

KIC 011176127

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})
011176127-01	OBS	1430.01	10.475467	131.691533	1060.8	2.330	32.2	37.1	0.61	4463	2.20	20.19
011176127-02	OBS	1430.03	77.473982	184.246764	1605.1	4.108	21.9	23.7	0.61	4463	2.62	1.40
011176127-03	OBS	1430.02	22.928837	143.864022	881.1	2.081	16.8	19.2	0.61	4463	2.19	7.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011176127-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011176127-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011176127-03	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.

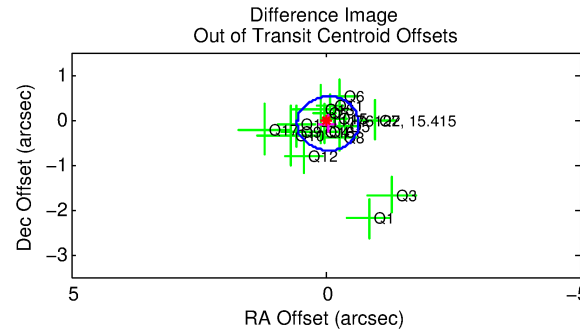
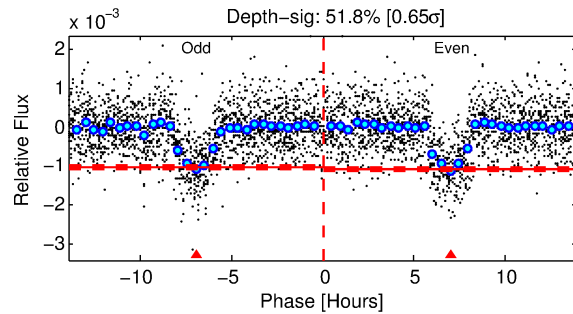
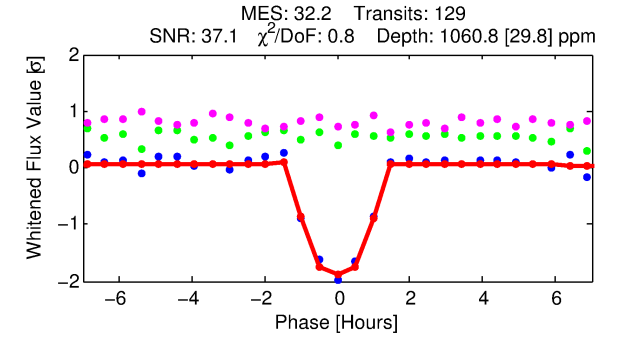
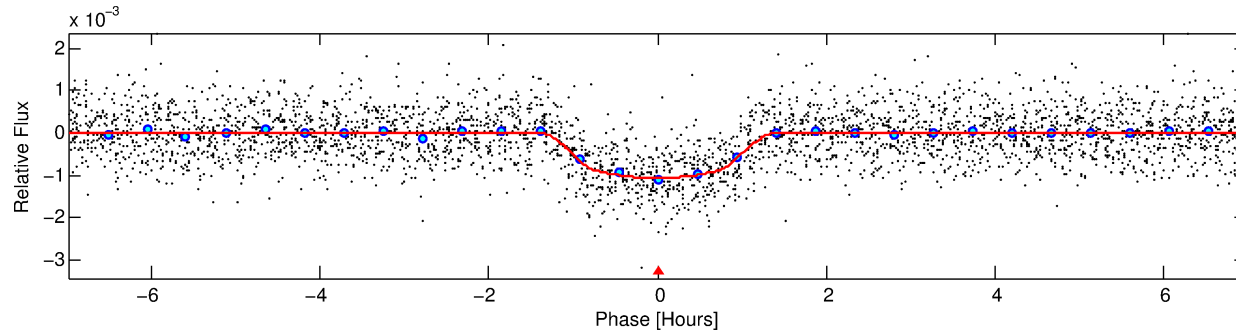
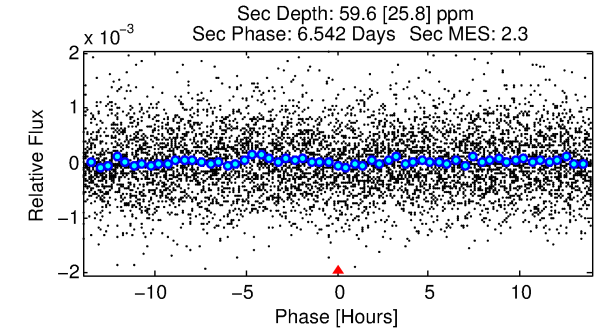
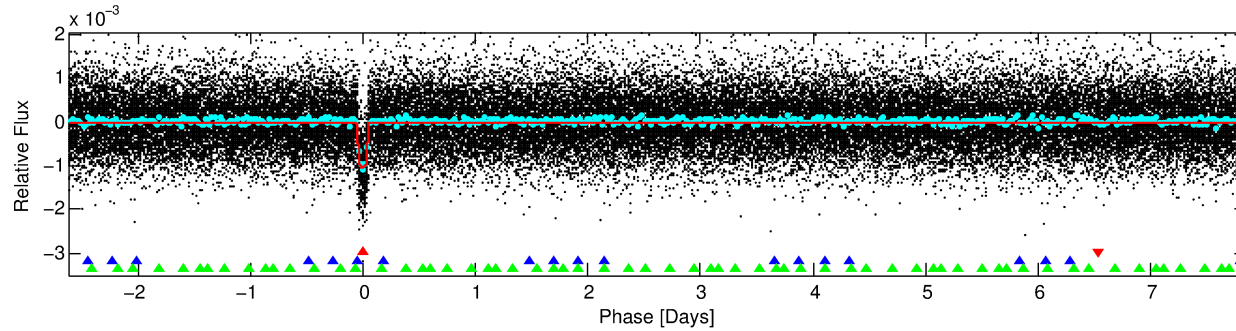
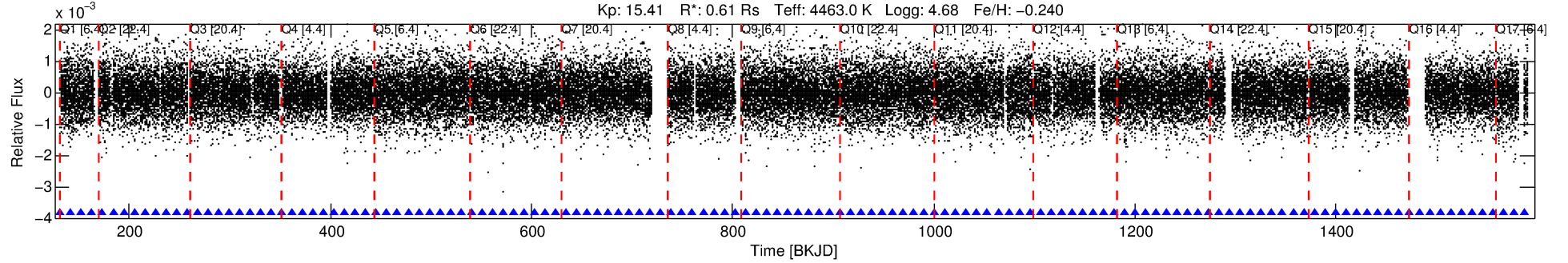
Ephemeris Match Information For 011176127-01

No Significant Match Found

DV One-Page Summary

KIC: 11176127 Candidate: 1 of 3 Period: 10.475 d
KOI: K01430.01 Name: Kepler-298b Corr: 0.992

Kp: 15.41 R*: 0.61 Rs Teff: 4463.0 K Logg: 4.68 Fe/H: -0.240



DV Fit Results:

Period = 10.47547 [0.00002] d
Epoch = 131.6915 [0.0015] BKJD
Rp/R* = 0.0330 [0.0114]
a/R* = 23.73 [27.24]
b = 0.77 [0.63]
Seff = 20.19 [2.21]
Teq = 541 [15] K
Rp = 2.20 [0.77] Re
a = 0.0811 [0.0044] AU
Ag = 44.57 [36.47] [1.19σ]
Teffp = 2159 [442] K [3.66σ]

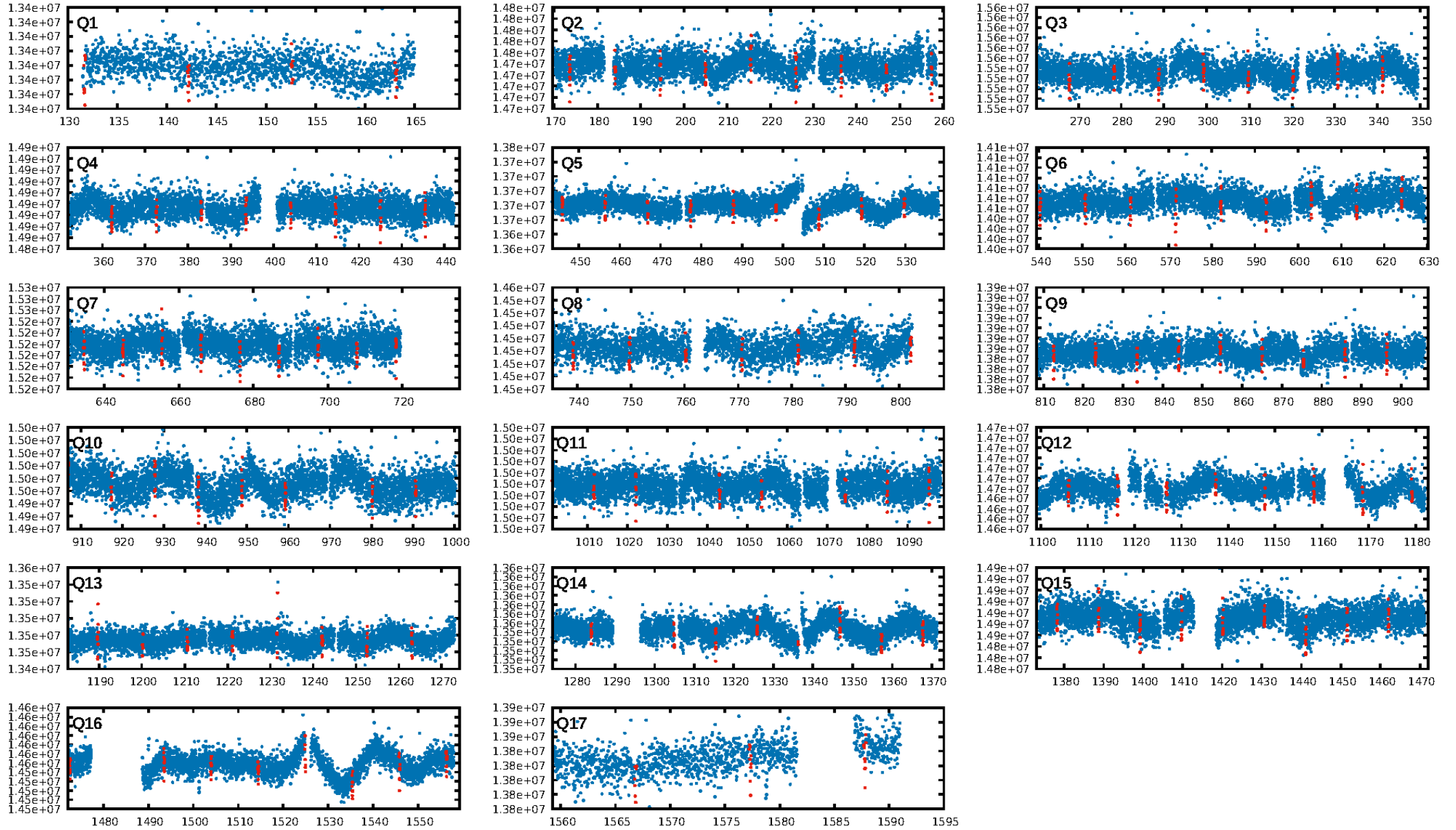
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [95.66σ]
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.91e-224
RollingBand-fgt: 1.00 [122/122]
GhostDiagnostic-chr: 4.55
Centroid-sig: 21.4%
Centroid-so: 1.026 arcsec [2.58σ]
OotOffset-rm: 0.098 arcsec [0.49σ]
KicOffset-rm: 0.104 arcsec [0.55σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

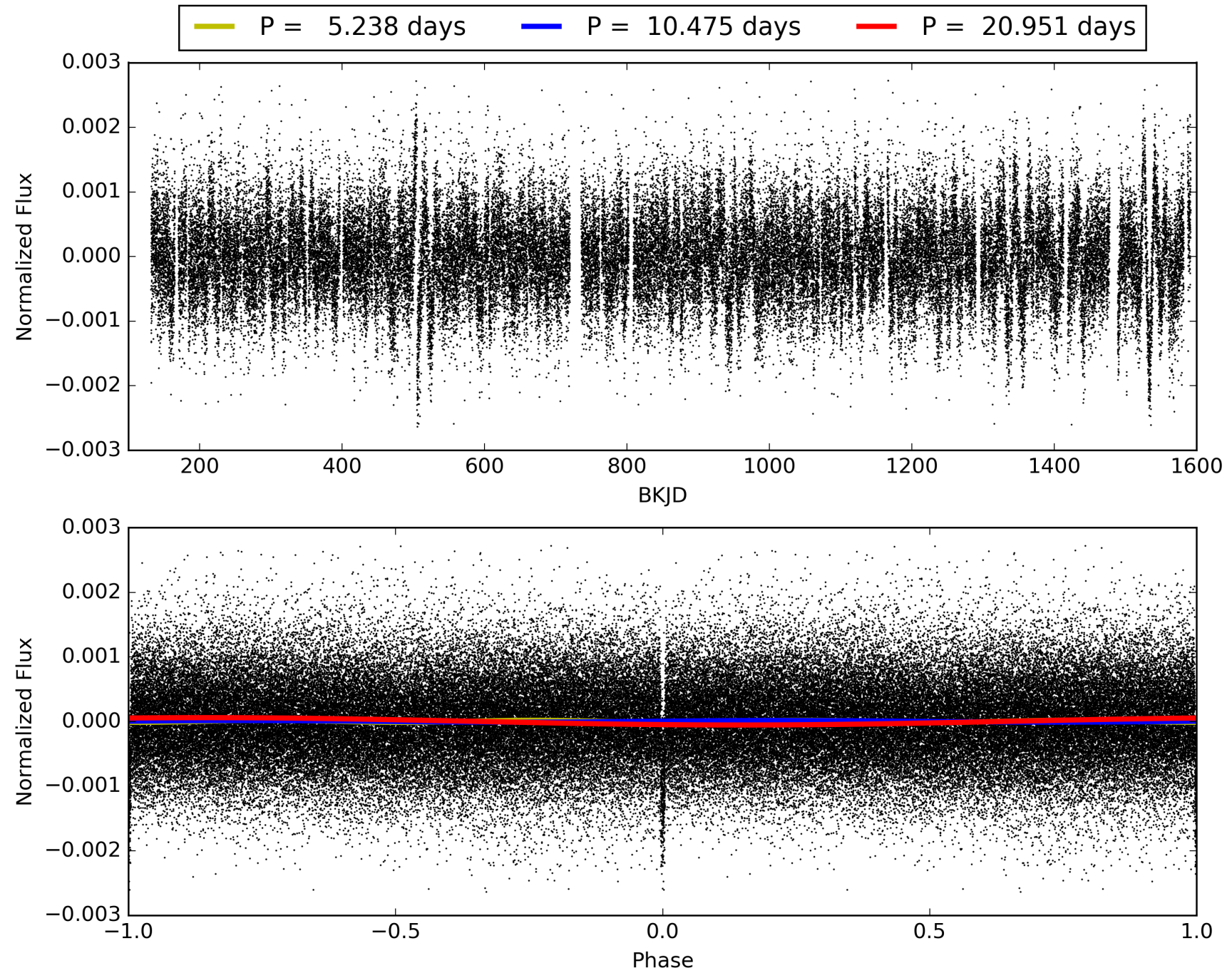
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:09:49 Z

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

TCE 011176127-01, PDC Light Curves

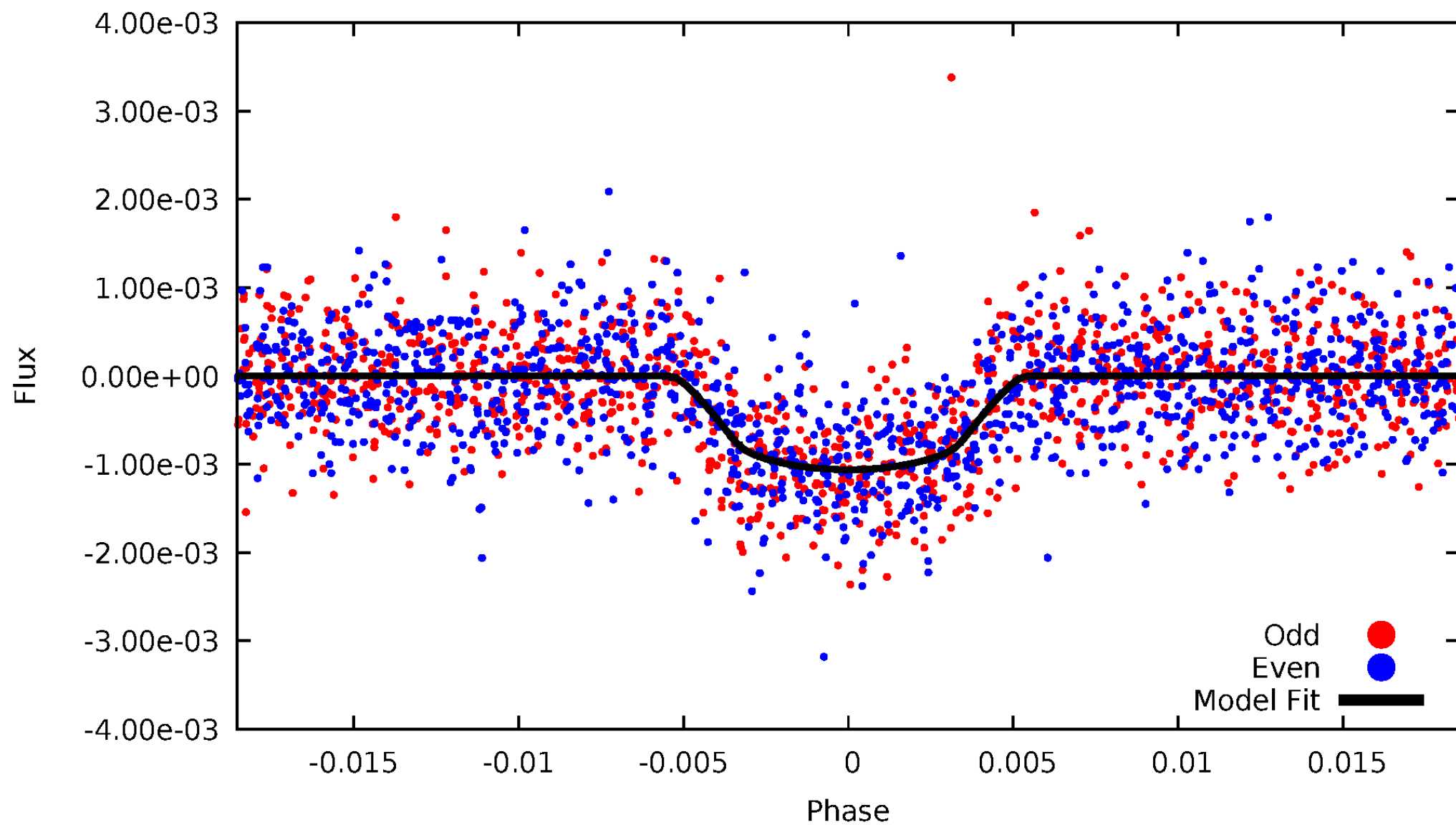


TCE 011176127-01



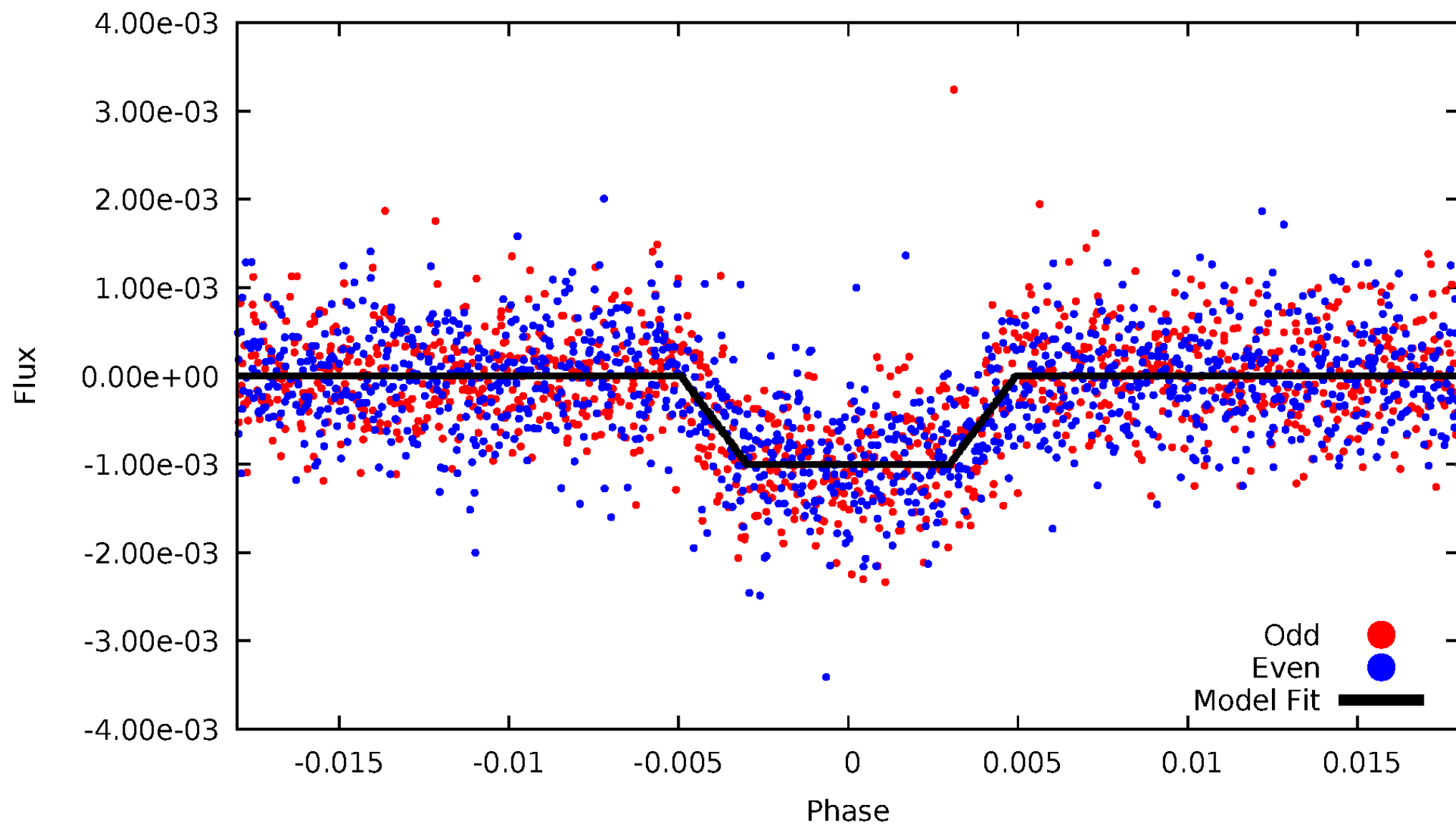
DV Odd/Even

TCE 011176127-01



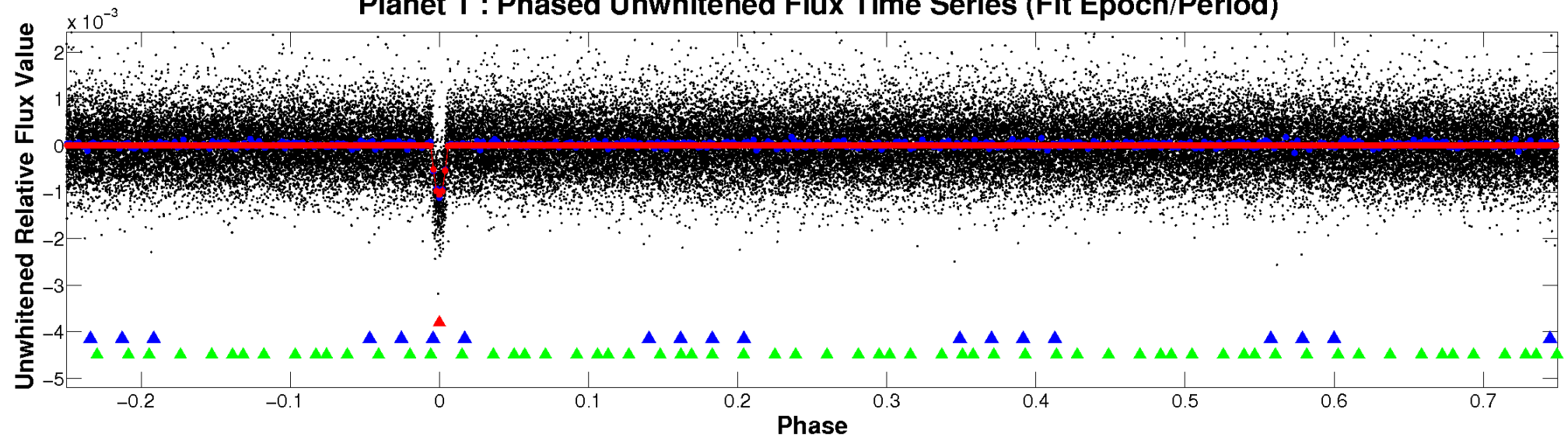
ALT Odd/Even

TCE 011176127-01

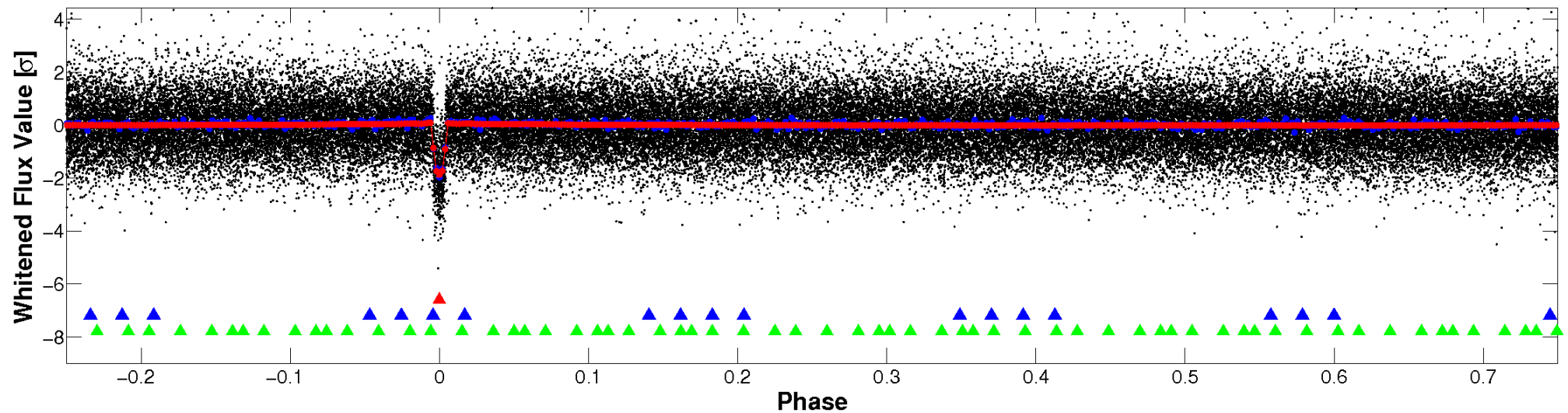


Non-Whitened Vs. Whitened Light Curve

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

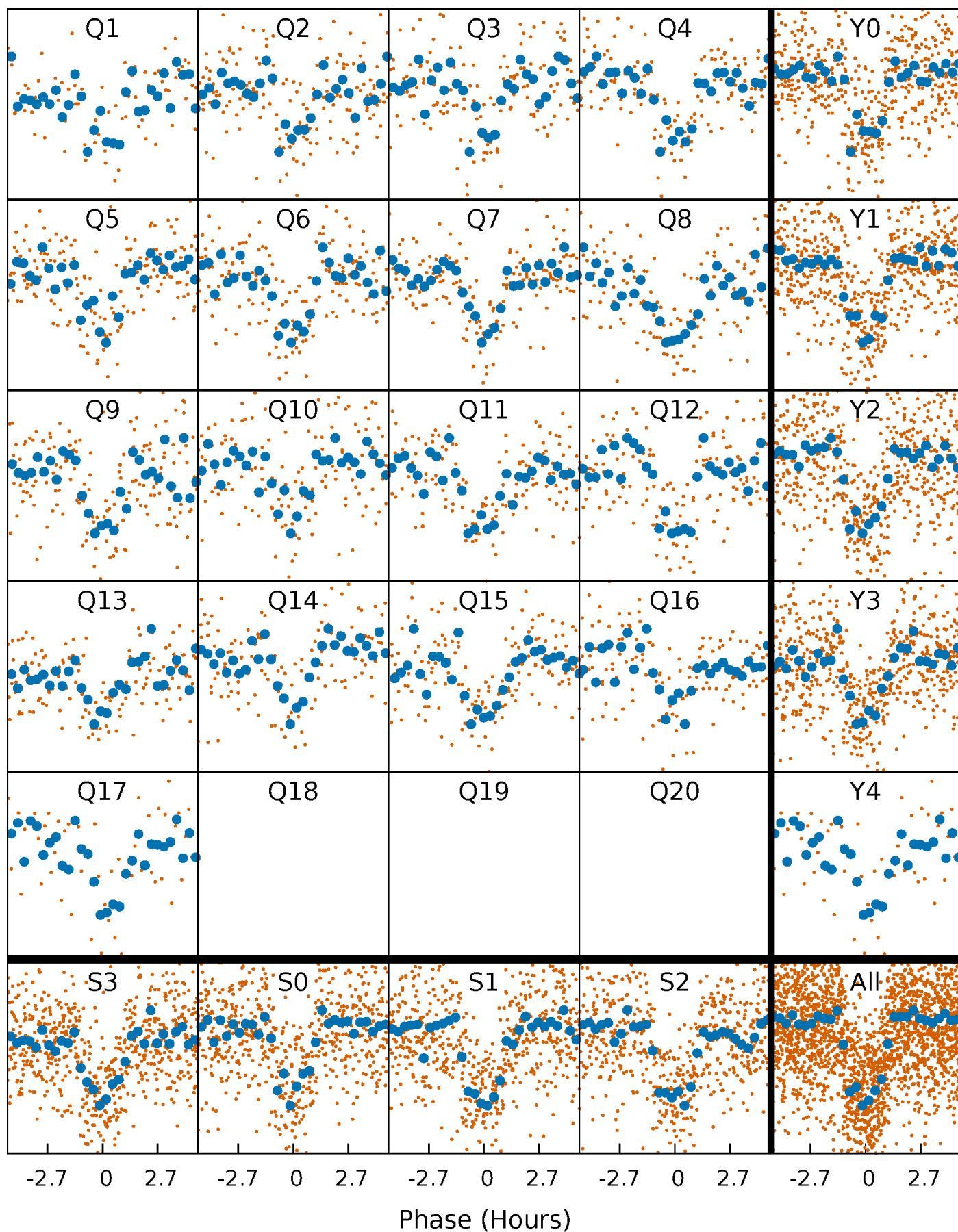


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



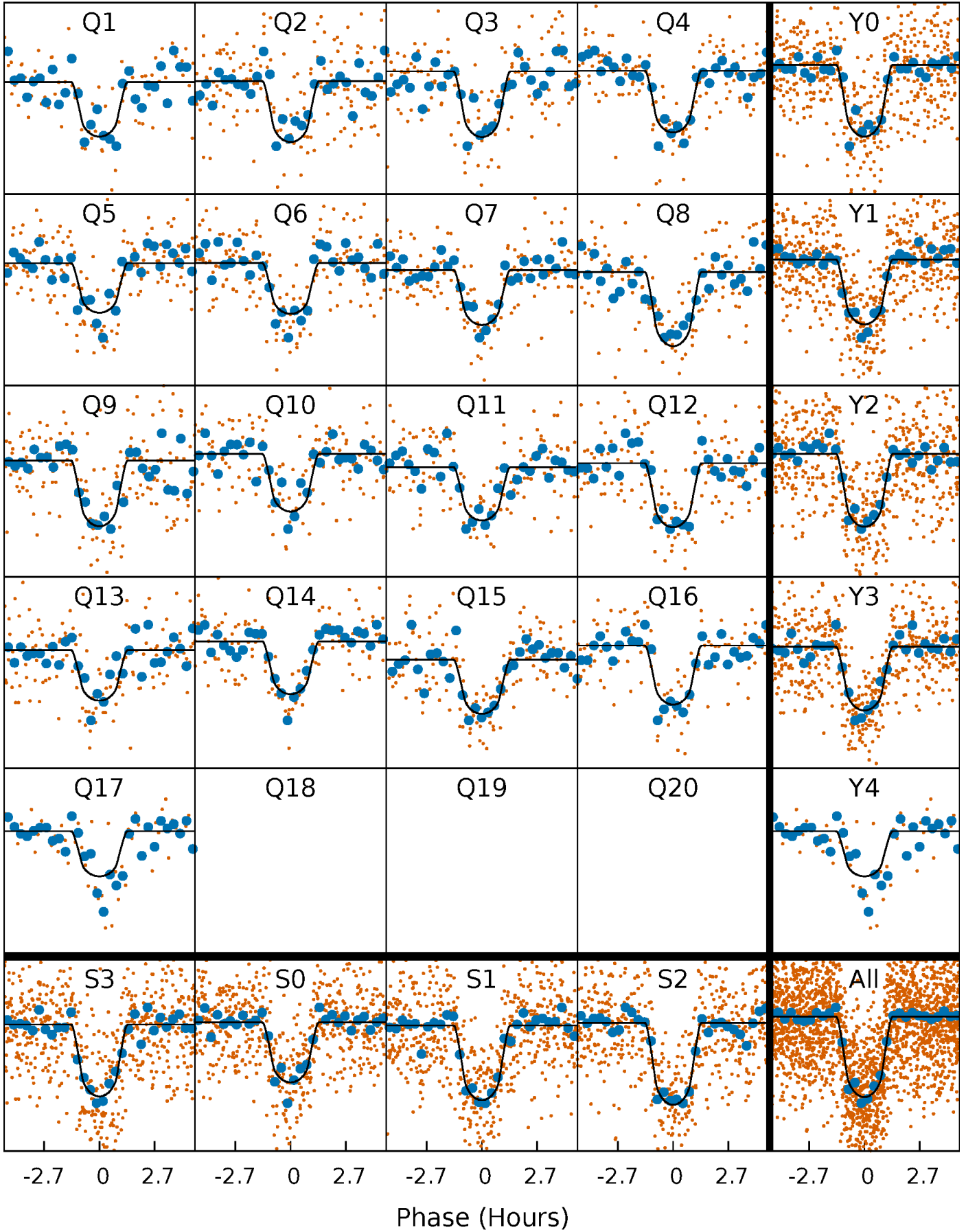
PDC Quarter-Phased Transit Curves

TCE 011176127-01 P= 10.475467 Days $T_0=131.691533$ (BKJD)



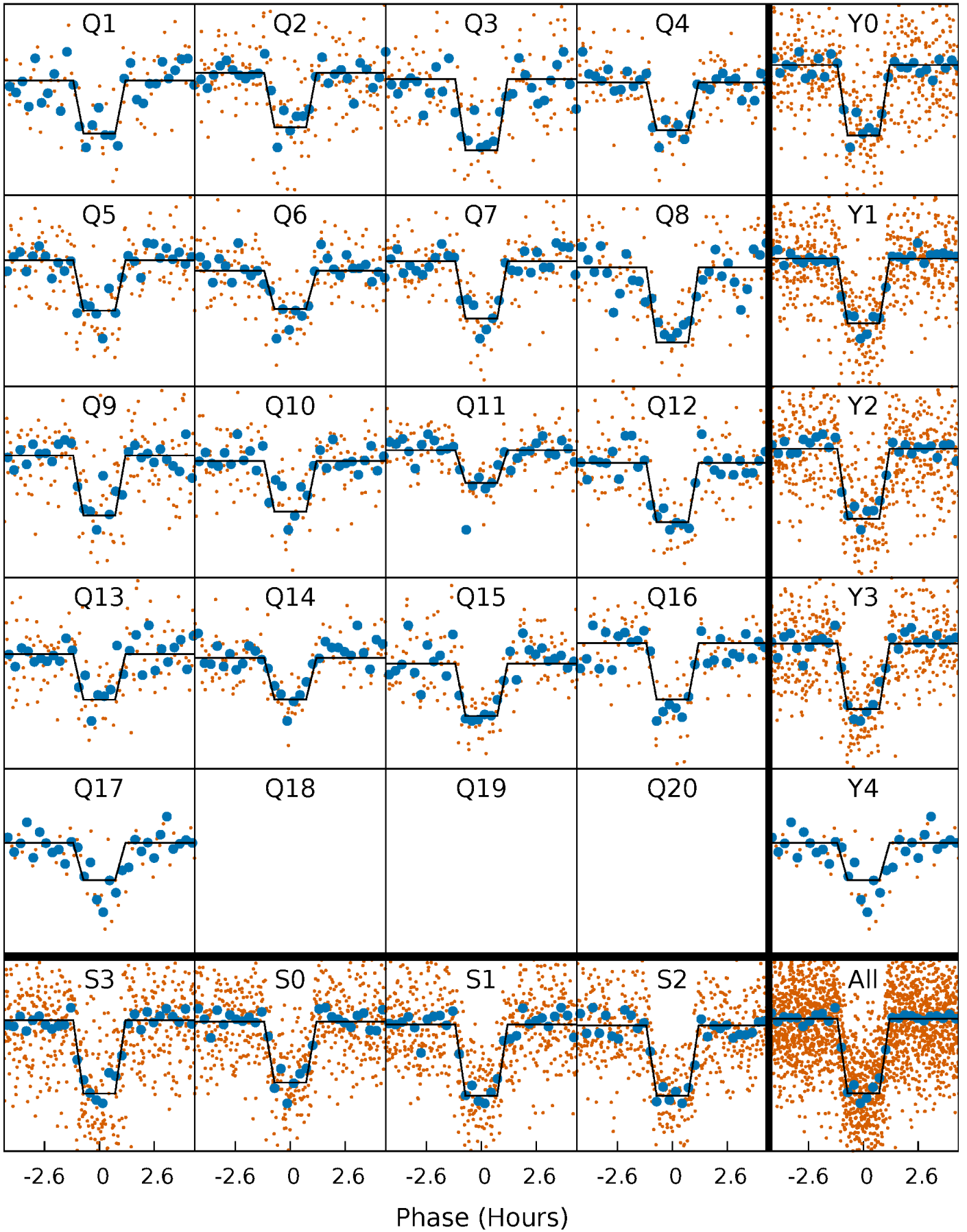
DV Quarter-Phased Transit Curves

TCE 011176127-01 P= 10.475467 Days $T_0=131.691533$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

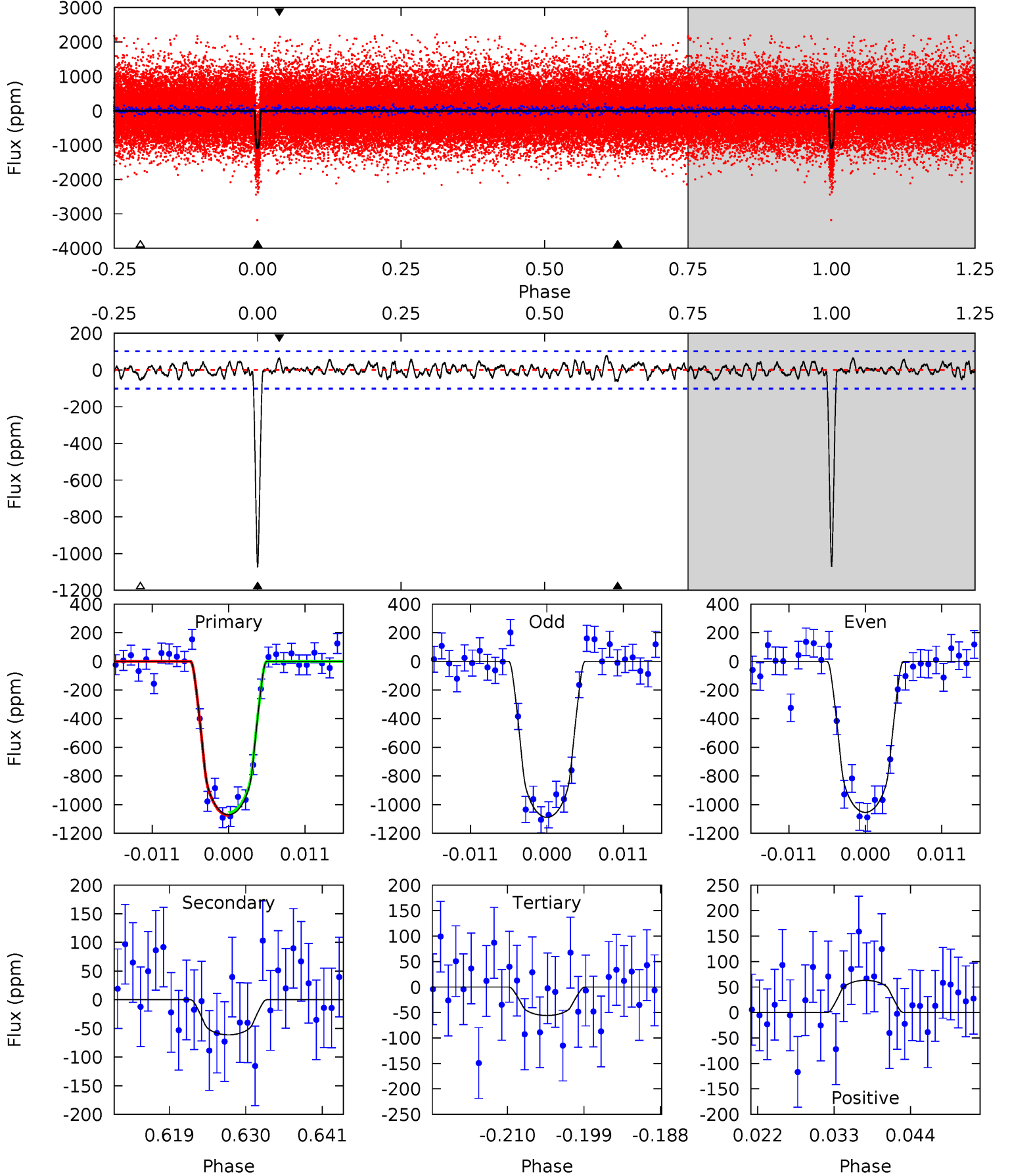
TCE 011176127-01 P= 10.475485 Days $T_0=131.689902$ (BKJD)



DV Model-Shift Uniqueness Test

011176127-01, $P = 10.475467$ Days, $E = 121.216066$ Days

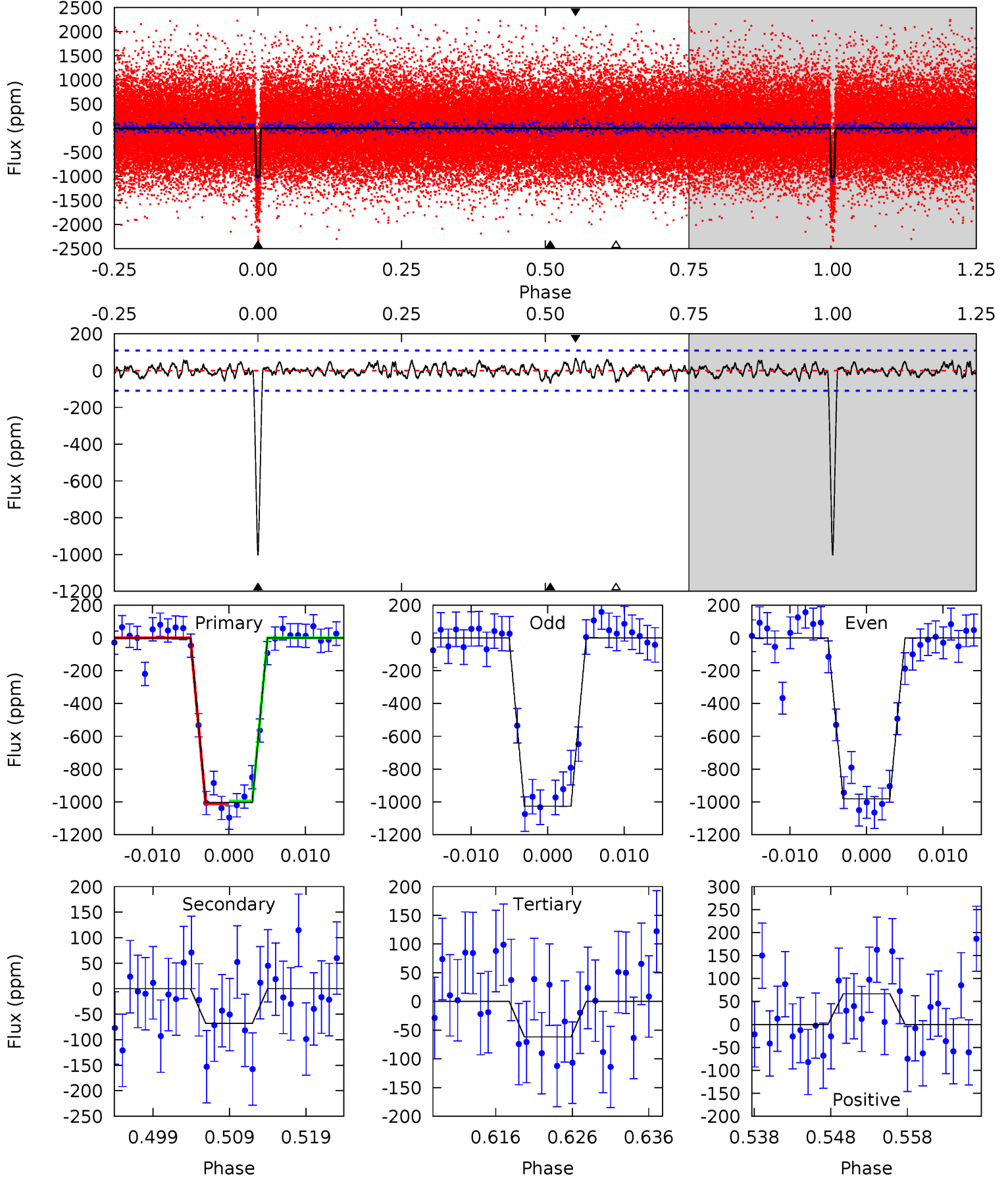
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.6	3.01	2.75	3.10	5.01	2.54	1.18	49.9	49.5	0.26	-0.09	0.86	1.00	0.07	0.46



Alt Model-Shift Uniqueness Test

011176127-01, $P = 10.475485$ Days, $E = 121.214417$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.3	3.14	2.85	3.07	5.03	2.58	1.06	43.4	43.2	0.29	0.07	1.05	1.03	0.06	0.38



Stellar Parameters For KIC 011176127

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4463^{+88}_{-88}	$4.677^{+0.013}_{-0.040}$	$-0.240^{+0.150}_{-0.150}$	$0.611^{+0.041}_{-0.019}$	$0.662^{+0.027}_{-0.042}$	$4.098^{+0.243}_{-0.652}$
	+2%/-2%	+0%/-1%	+62%/-62%	+7%/-3%	+4%/-6%	+6%/-16%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 011176127-01 / KOI 1430.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-61 ± 20	$2.21^{+0.79}_{-0.73}$	761^{+17}_{-18}	2811^{+355}_{-254}	44^{+57}_{-23}
Alt.	-68 ± 22	$2.22^{+0.78}_{-0.78}$	760^{+17}_{-19}	2854^{+392}_{-262}	49^{+71}_{-25}

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

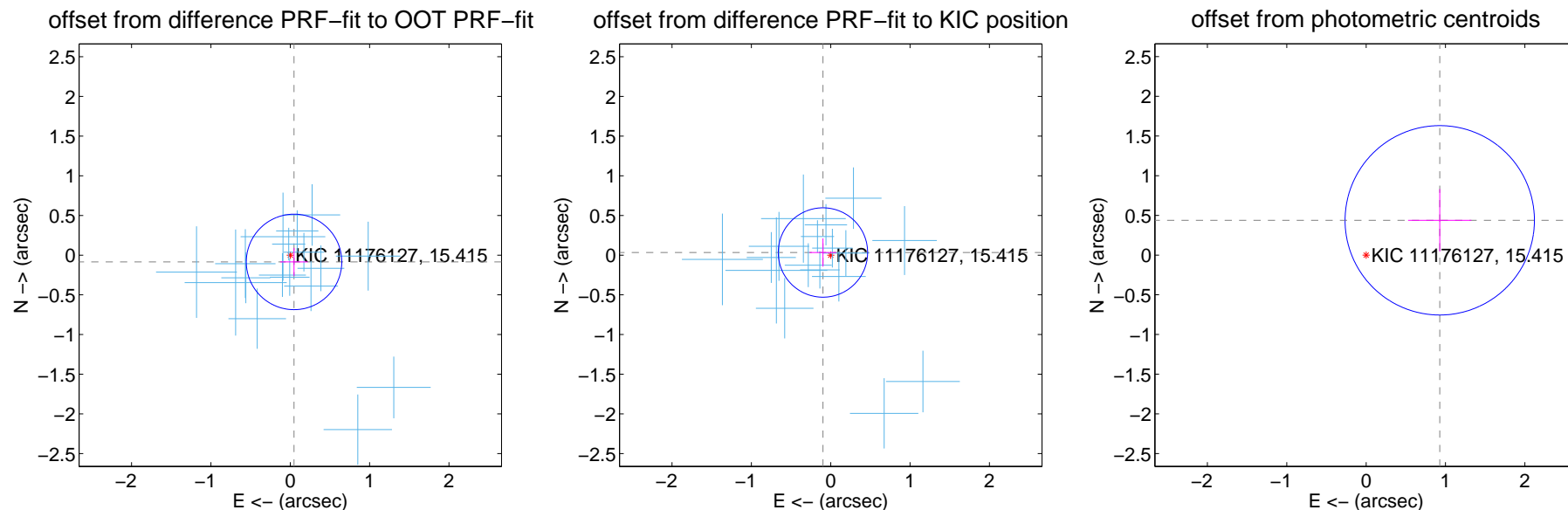
DV Centroid Data

Supplemental centroid analysis for 011176127-01. Kepler magnitude: 15.41. Transit SNR 37.10

There are 17 quarters with good PRF difference image offsets

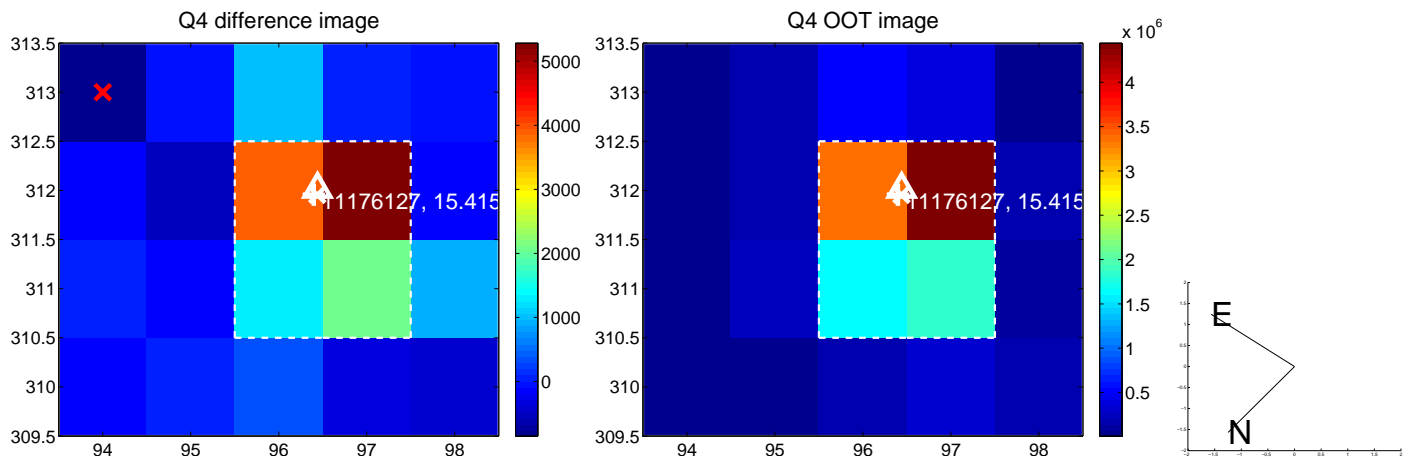
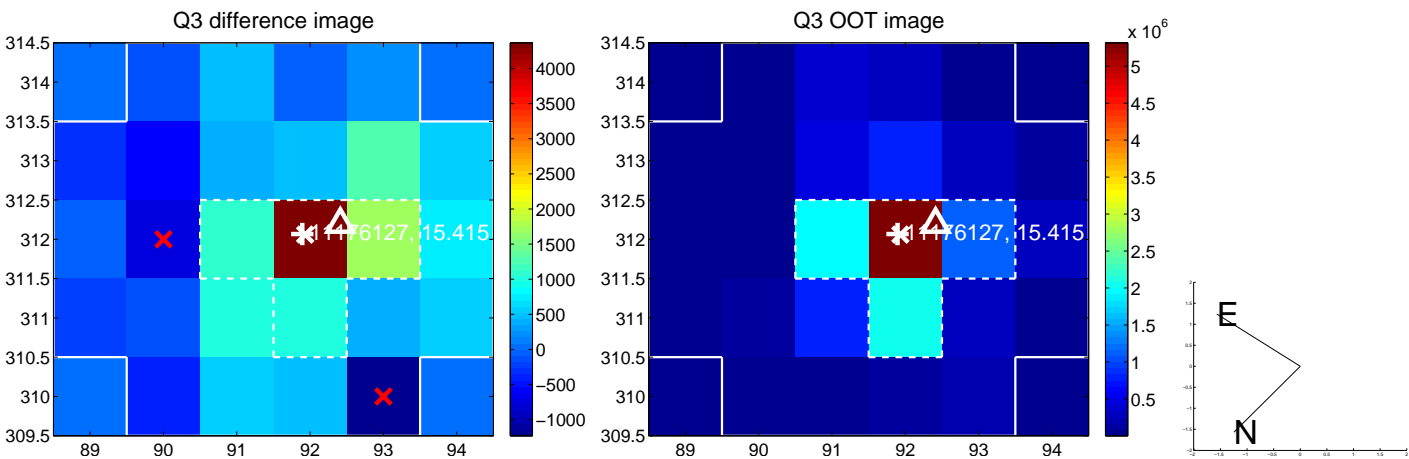
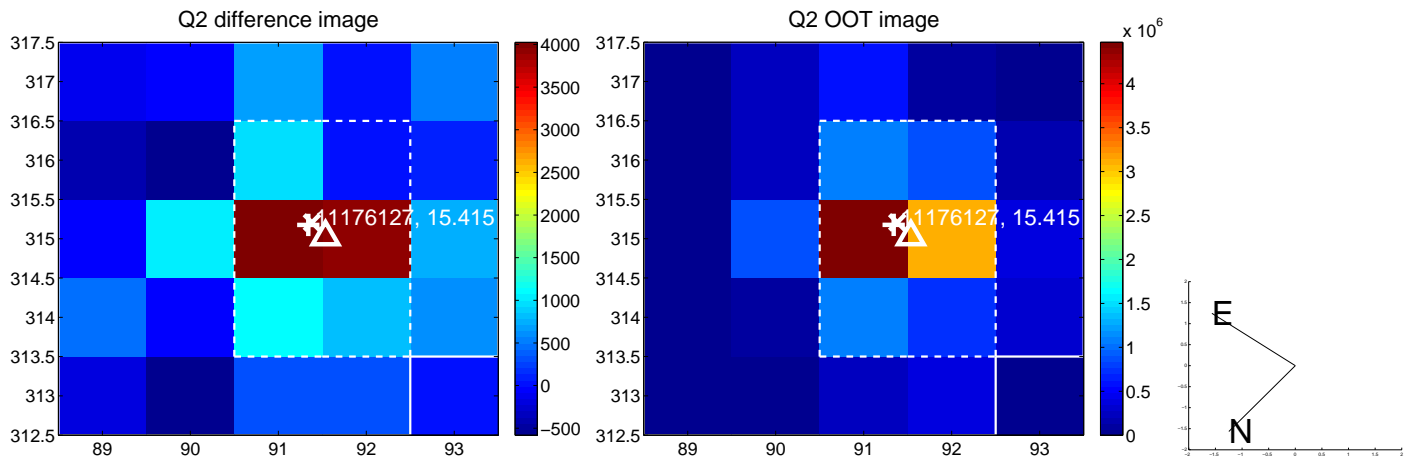
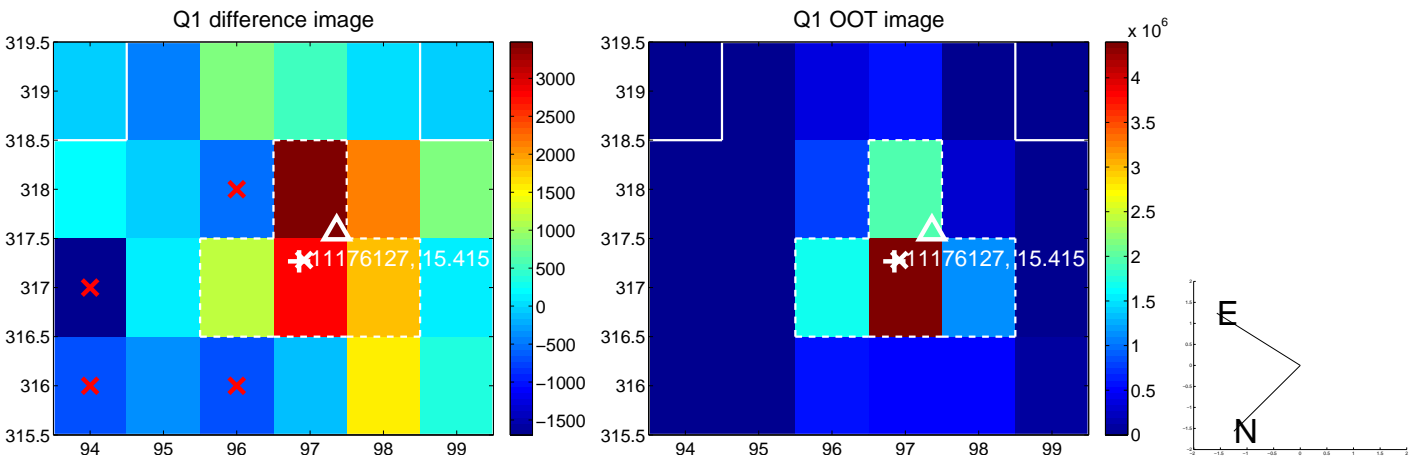
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.098 ± 0.201	0.49	-0.048 ± 0.173	-0.085 ± 0.176
PRF-fit source offset from KIC position	0.104 ± 0.188	0.55	0.098 ± 0.168	0.033 ± 0.177
photometric centroid source offset	1.03 ± 0.40	2.58	-0.93 ± 0.40	0.44 ± 0.39

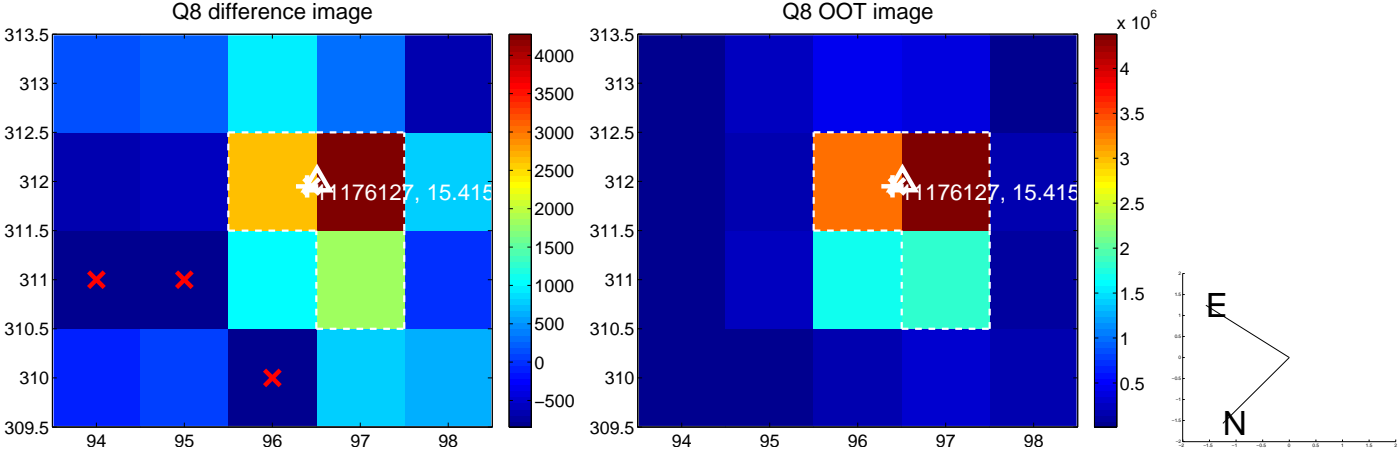
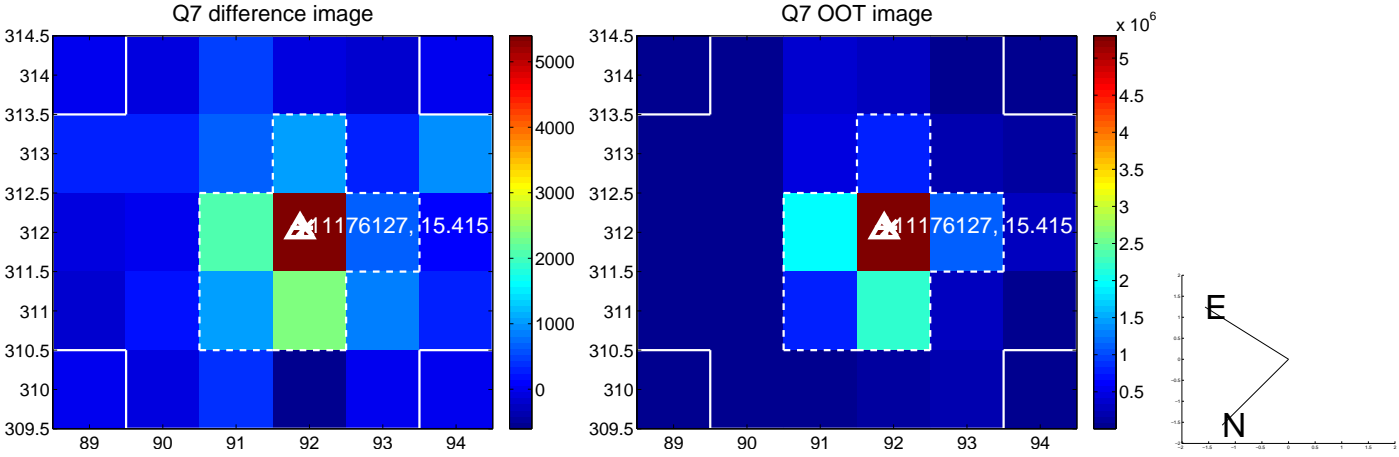
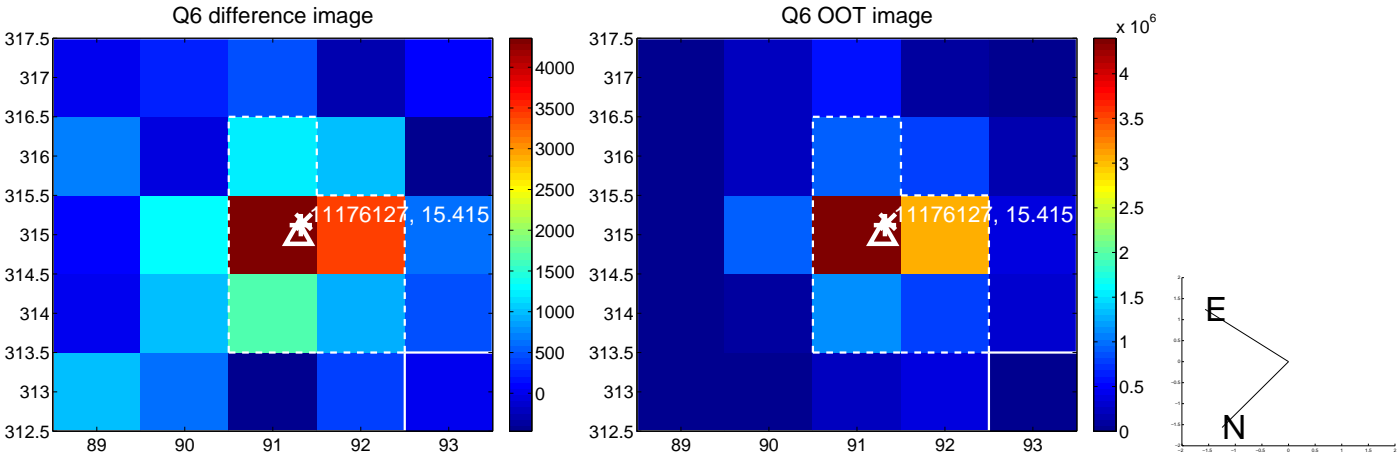
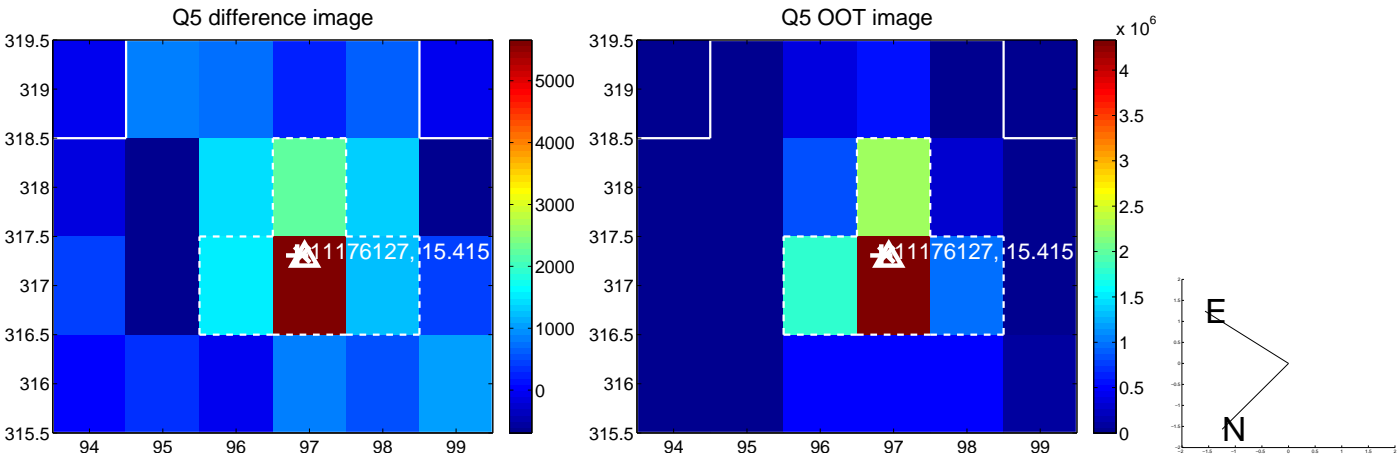


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

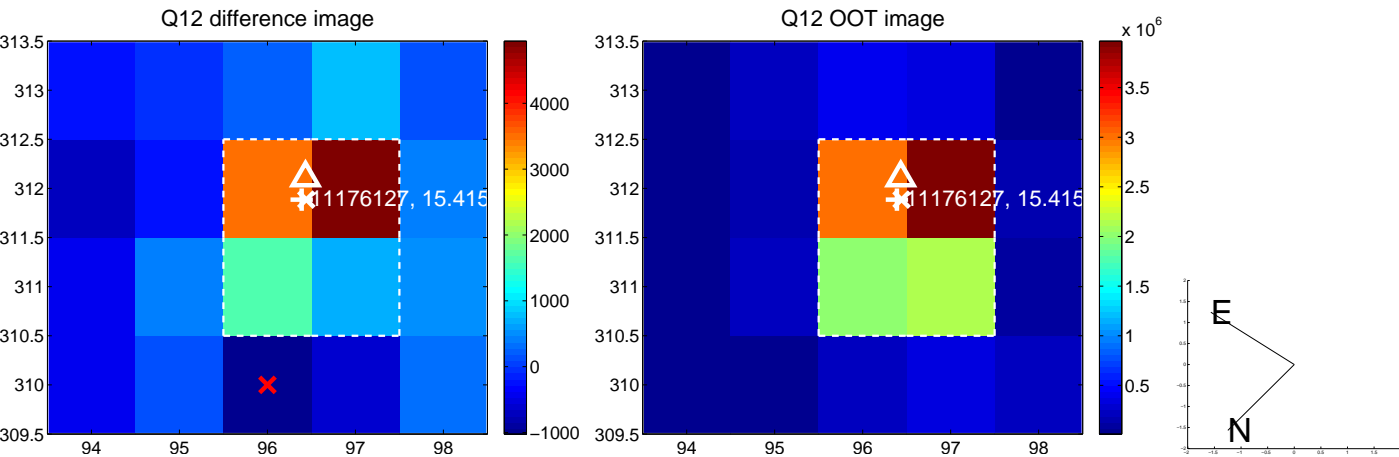
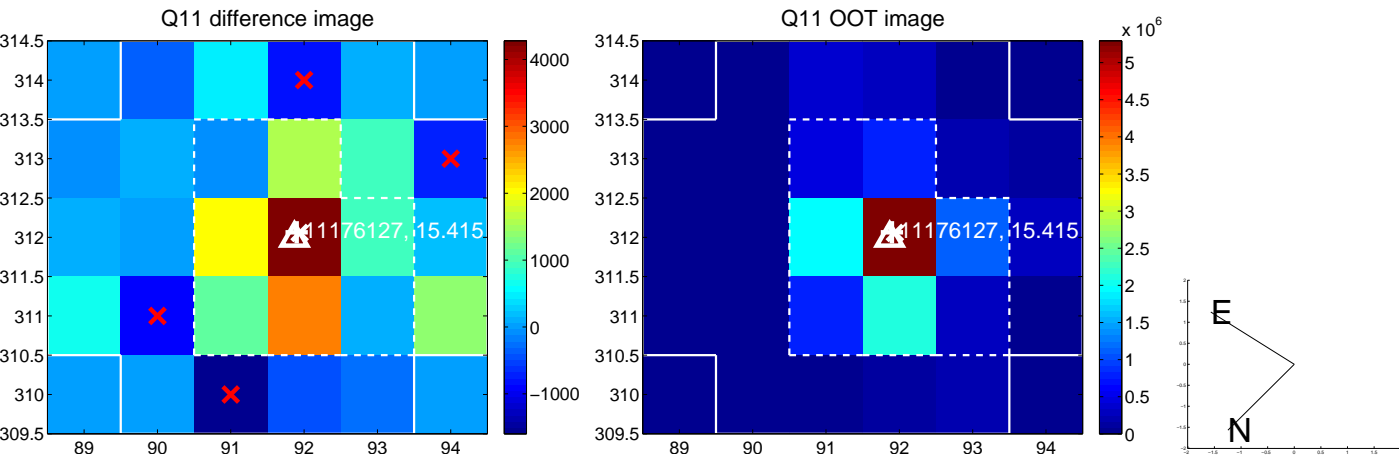
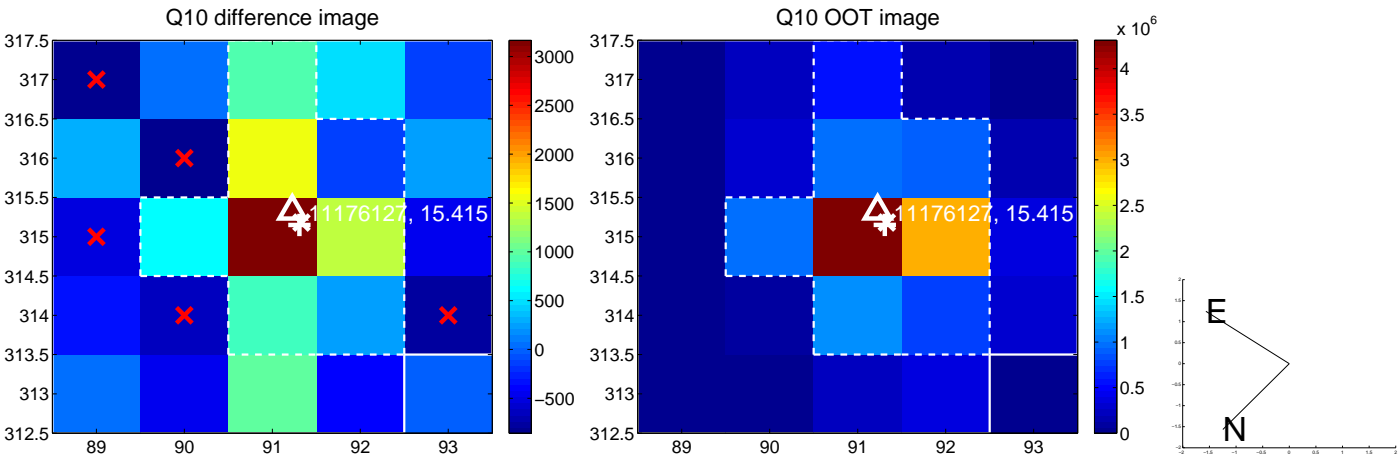
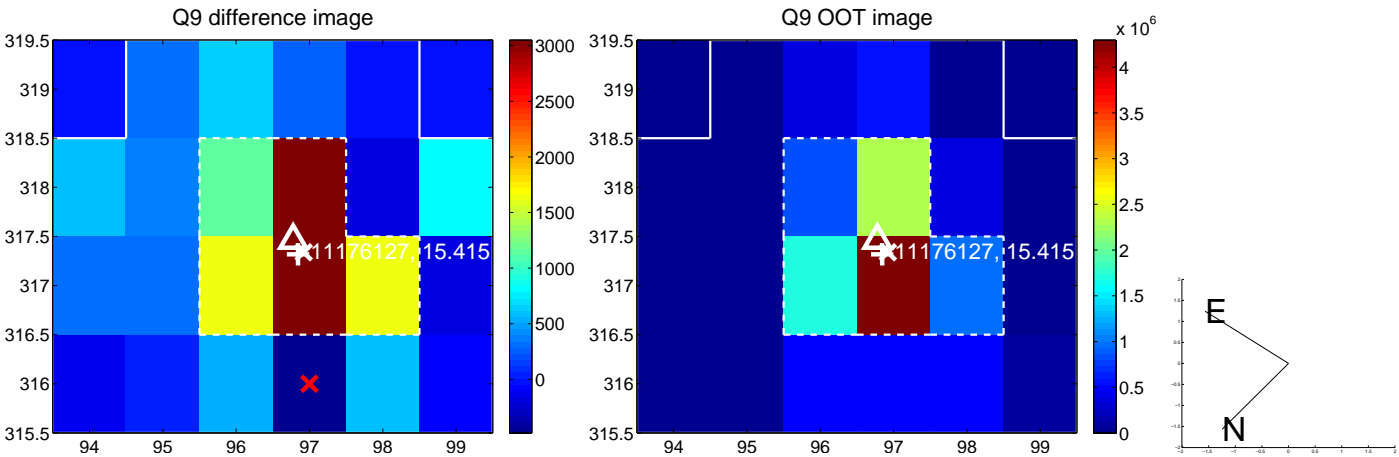
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



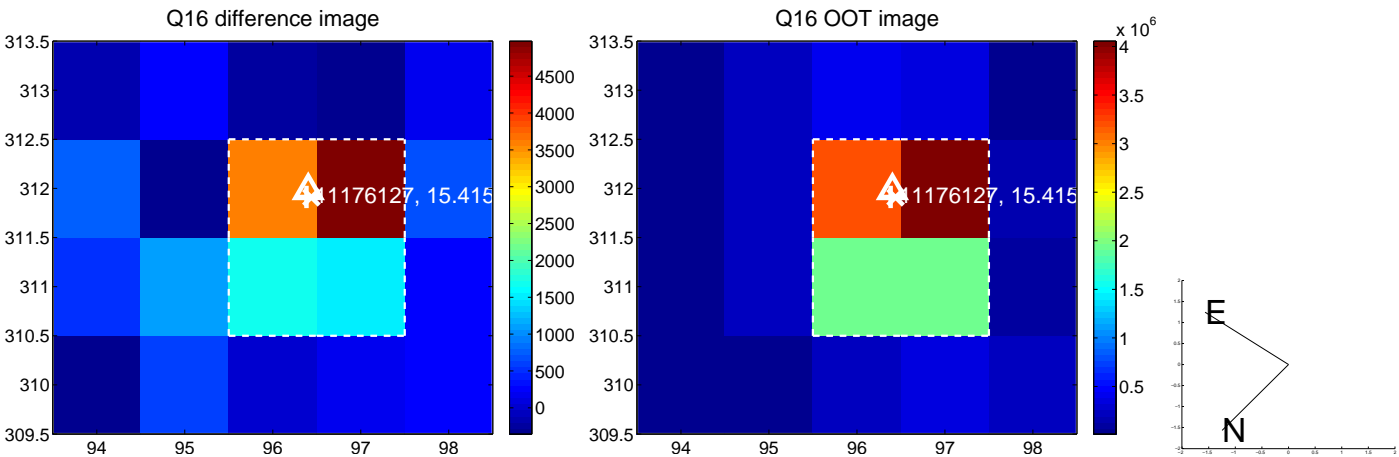
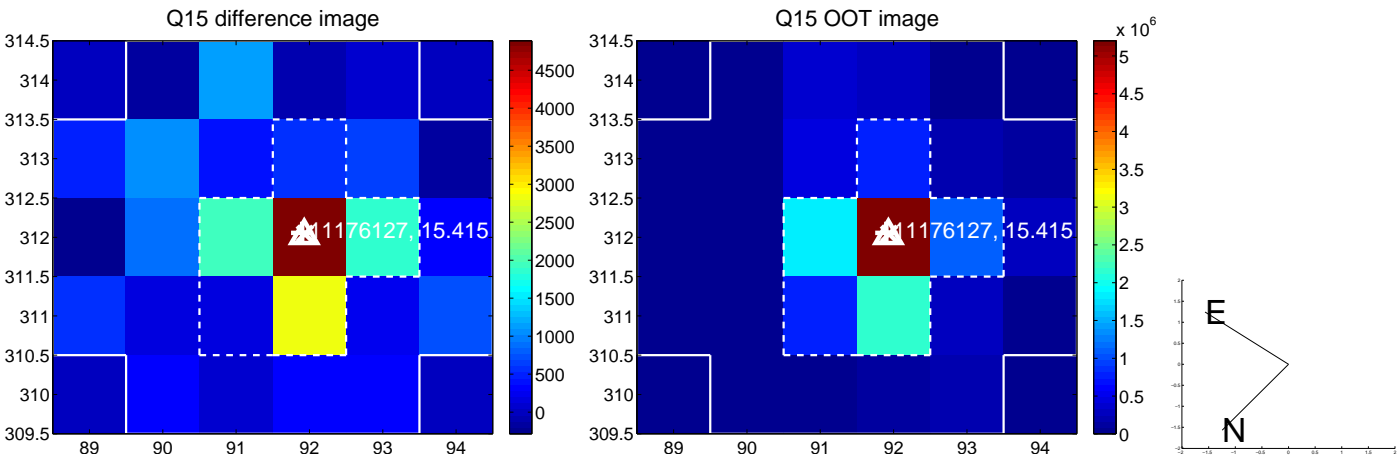
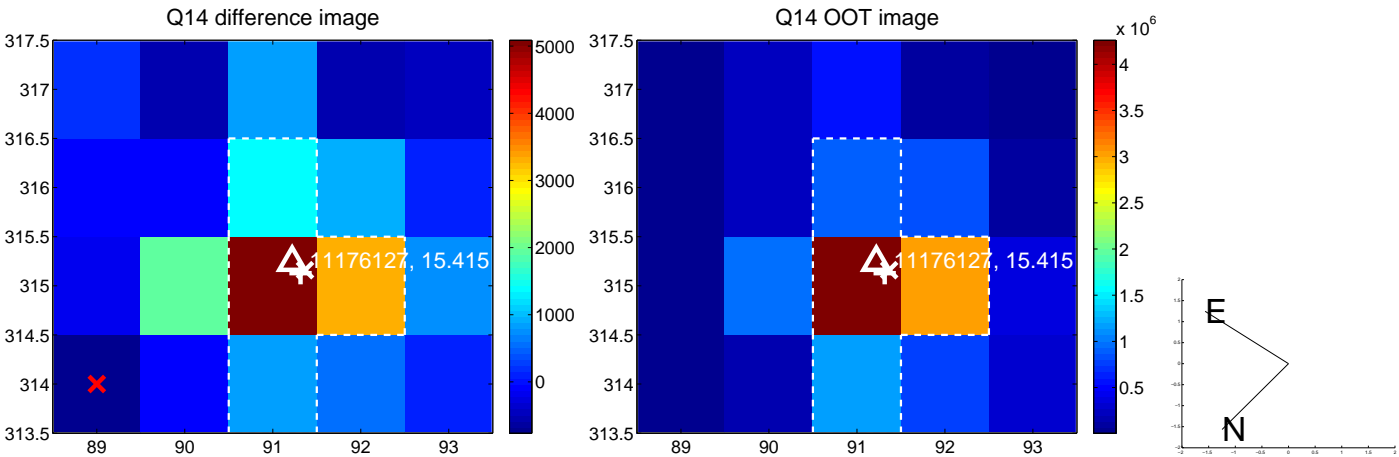
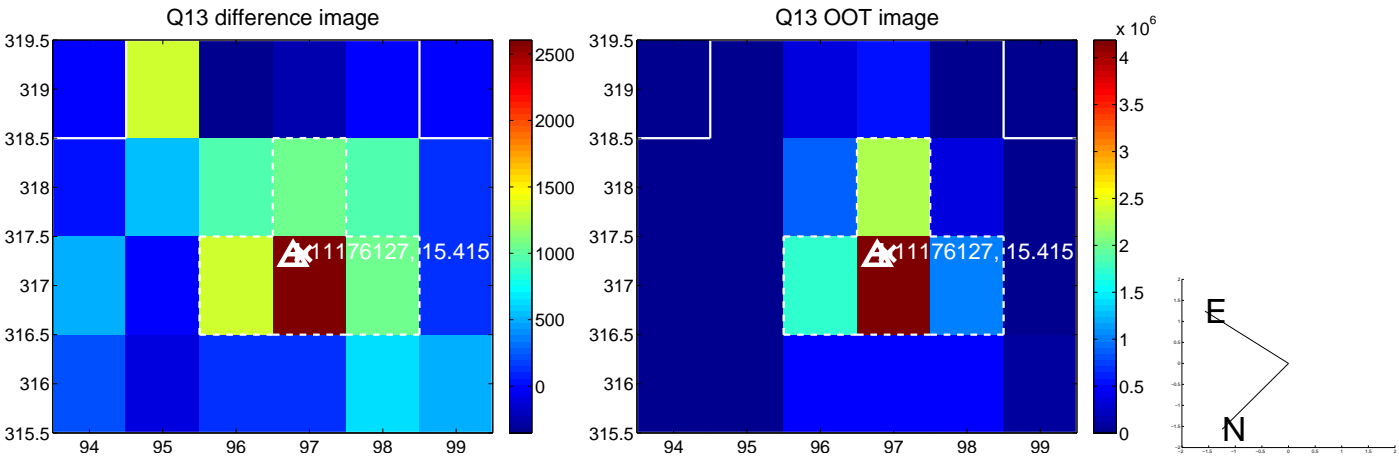
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



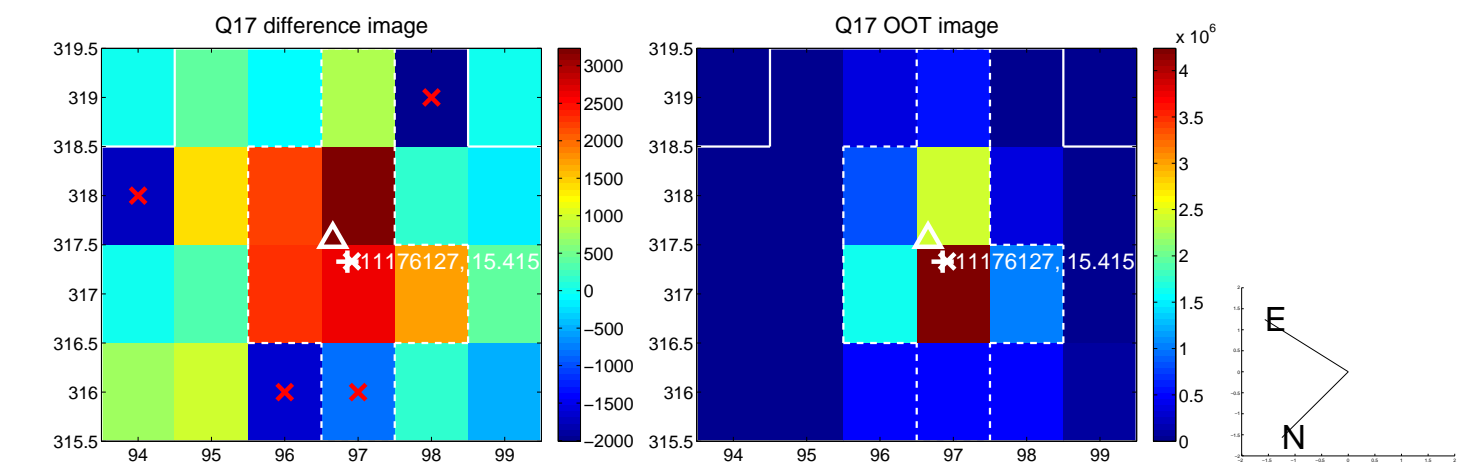
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



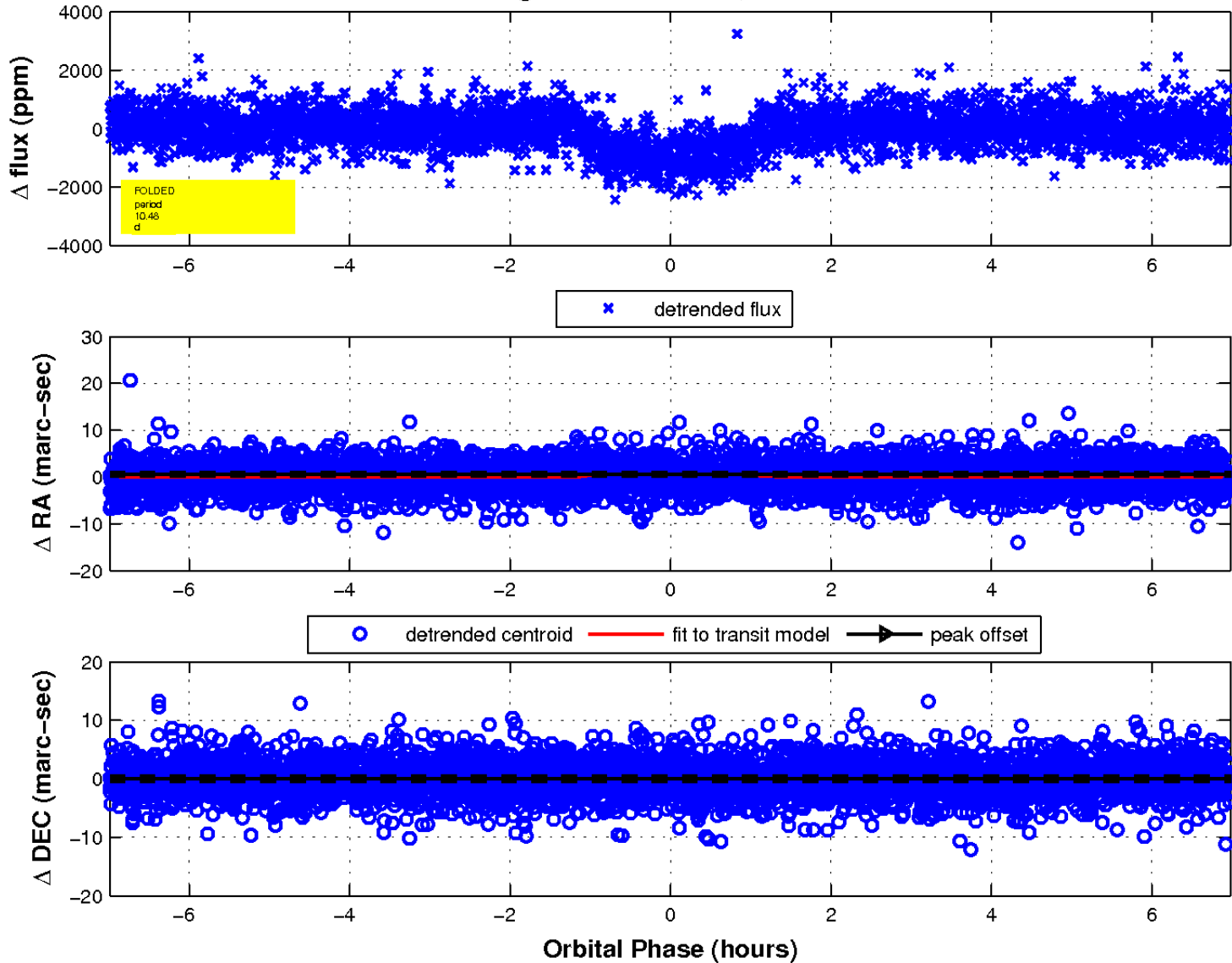
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

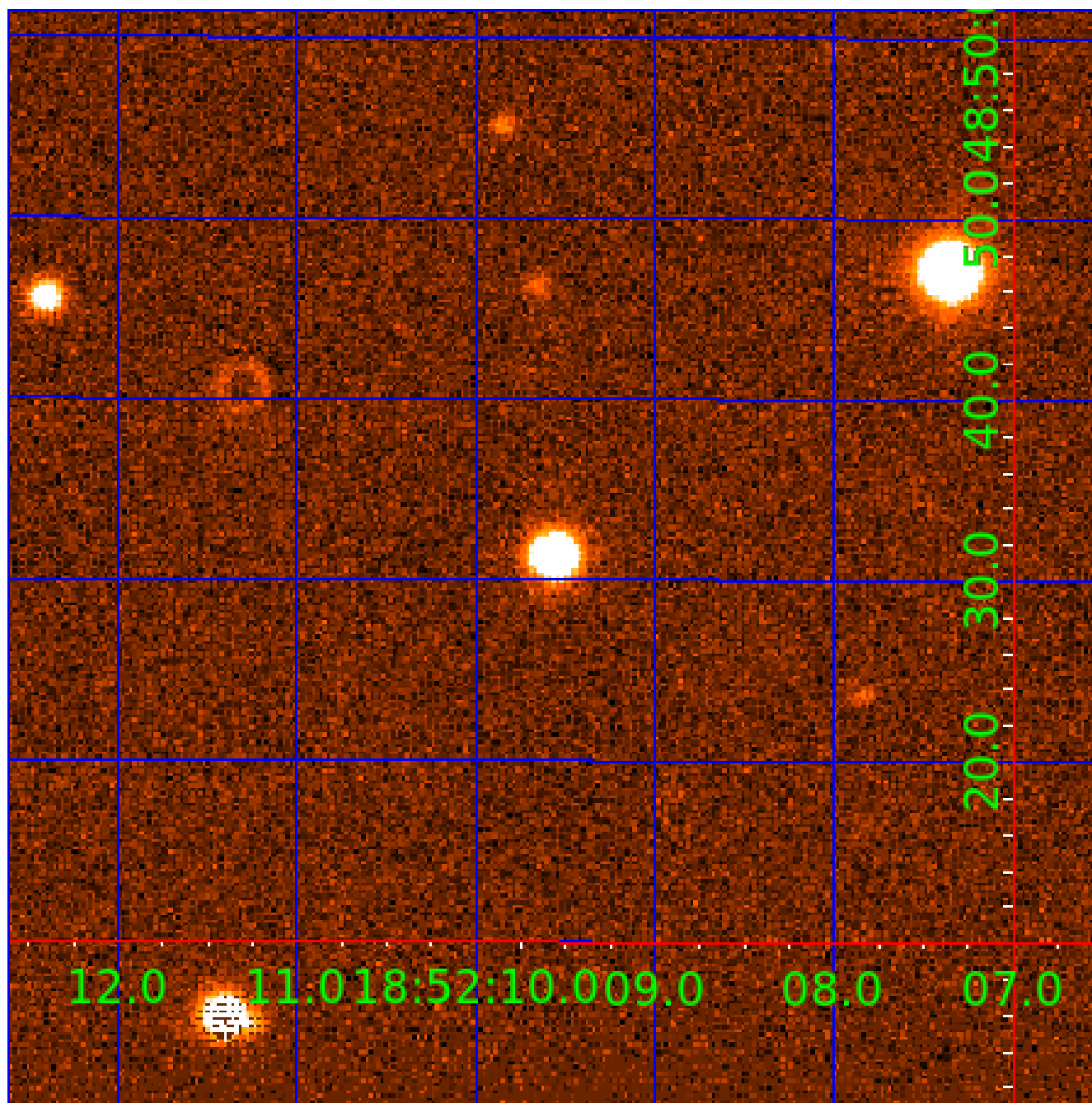


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 011176127

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})
011176127-01	OBS	1430.01	10.475467	131.691533	1060.8	2.330	32.2	37.1	0.61	4463	2.20	20.19
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011176127-03	OBS	1430.02	22.928837	143.864022	881.1	2.081	16.8	19.2	0.61	4463	2.19	7.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011176127-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011176127-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011176127-03	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.

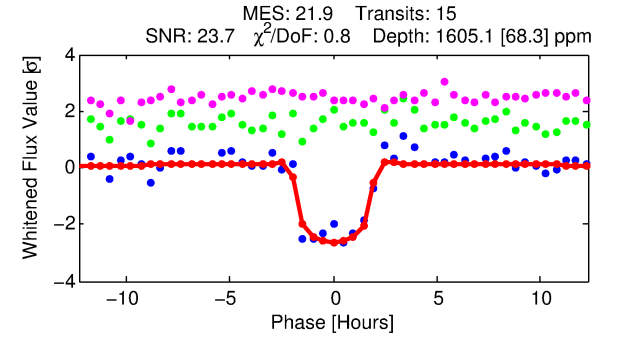
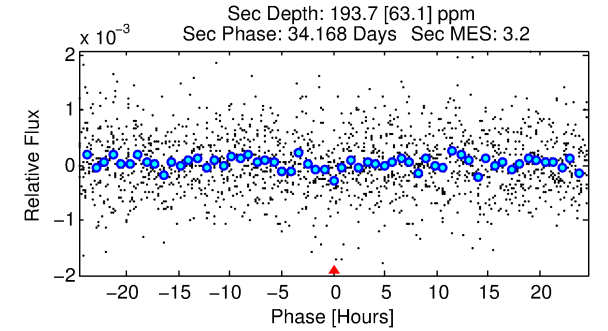
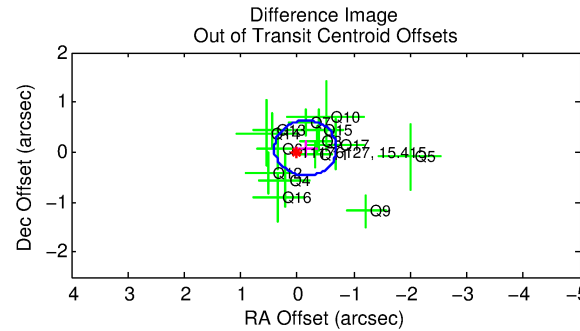
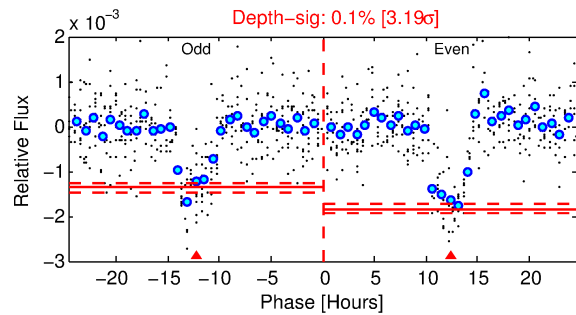
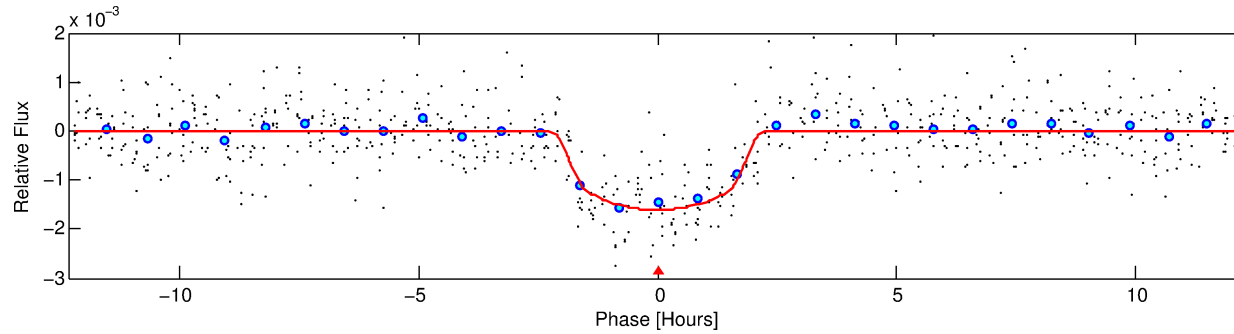
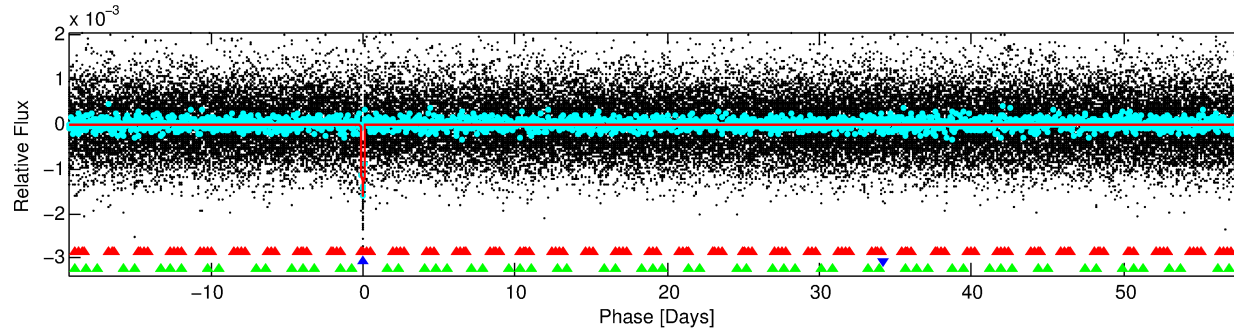
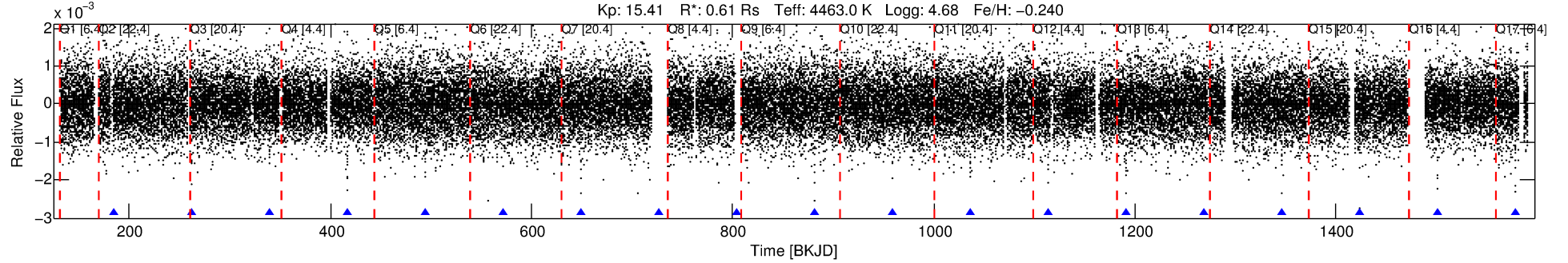
Ephemeris Match Information For 011176127-02

No Significant Match Found

DV One-Page Summary

KIC: 11176127 Candidate: 2 of 3 Period: 77.474 d
KOI: K01430.03 Name: Kepler-298d Corr: 0.993

Kp: 15.41 R*: 0.61 Rs Teff: 4463.0 K Logg: 4.68 Fe/H: -0.240



DV Fit Results:

Period = 77.47398 [0.00033] d
Epoch = 184.2468 [0.0039] BKJD
Rp/R* = 0.0393 [0.0143]
a/R* = 109.53 [129.35]
b = 0.71 [0.85]
Seff = 1.40 [0.15]
Teq = 277 [8] K
Rp = 2.62 [0.97] Re
a = 0.3077 [0.0167] AU
Ag = 1465.73 [1175.97] [1.25σ]
Teffp = 2654 [533] K [4.46σ]

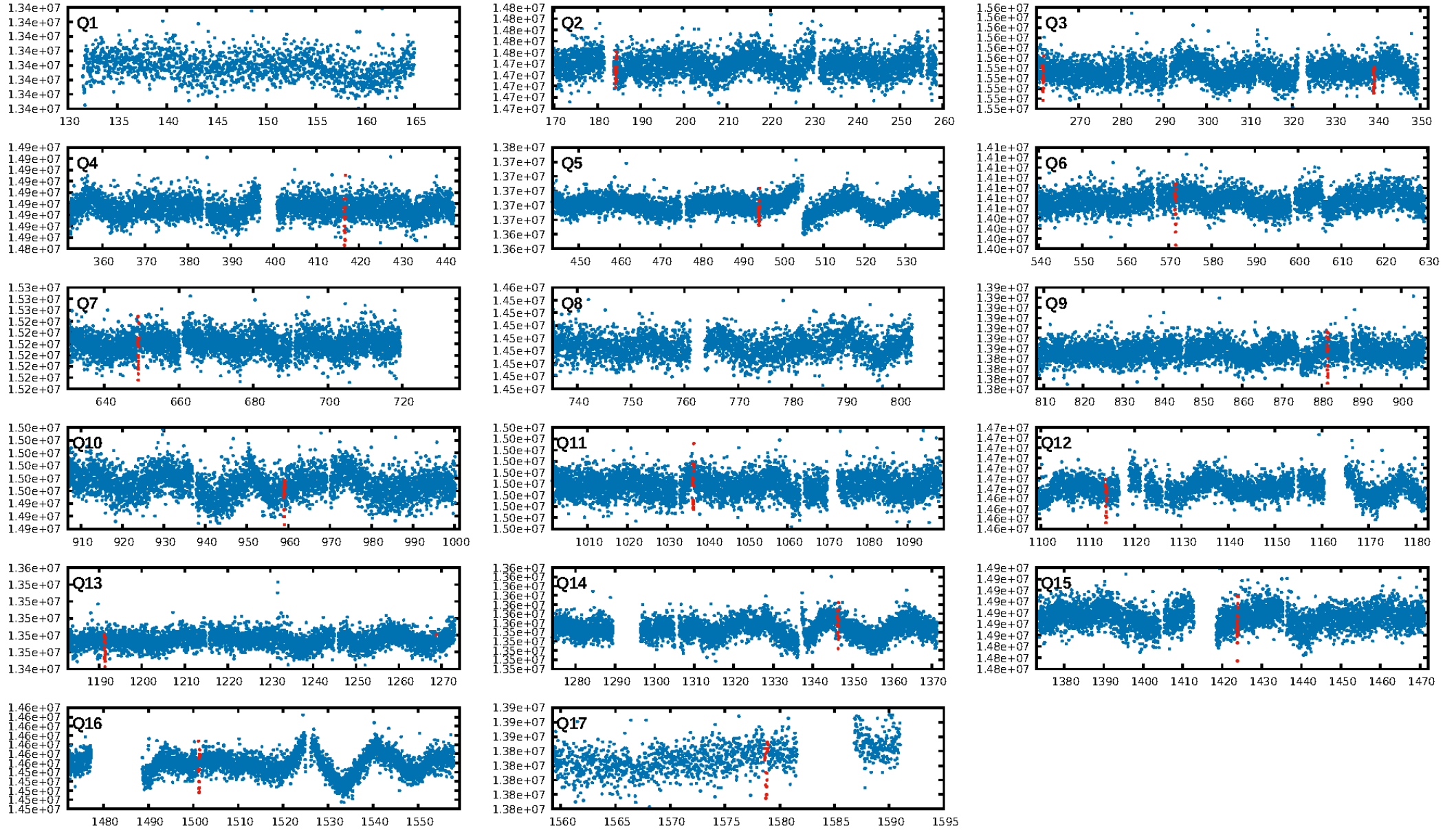
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [284.27σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.93e-99
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: -48.49
Centroid-sig: 26.5%
Centroid-so: 0.252 arcsec [0.46σ]
OotOffset-rm: 0.168 arcsec [0.91σ]
KicOffset-rm: 0.180 arcsec [1.11σ]
OotOffset-st: 3/4/3/4 [14]
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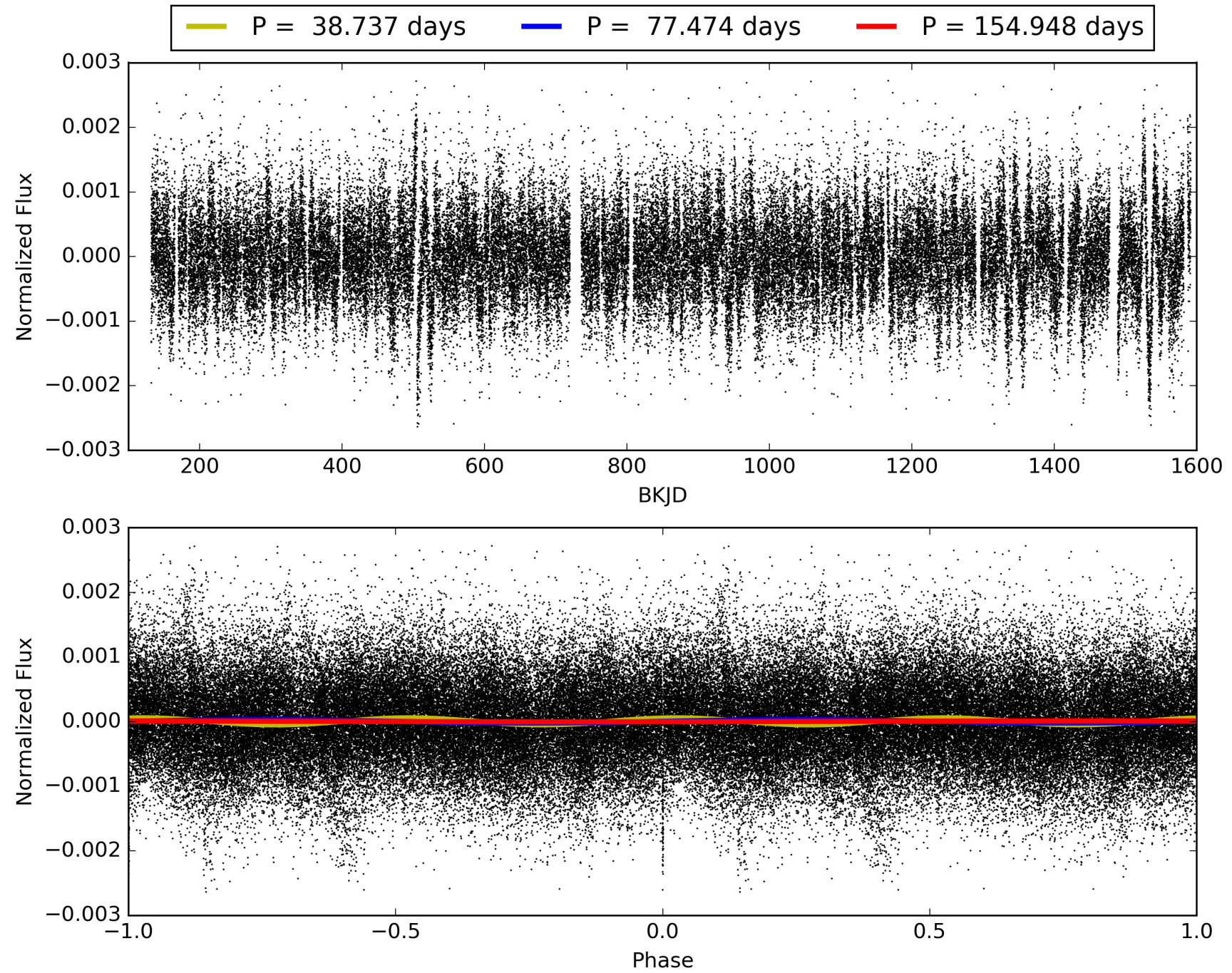
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:10:00 Z

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

TCE 011176127-02, PDC Light Curves

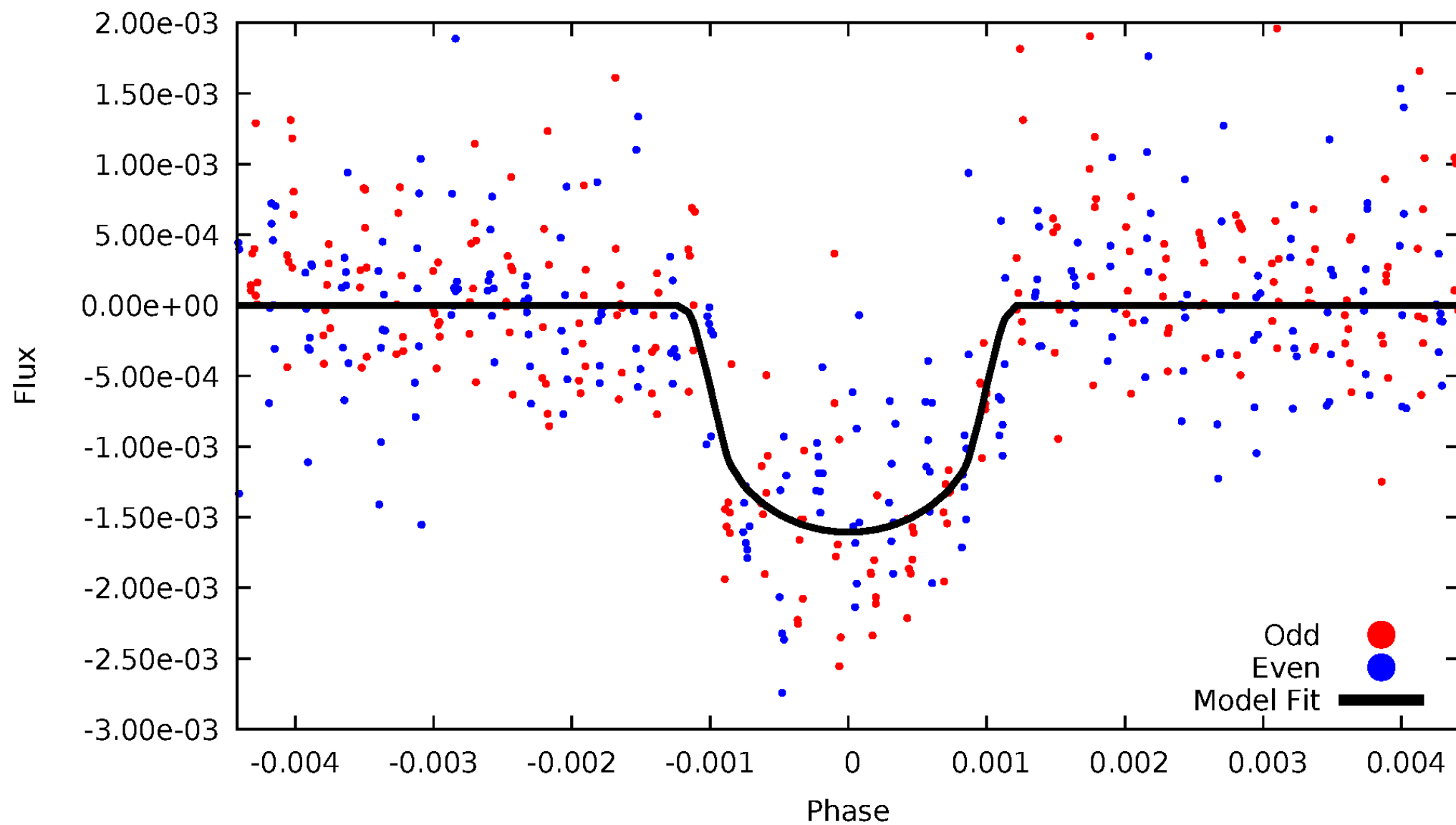


TCE 011176127-02



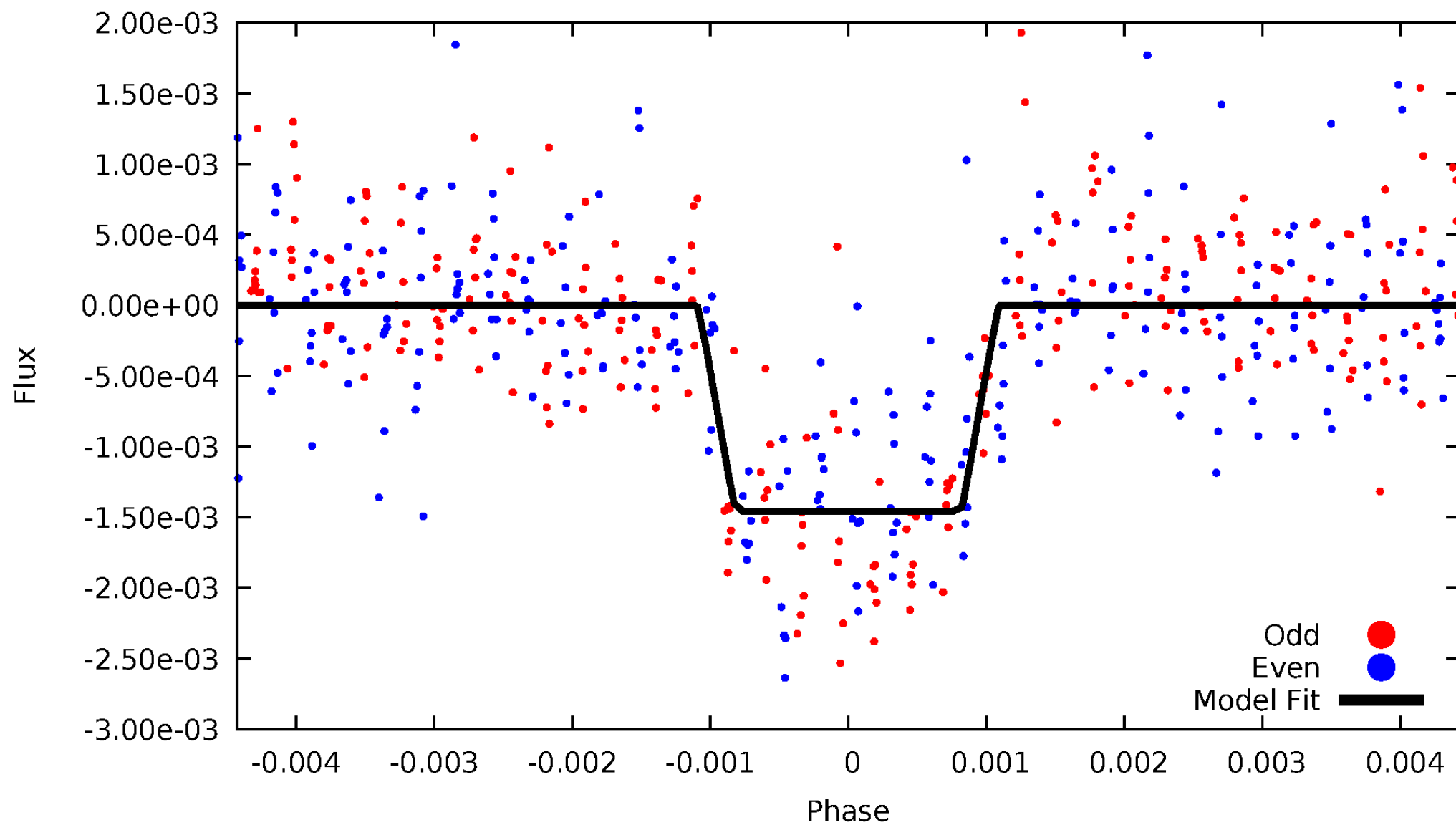
DV Odd/Even

TCE 011176127-02



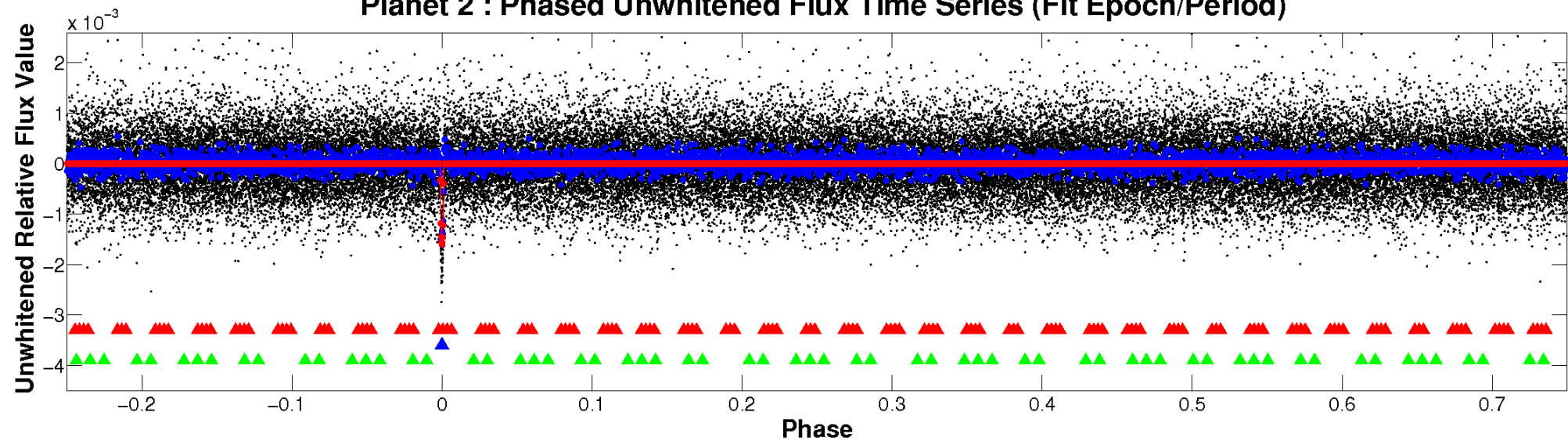
ALT Odd/Even

TCE 011176127-02

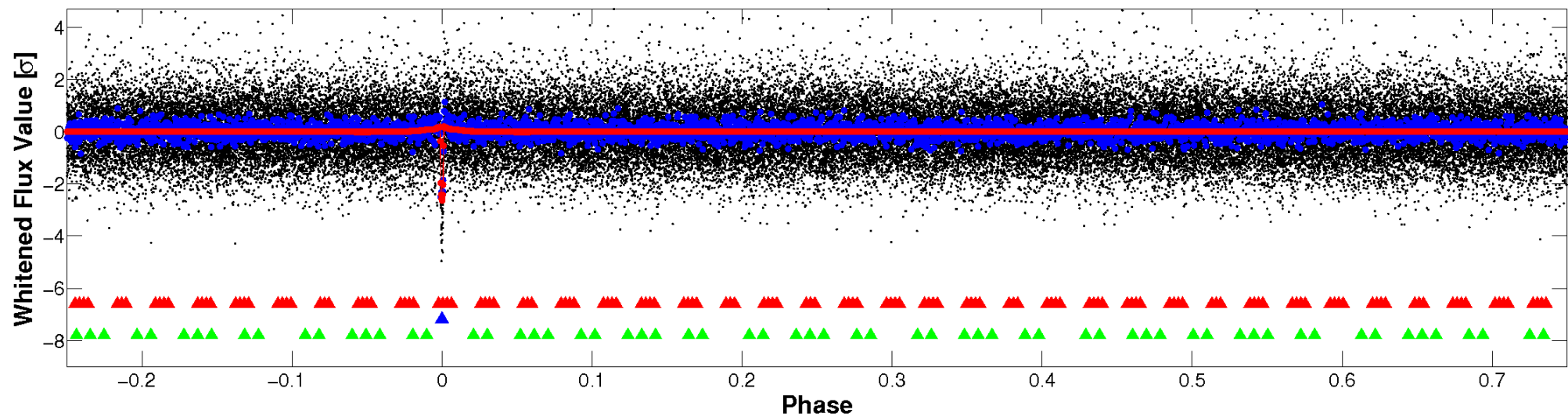


Non-Whitened Vs. Whitened Light Curve

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

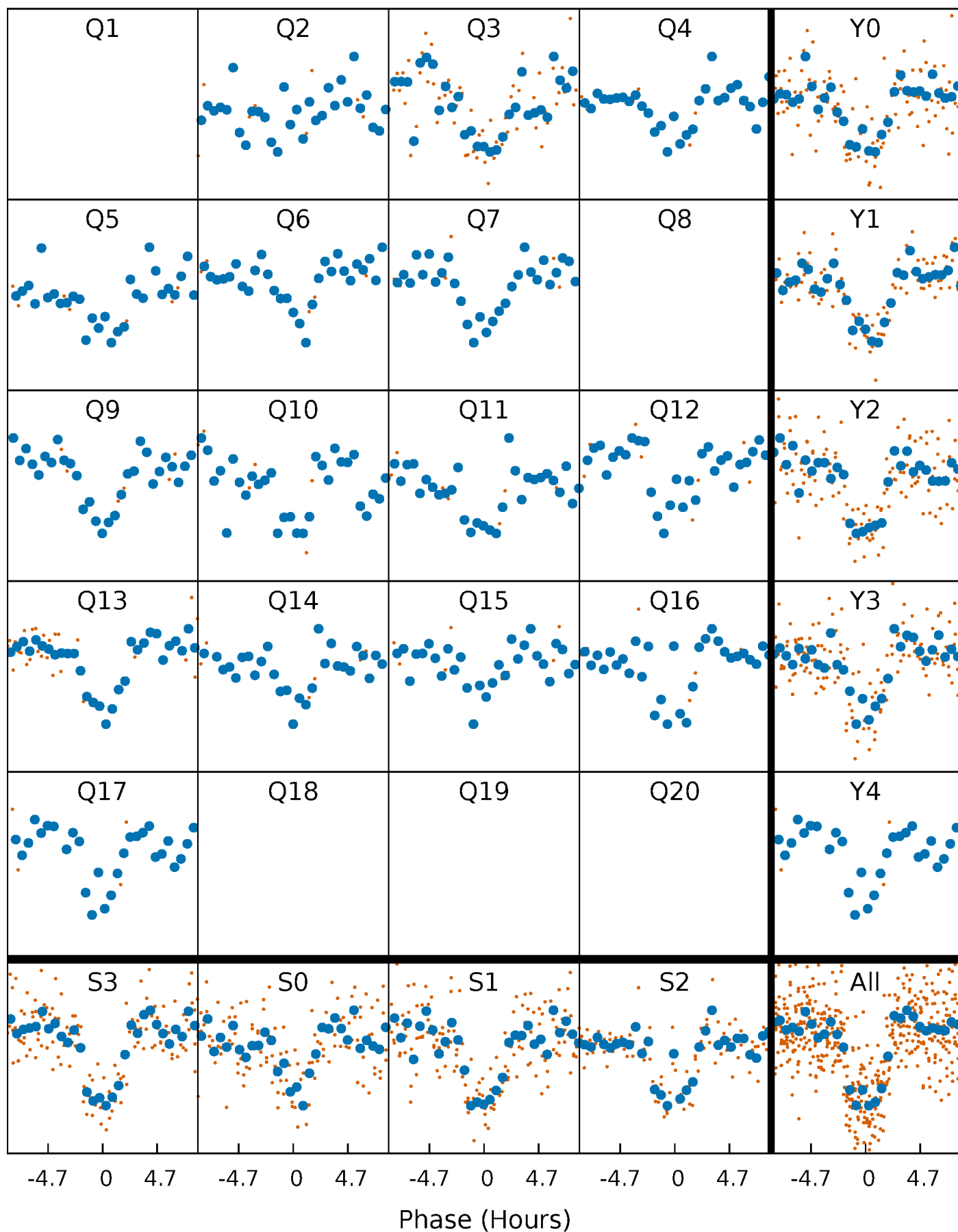


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



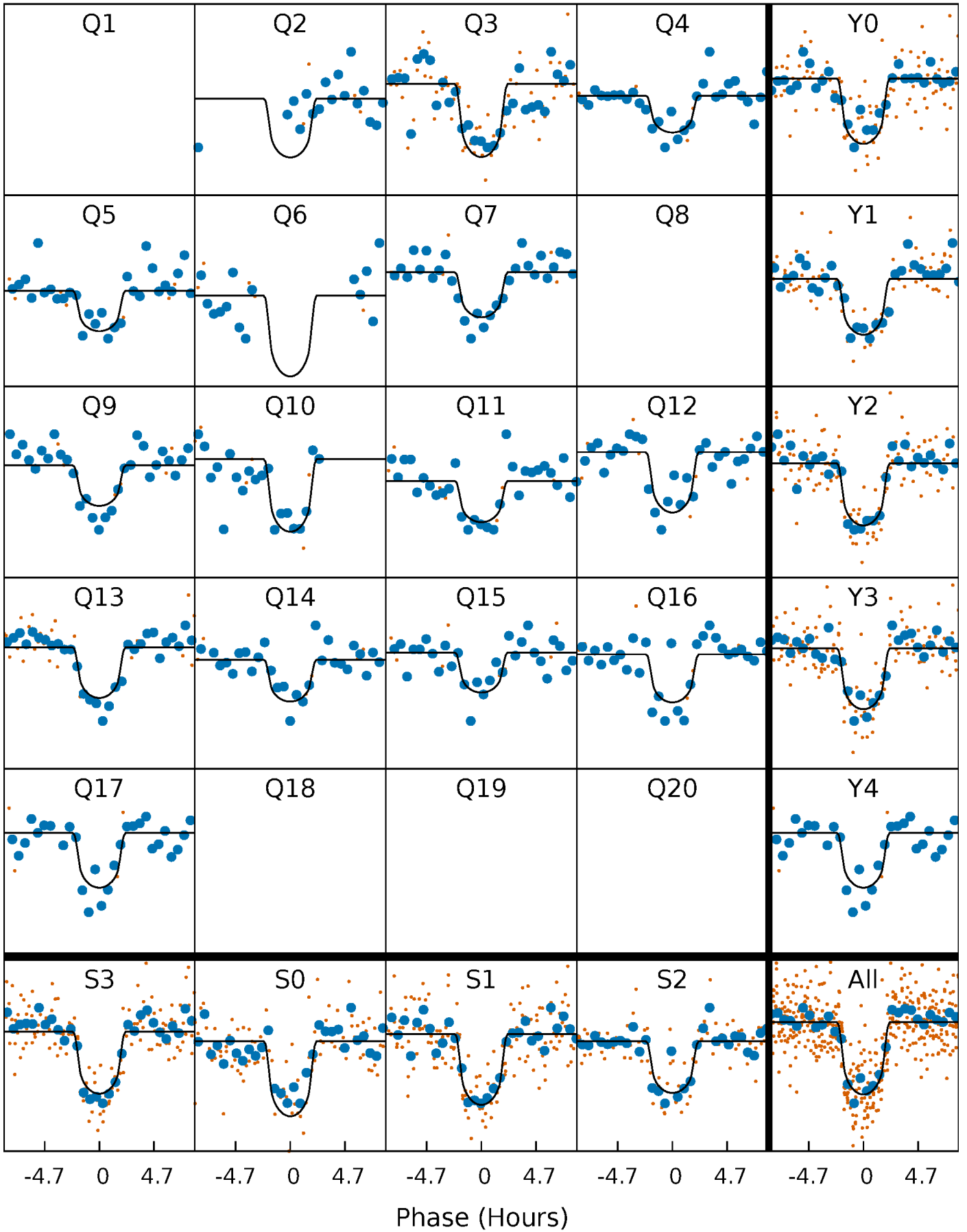
PDC Quarter-Phased Transit Curves

TCE 011176127-02 P= 77.473982 Days $T_0=184.246763$ (BKJD)



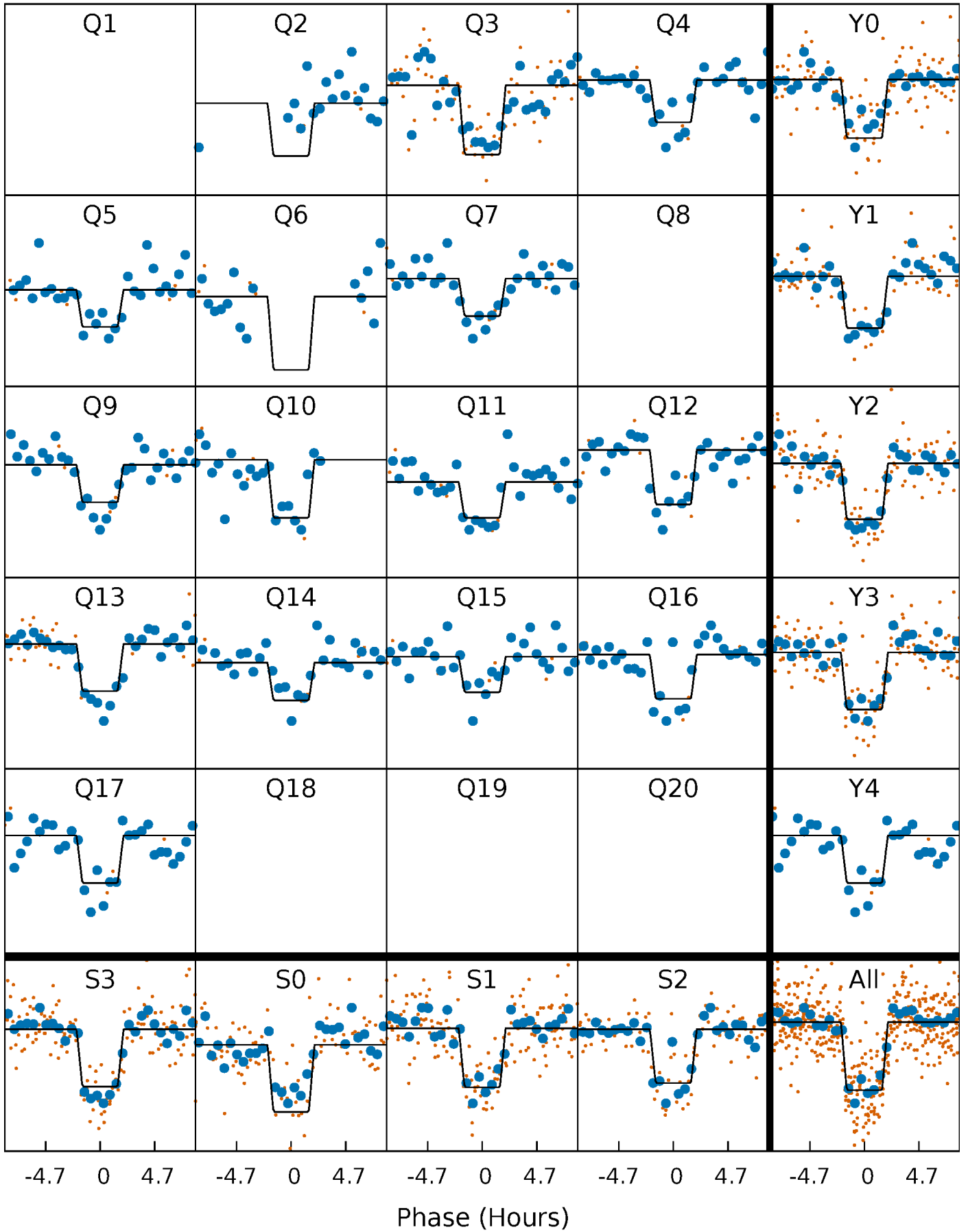
DV Quarter-Phased Transit Curves

TCE 011176127-02 P= 77.473982 Days $T_0=184.246763$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

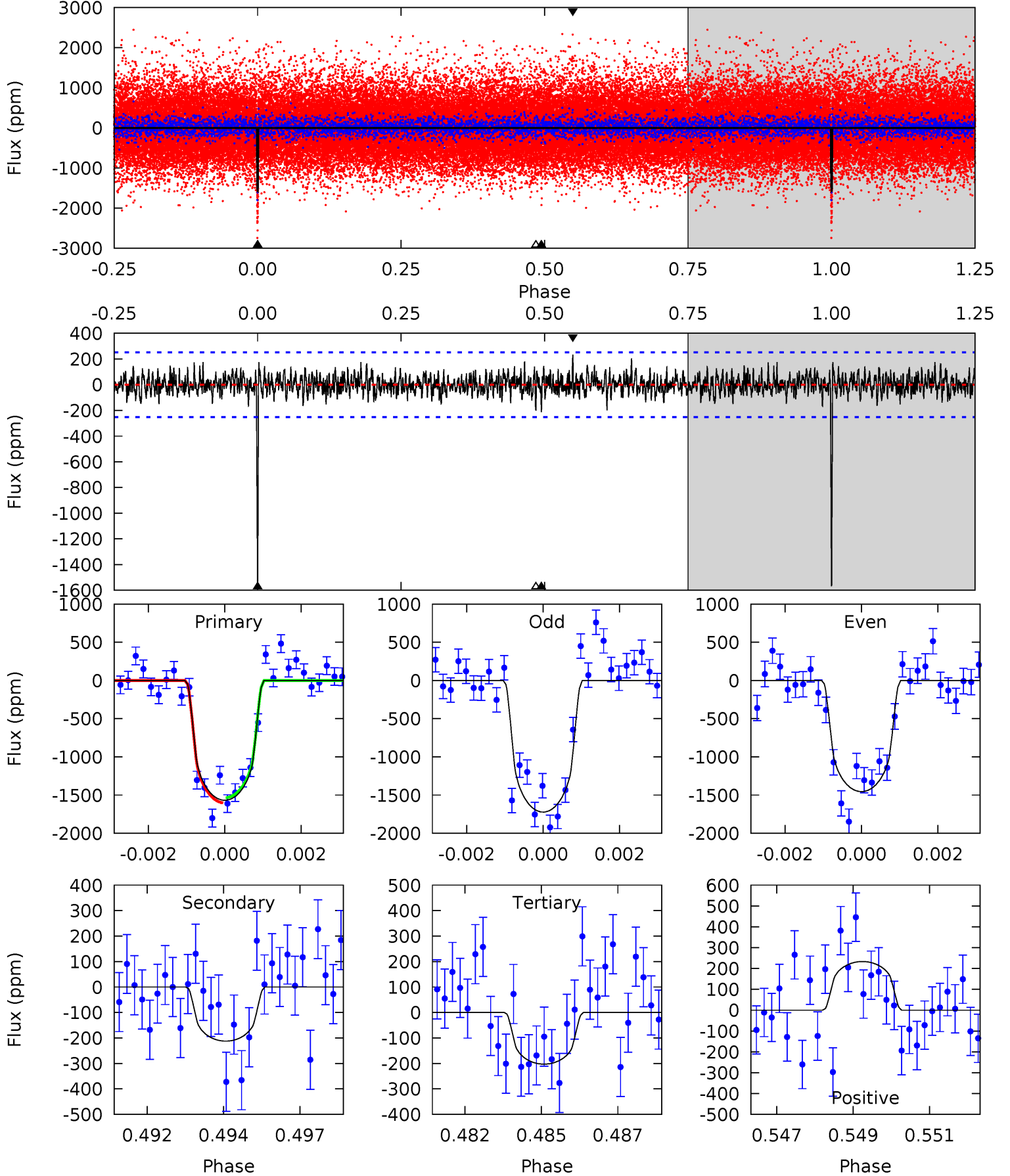
TCE 011176127-02 P= 77.473831 Days $T_0=184.247703$ (BKJD)



DV Model-Shift Uniqueness Test

011176127-02, $P = 77.473982$ Days, $E = 106.772781$ Days

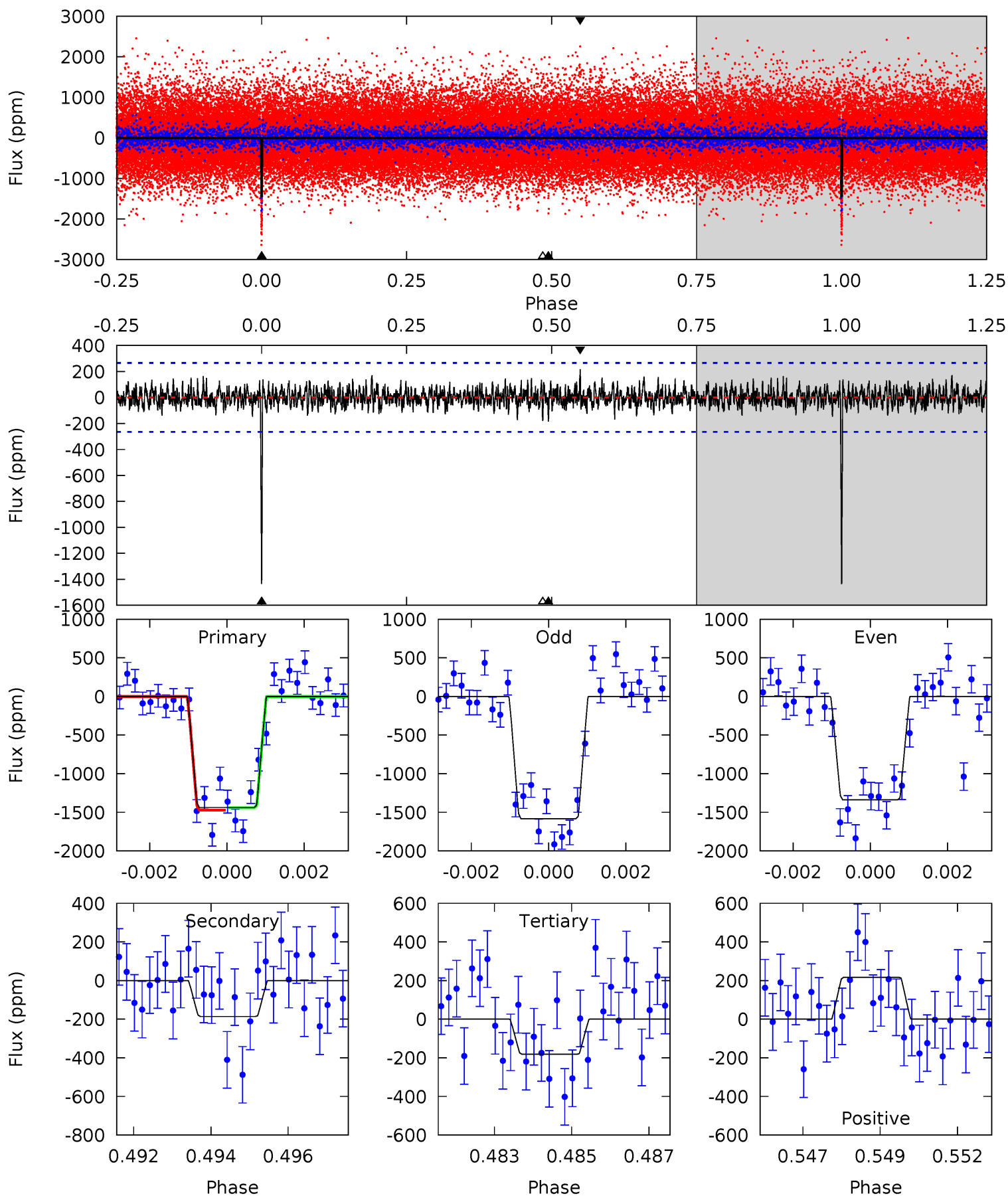
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	4.47	4.26	4.91	5.30	3.04	1.22	28.7	28.1	0.20	-0.44	2.81	1.02	0.13	0.71



Alt Model-Shift Uniqueness Test

011176127-02, P = 77.473831 Days, E = 106.773872 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.7	3.72	3.64	4.35	5.31	3.07	1.05	25.1	24.4	0.09	-0.63	2.45	0.99	0.13	0.32



Stellar Parameters For KIC 011176127

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4463^{+88}_{-88}	$4.677^{+0.013}_{-0.040}$	$-0.240^{+0.150}_{-0.150}$	$0.611^{+0.041}_{-0.019}$	$0.662^{+0.027}_{-0.042}$	$4.098^{+0.243}_{-0.652}$
	+2%/-2%	+0%/-1%	+62%/-62%	+7%/-3%	+4%/-6%	+6%/-16%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 011176127-02 / KOI 1430.03

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-212 ± 48	$2.61^{+1.03}_{-0.90}$	390^{+9}_{-9}	3210^{+477}_{-318}	1616^{+2159}_{-829}
Alt.	-186 ± 50	$2.59^{+0.93}_{-0.96}$	391^{+9}_{-9}	3151^{+520}_{-297}	1427^{+2265}_{-714}

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

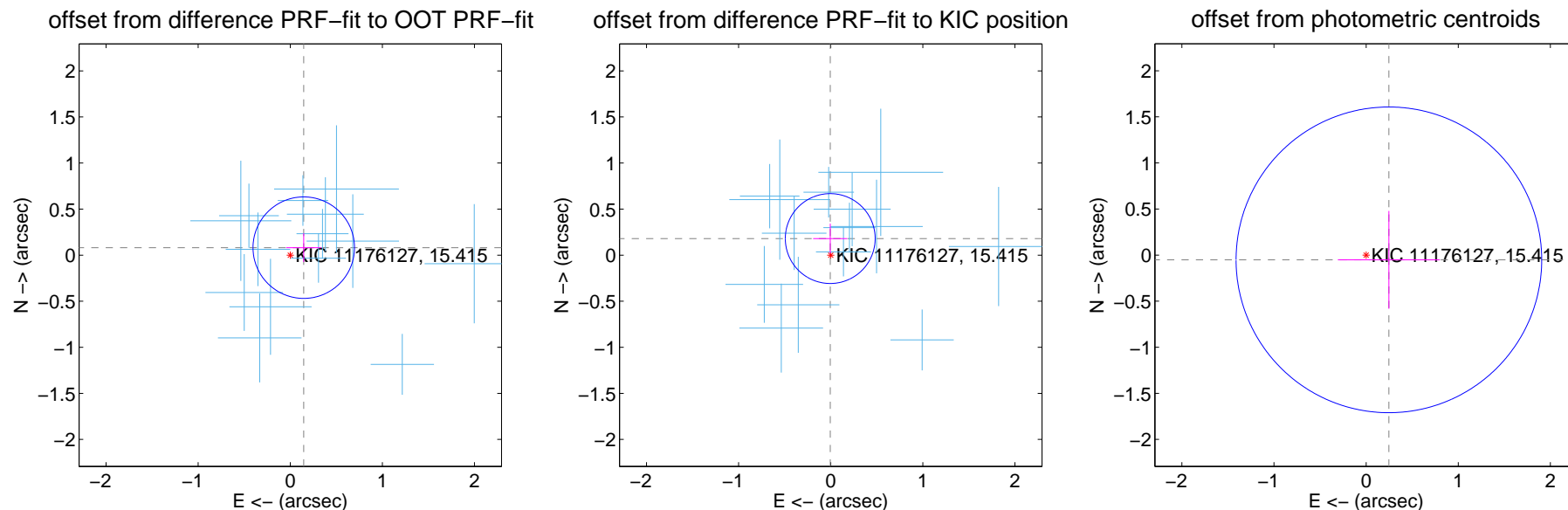
DV Centroid Data

Supplemental centroid analysis for 011176127-02. Kepler magnitude: 15.41. Transit SNR 23.65

There are 14 quarters with good PRF difference image offsets

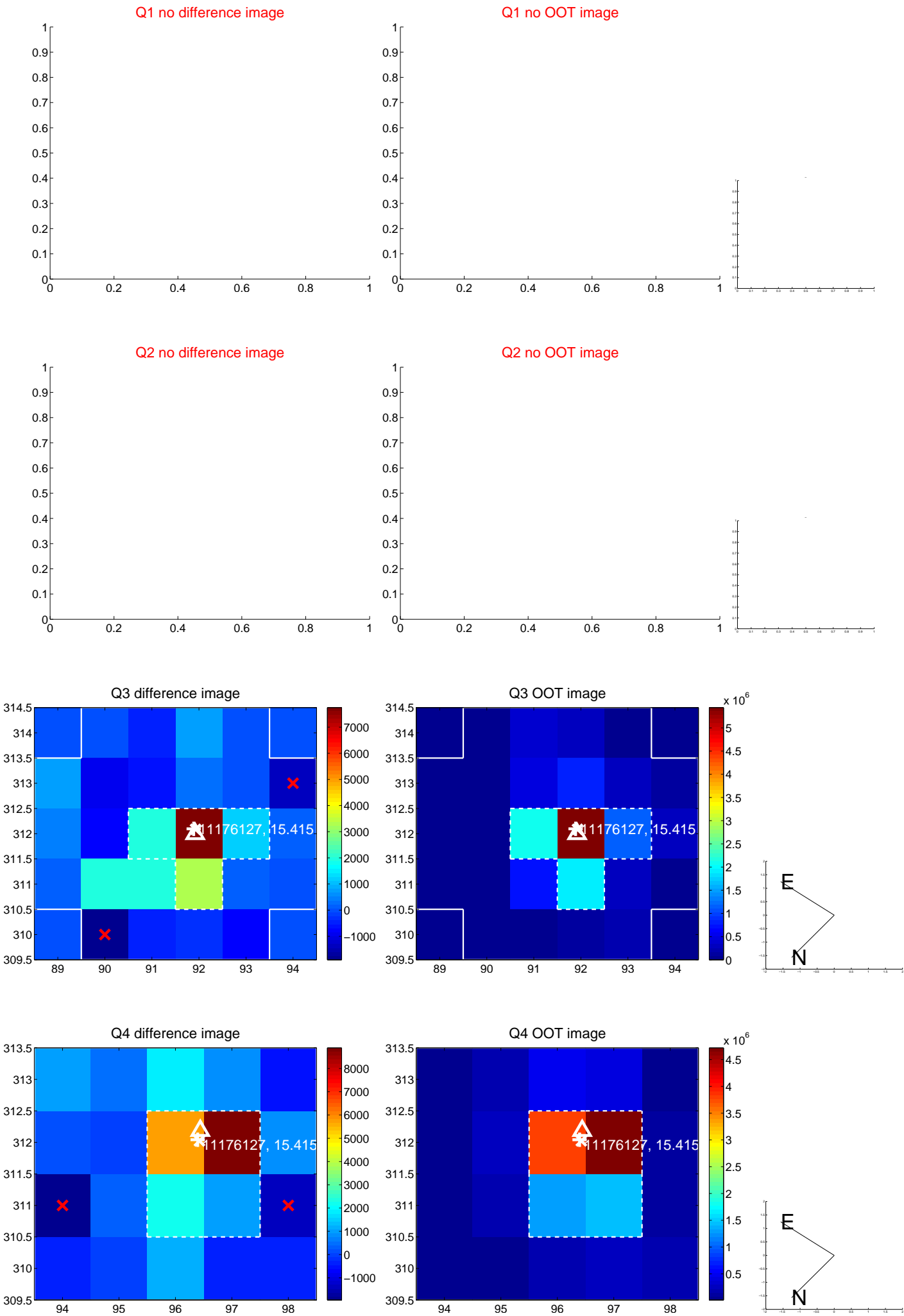
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.168 ± 0.184	0.91	-0.146 ± 0.192	0.081 ± 0.156
PRF-fit source offset from KIC position	0.180 ± 0.163	1.11	0.005 ± 0.186	0.180 ± 0.163
photometric centroid source offset	0.25 ± 0.55	0.46	-0.25 ± 0.55	-0.05 ± 0.53

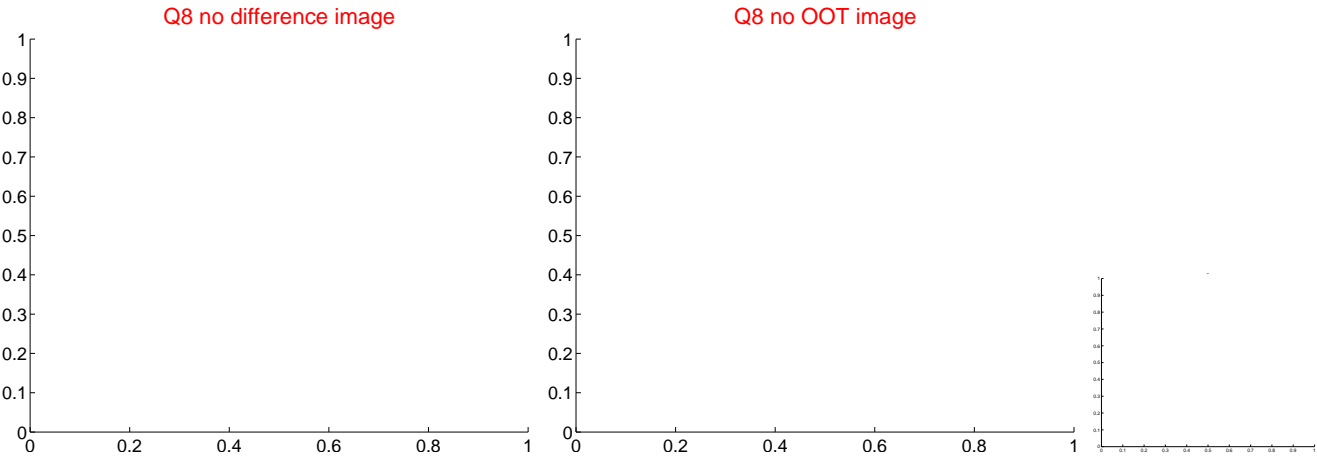
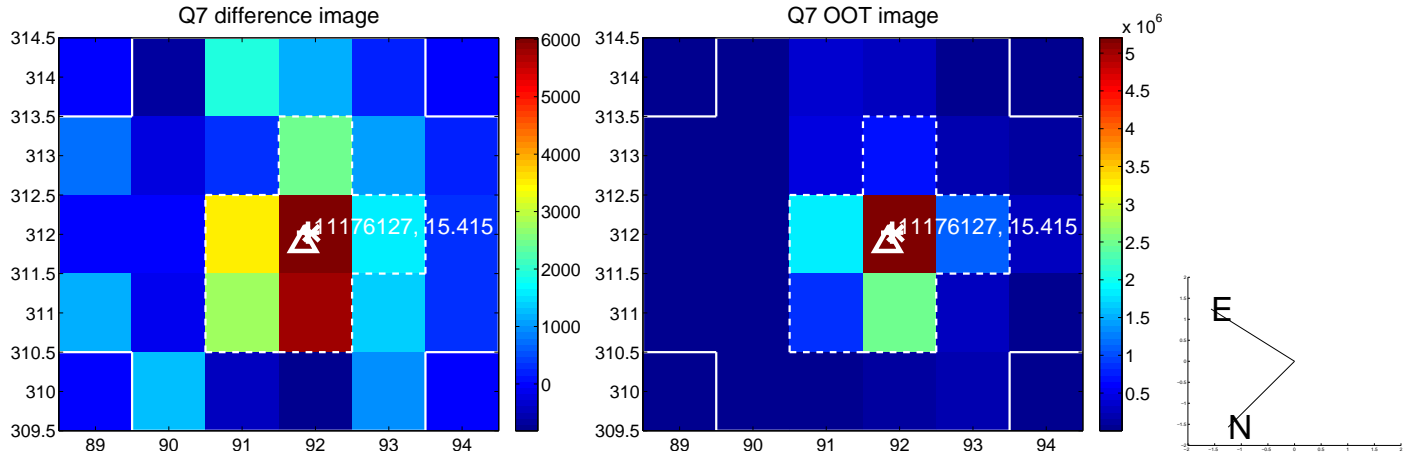
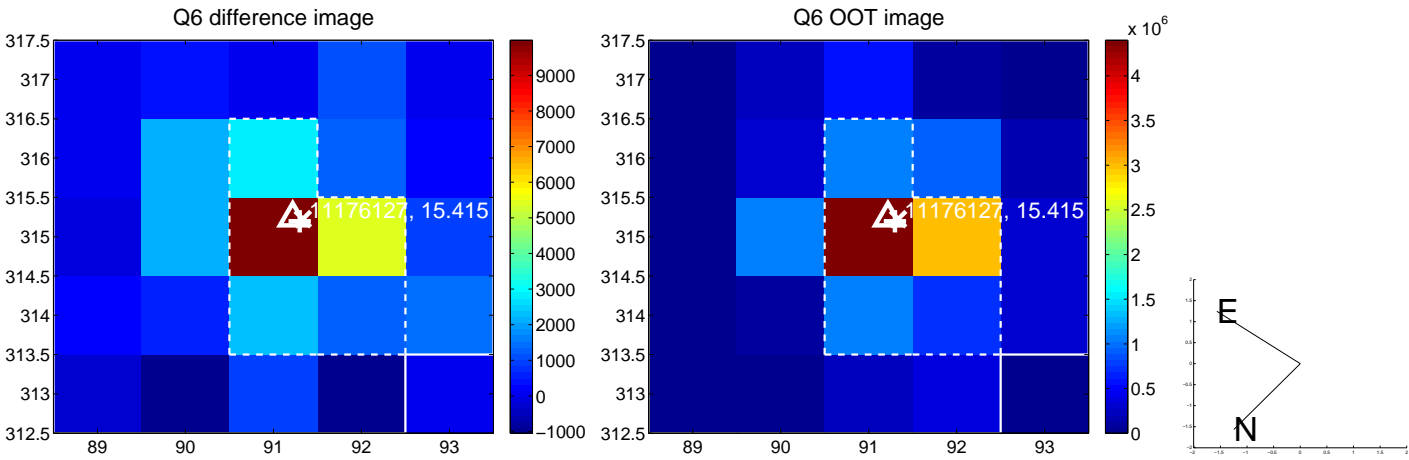
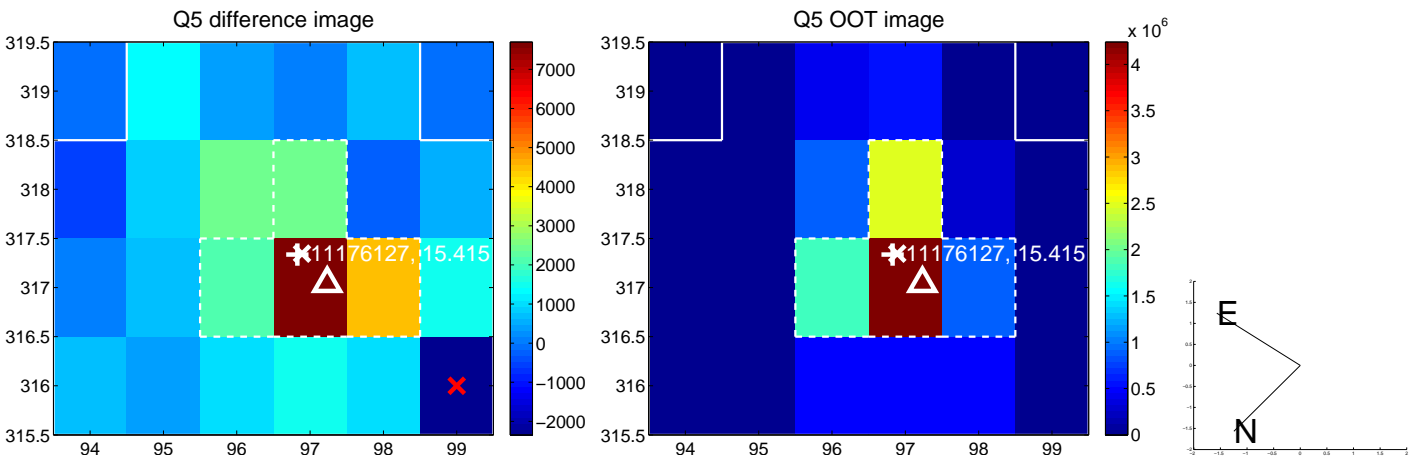


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

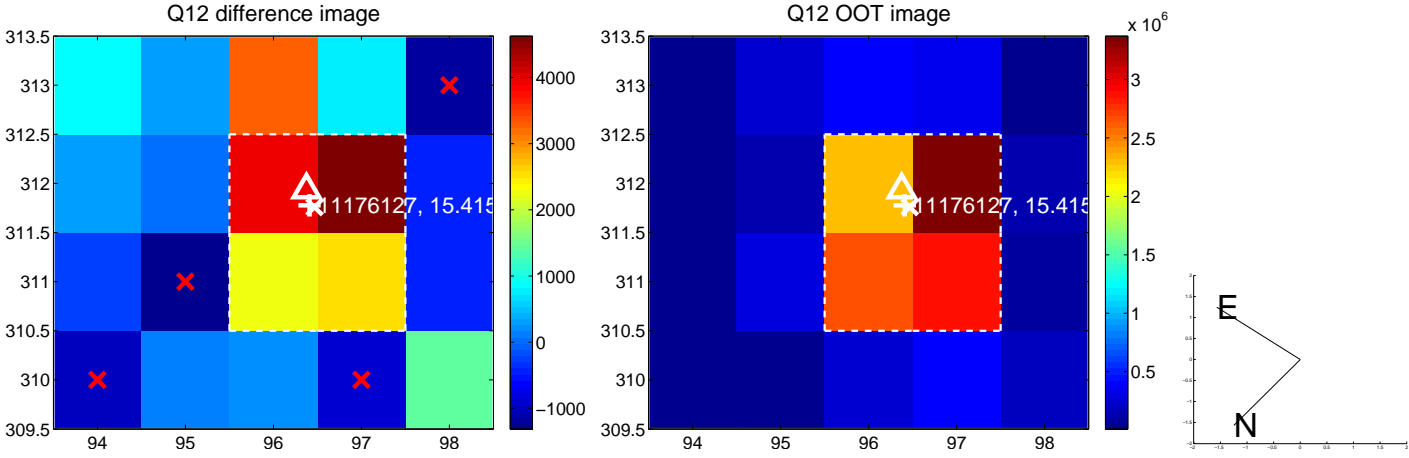
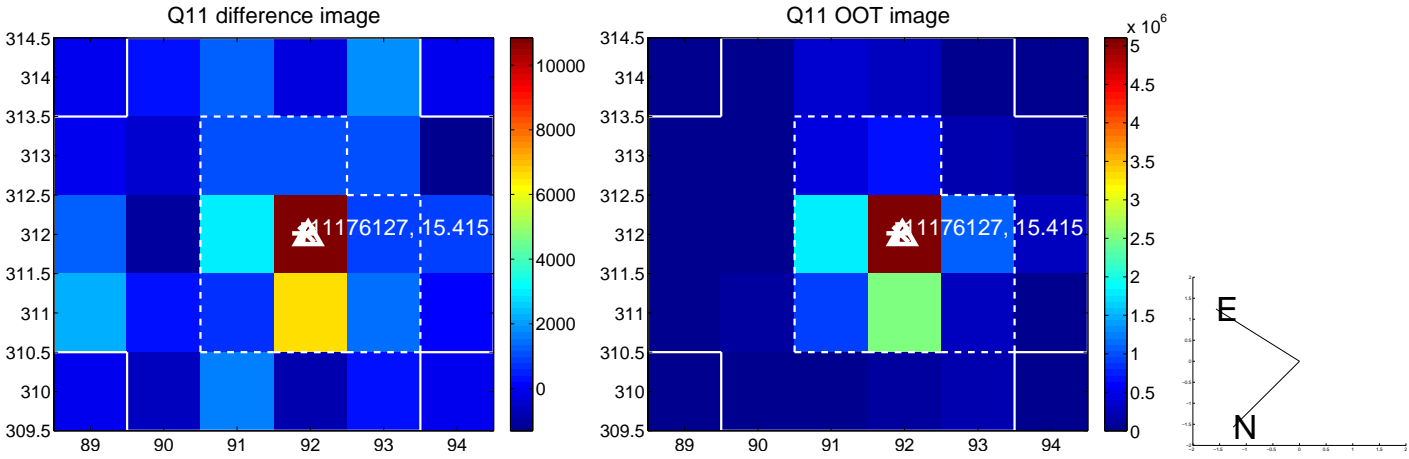
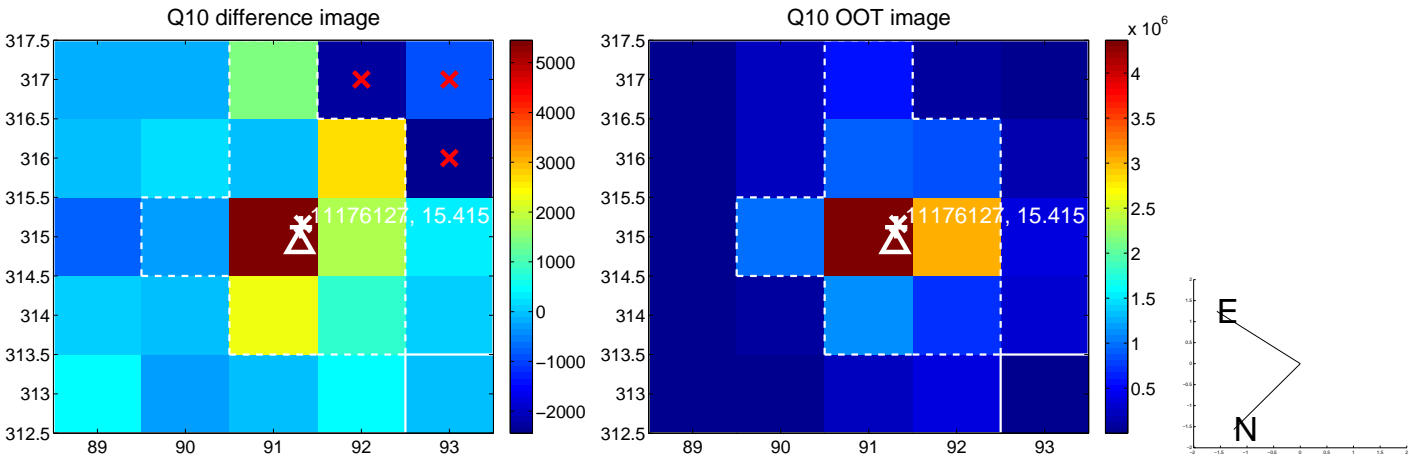
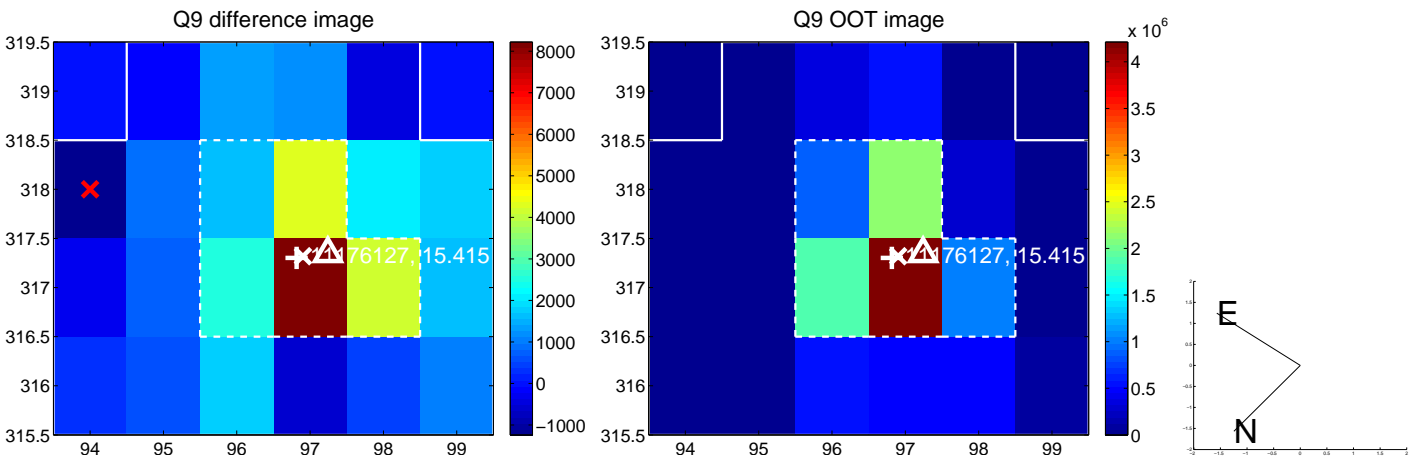
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



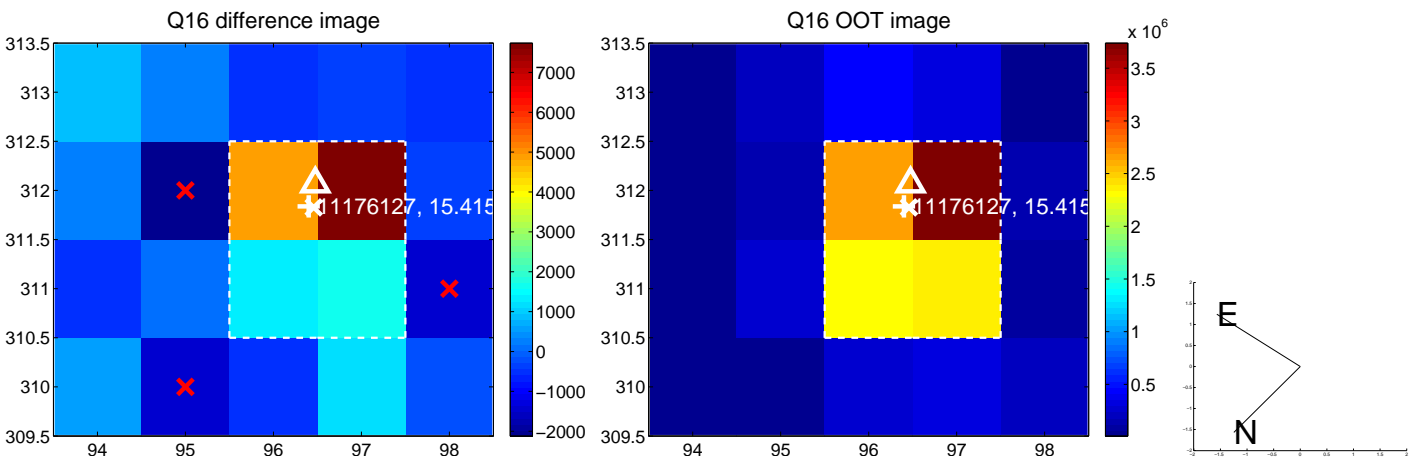
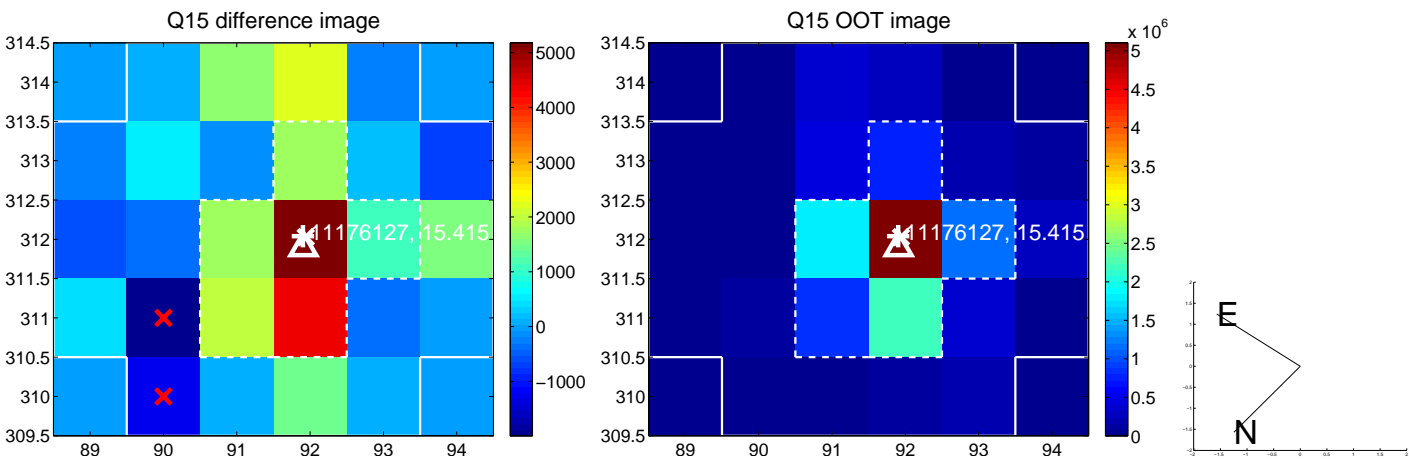
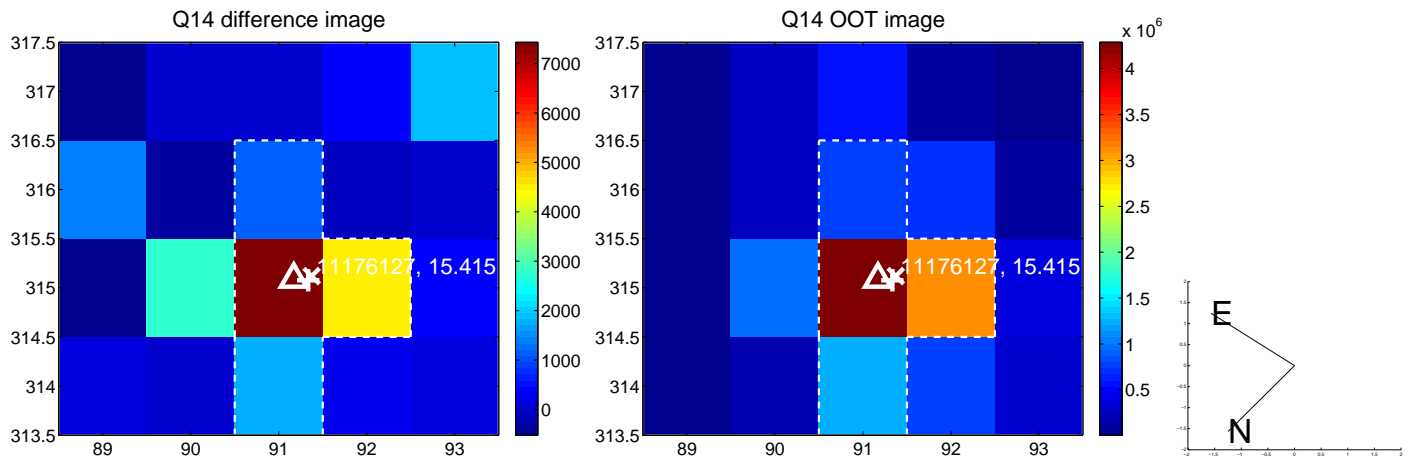
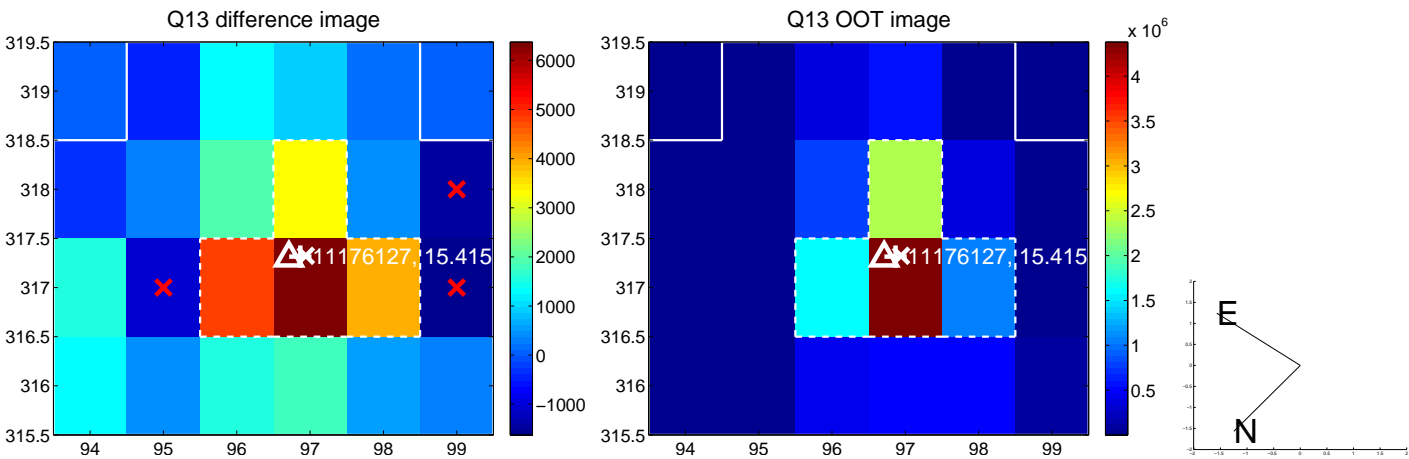
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



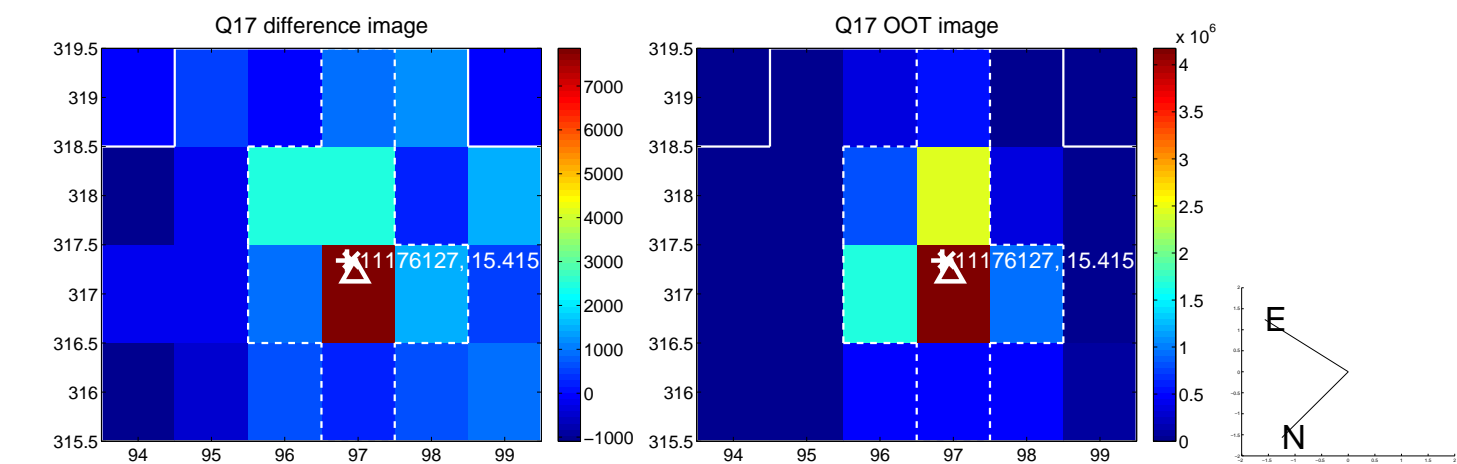
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



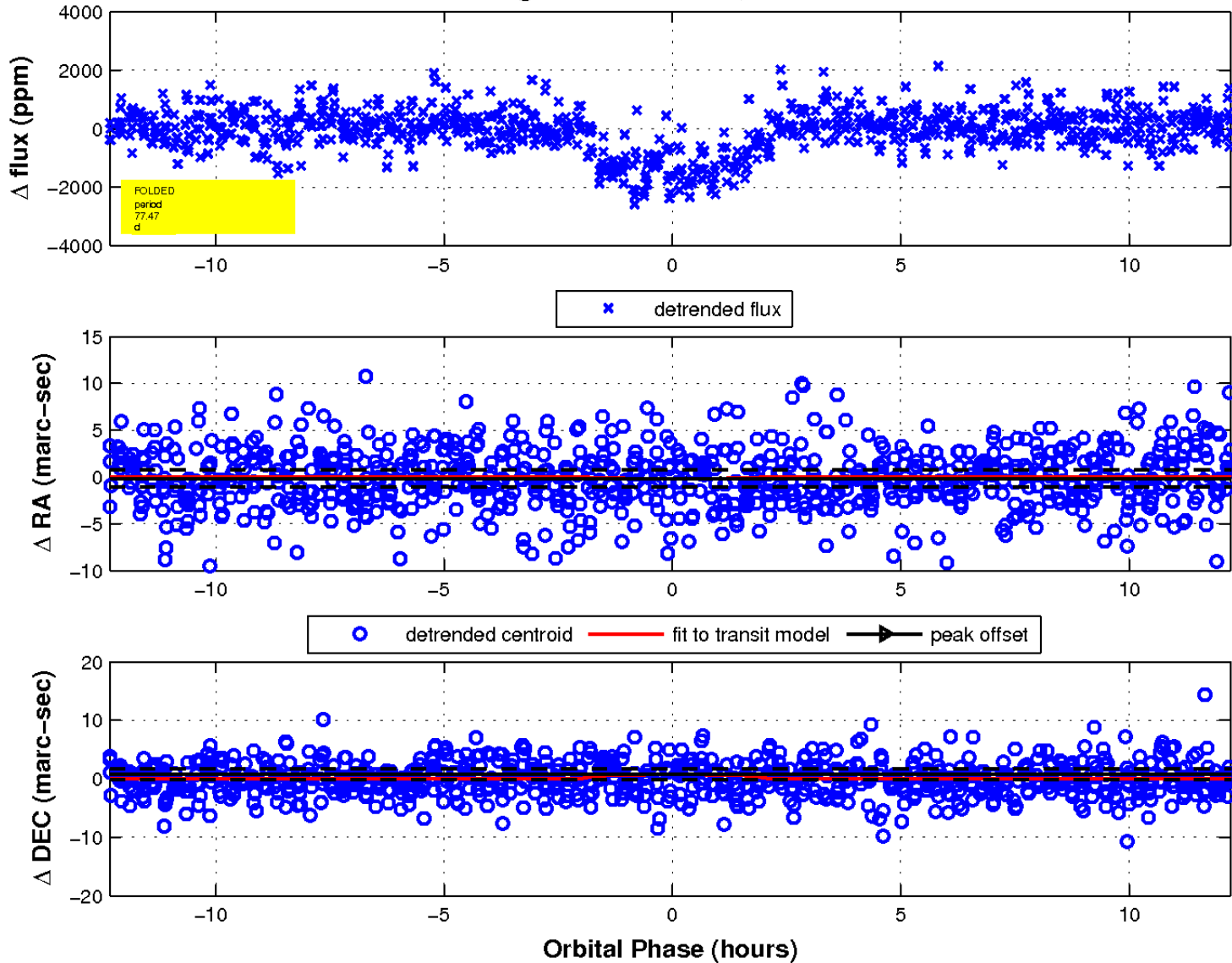
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

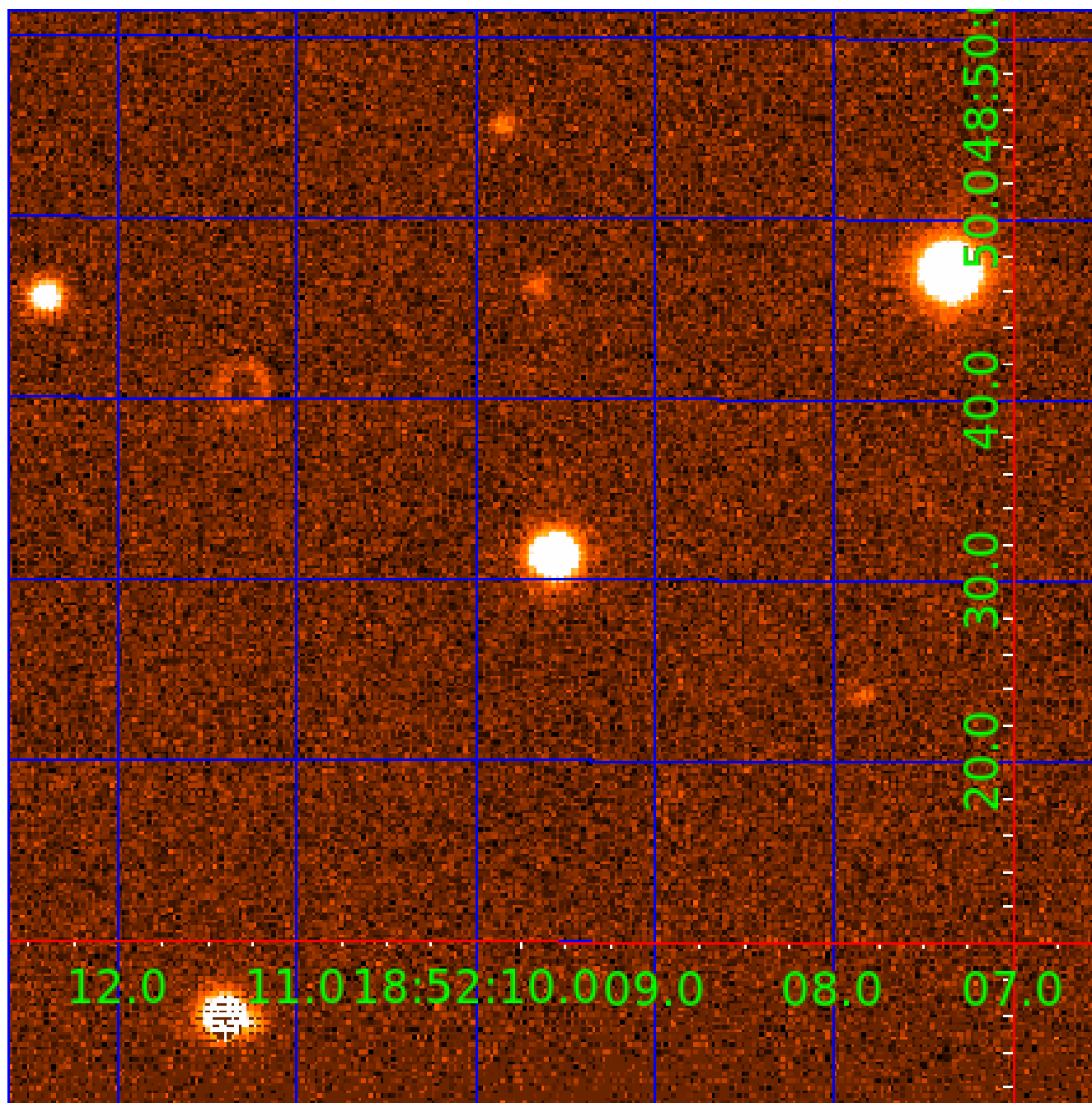


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 011176127

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})
011176127-01	OBS	1430.01	10.475467	131.691533	1060.8	2.330	32.2	37.1	0.61	4463	2.20	20.19
011176127-02	OBS	1430.03	77.473982	184.246764	1605.1	4.108	21.9	23.7	0.61	4463	2.62	1.40
011176127-03	OBS	1430.02	22.928837	143.864022	881.1	2.081	16.8	19.2	0.61	4463	2.19	7.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011176127-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011176127-02	OBS	PC	1.00	0	0	0	0	NO_COMMENT
011176127-03	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.

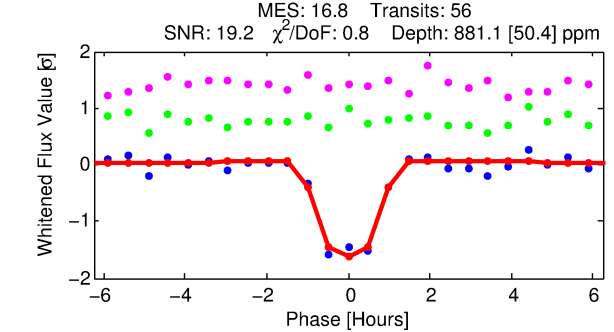
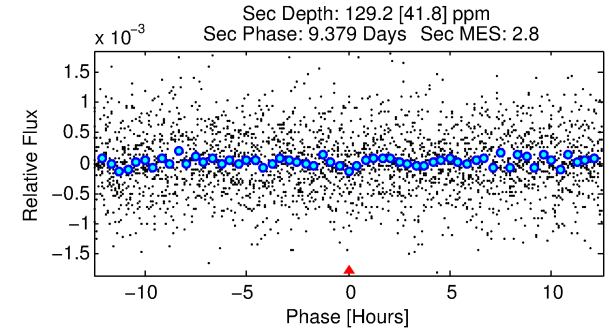
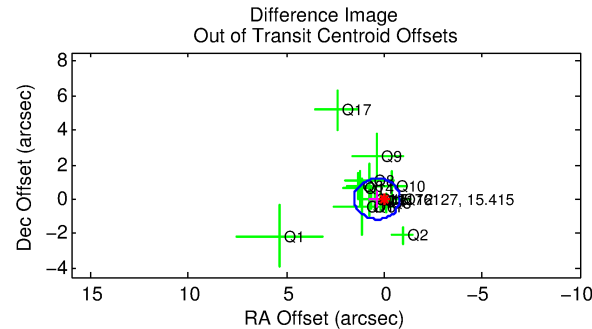
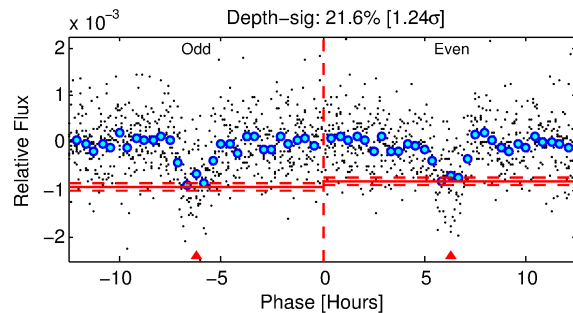
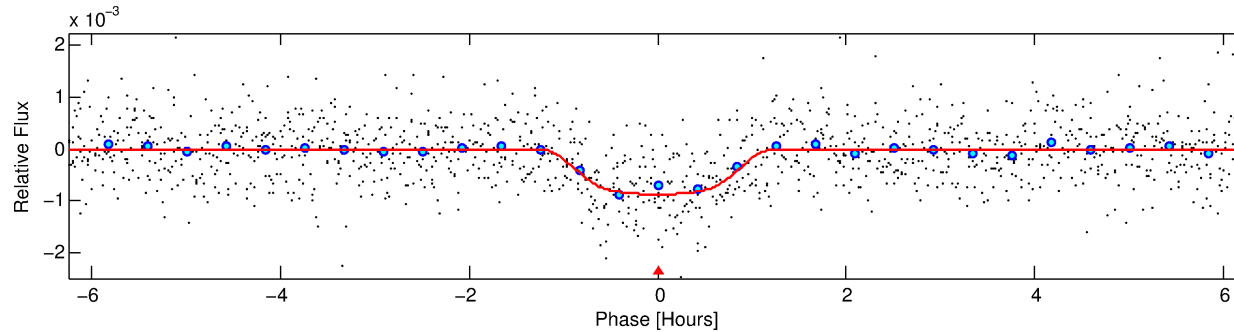
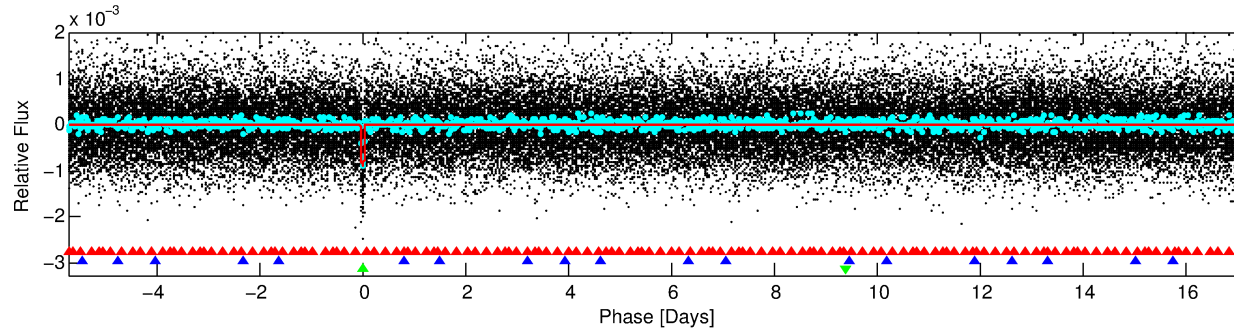
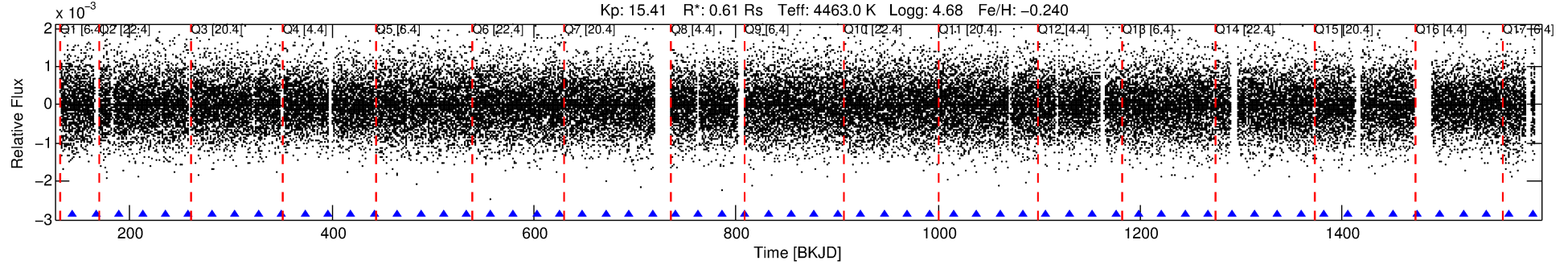
Ephemeris Match Information For 011176127-03

No Significant Match Found

DV One-Page Summary

KIC: 11176127 Candidate: 3 of 3 Period: 22.929 d
KOI: K01430.02 Name: Kepler-298c Corr: 0.982

Kp: 15.41 R*: 0.61 Rs Teff: 4463.0 K Logg: 4.68 Fe/H: -0.240



DV Fit Results:

Period = 22.92884 [0.00008] d
Epoch = 143.8640 [0.0029] BKJD
Rp/R* = 0.0328 [0.0101]
a/R* = 45.22 [49.90]
b = 0.88 [0.29]
Seff = 7.11 [0.78]
Teq = 416 [11] K
Rp = 2.19 [0.69] Re
a = 0.1367 [0.0074] AU
Ag = 277.99 [194.55] [1.42σ]
Teffp = 2628 [460] K [4.81σ]

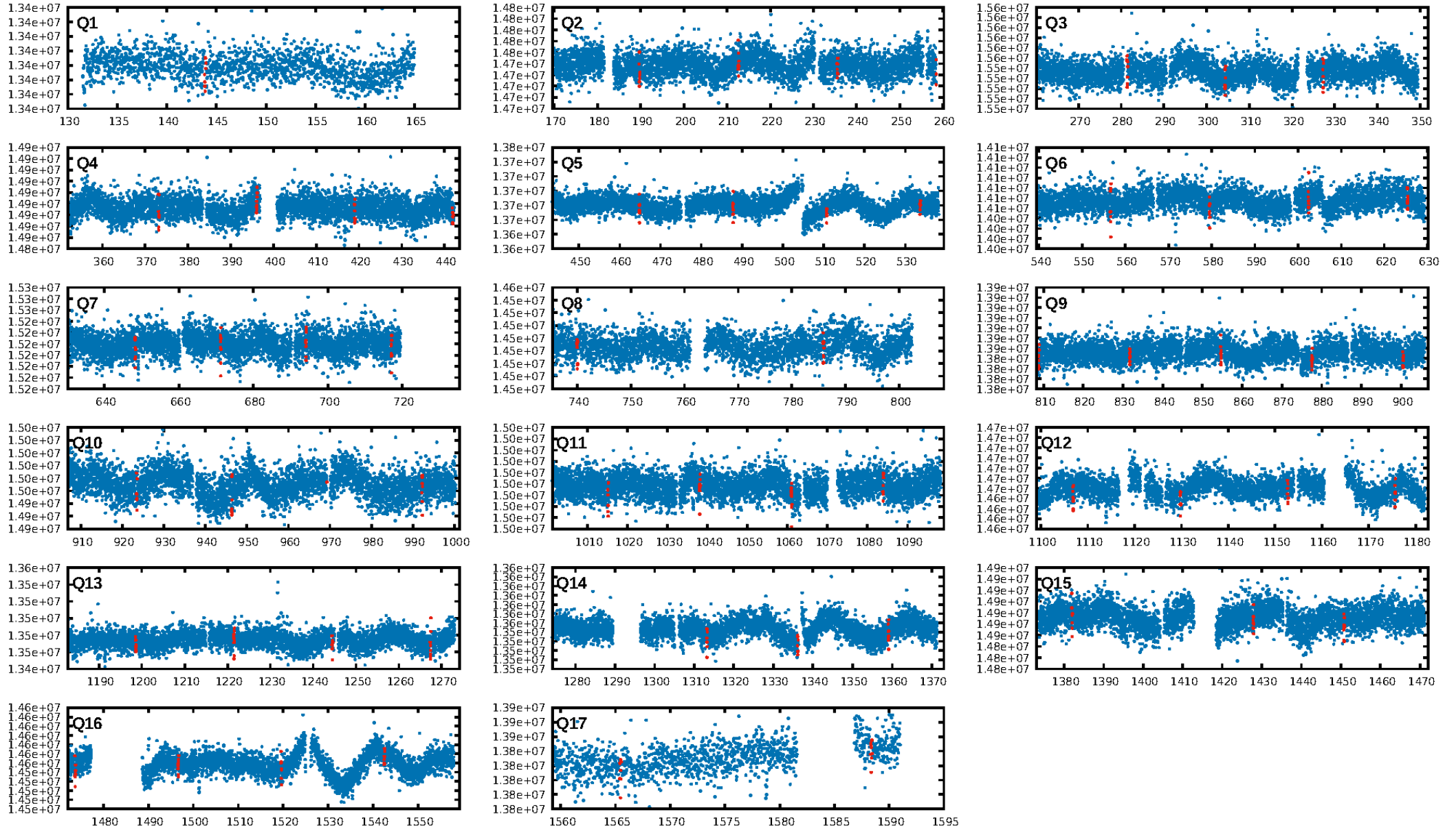
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [95.66σ]
LongPeriod-sig: 100.0% [284.27σ]
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.38e-62
RollingBand-fgt: 1.00 [53/53]
GhostDiagnostic-chr: 2.655
Centroid-sig: 77.1%
Centroid-so: 0.909 arcsec [1.15σ]
OotOffset-rm: 0.374 arcsec [0.96σ]
KicOffset-rm: 0.524 arcsec [1.29σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.67 [10/15]
DiffImageOverlap-fno: 1.00 [17/17]

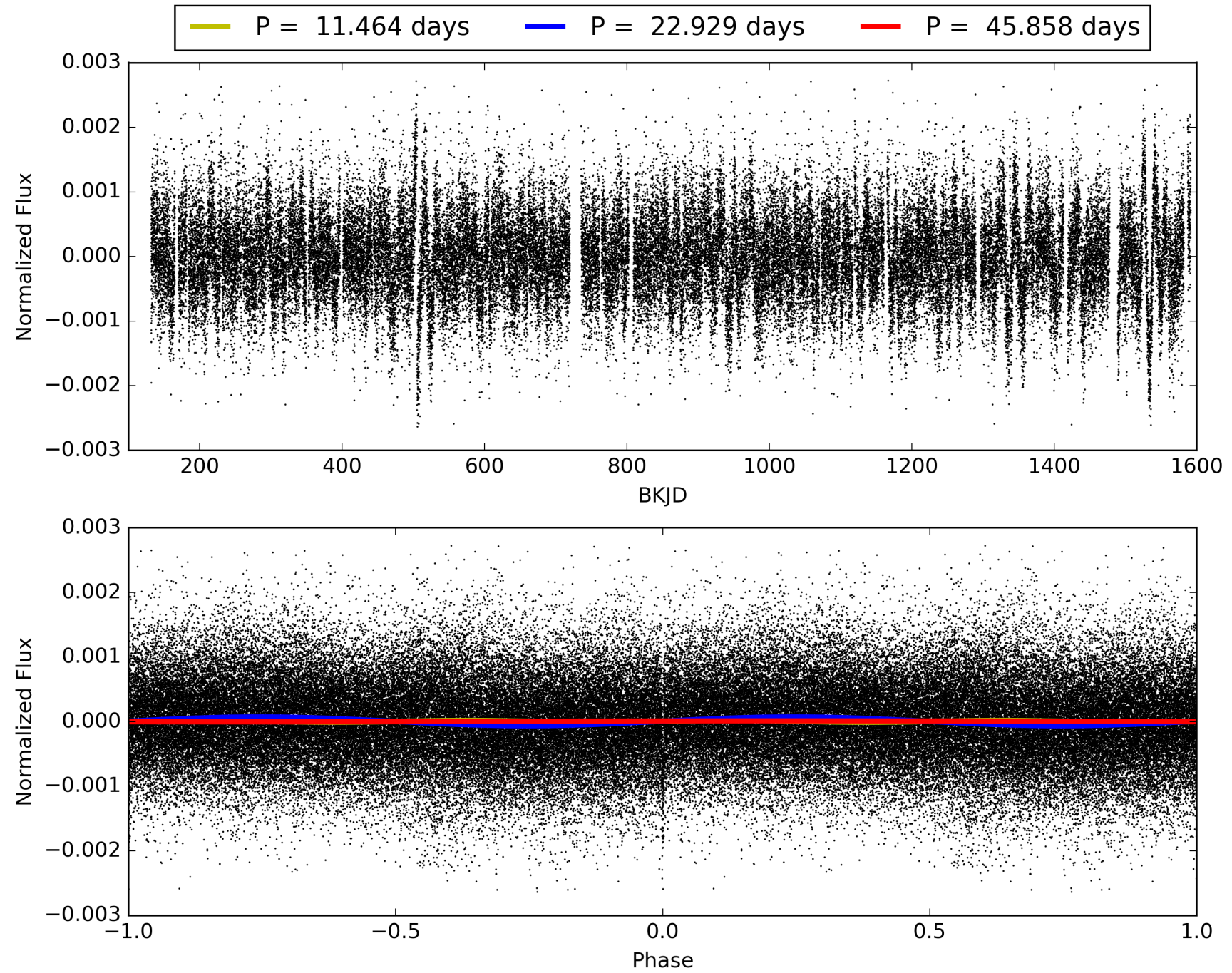
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:10:10 Z

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

TCE 011176127-03, PDC Light Curves

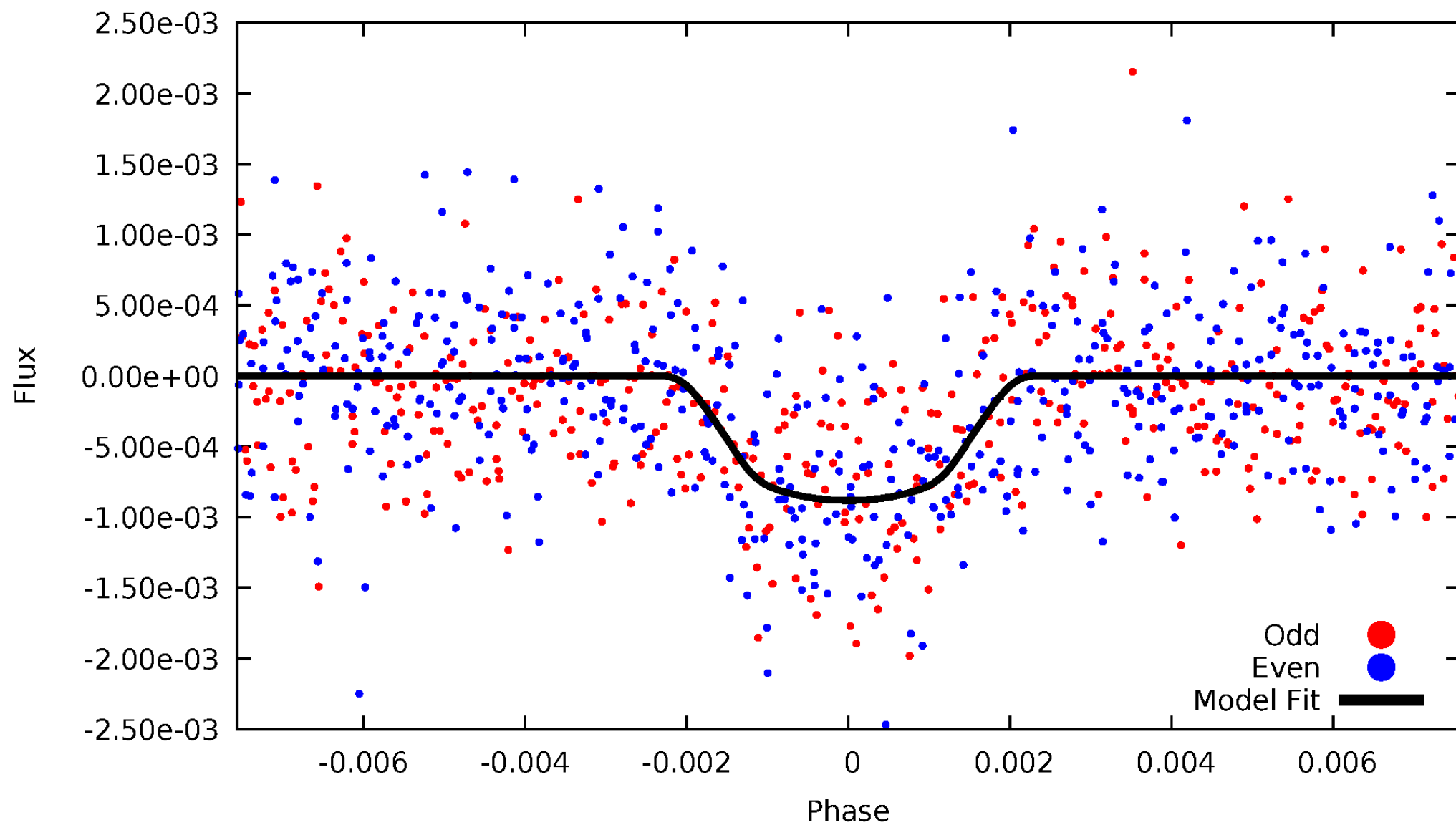


TCE 011176127-03



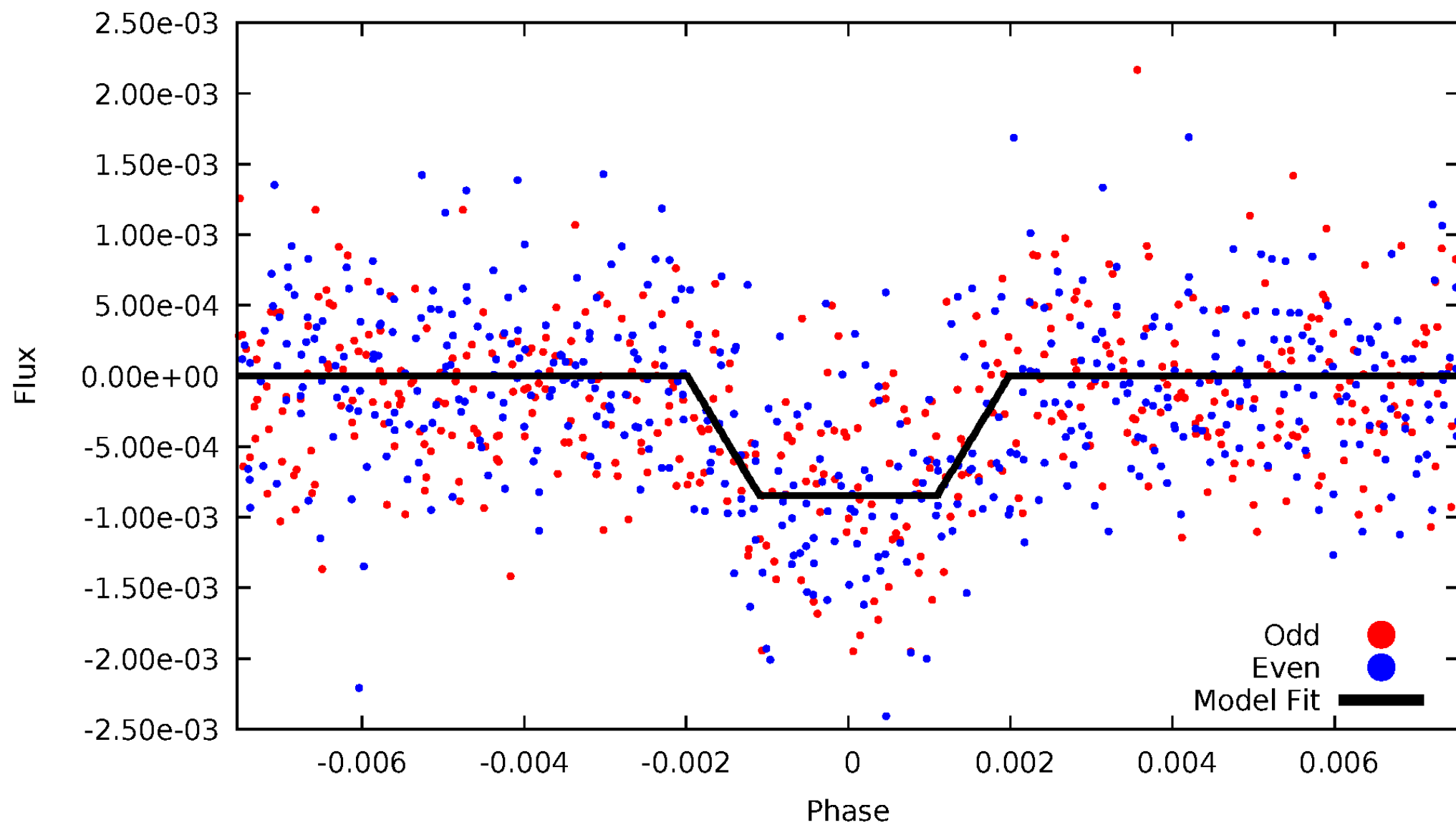
DV Odd/Even

TCE 011176127-03



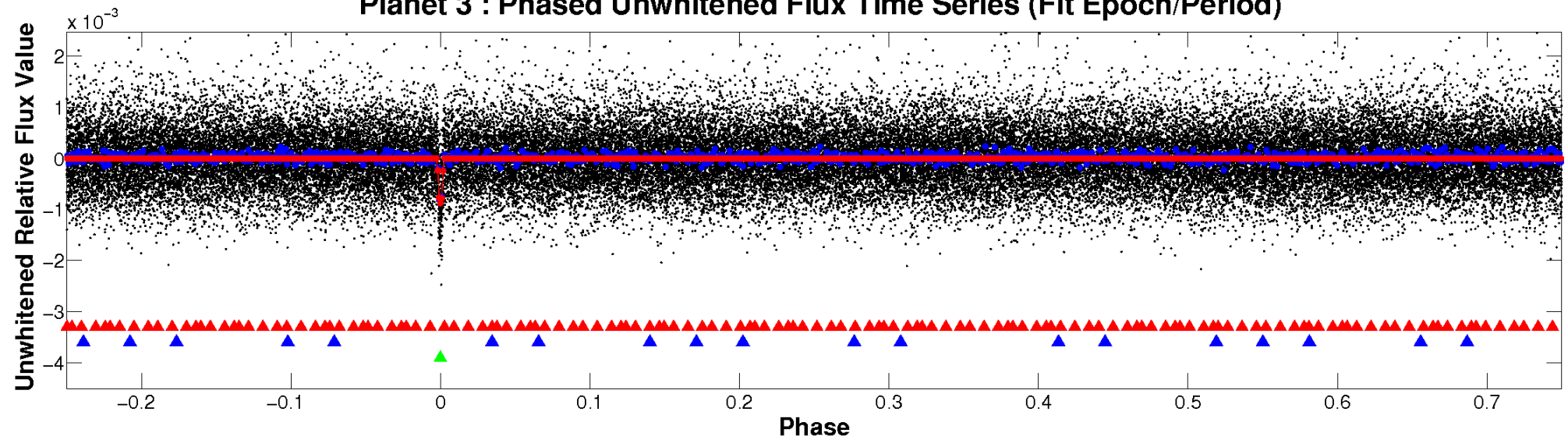
ALT Odd/Even

TCE 011176127-03

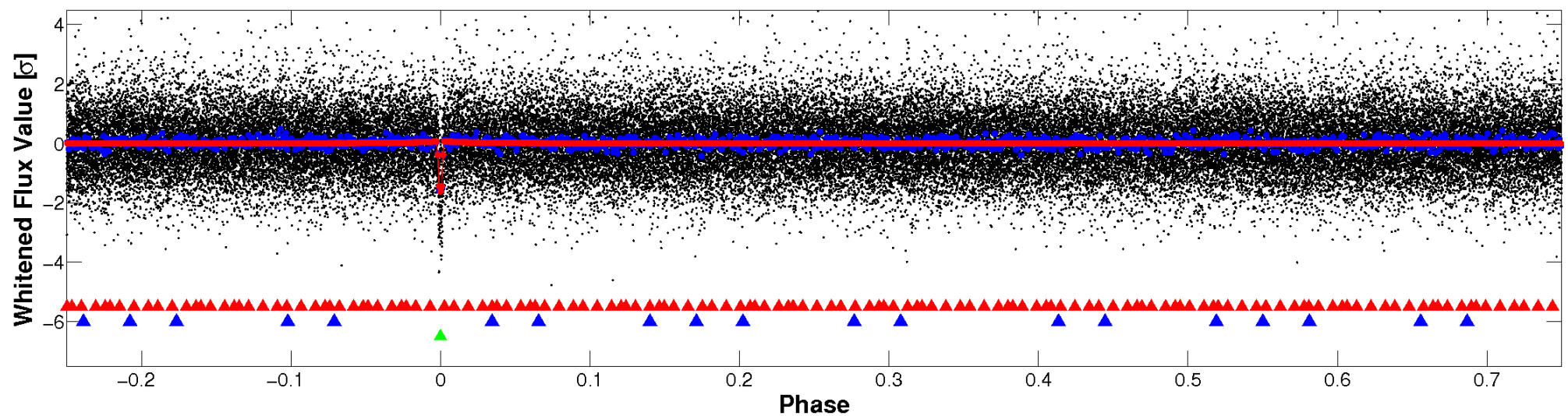


Non-Whitened Vs. Whitened Light Curve

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

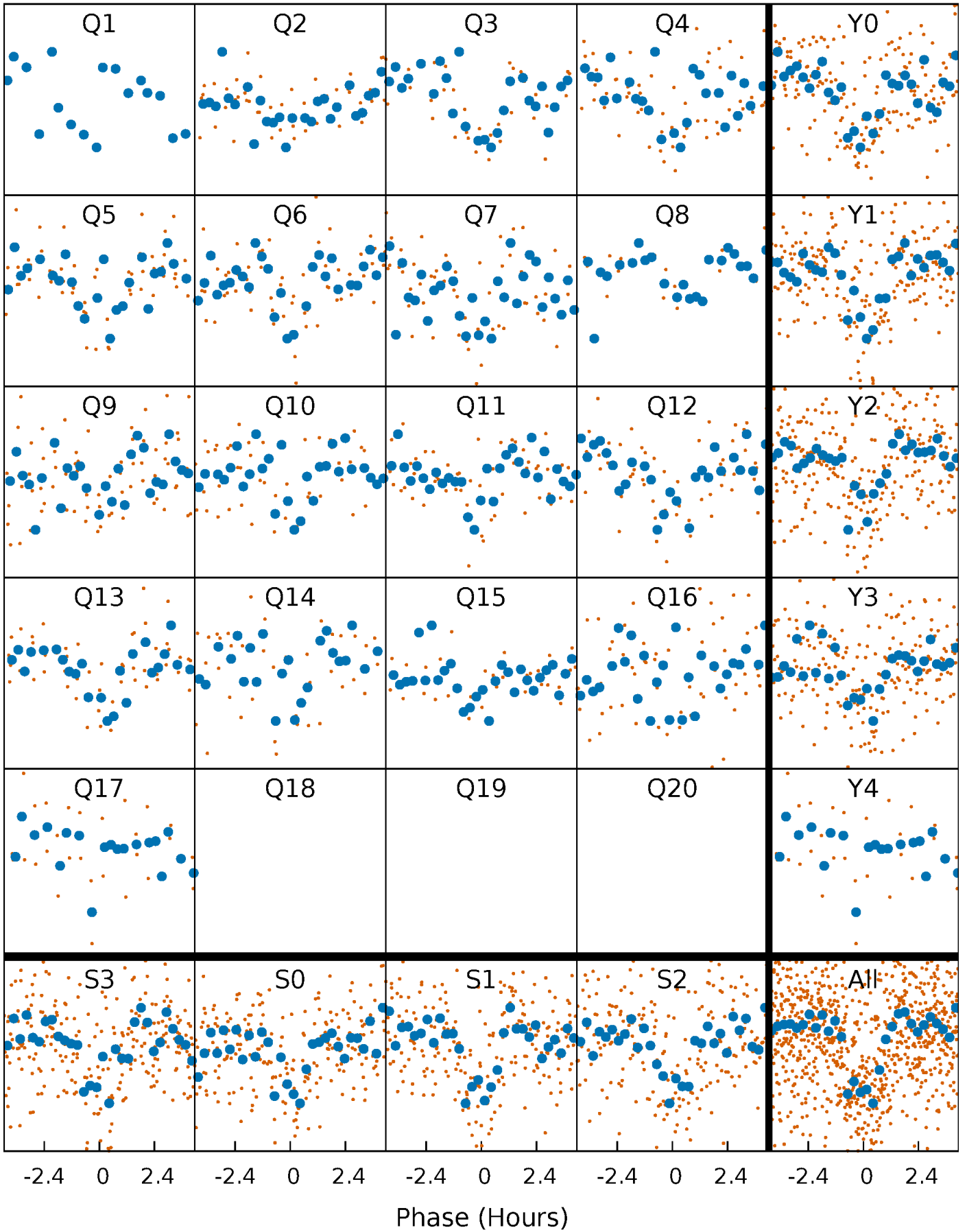


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



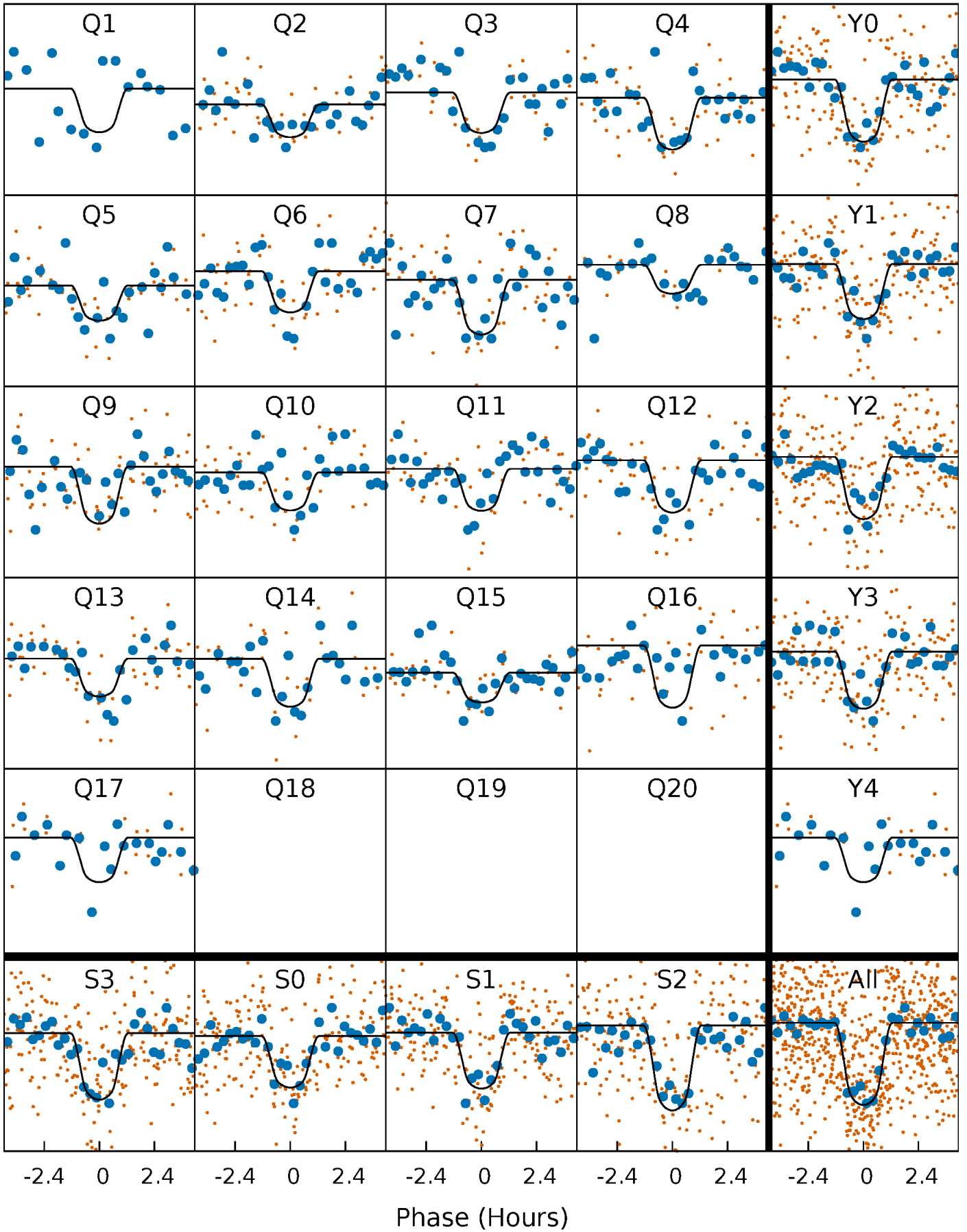
PDC Quarter-Phased Transit Curves

TCE 011176127-03 P= 22.928837 Days $T_0=143.864022$ (BKJD)



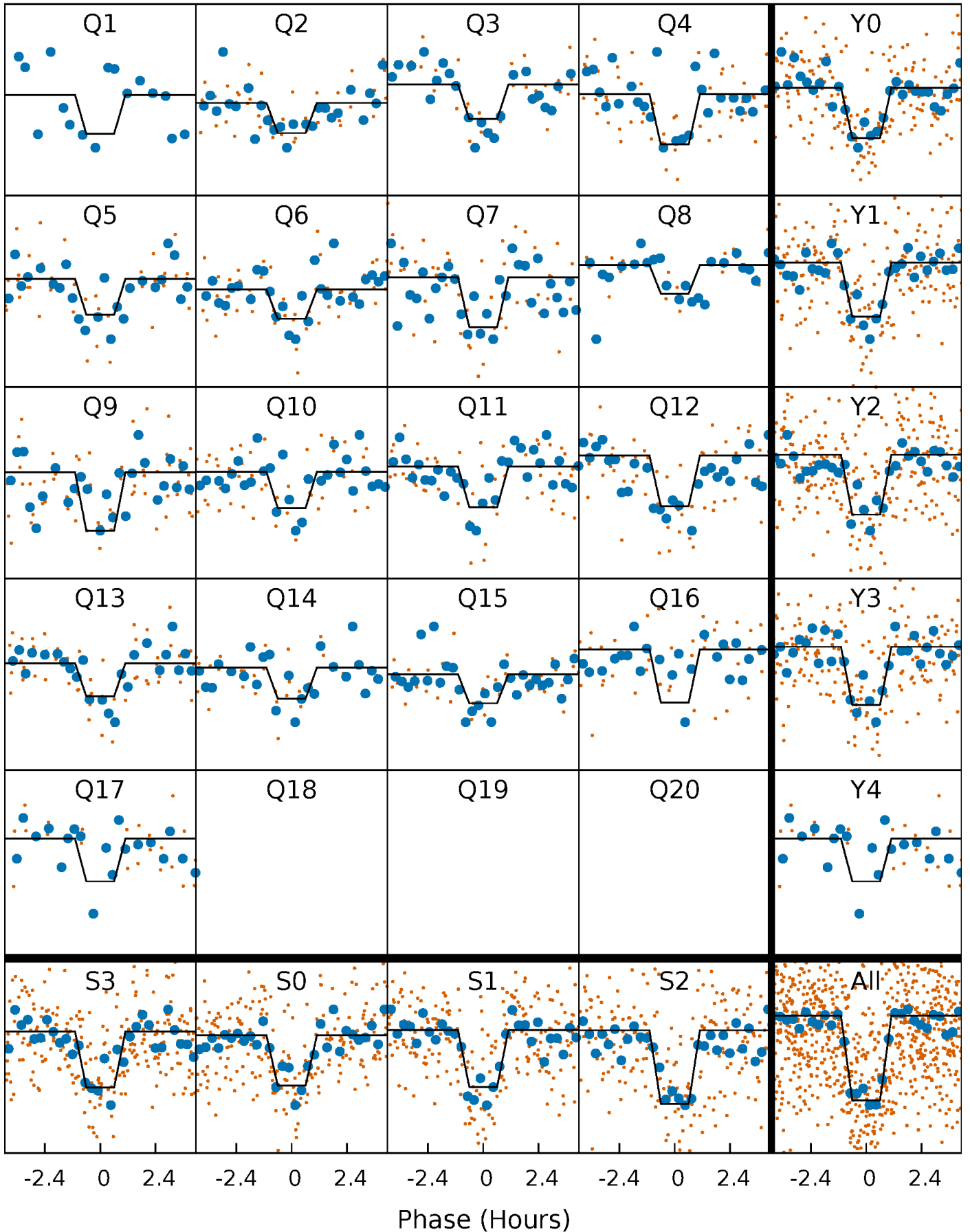
DV Quarter-Phased Transit Curves

TCE 011176127-03 P= 22.928837 Days $T_0=143.864022$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

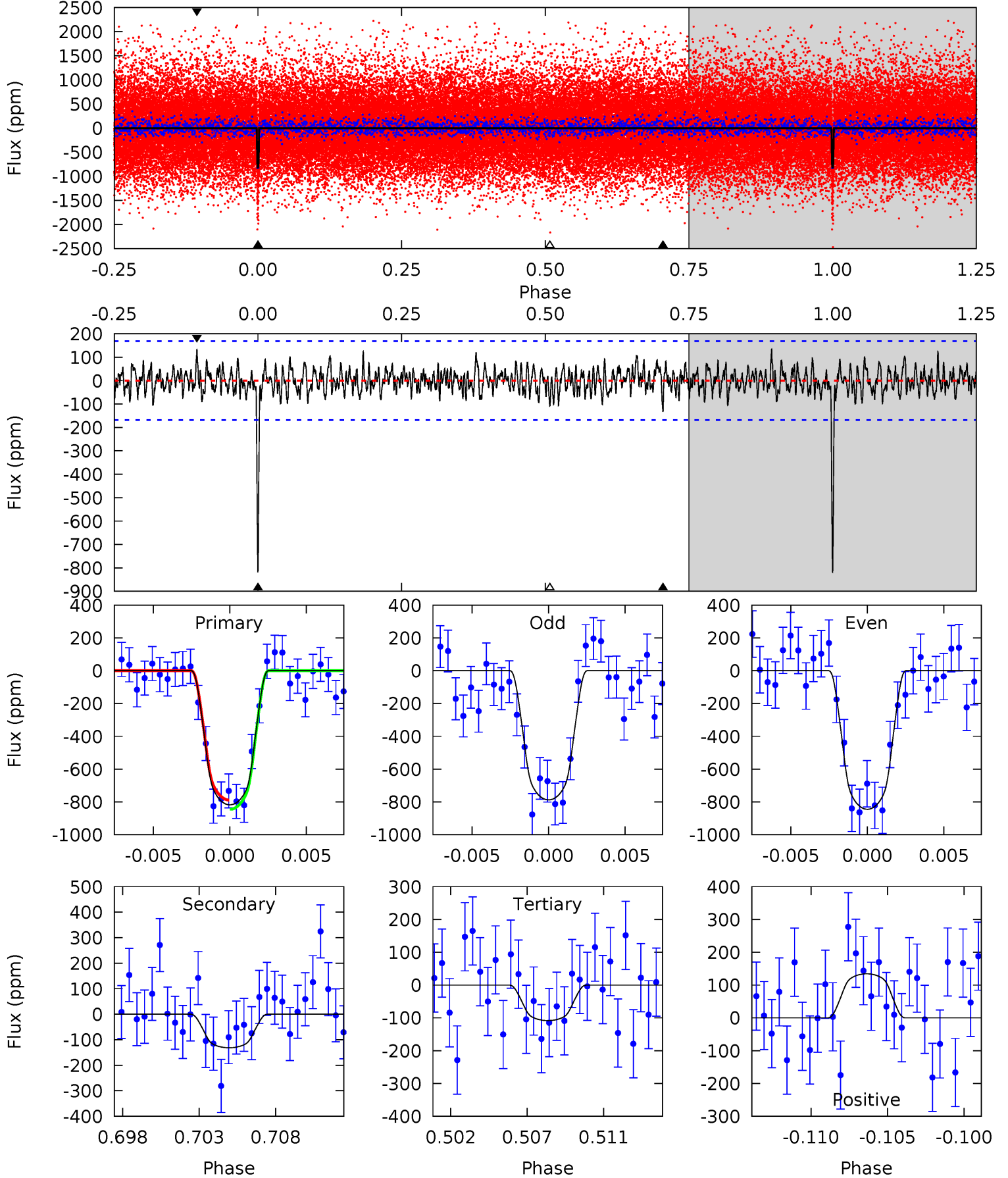
TCE 011176127-03 P= 22.928803 Days $T_0=143.864617$ (BKJD)



DV Model-Shift Uniqueness Test

011176127-03, $P = 22.928837$ Days, $E = 120.935185$ Days

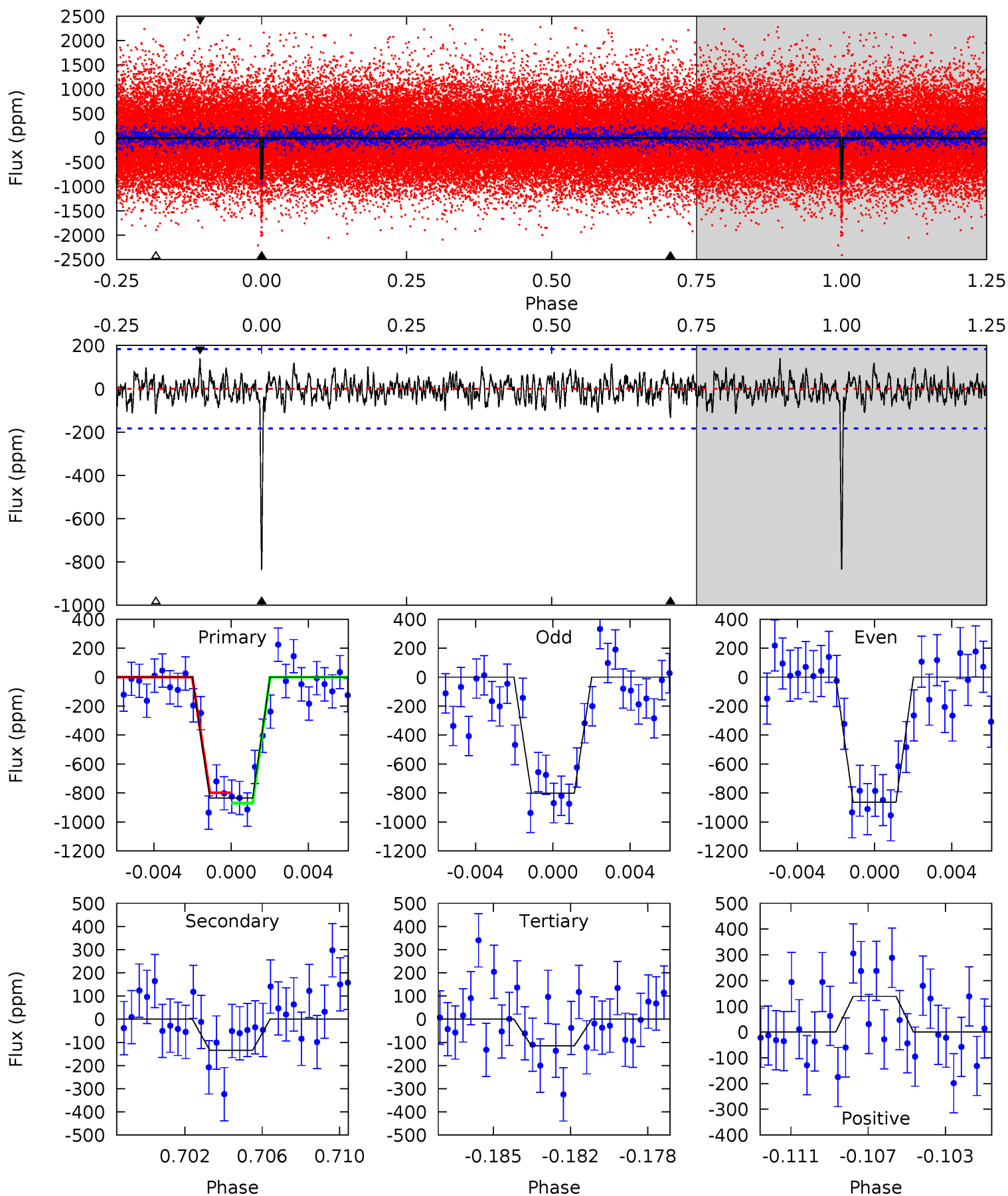
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	4.04	3.33	4.12	5.17	2.84	1.26	21.8	21.0	0.71	-0.09	0.88	1.09	0.14	0.86



Alt Model-Shift Uniqueness Test

011176127-03, P = 22.928803 Days, E = 120.935814 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	3.79	3.26	3.92	5.20	2.88	1.16	20.4	19.7	0.53	-0.14	0.88	1.06	0.14	1.02



Stellar Parameters For KIC 011176127

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4463^{+88}_{-88}	$4.677^{+0.013}_{-0.040}$	$-0.240^{+0.150}_{-0.150}$	$0.611^{+0.041}_{-0.019}$	$0.662^{+0.027}_{-0.042}$	$4.098^{+0.243}_{-0.652}$
	+2%/-2%	+0%/-1%	+62%/-62%	+7%/-3%	+4%/-6%	+6%/-16%
Source	SPE58	SPE58	SPE58	DSEP		

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

Secondary Eclipse Parameters for KIC 011176127-03 / KOI 1430.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-131 ± 33	$2.23^{+0.66}_{-0.69}$	585^{+14}_{-13}	3128^{+395}_{-238}	269^{+305}_{-115}
Alt.	-134 ± 35	$2.00^{+0.76}_{-0.65}$	586^{+14}_{-13}	3239^{+440}_{-309}	336^{+443}_{-170}

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

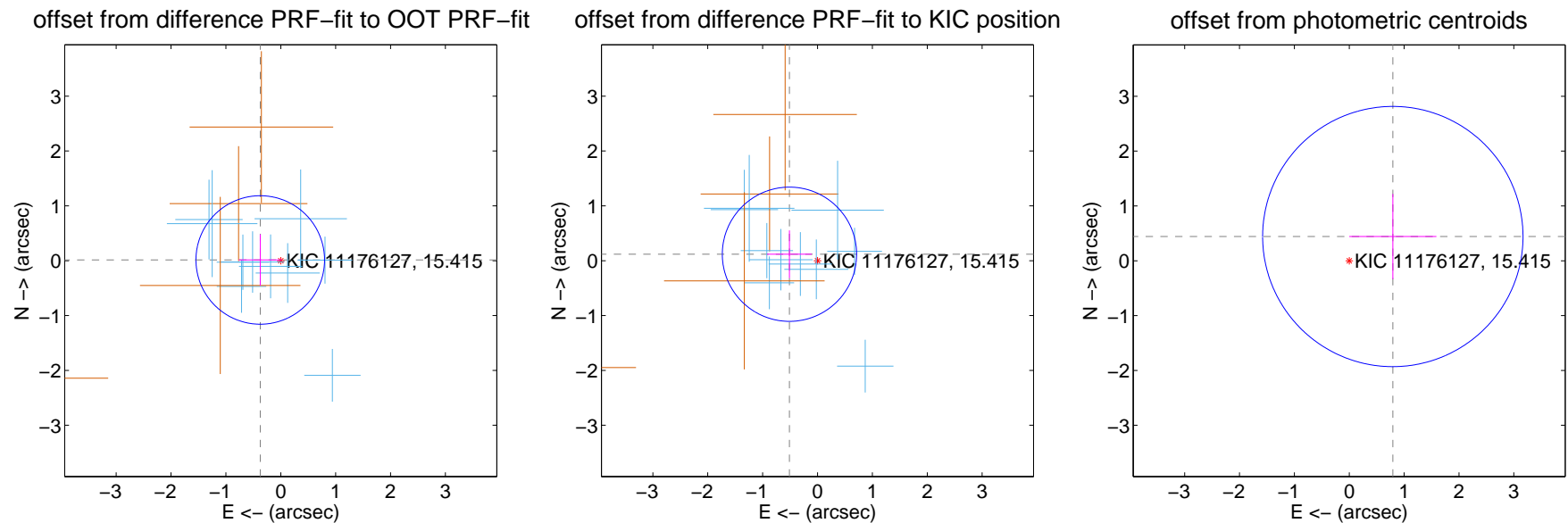
DV Centroid Data

Supplemental centroid analysis for 011176127-03. Kepler magnitude: 15.41. Transit SNR 19.20

There are 10 quarters with good PRF difference image offsets

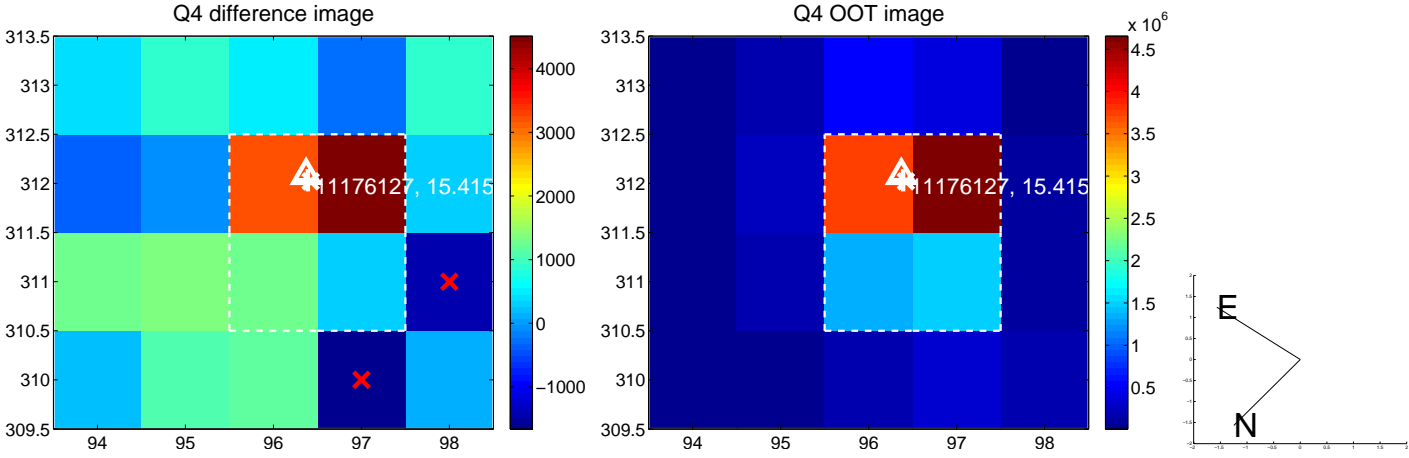
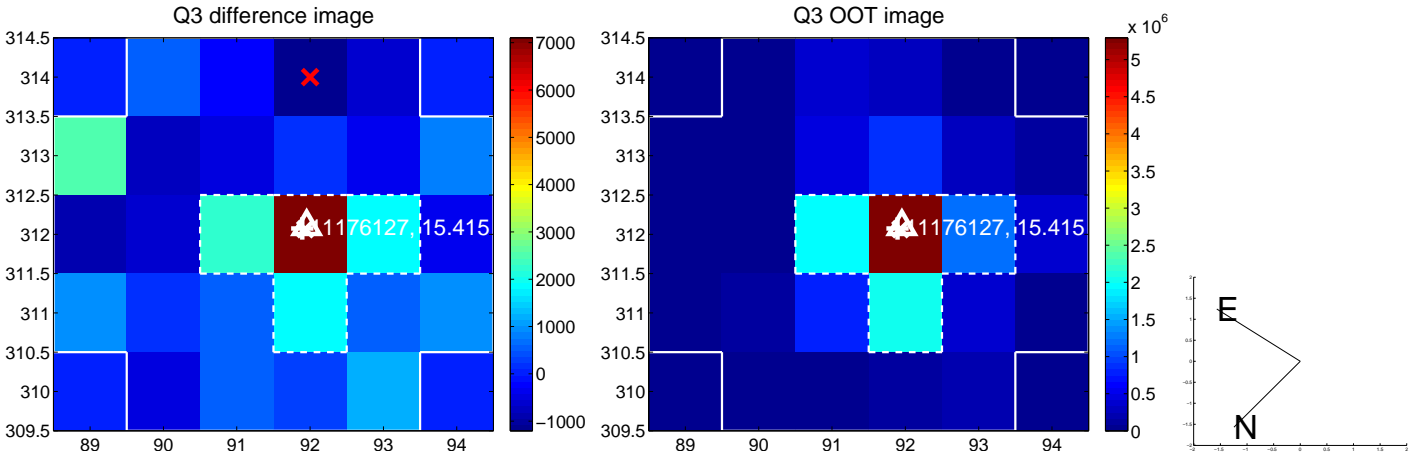
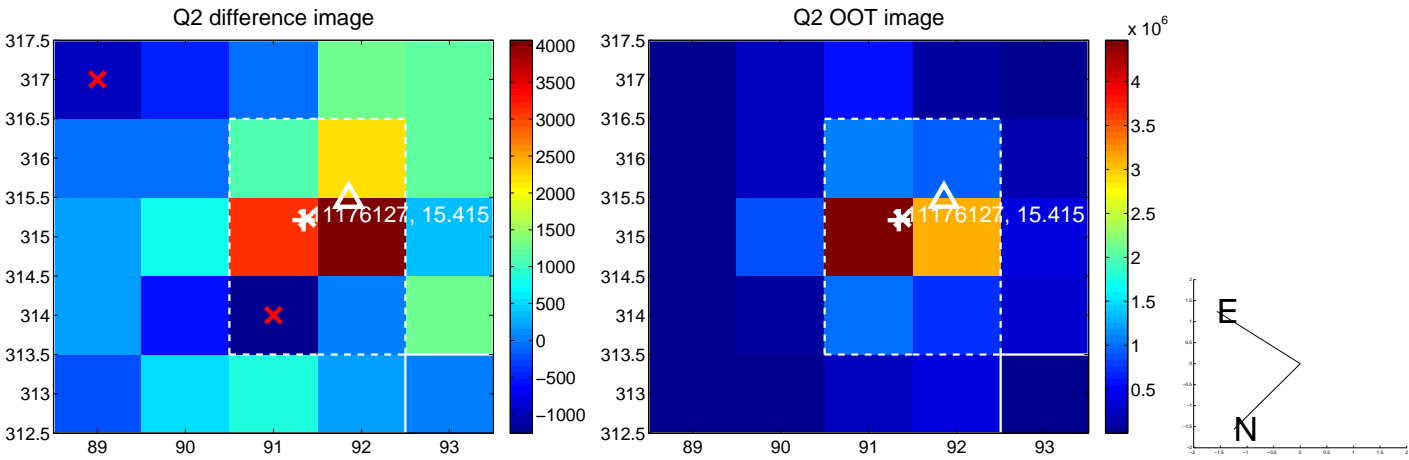
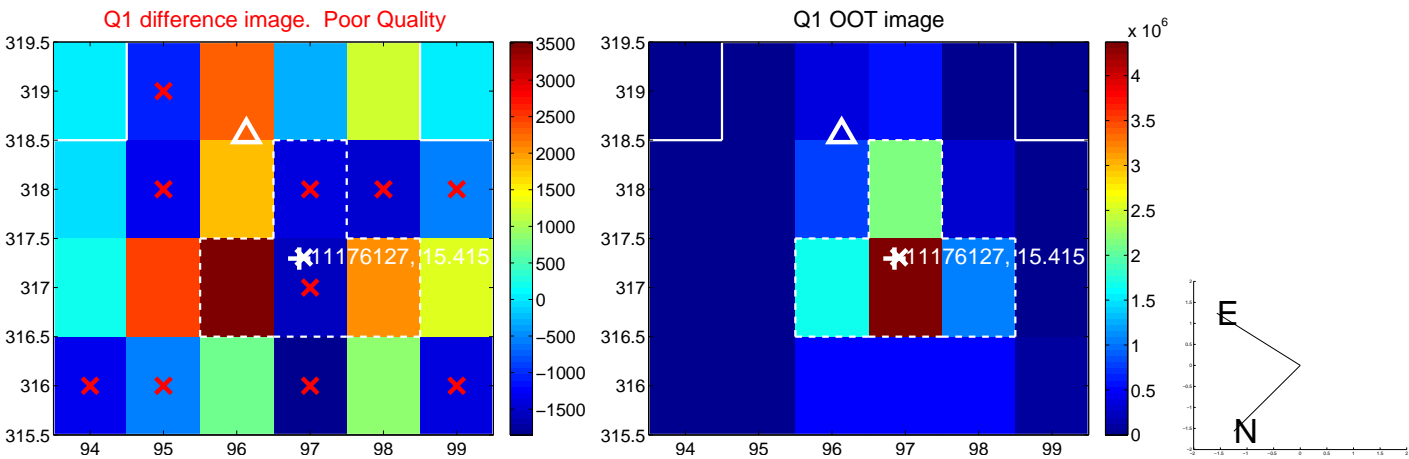
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.374 ± 0.391	0.96	0.374 ± 0.391	0.013 ± 0.467
PRF-fit source offset from KIC position	0.524 ± 0.408	1.29	0.511 ± 0.408	0.118 ± 0.434
photometric centroid source offset	0.91 ± 0.79	1.15	-0.79 ± 0.80	0.44 ± 0.78

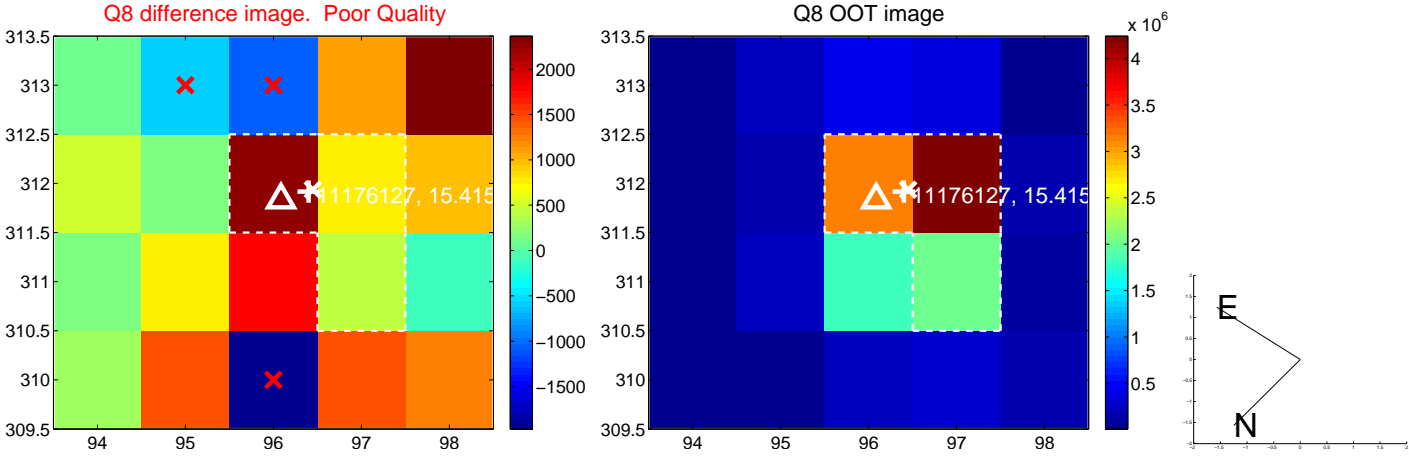
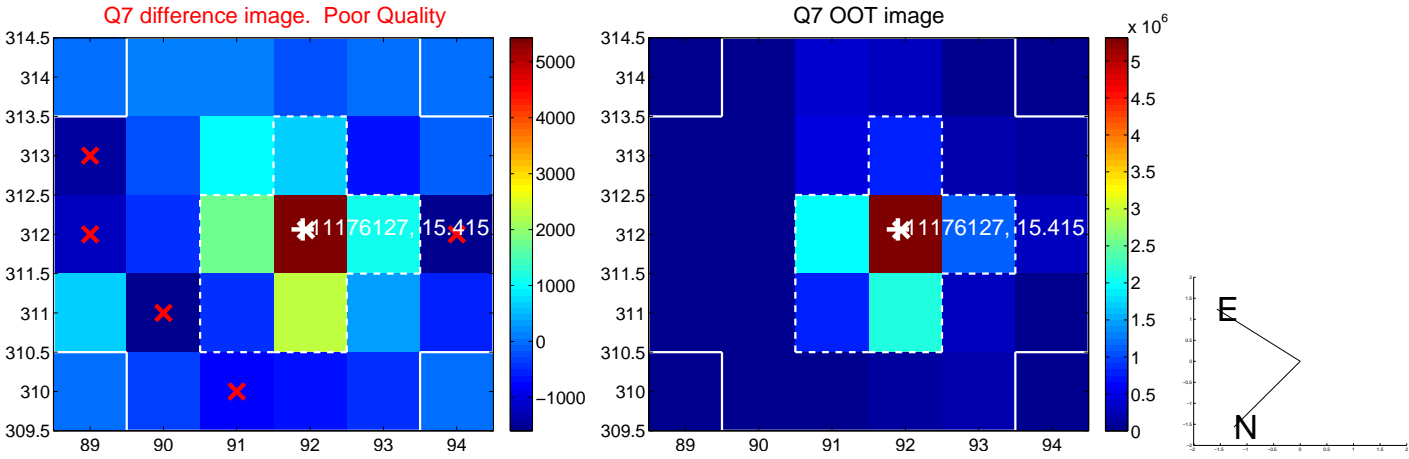
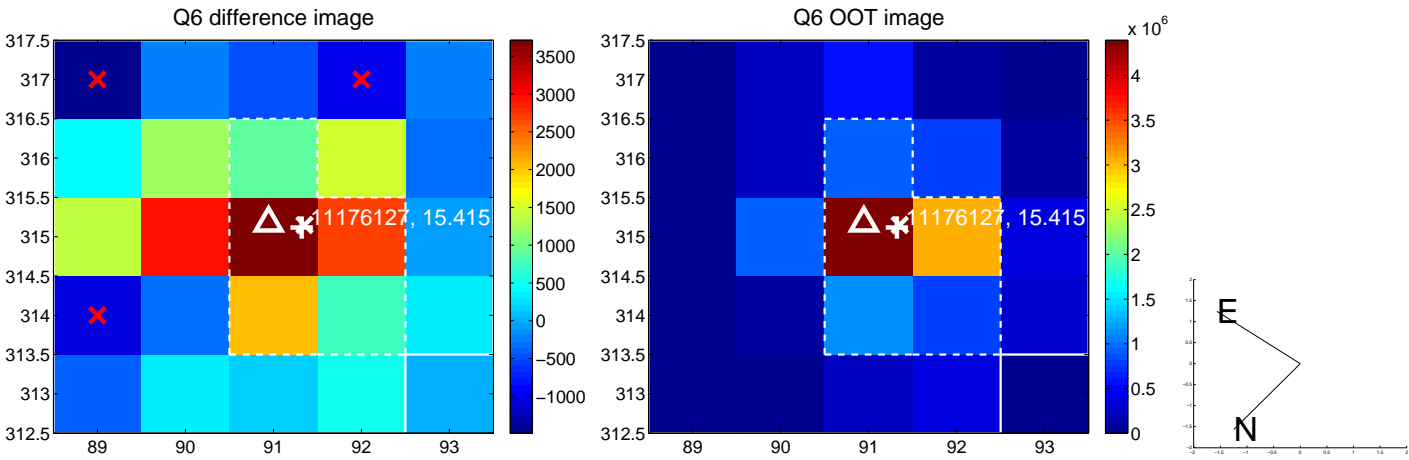
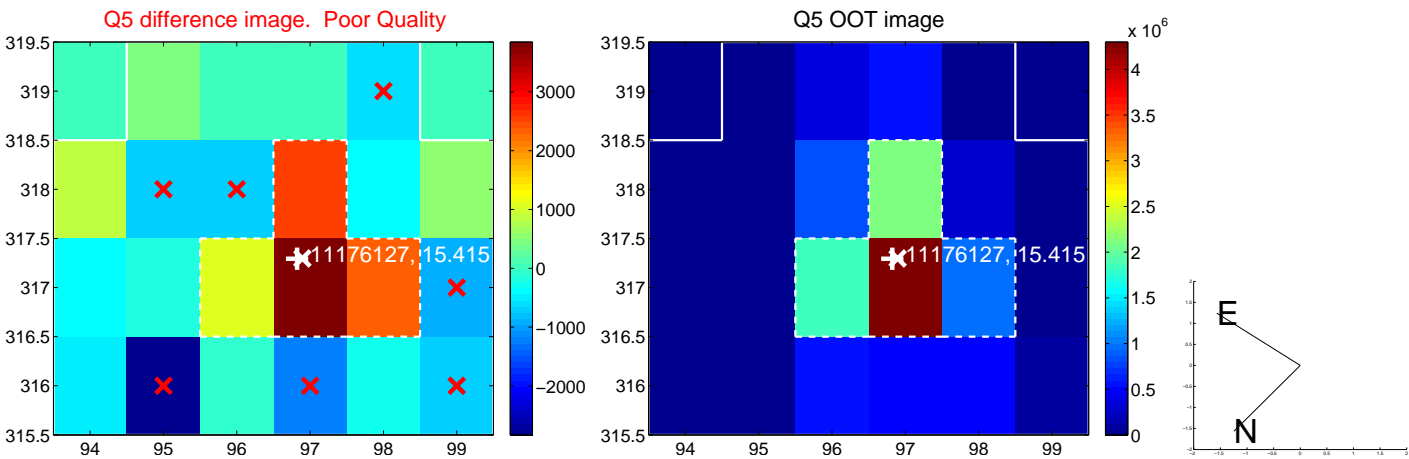


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

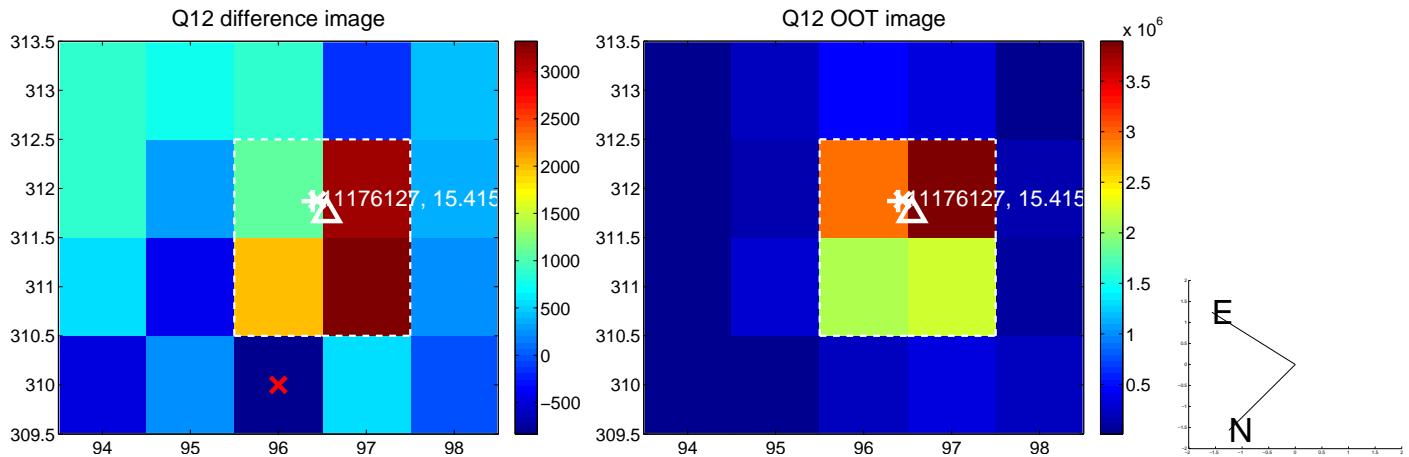
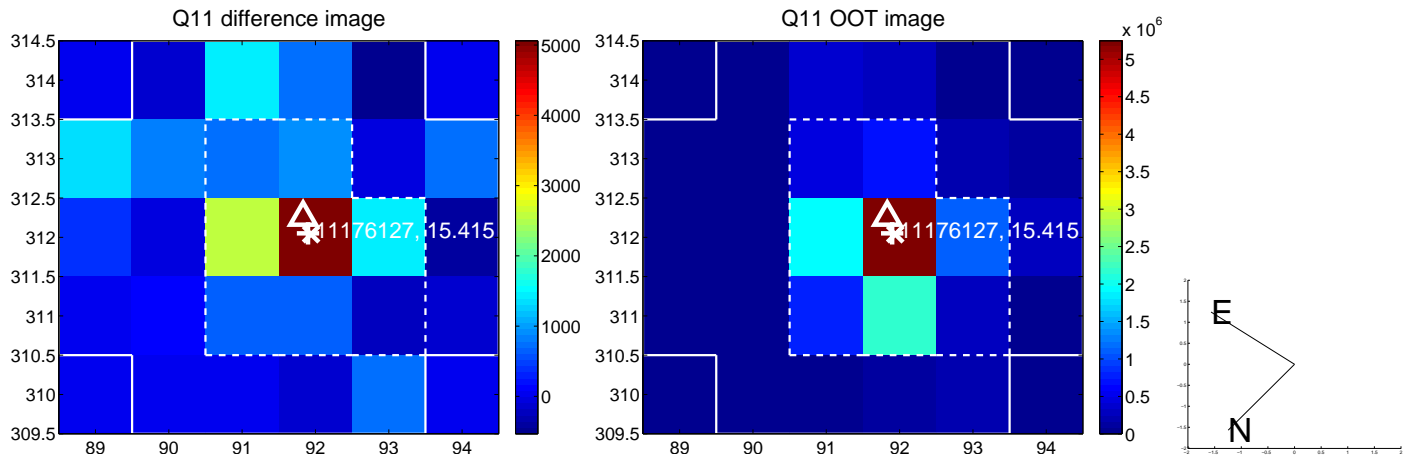
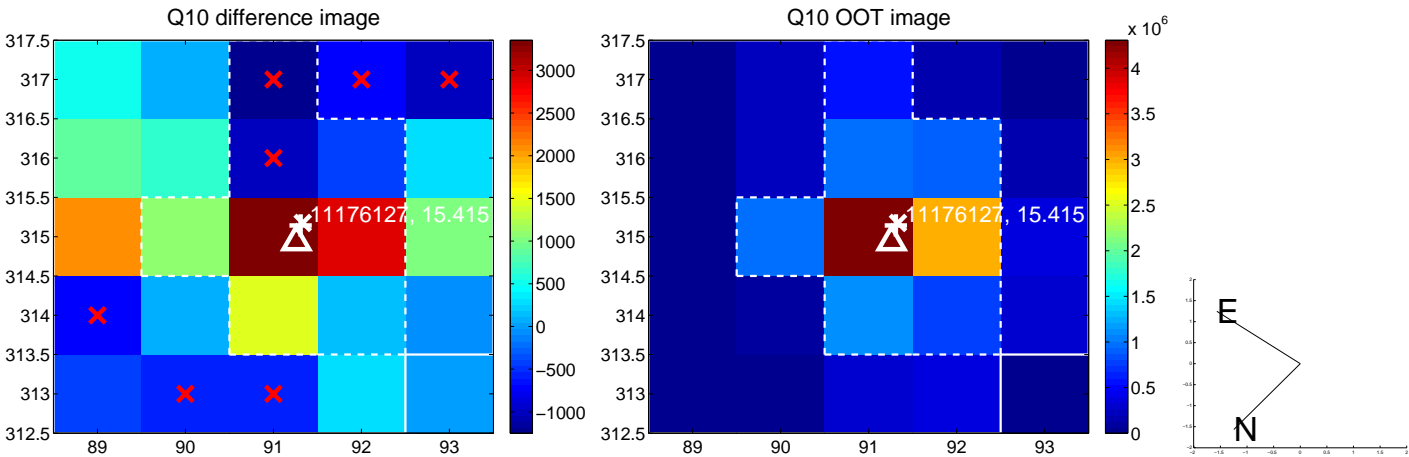
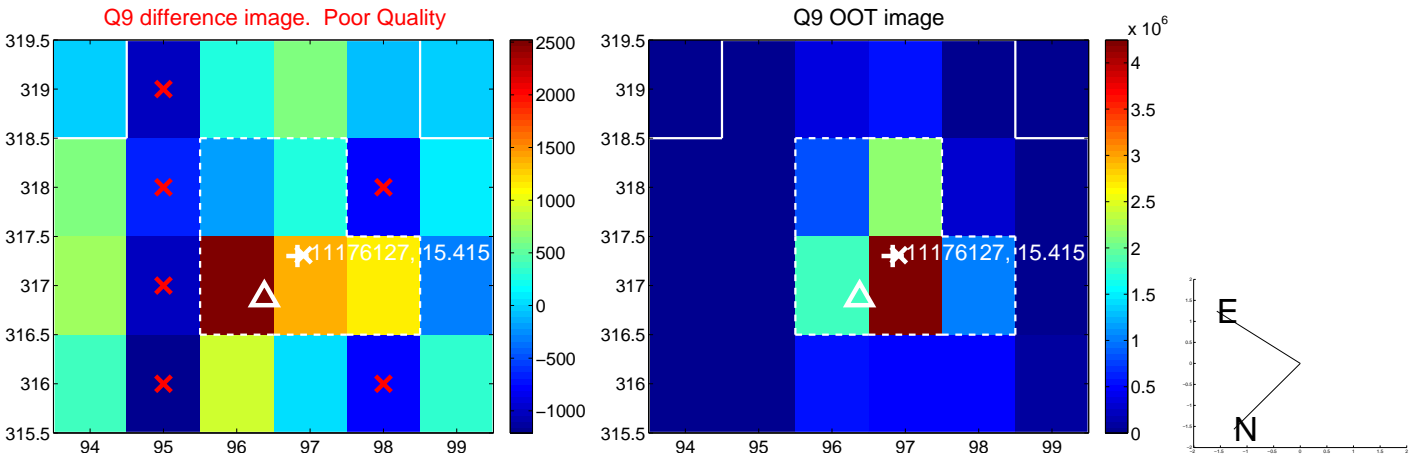
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



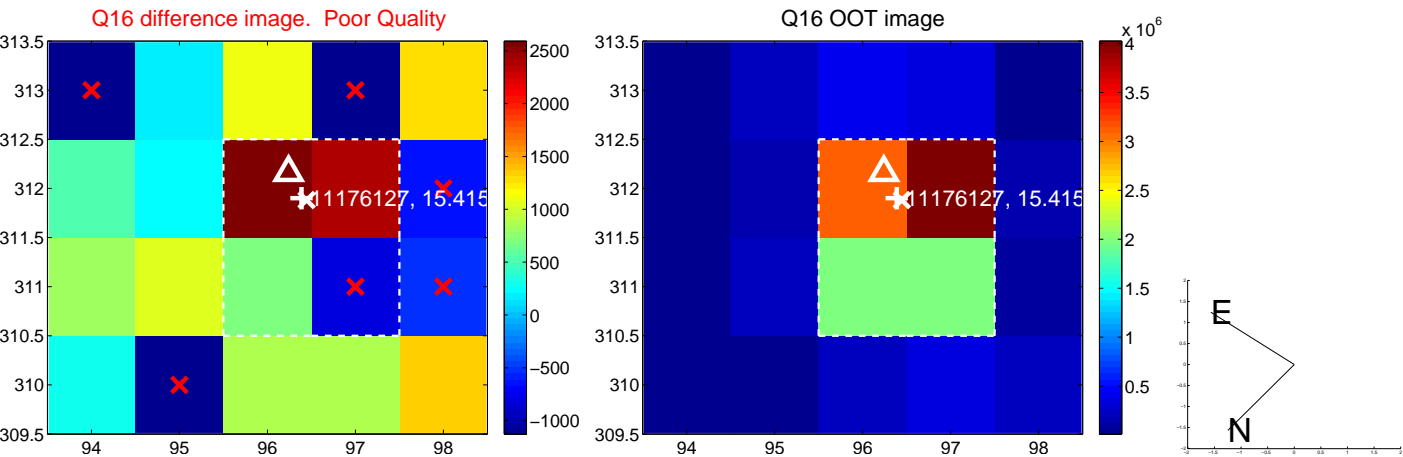
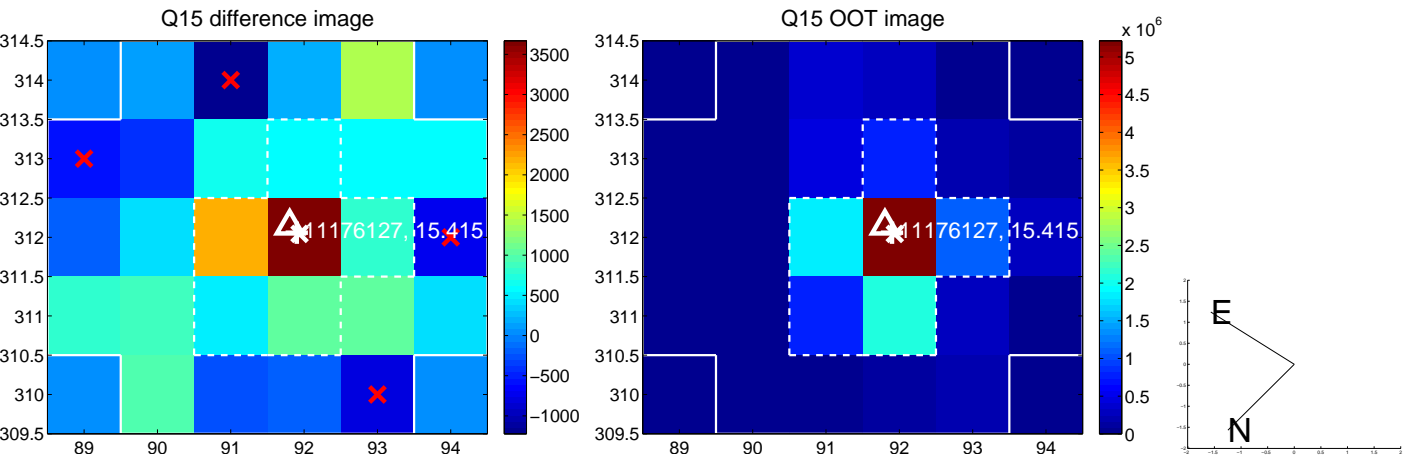
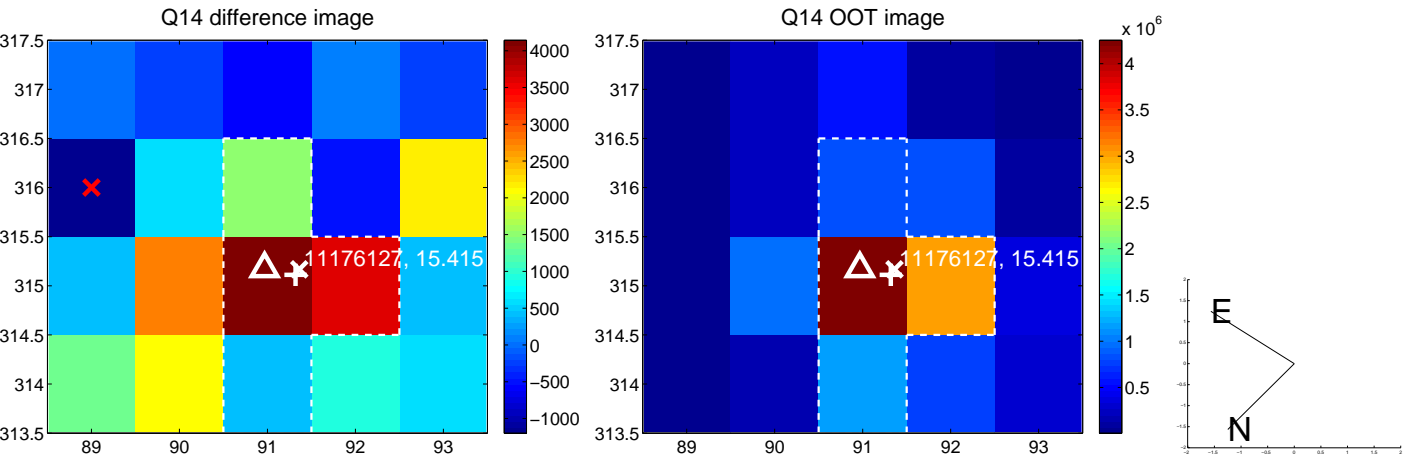
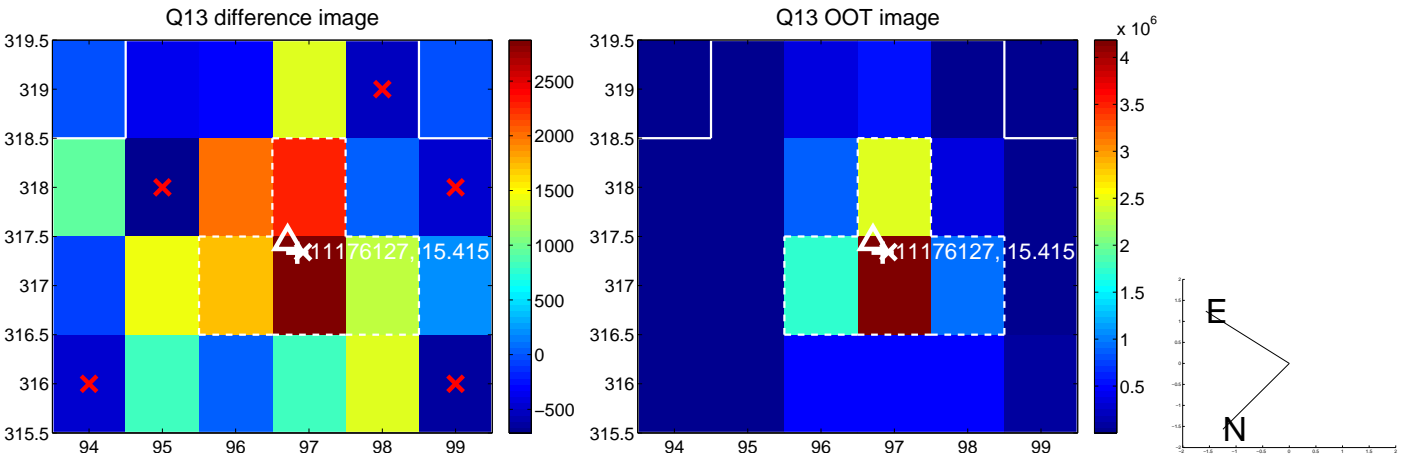
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



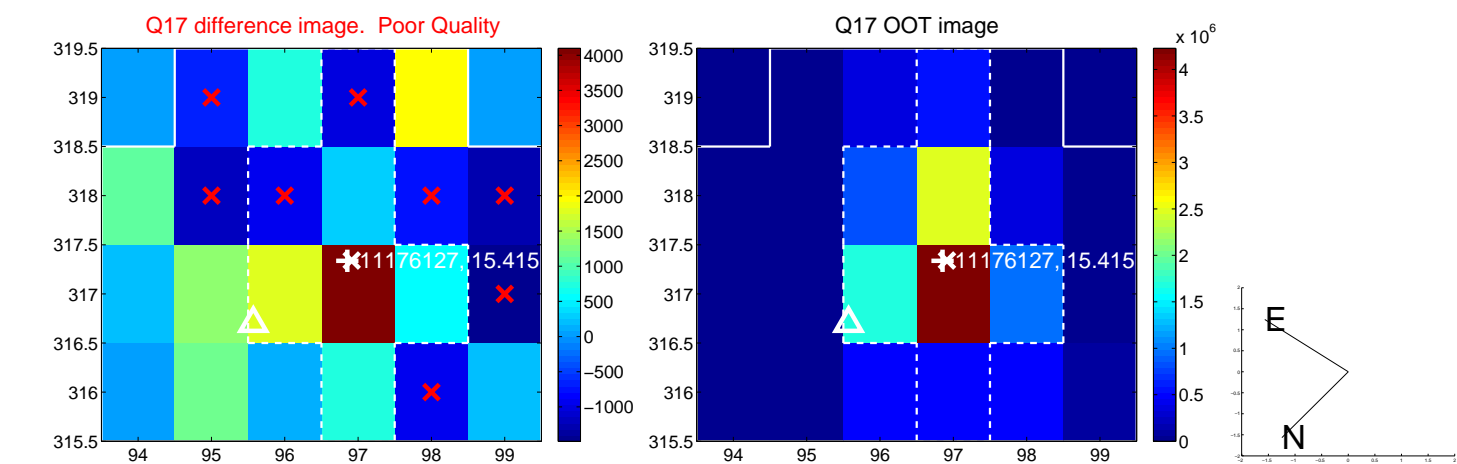
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



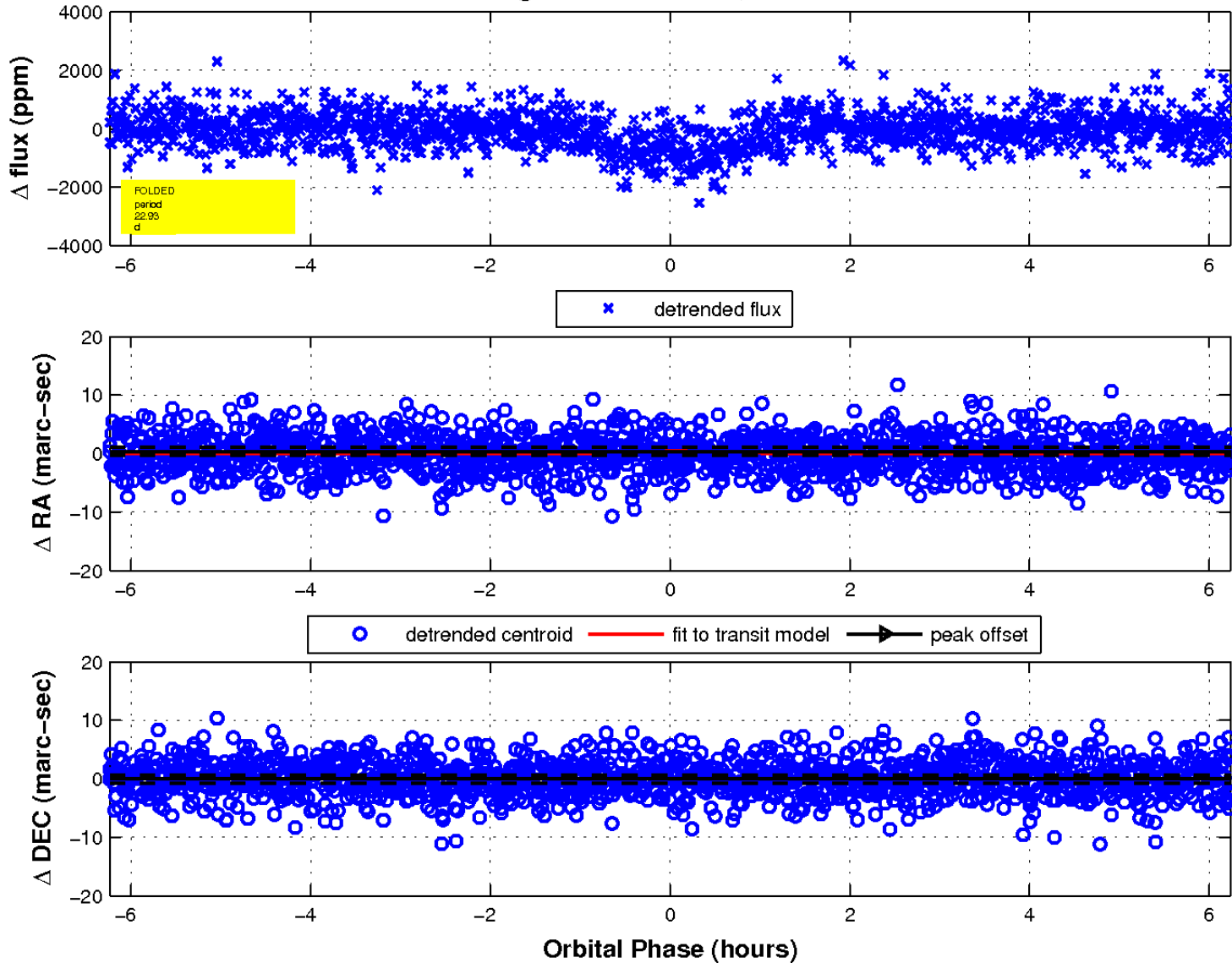
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

