	2.60	1.03	16.5	16.8	0.36	0.63	0.14	1.02	0.12	0.32



Alt Model-Shift Uniqueness Test

011401767-02, P = 30.090060 Days, E = 118.973425 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	3.09	2.85	2.43	5.05	2.63	0.92	15.4	15.8	0.24	0.66	0.02	0.93	0.12	0.25



Stellar Parameters For KIC 011401767

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6056^{+81}_{-90}	$4.332^{+0.080}_{-0.120}$	$0.160^{+0.150}_{-0.150}$	$1.209^{+0.202}_{-0.134}$	$1.147^{+0.076}_{-0.083}$	$0.915^{+0.318}_{-0.331}$
	+1%/-1%	+2%/-3%	+94%/-94%	+17%/-11%	+7%/-7%	+35%/-36%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011401767-02 / KOI 2195.02

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-41 ± 12	$2.21^{+0.59}_{-0.61}$	925^{+43}_{-32}	4048^{+532}_{-385}	182^{+167}_{-83}
Alt.	-39 ± 13	$2.02^{+0.60}_{-0.52}$	928^{+40}_{-35}	4163^{+605}_{-430}	205^{+206}_{-97}

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 $A_{obs} \gg 1.0$

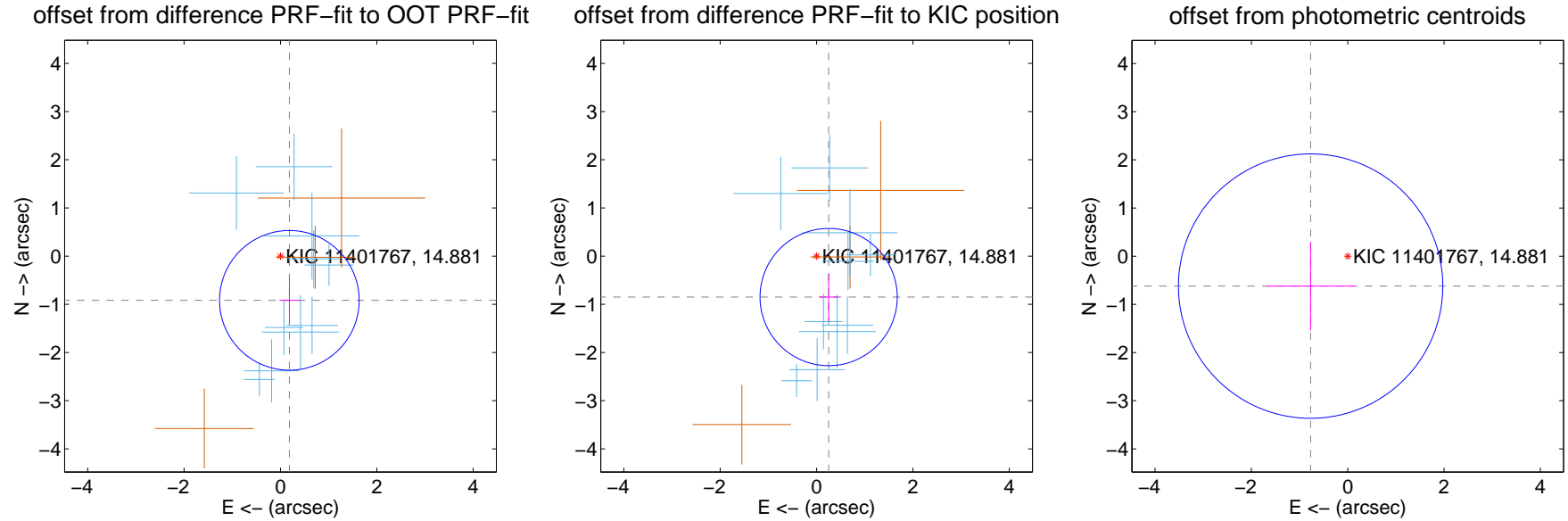
DV Centroid Data

Supplemental centroid analysis for 011401767-02. Kepler magnitude: 14.88. Transit SNR 15.64

There are 10 quarters with good PRF difference image offsets

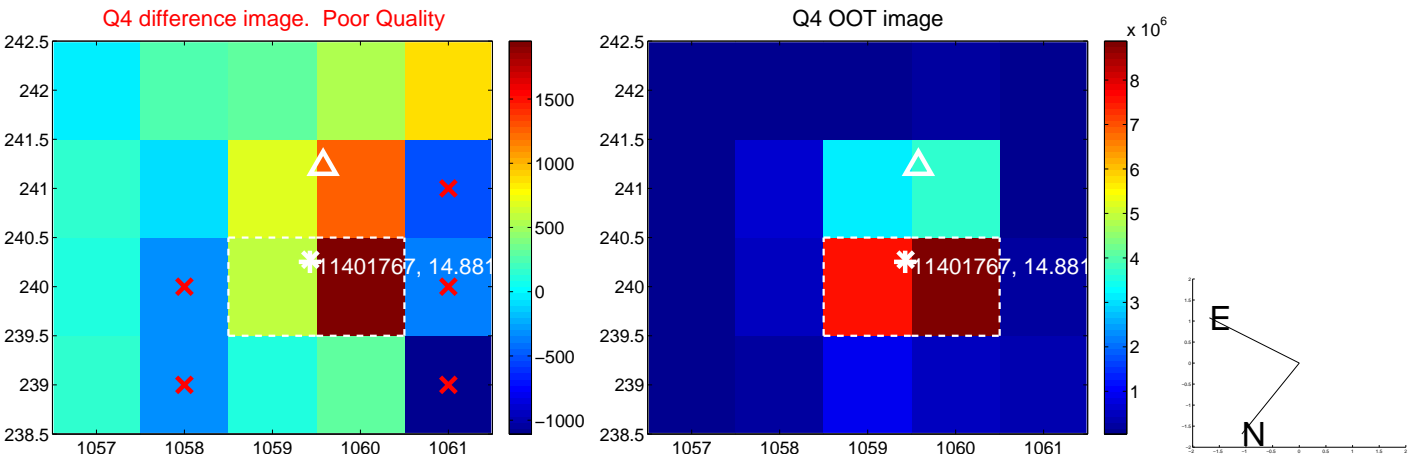
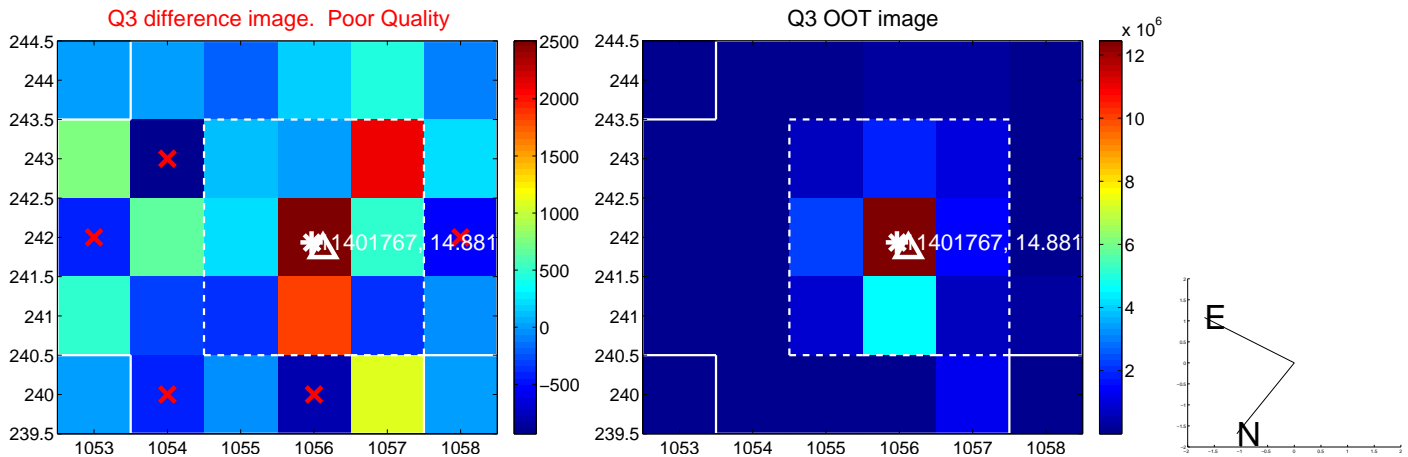
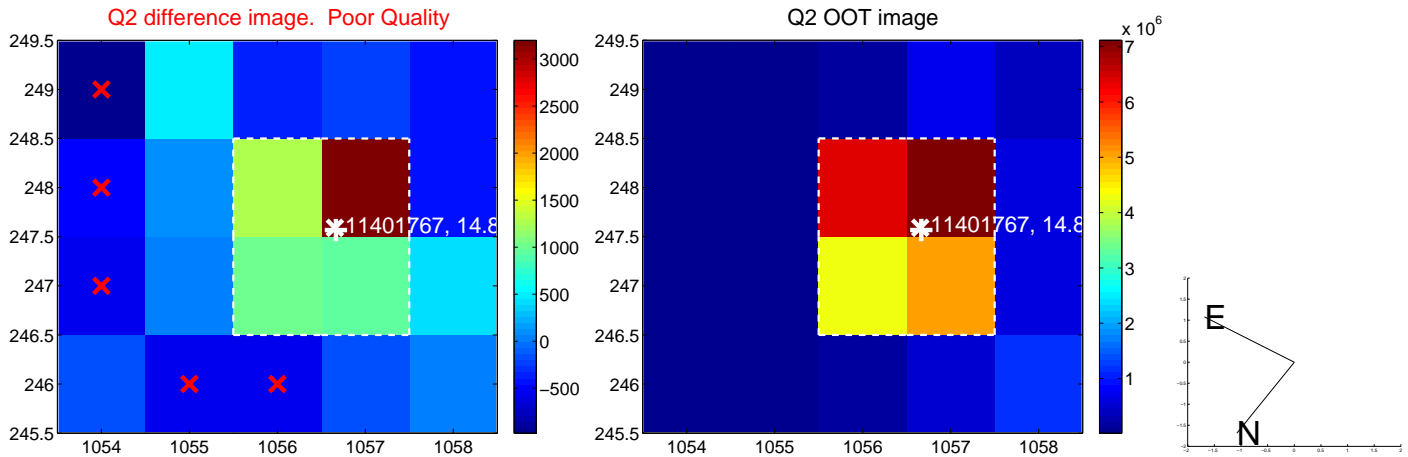
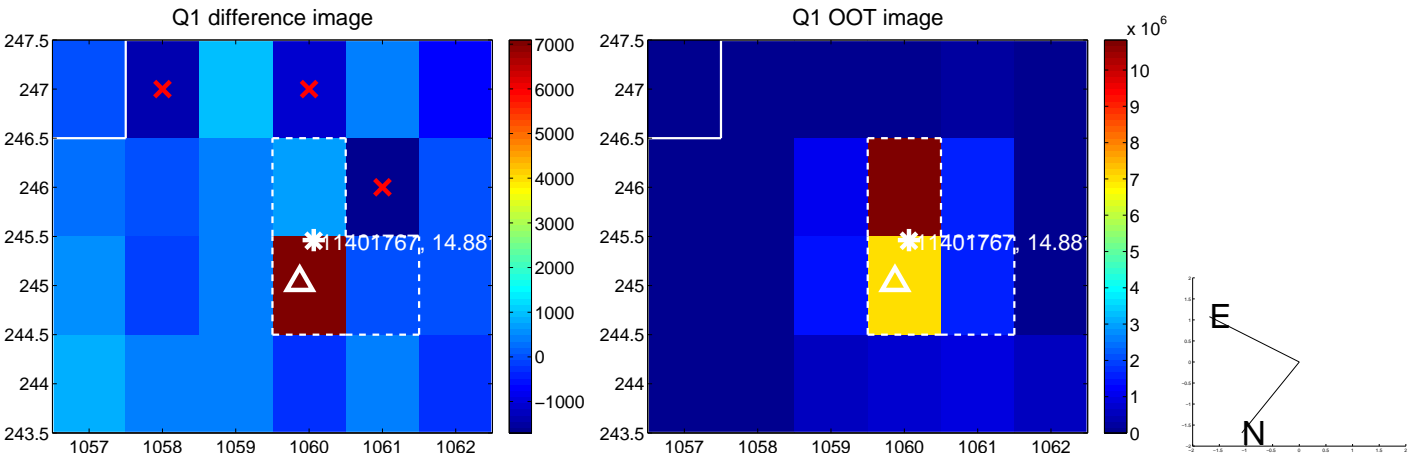
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.936 ± 0.483	1.94	-0.185 ± 0.210	-0.917 ± 0.491
PRF-fit source offset from KIC position	0.886 ± 0.475	1.87	-0.250 ± 0.198	-0.850 ± 0.491
photometric centroid source offset	0.99 ± 0.91	1.08	0.77 ± 0.91	-0.62 ± 0.92

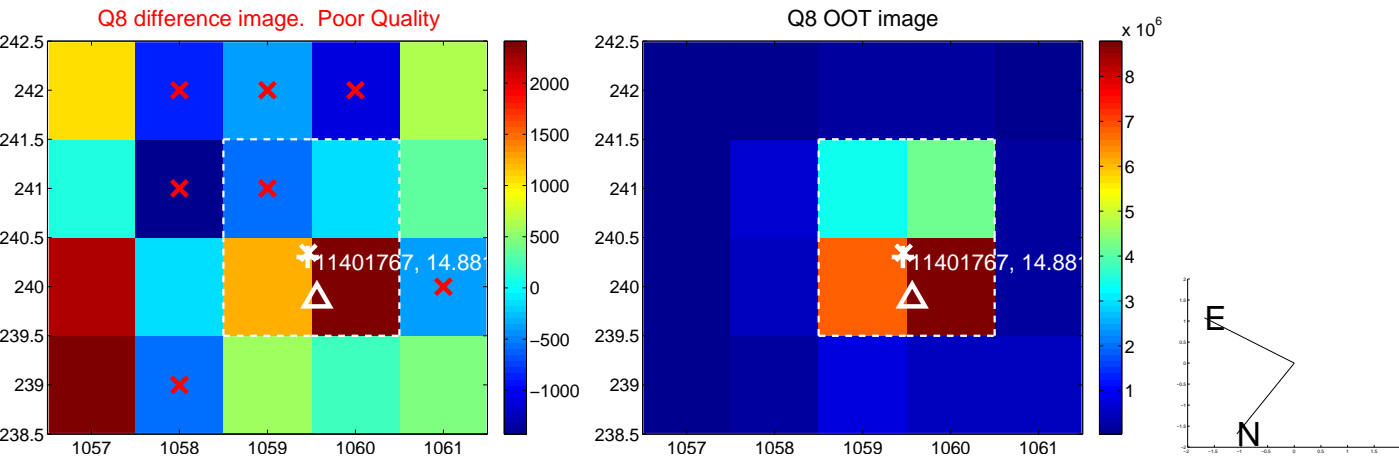
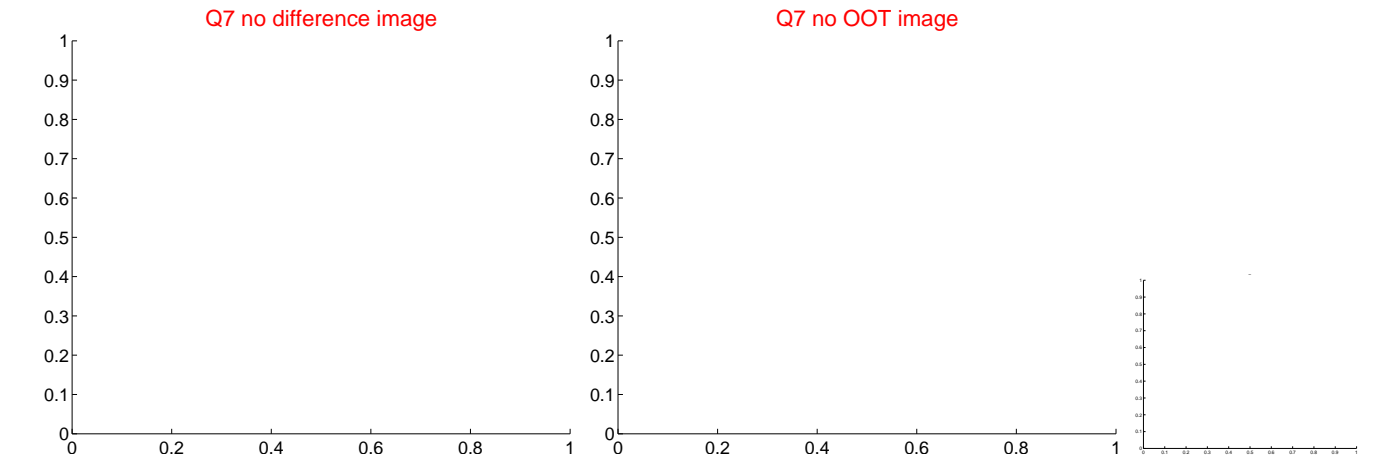
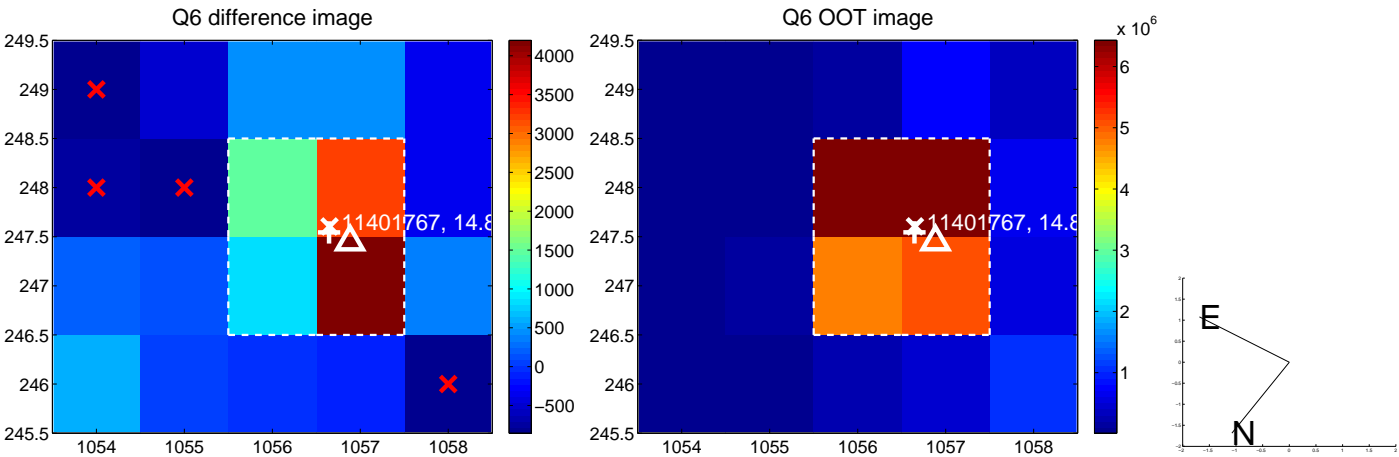
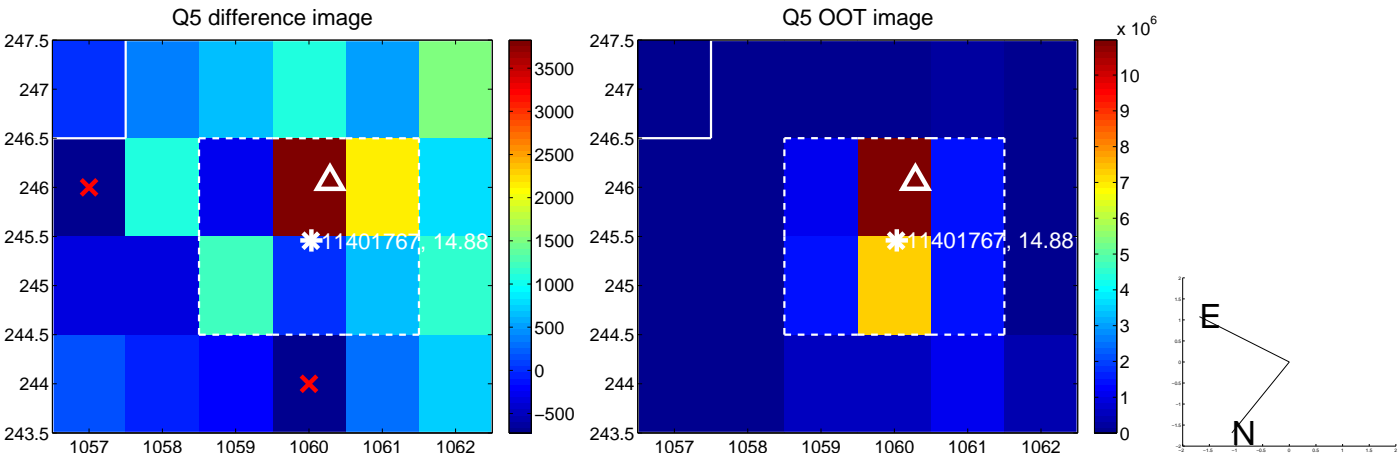


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

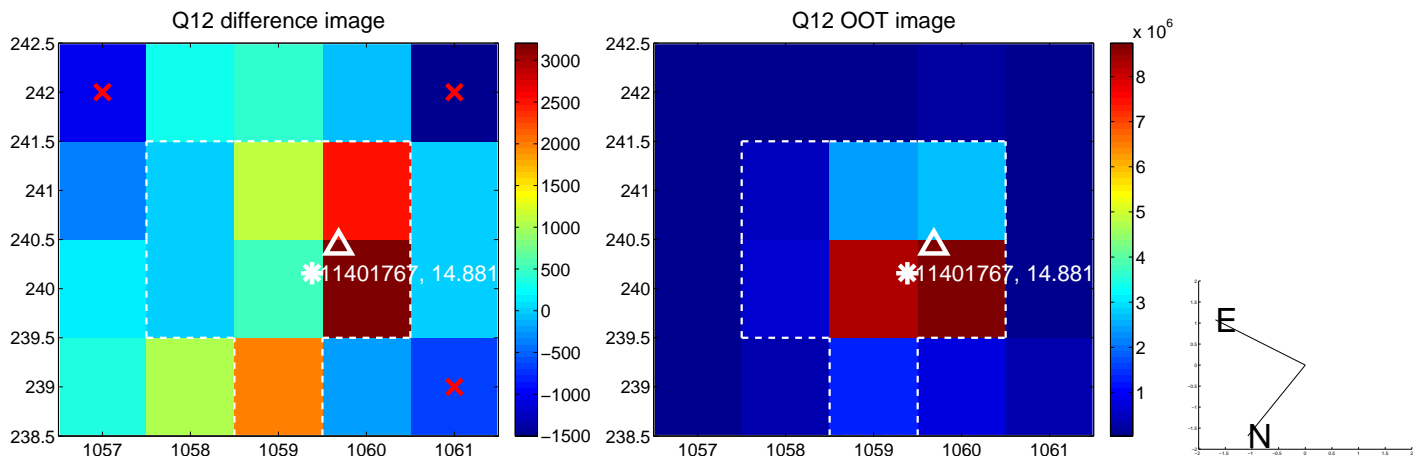
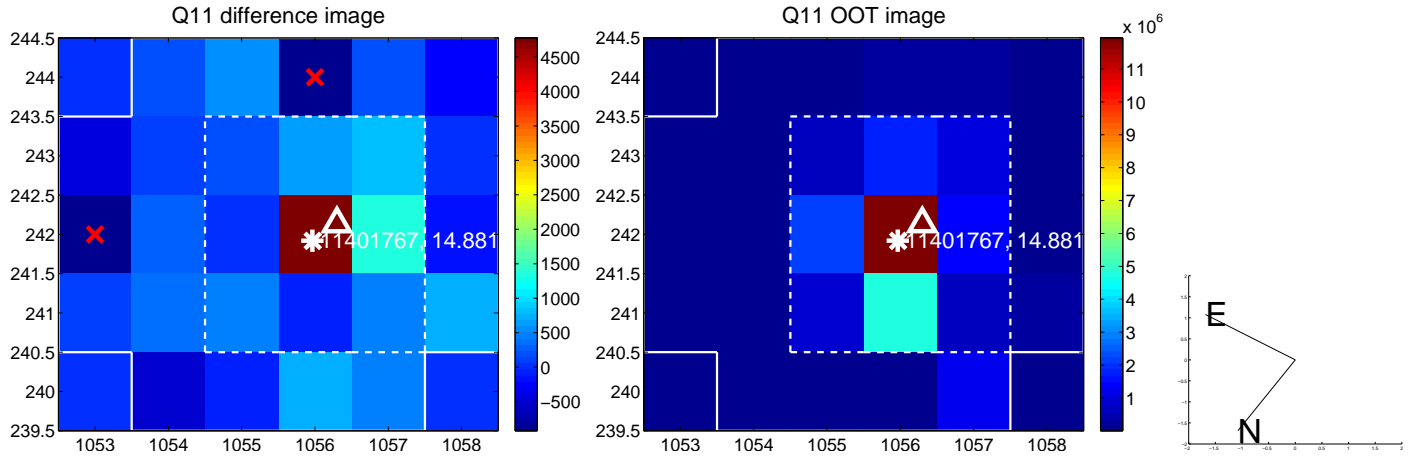
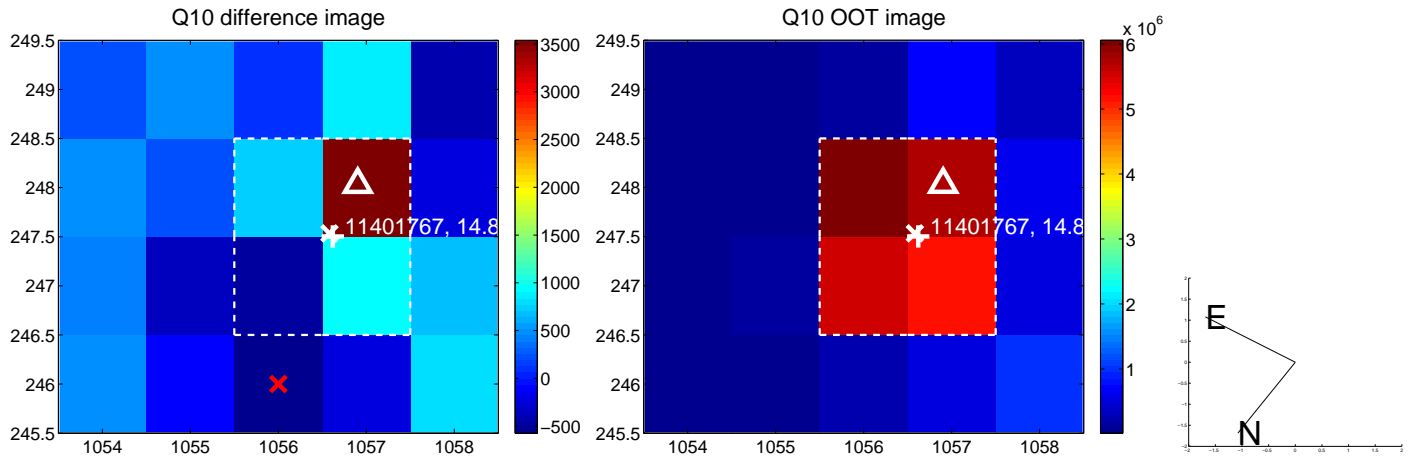
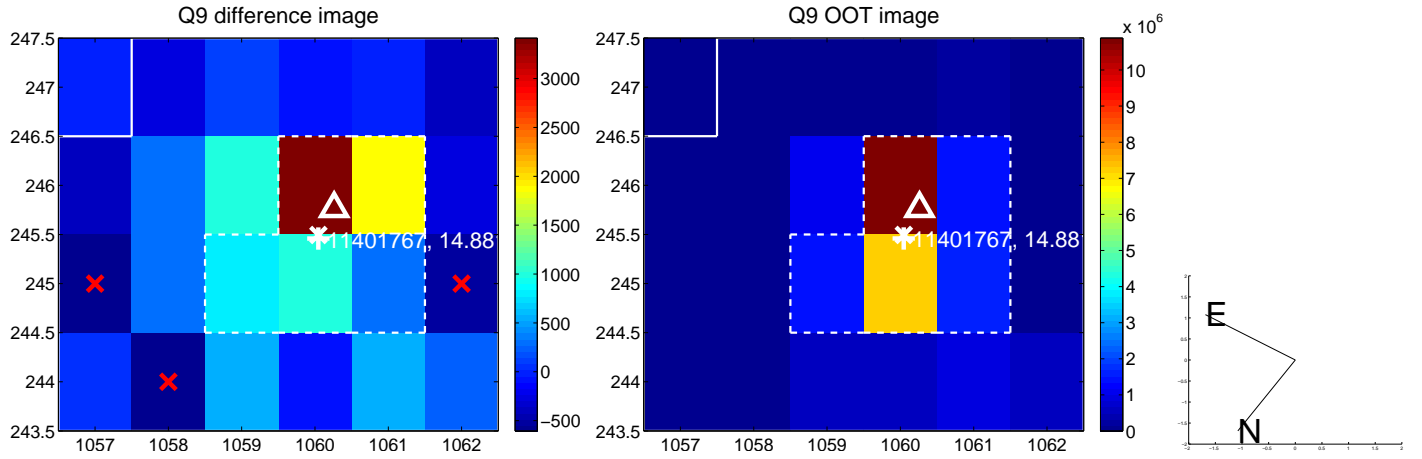
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



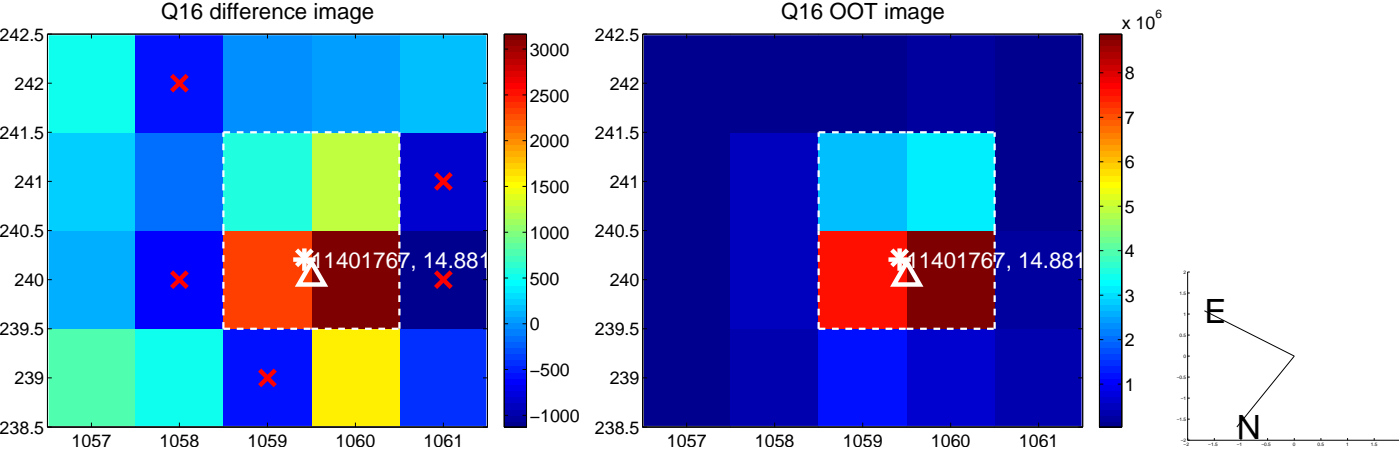
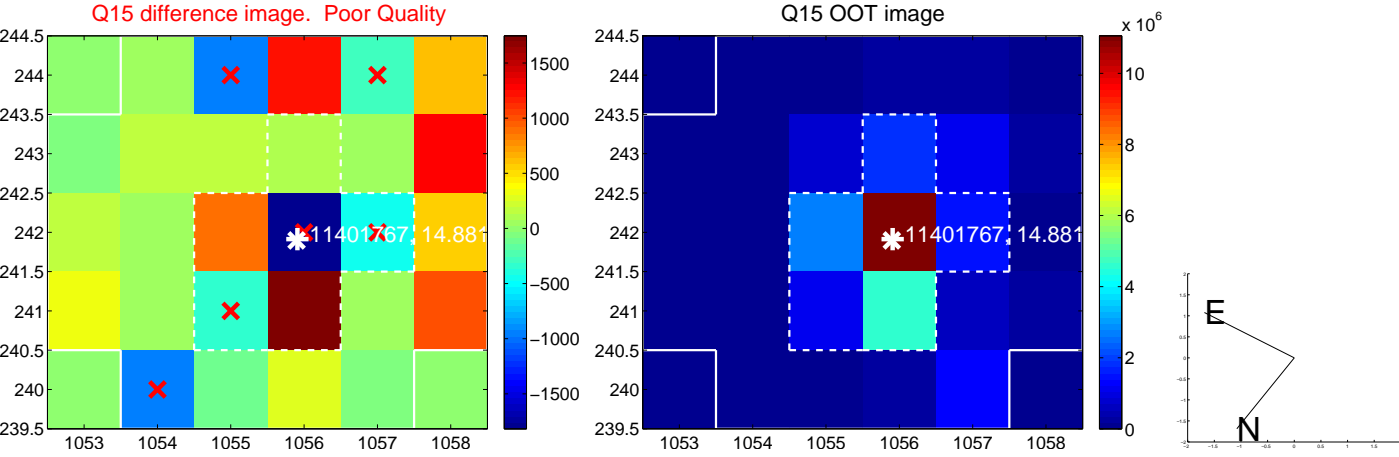
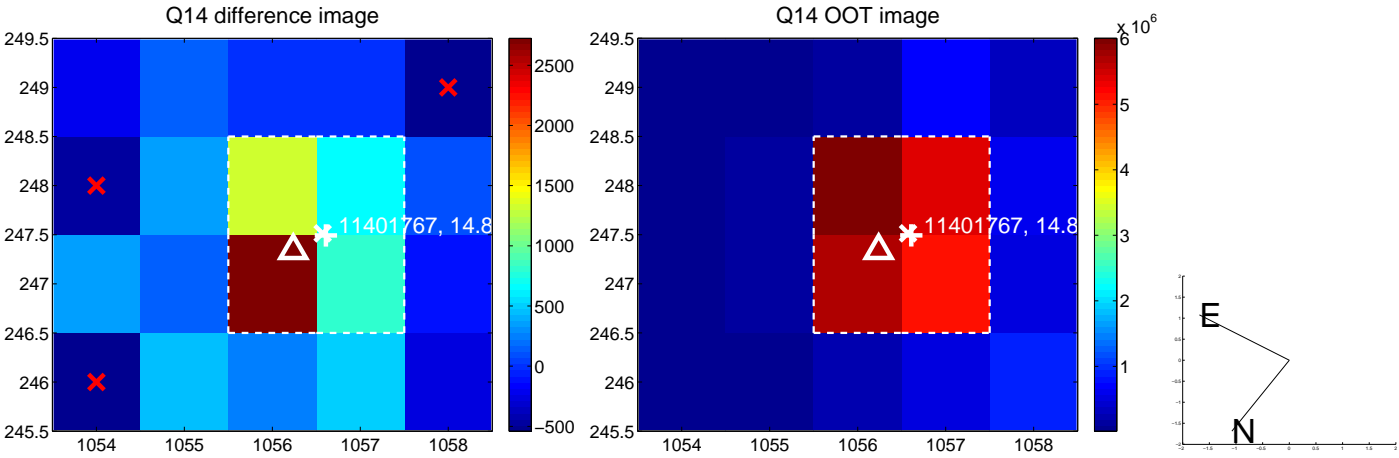
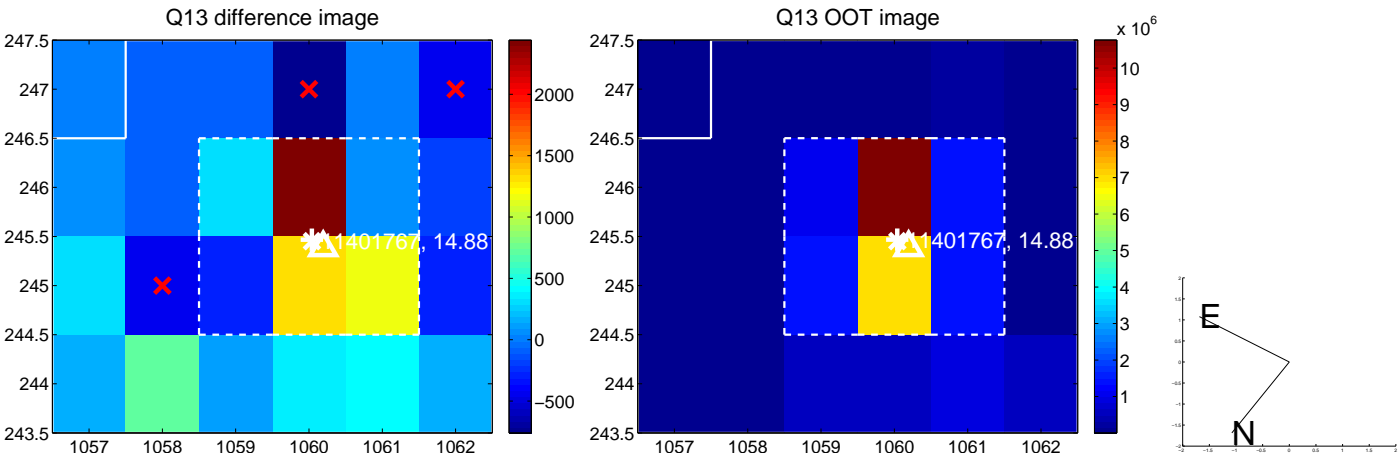
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



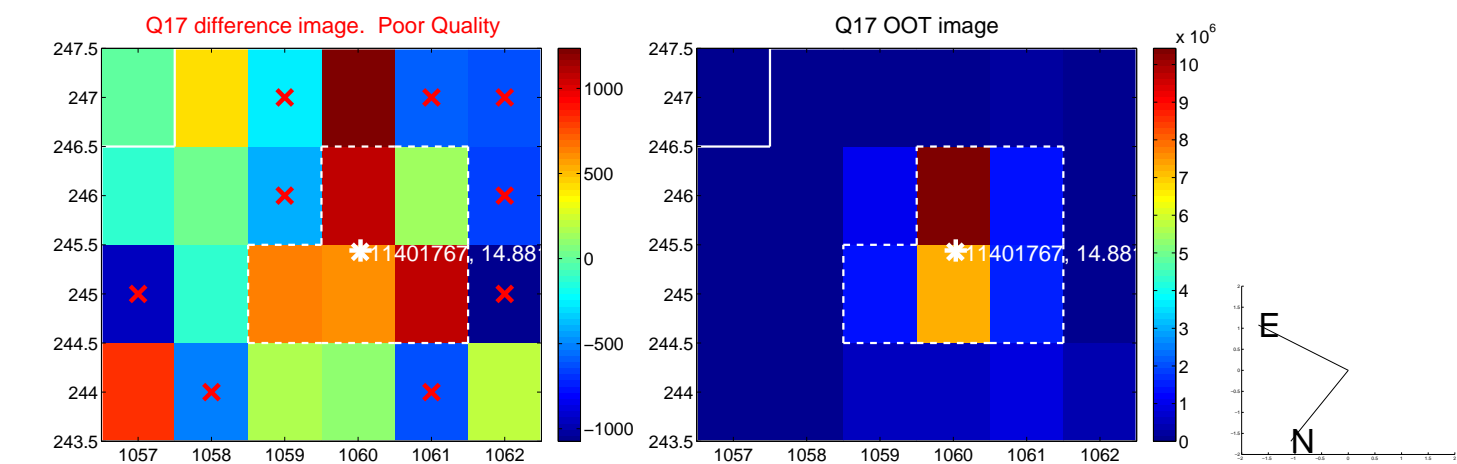
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



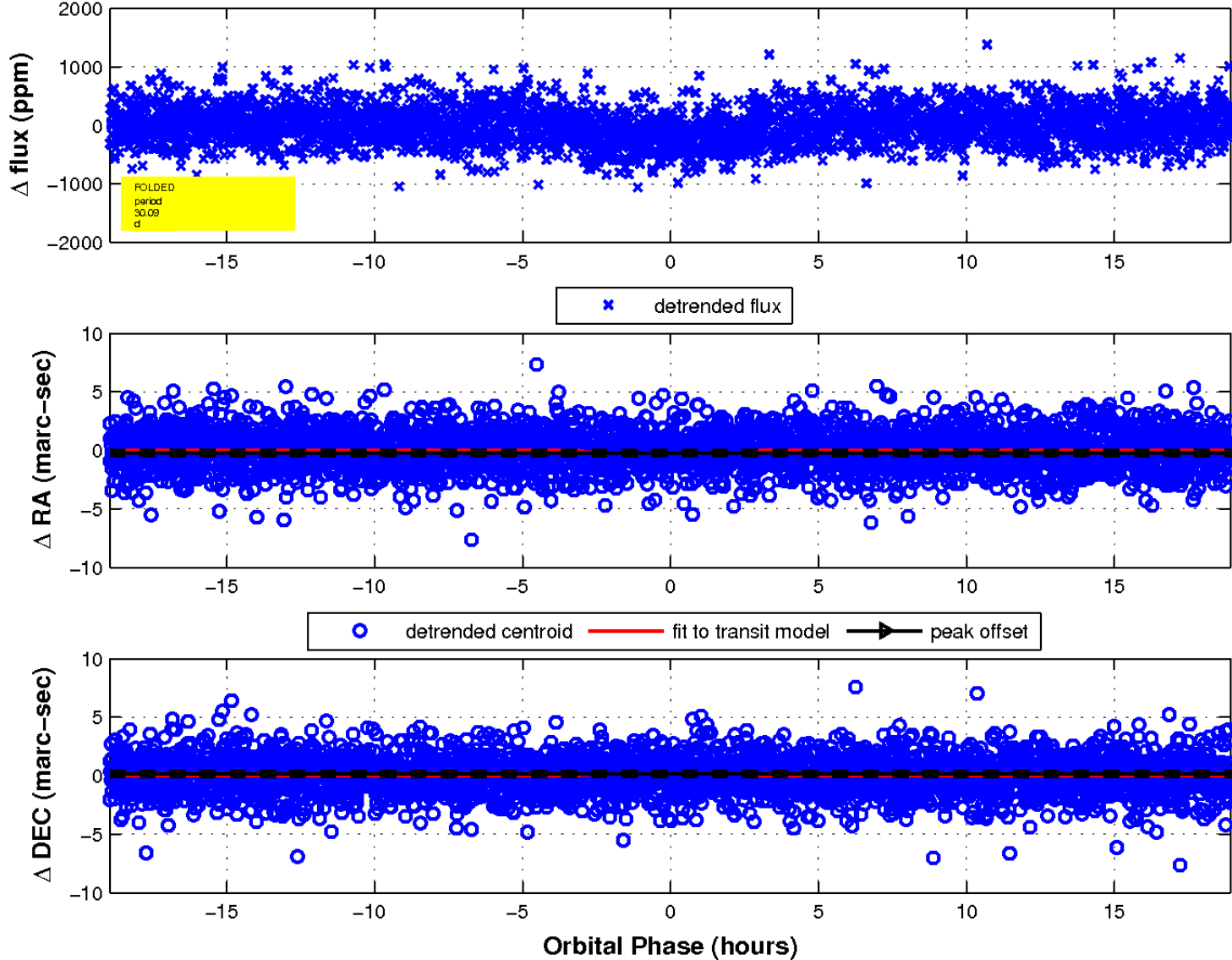
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

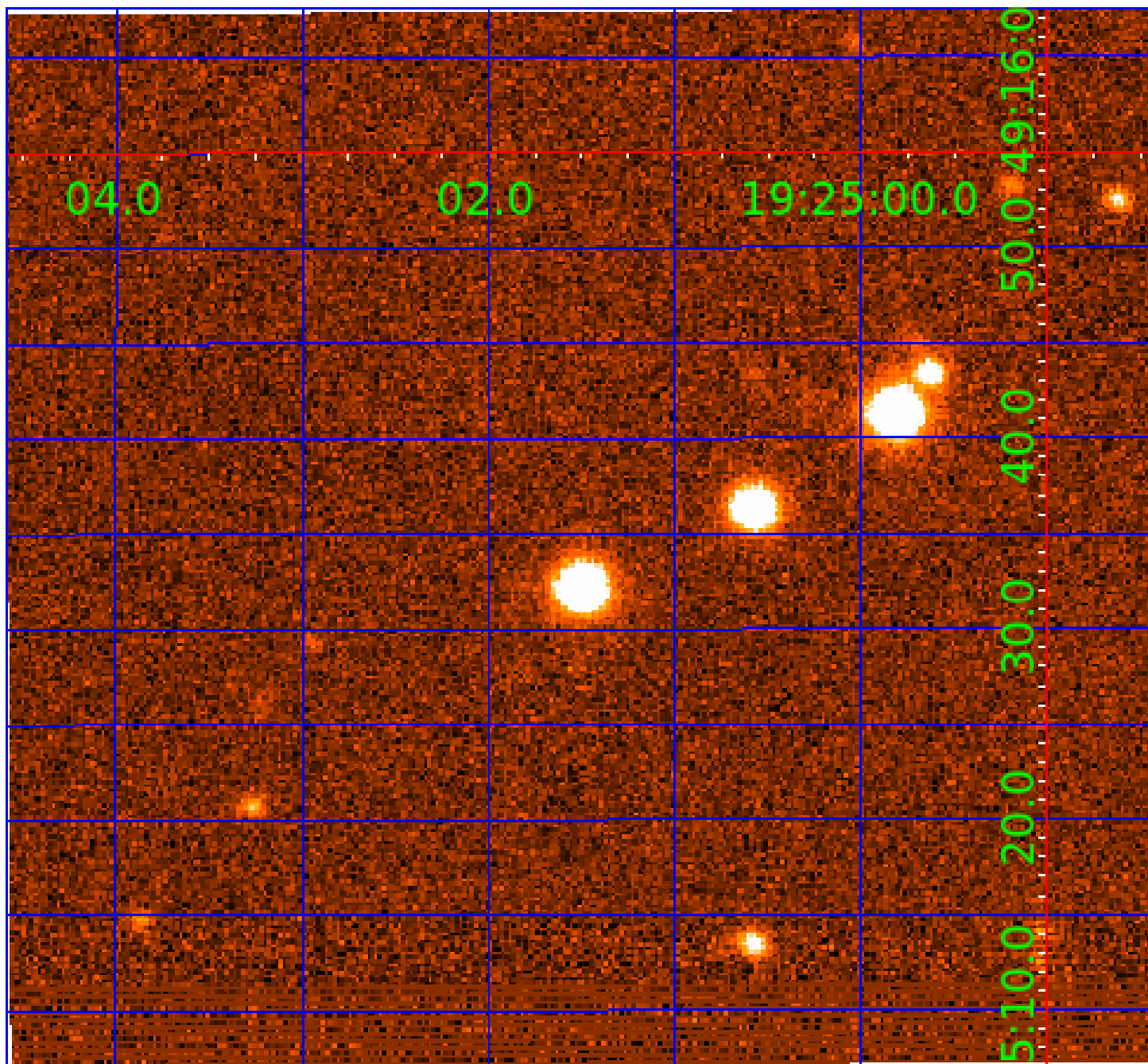


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 011401767

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})
011401767-01	OBS	2195.01	20.054625	136.561701	297.9	6.914	22.6	24.5	1.21	6056	2.52	77.08
011401767-02	OBS	2195.02	30.090000	149.063366	244.2	6.315	14.9	15.6	1.21	6056	2.15	44.88
011401767-03	OBS	2195.03	6.849638	134.683071	126.6	4.708	14.3	14.7	1.21	6056	1.59	322.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011401767-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011401767-02	OBS	PC	0.98	0	0	0	0	NO_COMMENT
011401767-03	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

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

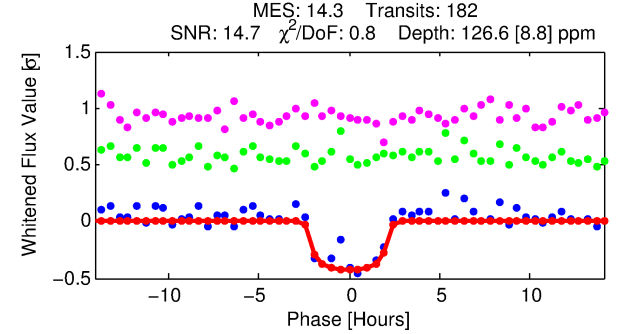
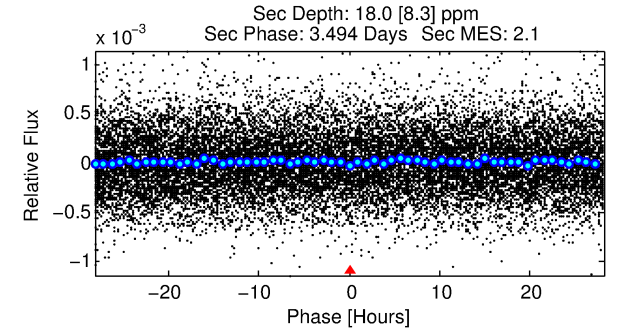
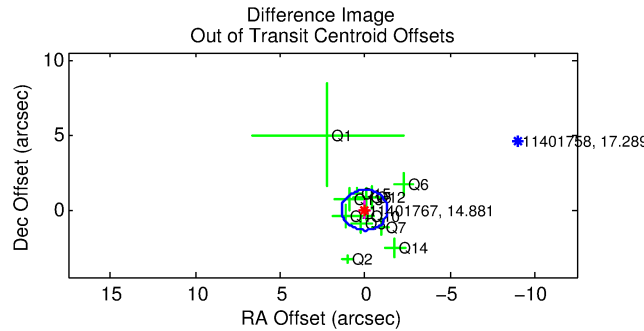
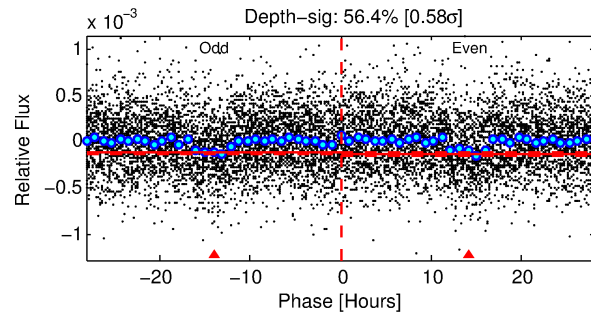
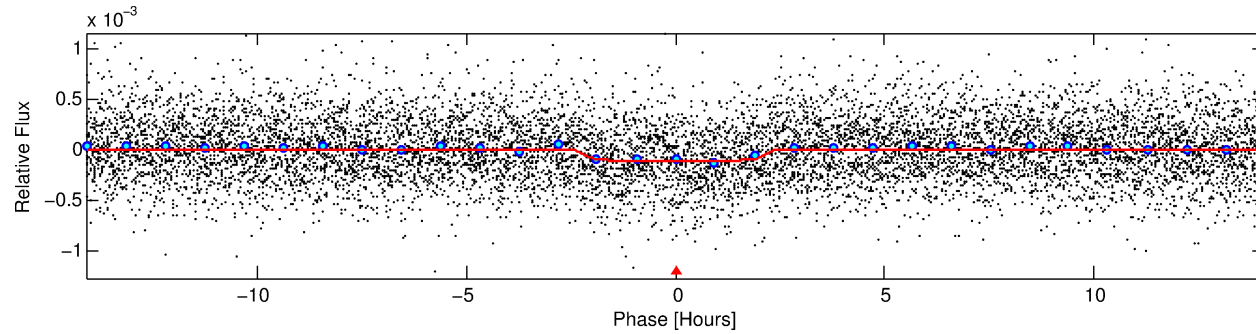
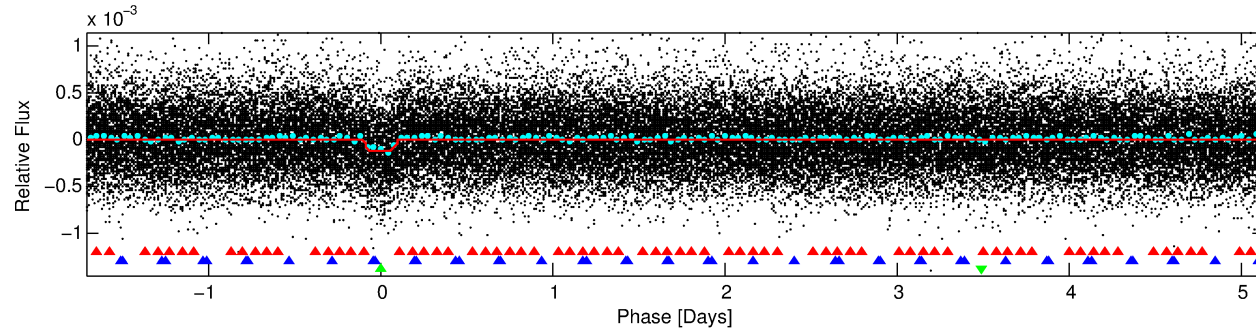
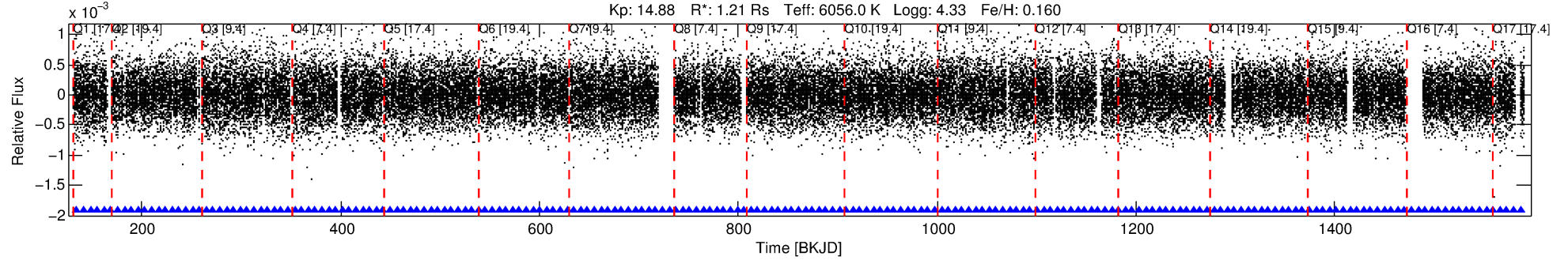
Ephemeris Match Information For 011401767-03

No Significant Match Found

DV One-Page Summary

KIC: 11401767 Candidate: 3 of 3 Period: 6.850 d
KOI: K02195.03 Name: Kepler-372b Corr: 0.957

Kp: 14.88 R*: 1.21 Rs Teff: 6056.0 K Logg: 4.33 Fe/H: 0.160



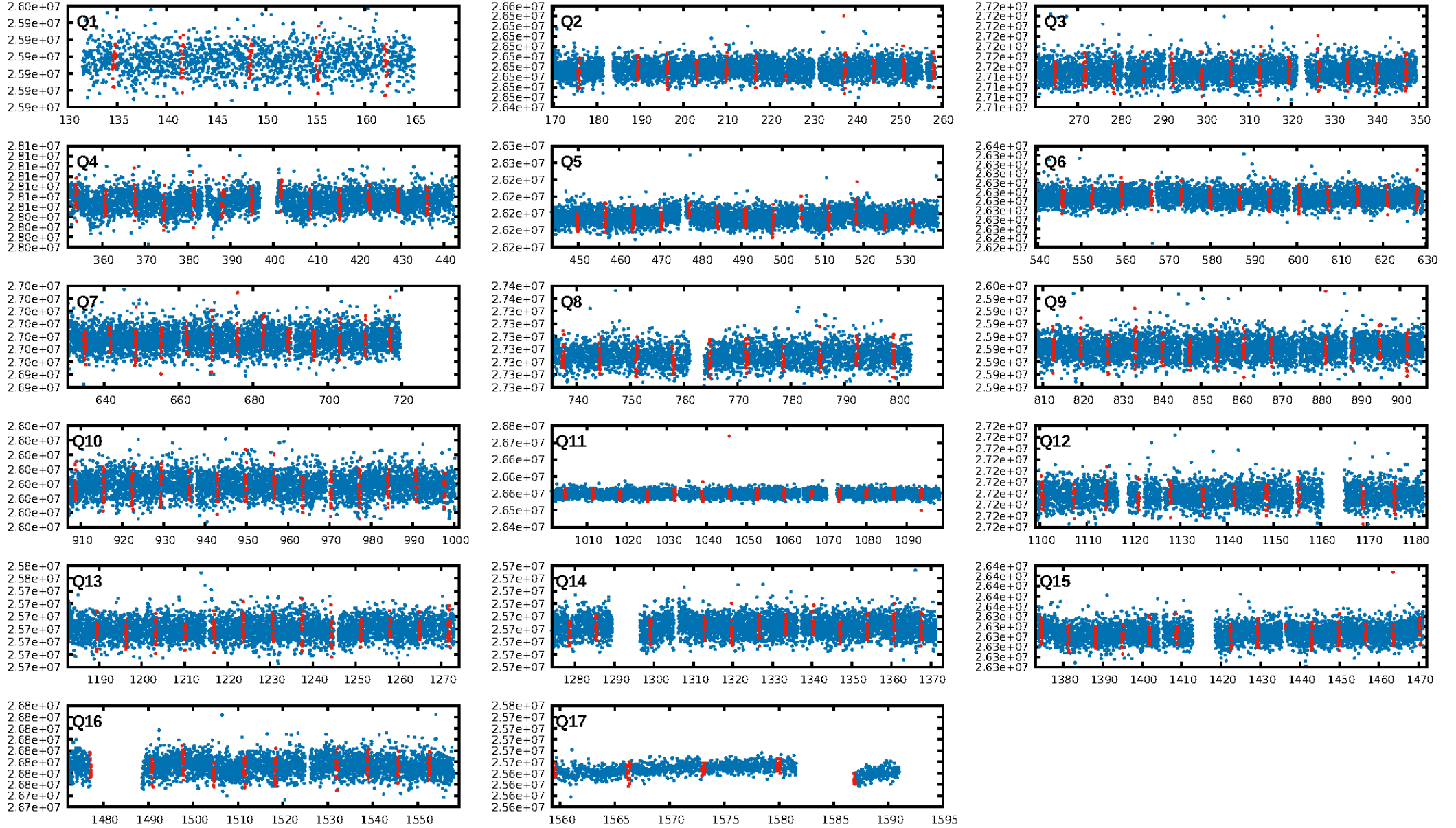
DV Fit Results:

Period = 6.84964 [0.00005] d
Epoch = 134.6831 [0.0059] BKJD
Rp/R* = 0.0120 [0.0044]
a/R* = 5.53 [9.84]
b = 0.89 [0.46]
Seff = 322.87 [72.10]
Teq = 1081 [60] K
Rp = 1.59 [0.64] Re
a = 0.0739 [0.0107] AU
Ag = 21.50 [19.18] [1.07σ]
Teffp = 3599 [781] K [3.22σ]

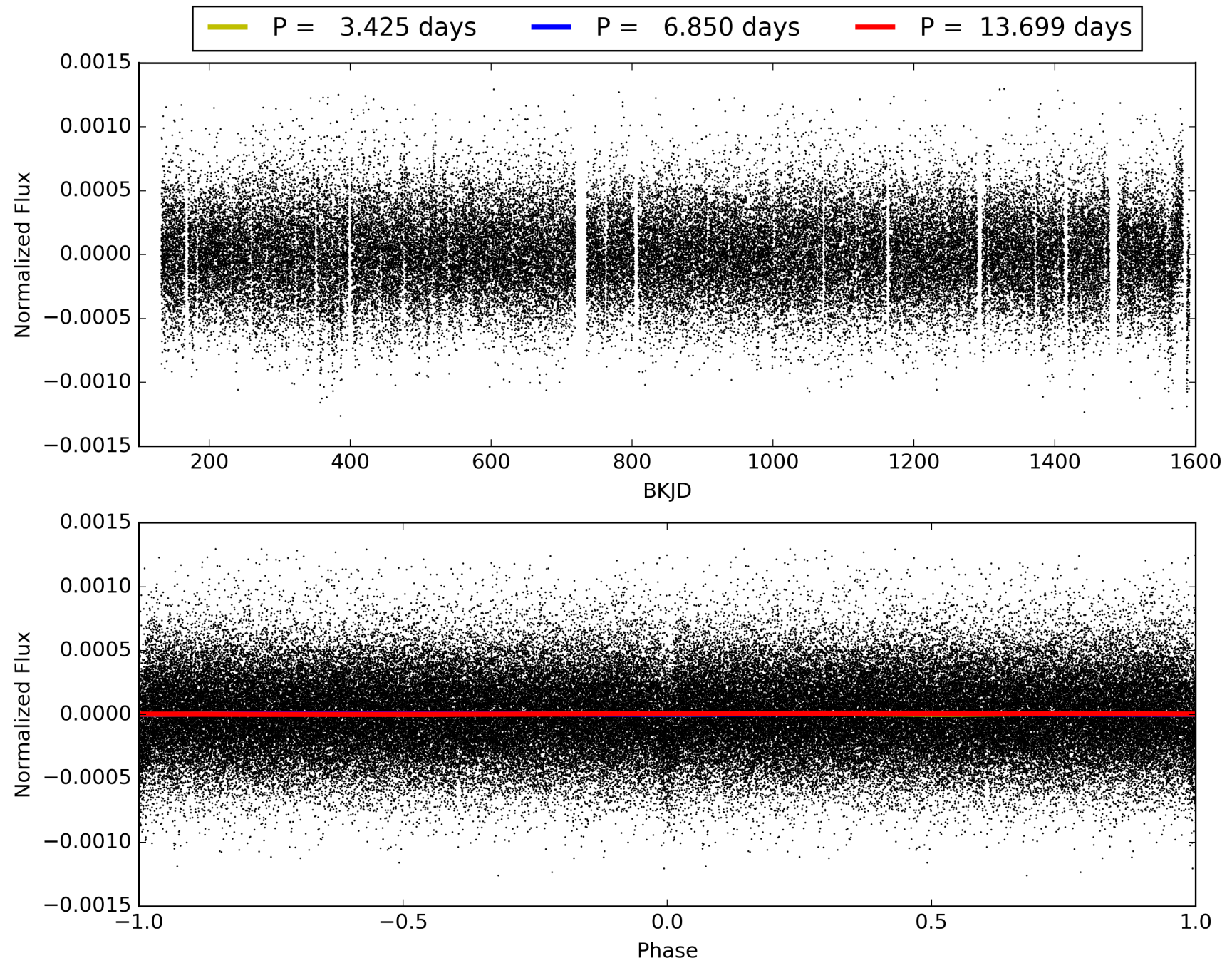
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [37.89σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.32e-45
RollingBand-fgt: 1.00 [172/172]
GhostDiagnostic-chr: 6.978
Centroid-sig: 41.2%
Centroid-so: 0.766 arcsec [0.81σ]
OotOffset-rm: 0.039 arcsec [0.09σ]
KicOffset-rm: 0.042 arcsec [0.08σ]
OotOffset-st: 4/3/2/3 [12]
KicOffset-st: 4/3/2/3 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011401767-03, PDC Light Curves

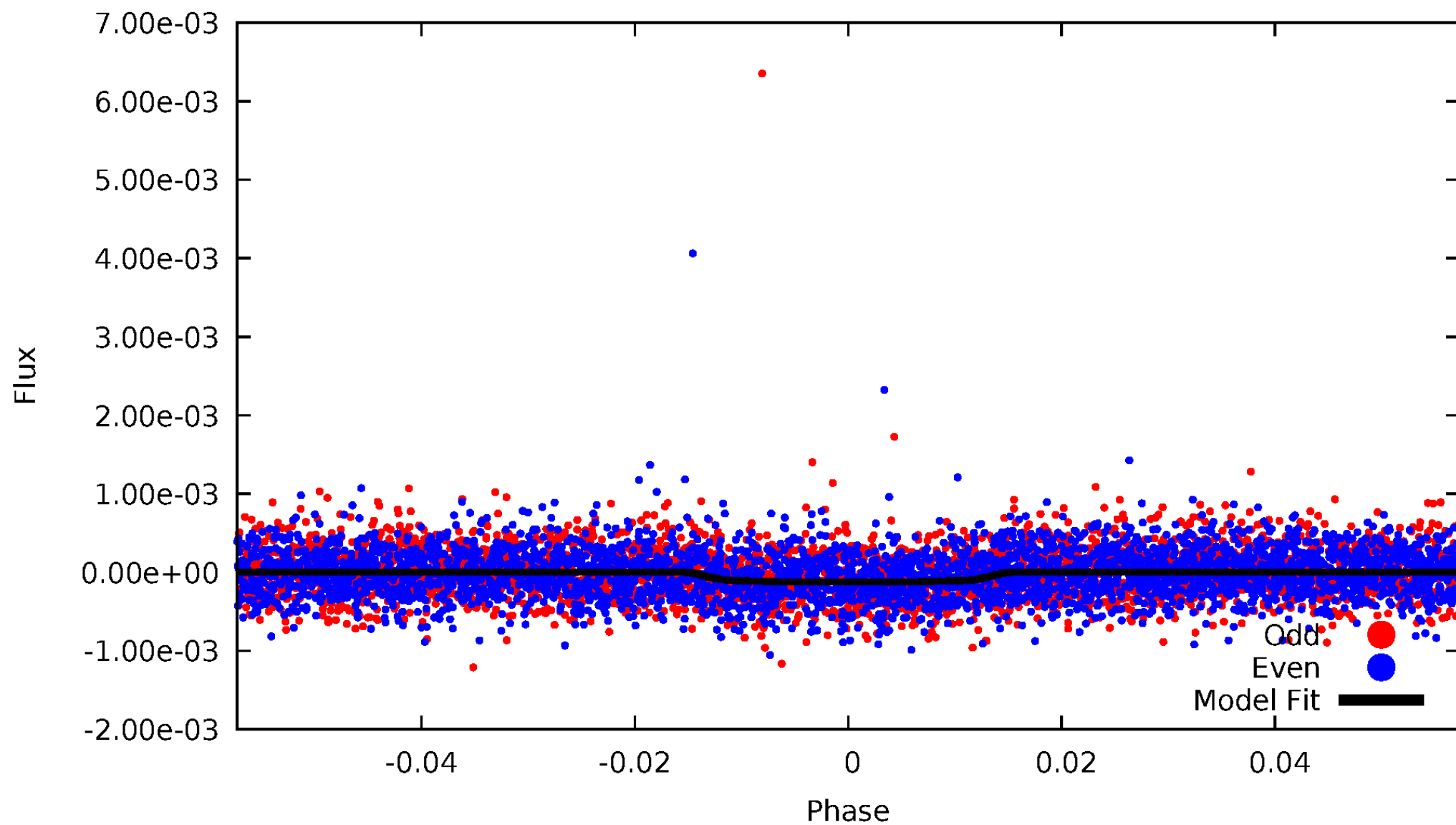


TCE 011401767-03



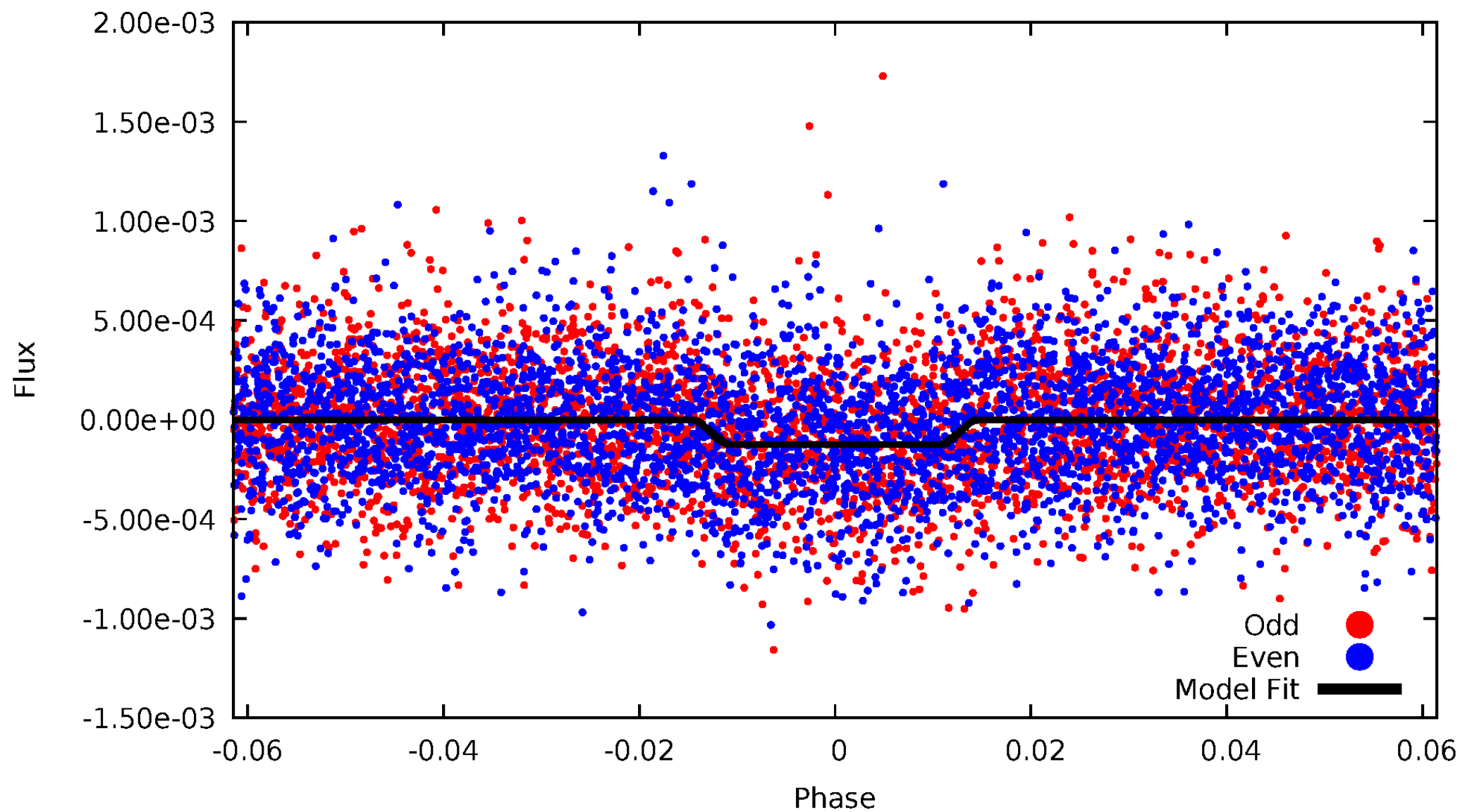
DV Odd/Even

TCE 011401767-03

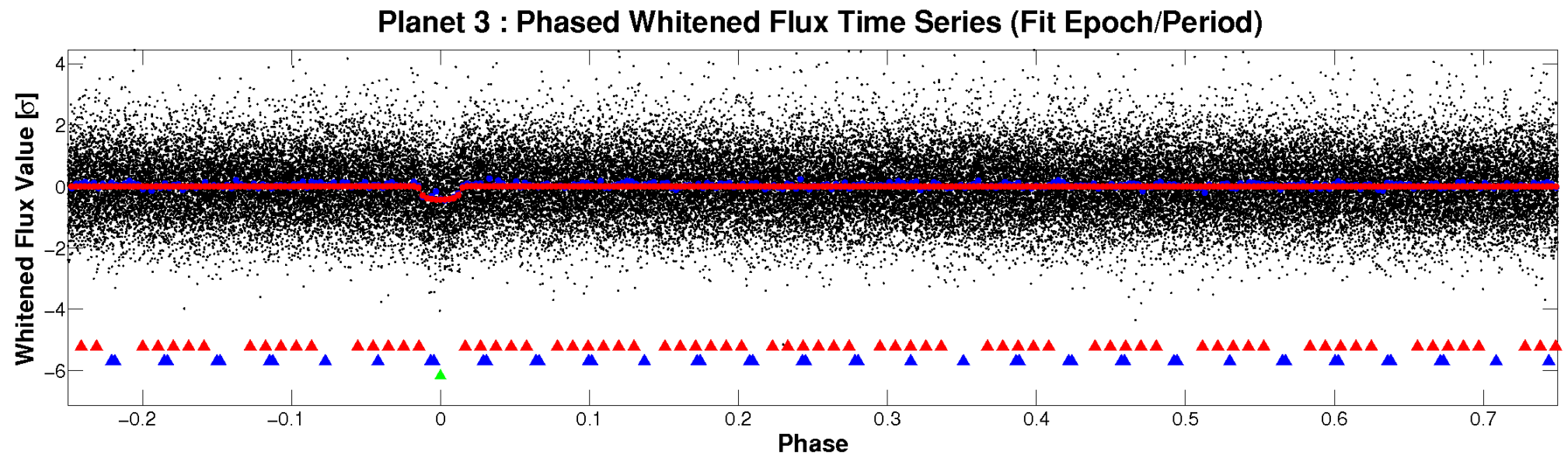
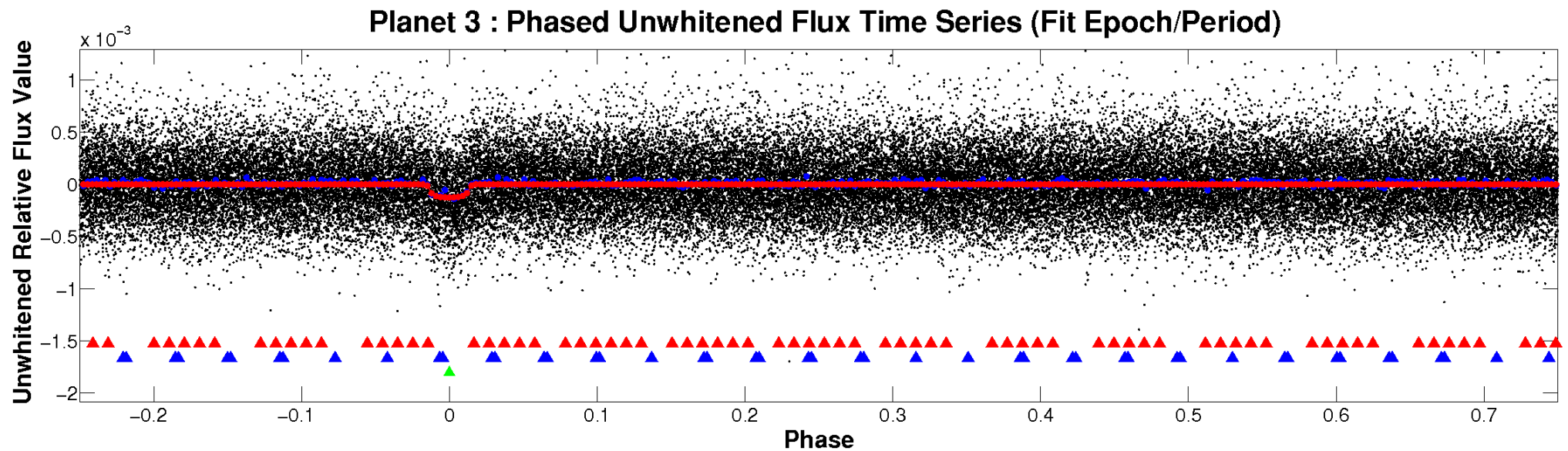


ALT Odd/Even

TCE 011401767-03

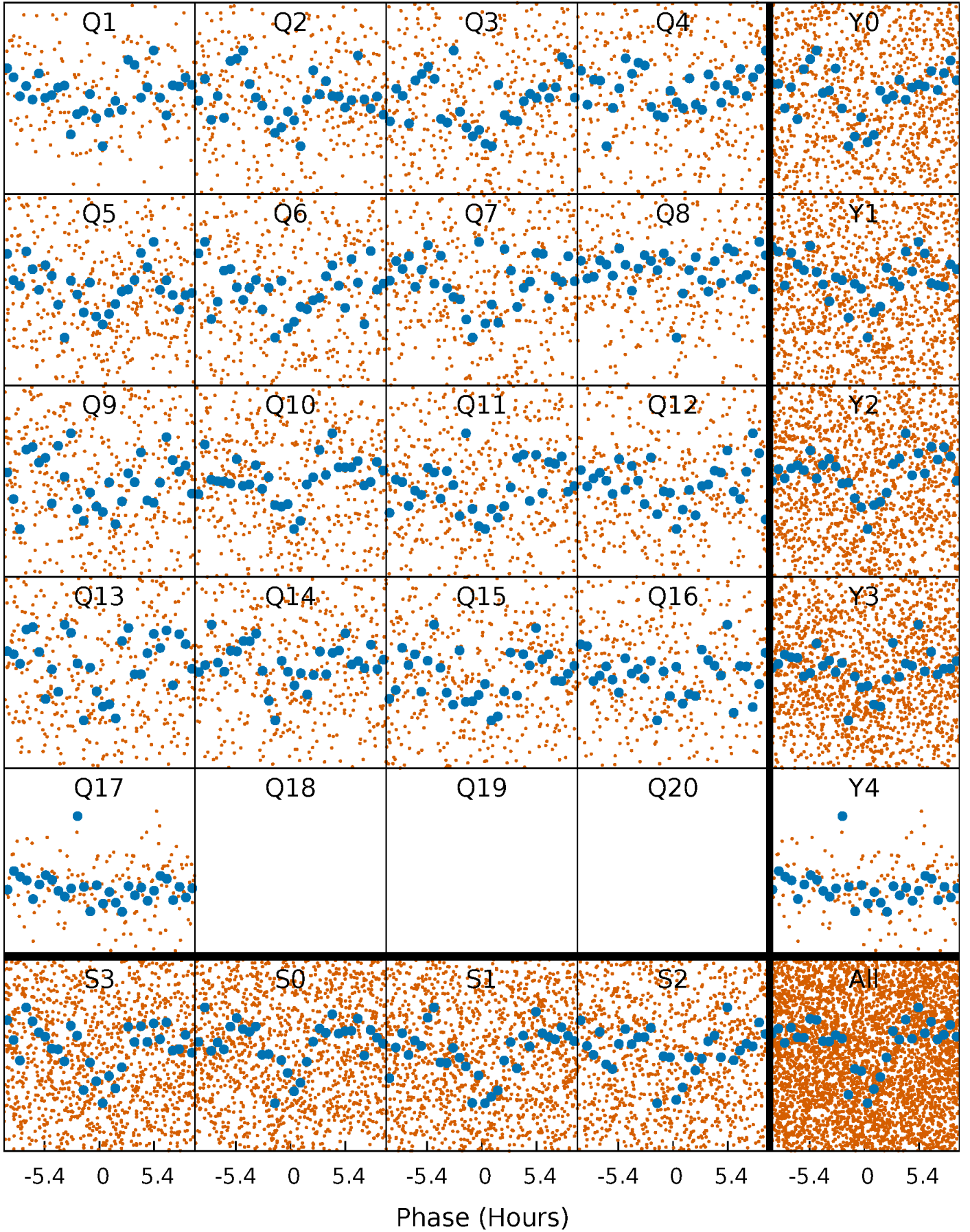


Non-Whitened Vs. Whitened Light Curve



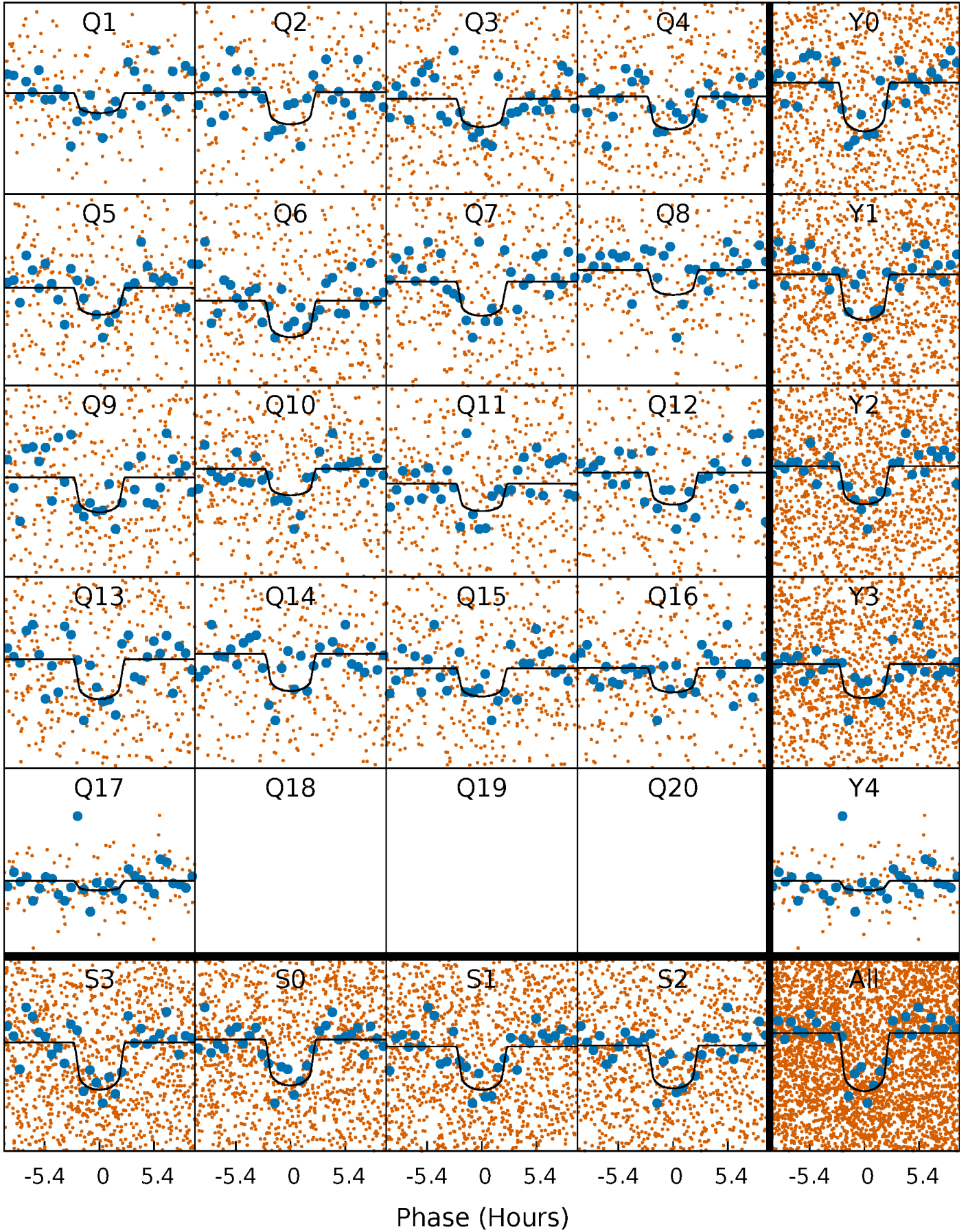
PDC Quarter-Phased Transit Curves

TCE 011401767-03 P= 6.849638 Days $T_0=134.683071$ (BKJD)



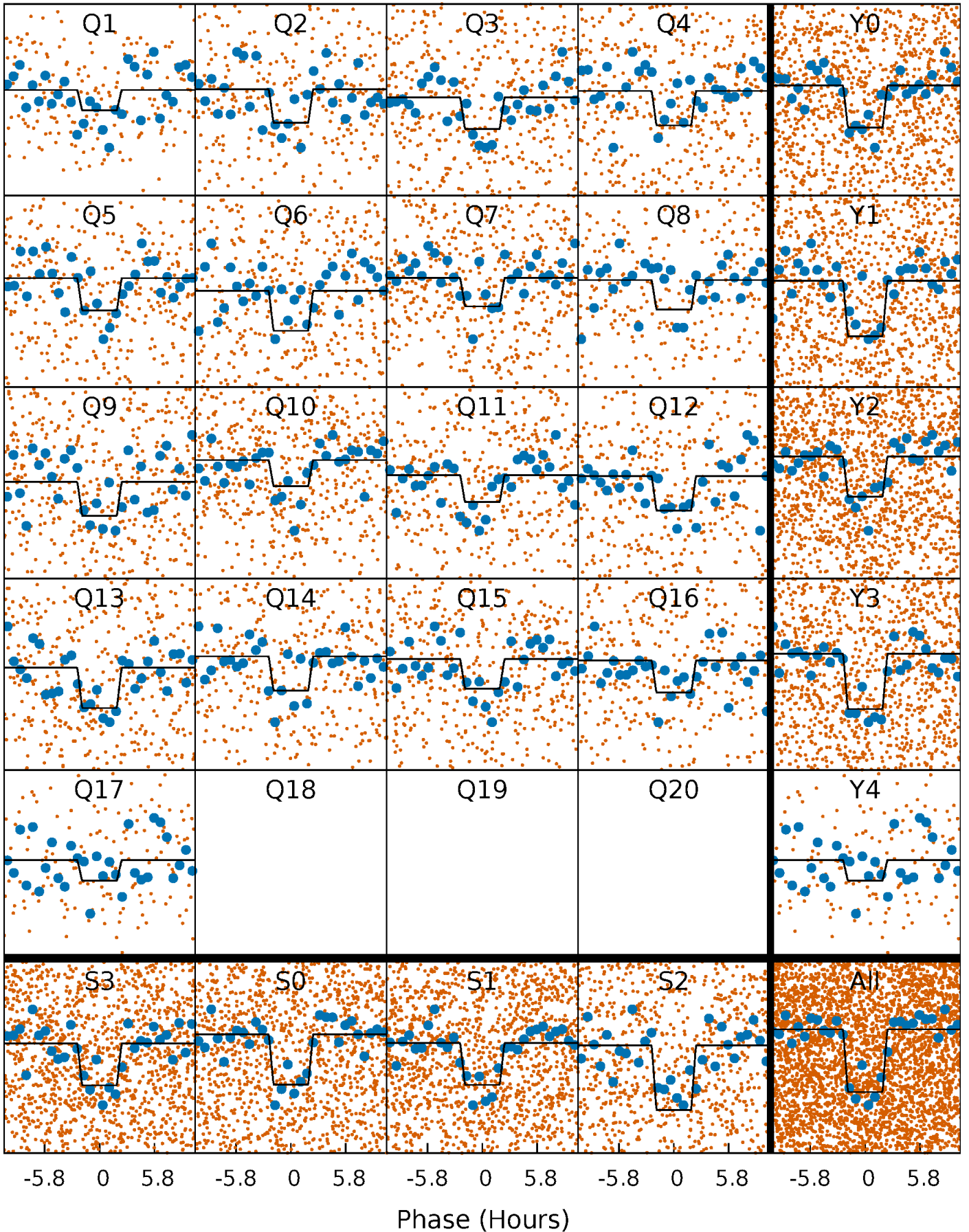
DV Quarter-Phased Transit Curves

TCE 011401767-03 P= 6.849638 Days $T_0=134.683071$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

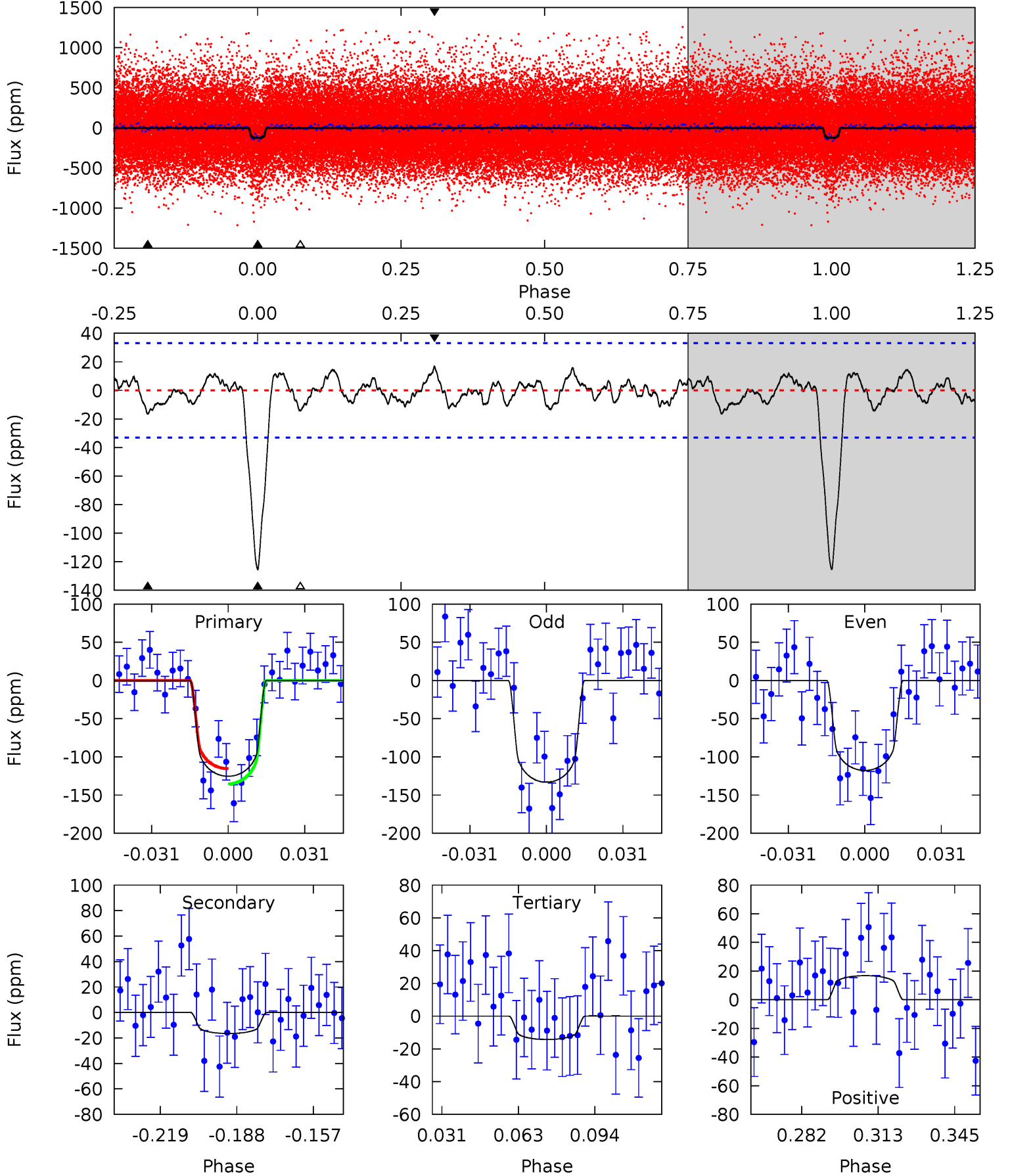
TCE 011401767-03 P= 6.849680 Days $T_0=134.674587$ (BKJD)



DV Model-Shift Uniqueness Test

011401767-03, P = 6.849638 Days, E = 127.833433 Days

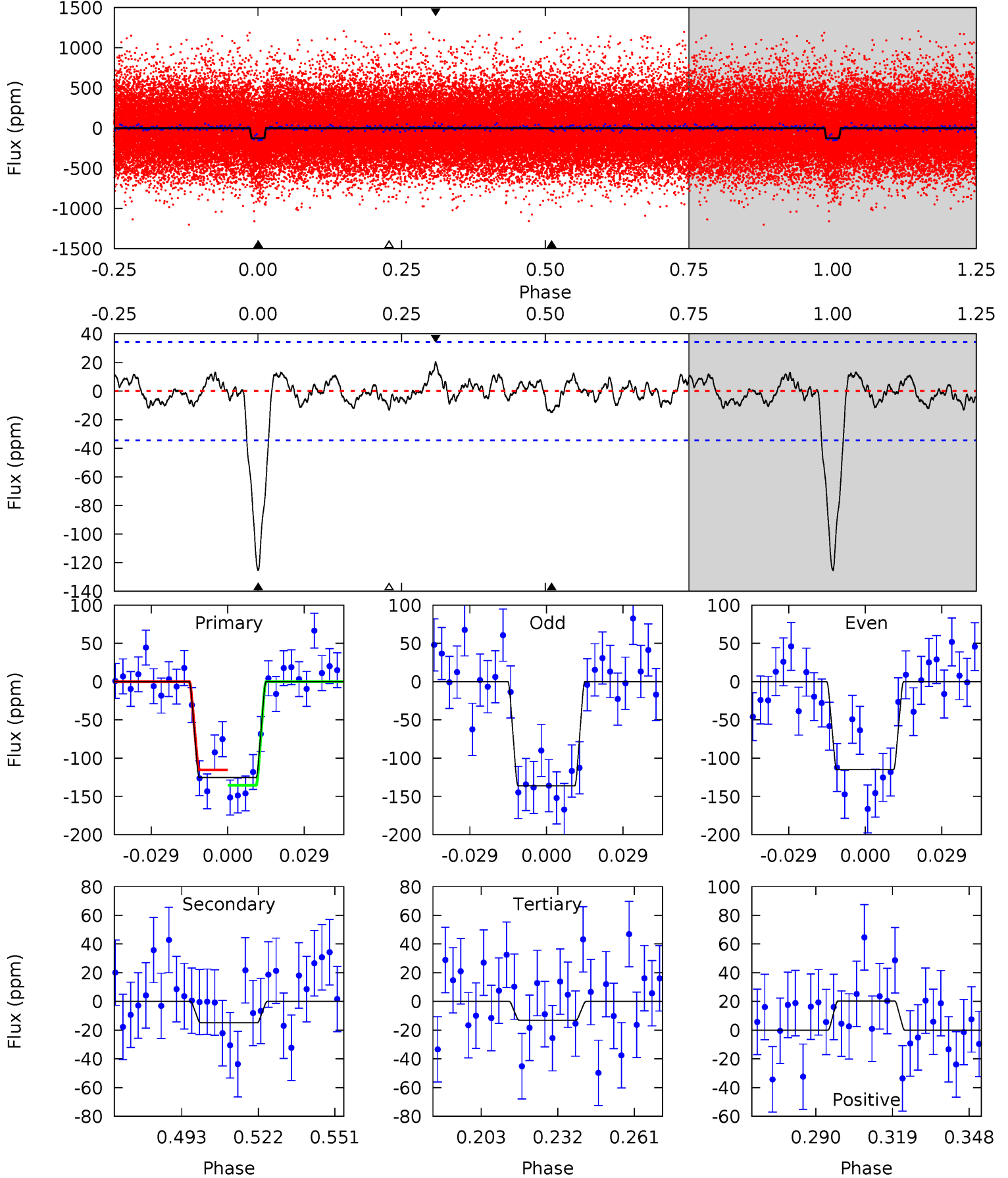
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	2.40	2.07	2.44	4.80	2.15	0.95	16.1	15.7	0.33	-0.04	1.12	0.88	0.12	1.44



Alt Model-Shift Uniqueness Test

011401767-03, P = 6.849680 Days, E = 127.824907 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	2.09	1.83	2.84	4.82	2.18	0.88	15.7	14.7	0.26	-0.76	1.48	0.94	0.14	1.41



Stellar Parameters For KIC 011401767

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6056^{+81}_{-90}	$4.332^{+0.080}_{-0.120}$	$0.160^{+0.150}_{-0.150}$	$1.209^{+0.202}_{-0.134}$	$1.147^{+0.076}_{-0.083}$	$0.915^{+0.318}_{-0.331}$
	+1%/-1%	+2%/-3%	+94%/-94%	+17%/-11%	+7%/-7%	+35%/-36%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011401767-03 / KOI 2195.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 7	$1.64^{+0.56}_{-0.59}$	1519^{+64}_{-56}	3840^{+751}_{-499}	18^{+31}_{-10}
Alt.	-15 ± 7	$1.49^{+0.62}_{-0.55}$	1517^{+67}_{-51}	3855^{+818}_{-572}	18^{+37}_{-12}

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 $A_{obs} \gg 1.0$

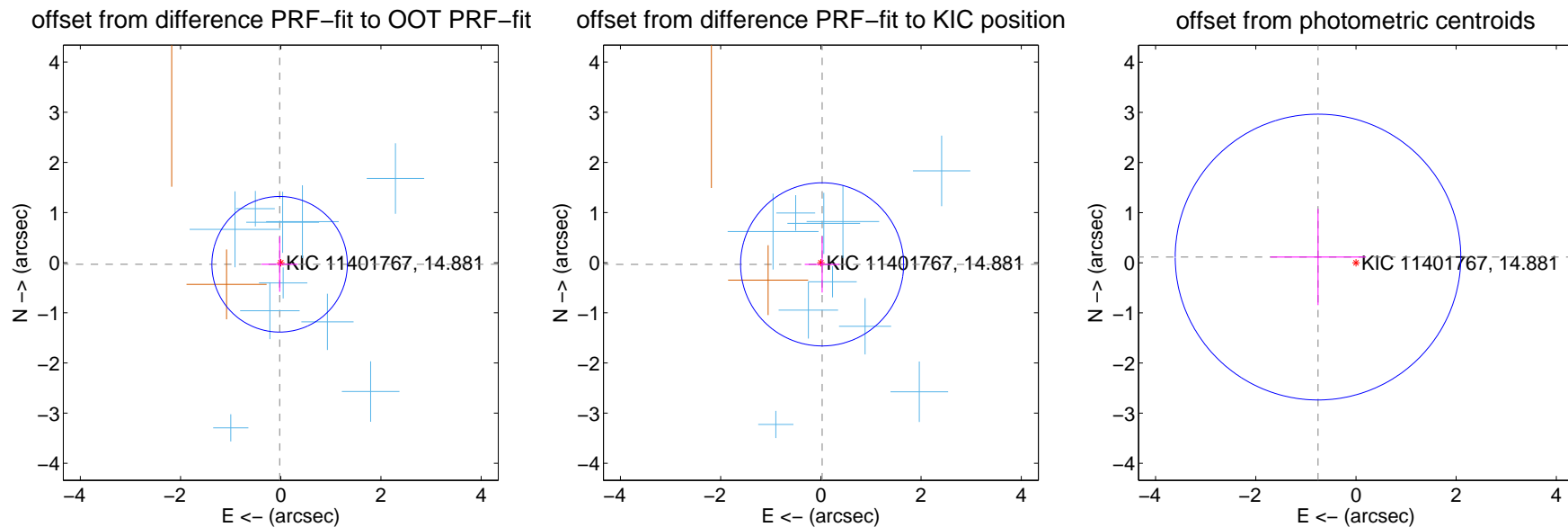
DV Centroid Data

Supplemental centroid analysis for 011401767-03. Kepler magnitude: 14.88. Transit SNR 14.71

There are 10 quarters with good PRF difference image offsets

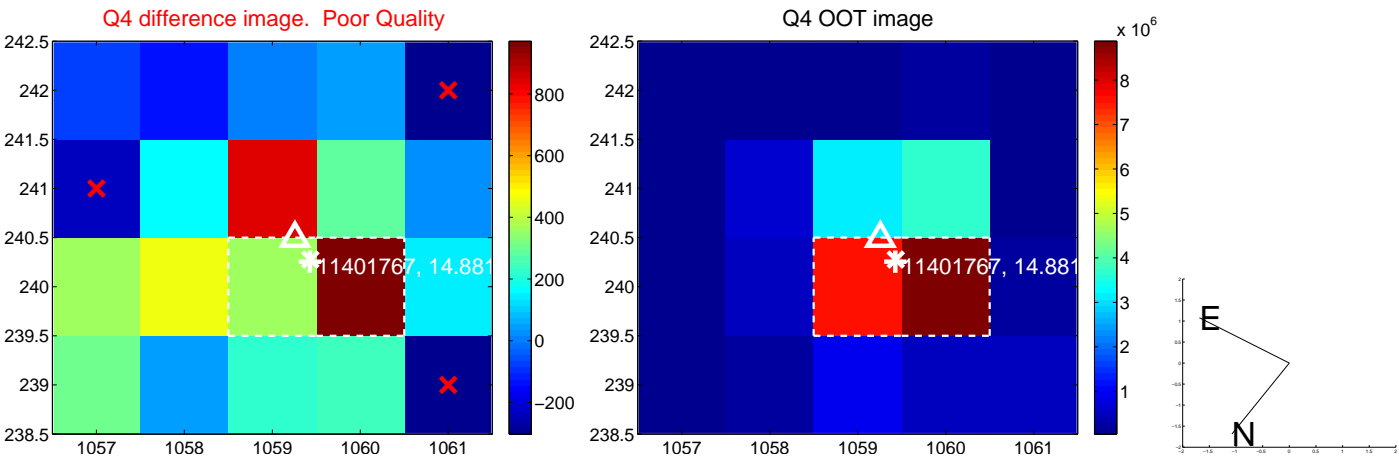
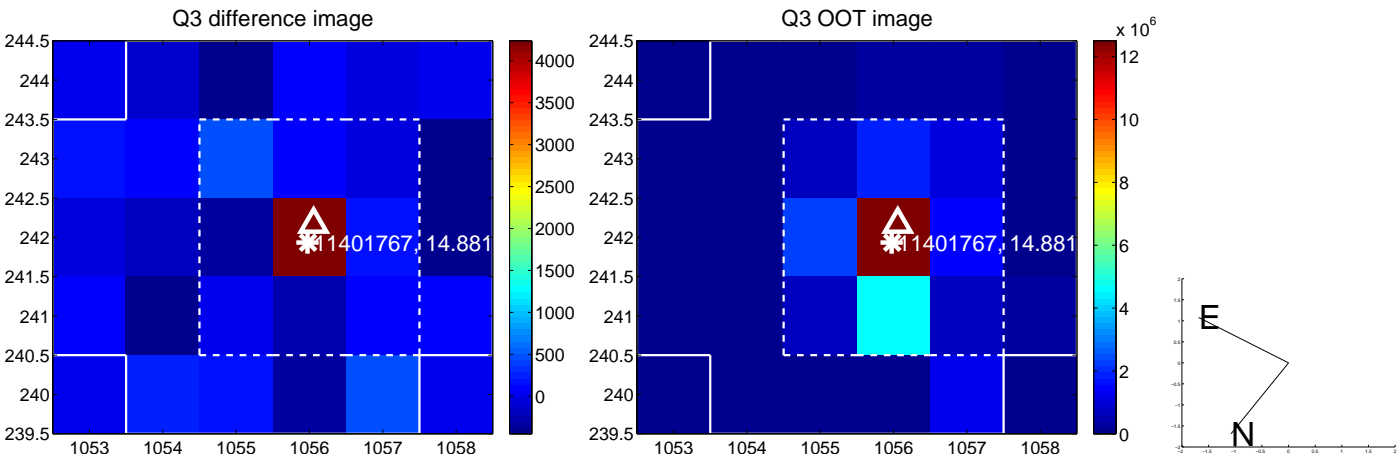
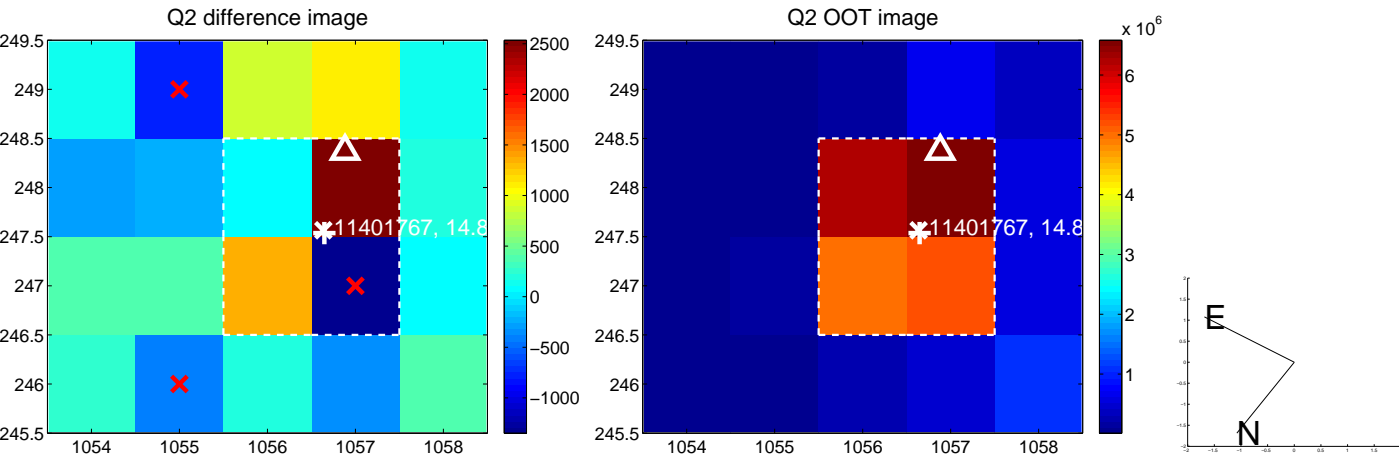
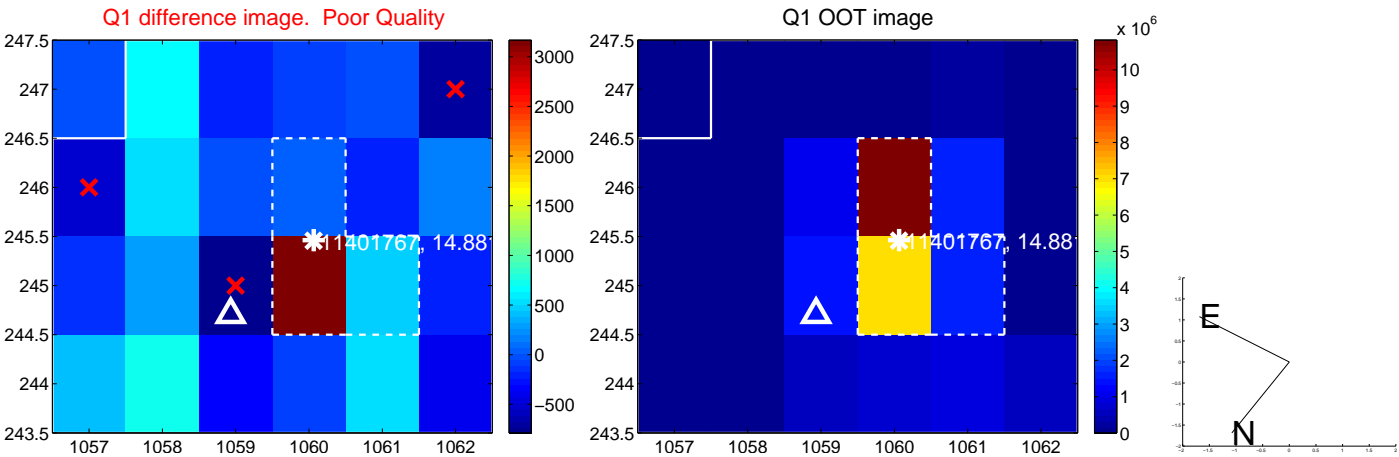
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.039 ± 0.451	0.09	0.023 ± 0.361	-0.032 ± 0.549
PRF-fit source offset from KIC position	0.042 ± 0.542	0.08	-0.025 ± 0.346	-0.033 ± 0.561
photometric centroid source offset	0.77 ± 0.95	0.81	0.76 ± 0.95	0.11 ± 0.96

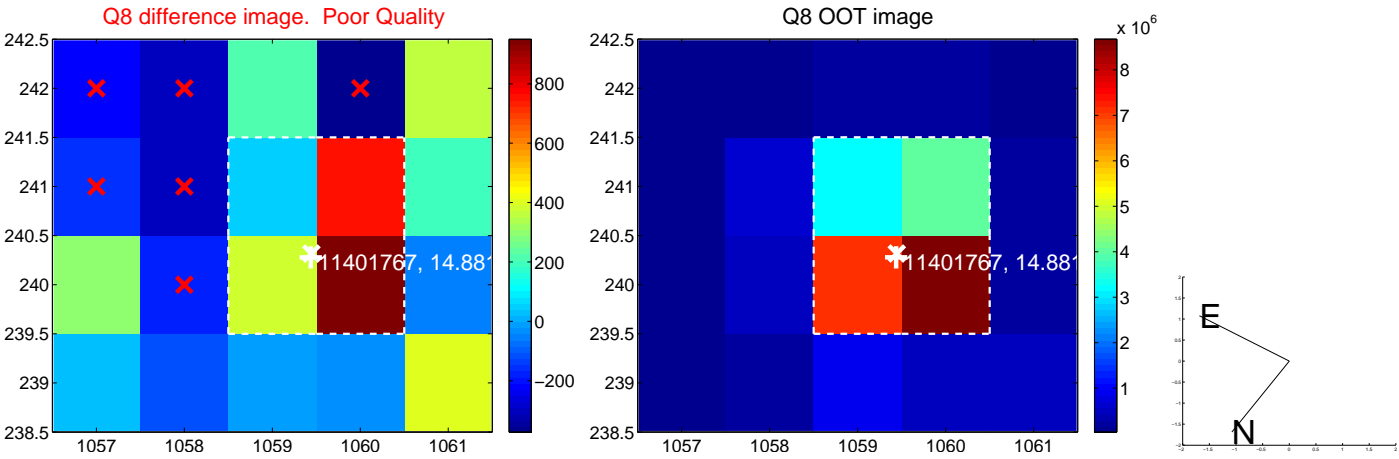
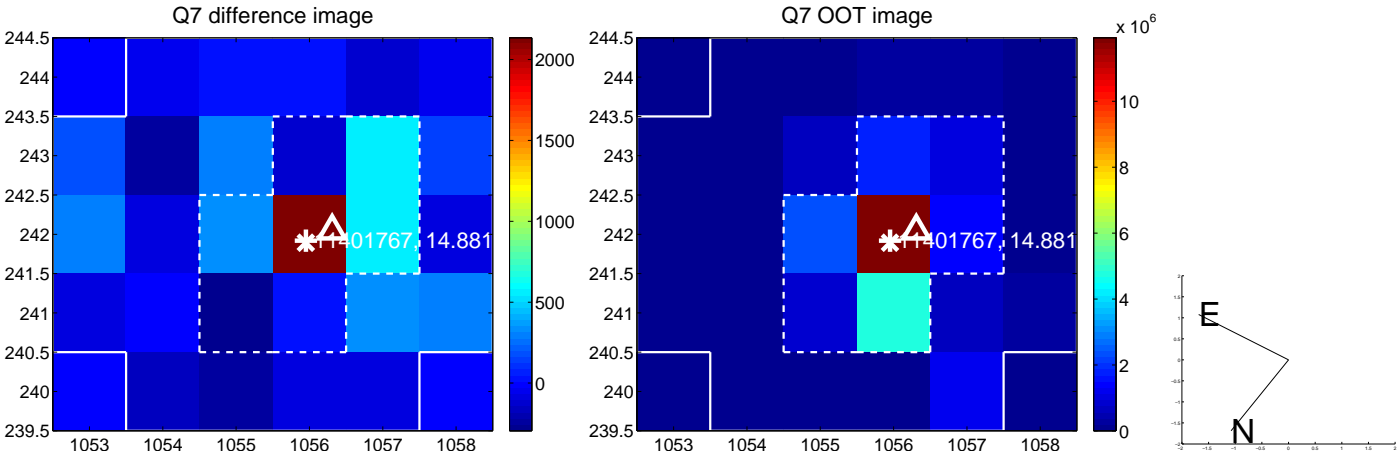
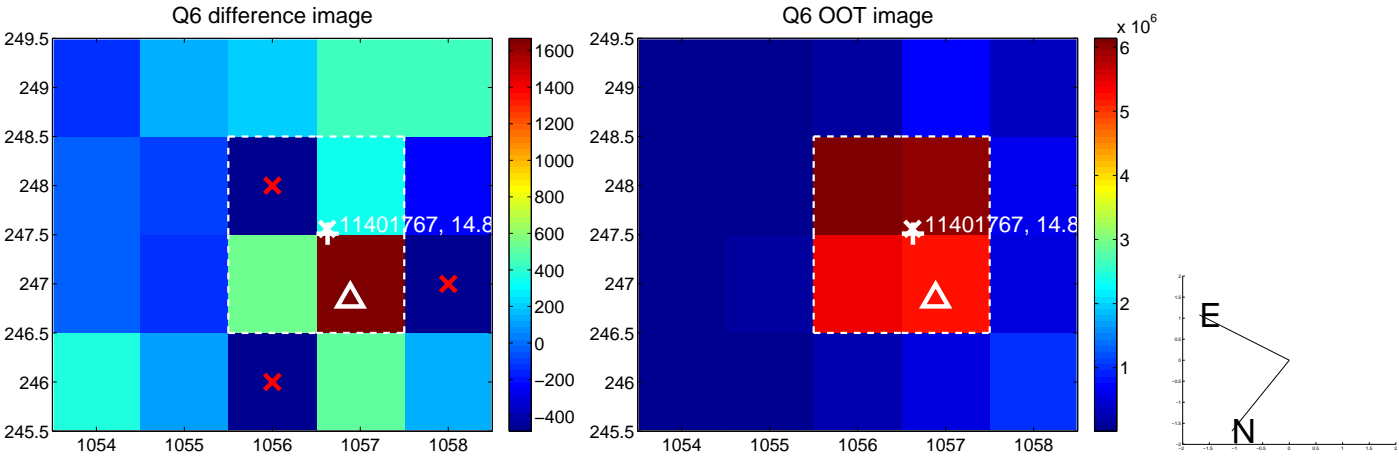
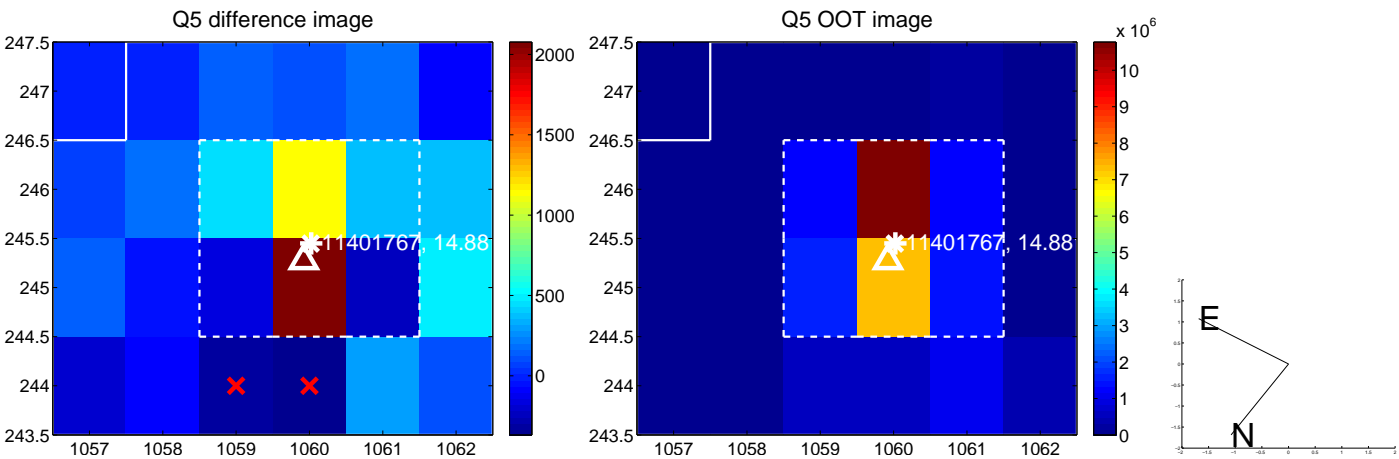


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

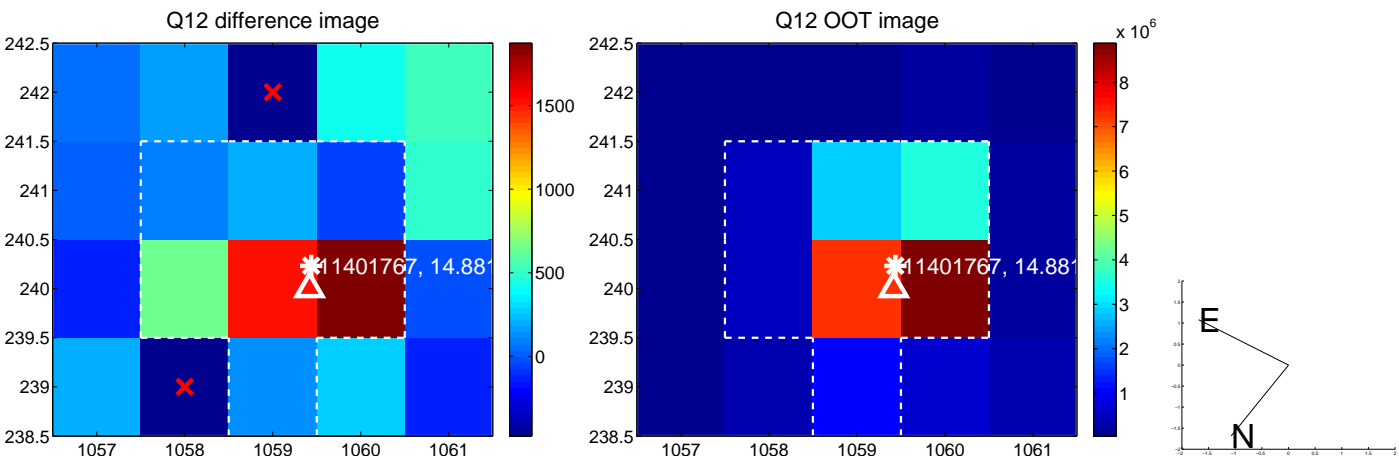
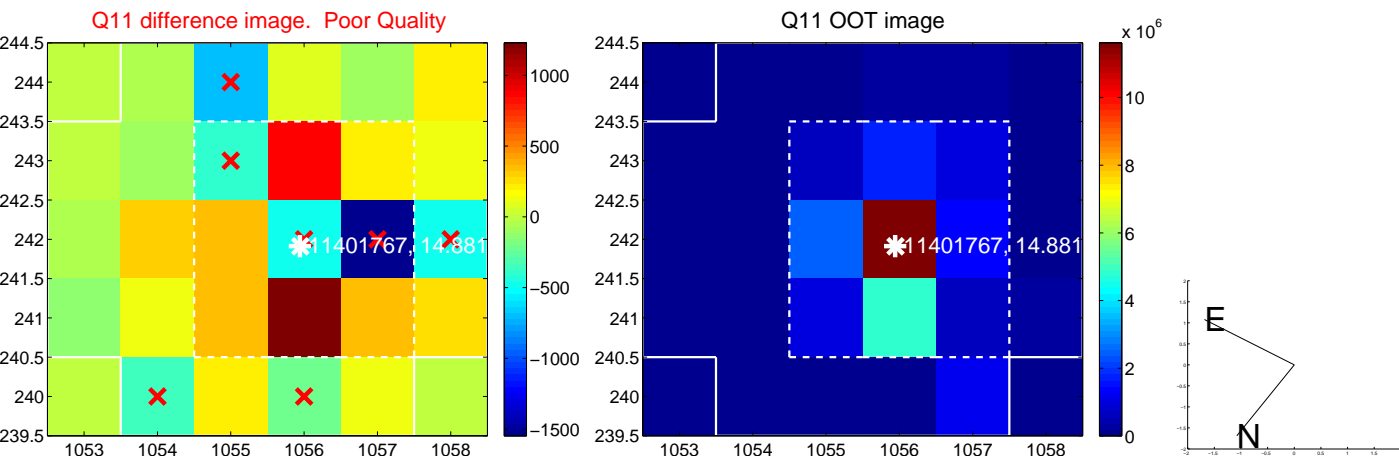
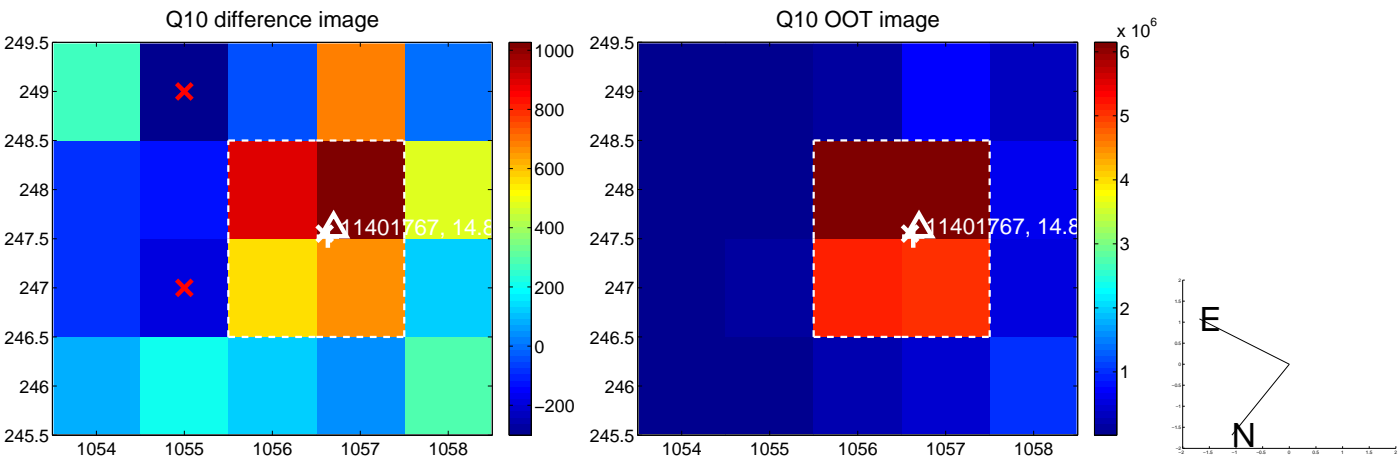
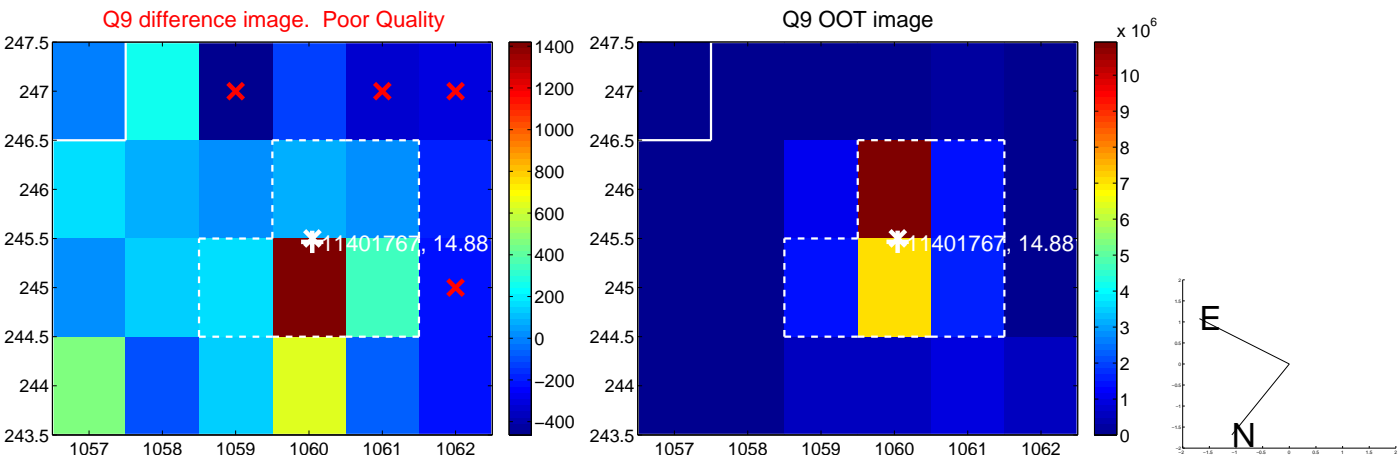
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



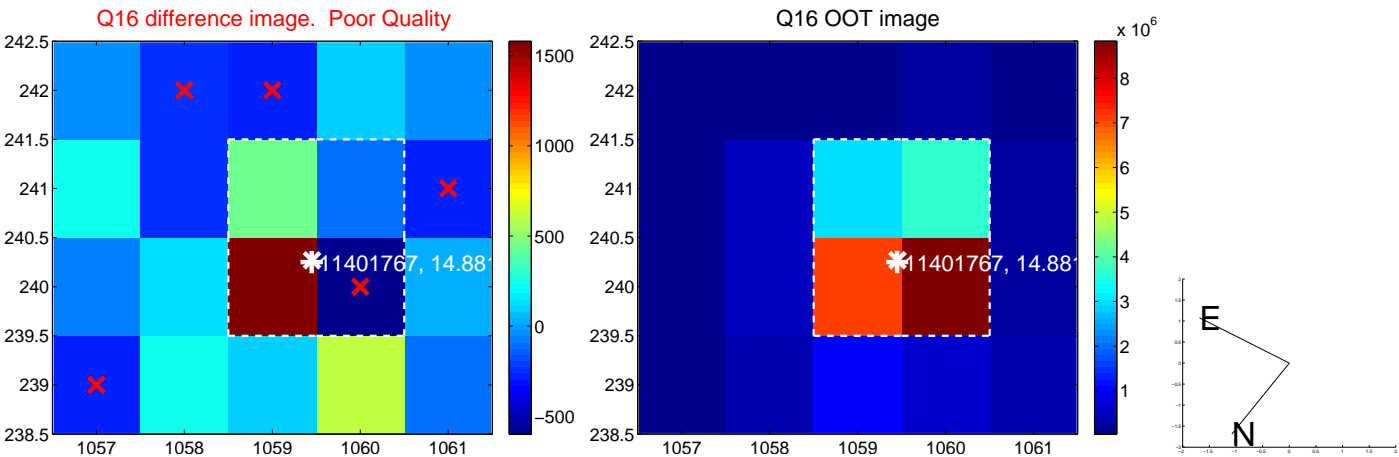
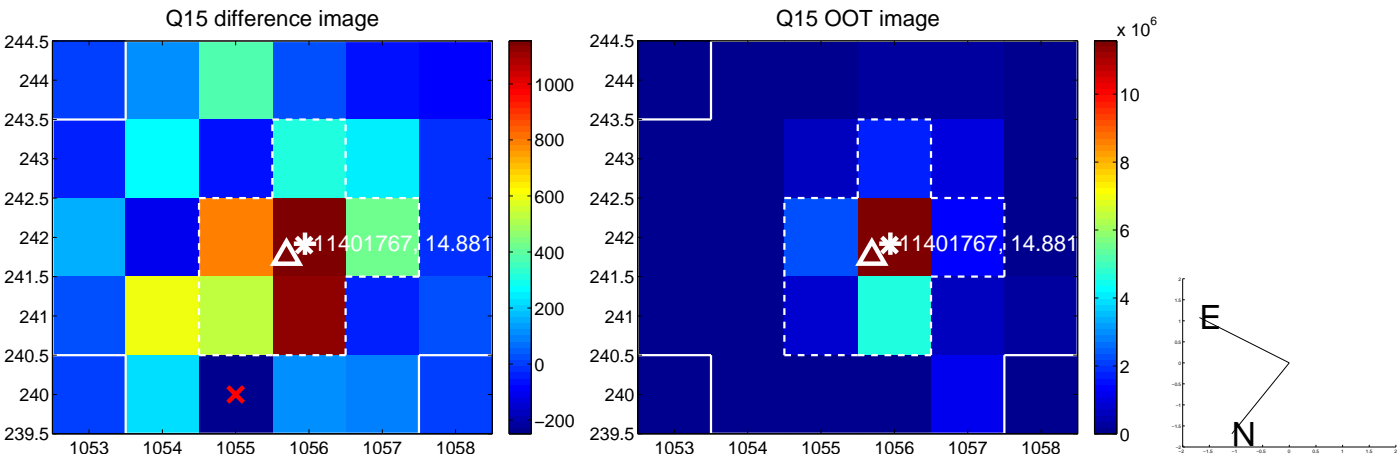
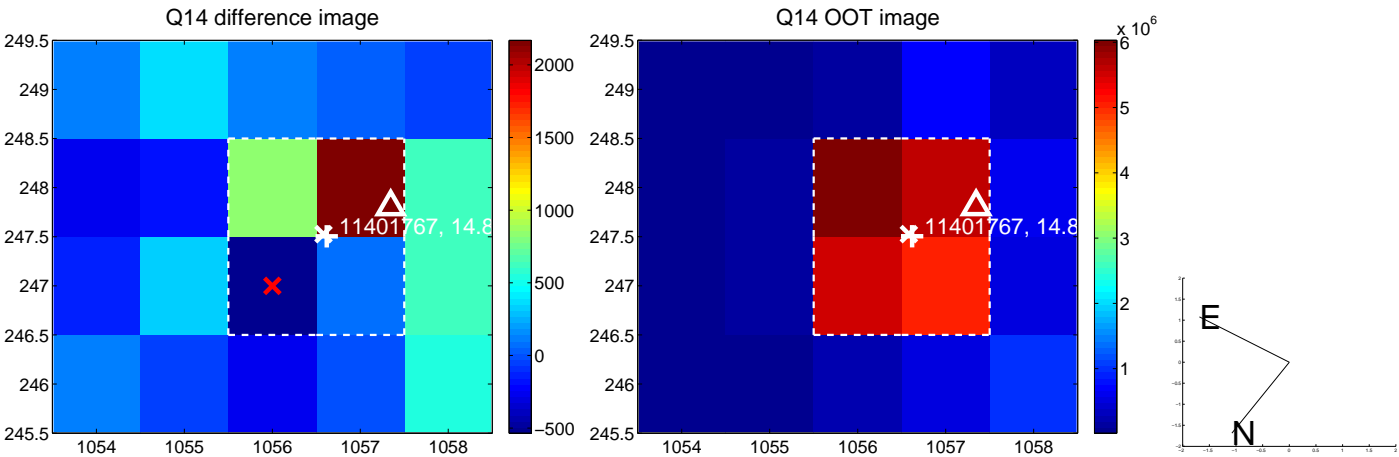
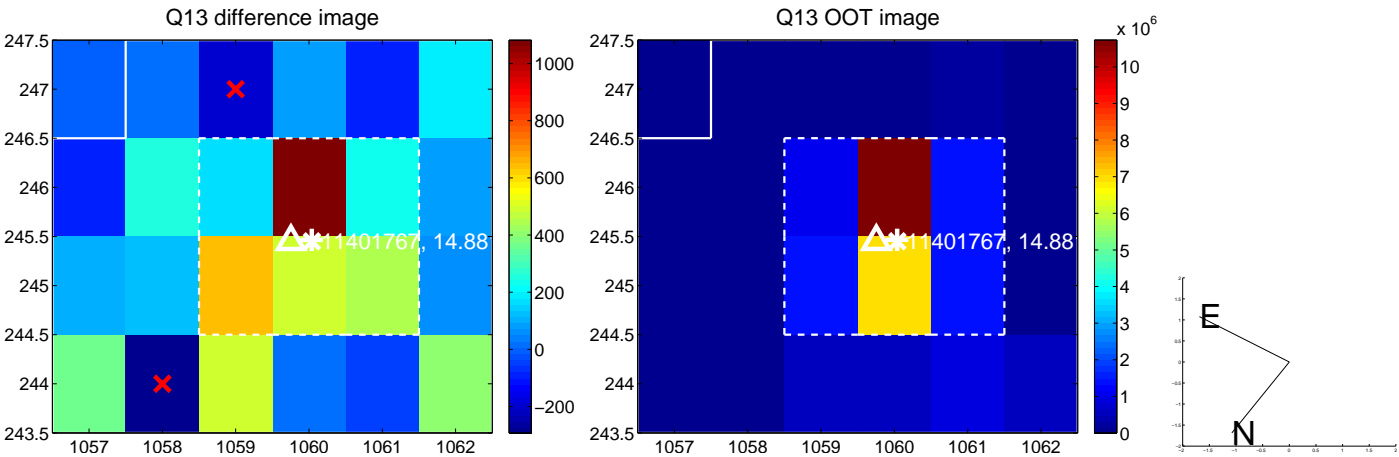
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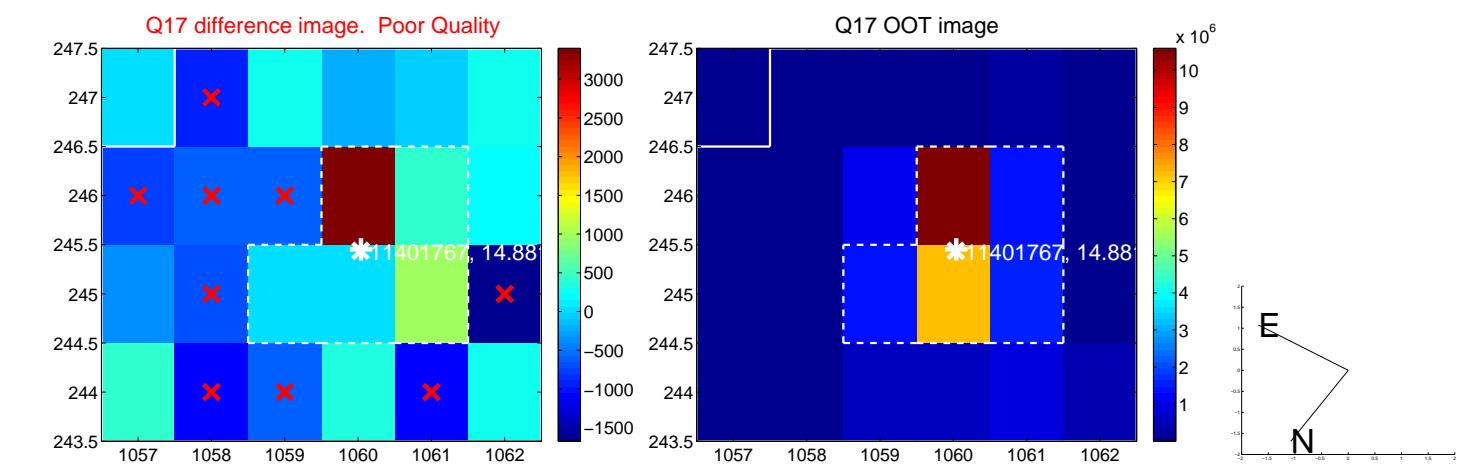
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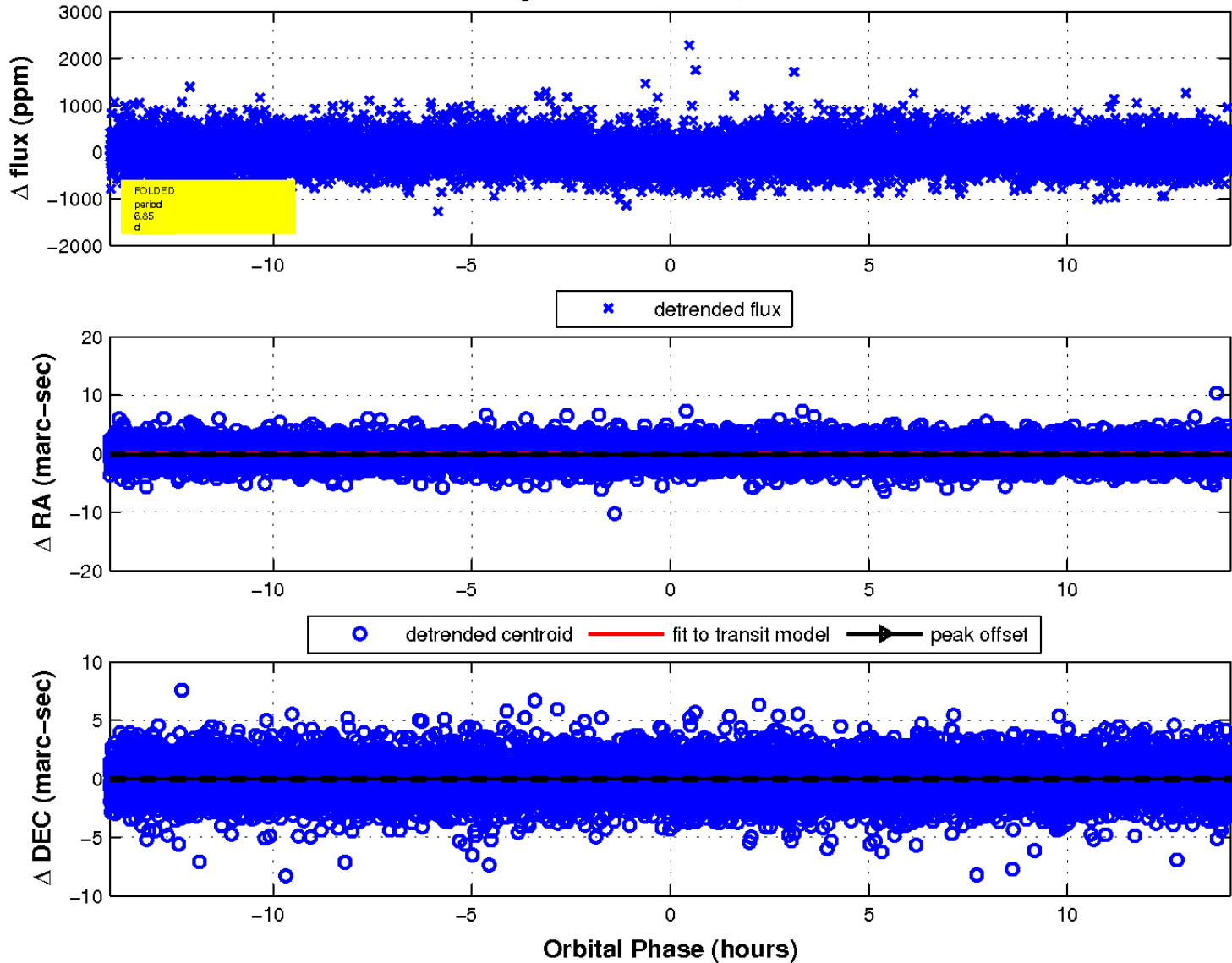
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

