

KIC 003735629

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})
003735629-01	OBS	3544.01	4.664189	133.667244	415354.6	2.500	6682.5	-1.0	3.58	5062	195.28	1901.03
003735629-02	OBS	No	6.996601	138.485649	44808.4	15.000	483.1	-1.0	3.58	5062	73.61	1107.07
003735629-03	OBS	No	3.491730	132.656513	425.0	10.078	512.0	8.6	3.58	5062	15.46	2796.64
003735629-04	OBS	No	6.996013	133.877881	48570.3	12.000	248.5	-1.0	3.58	5062	76.66	1107.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003735629-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
003735629-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003735629-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
003735629-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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.

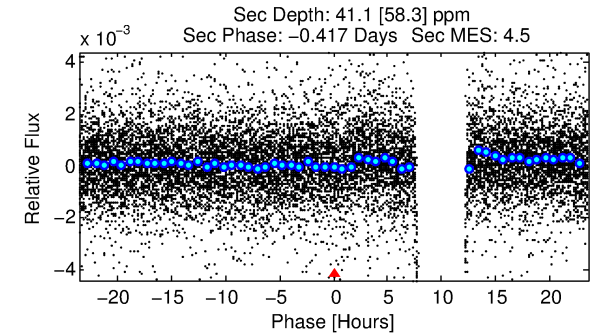
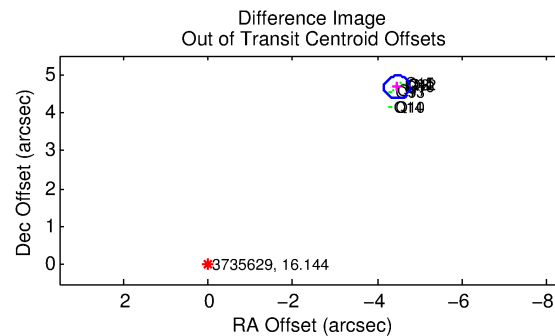
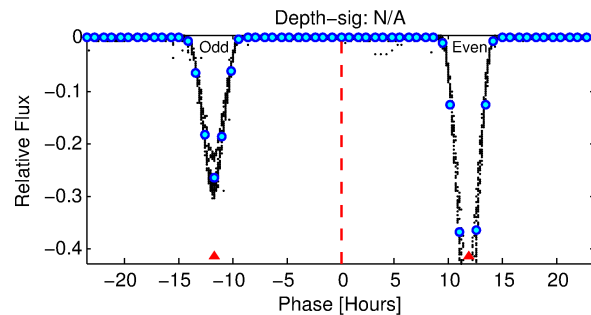
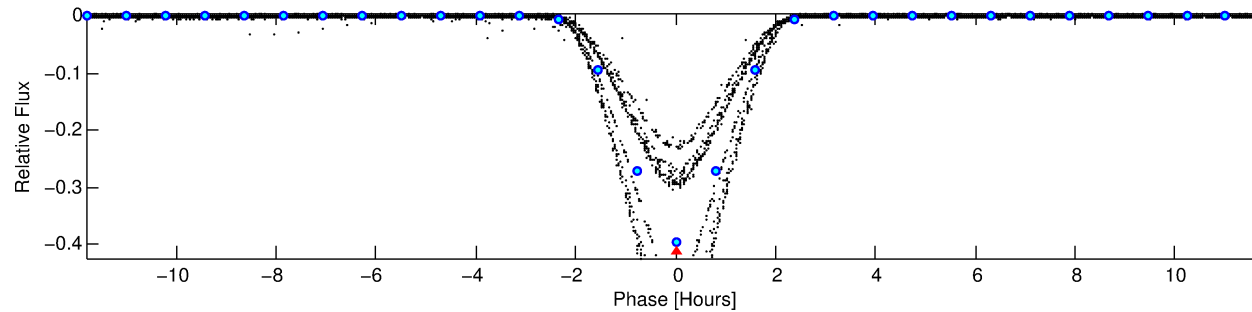
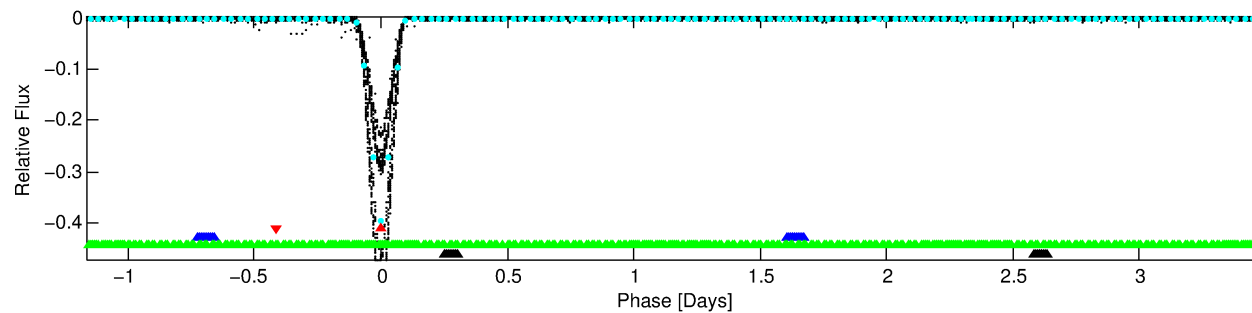
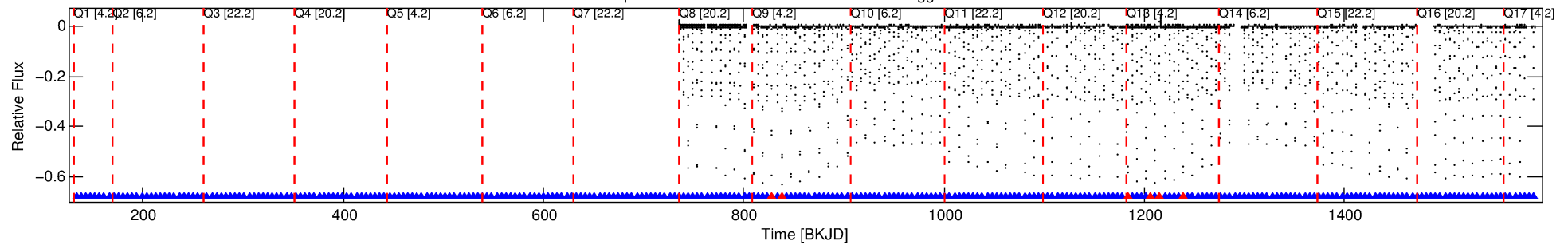
Ephemeris Match Information For 003735629-01

No Significant Match Found

DV One-Page Summary

KIC: 3735629 Candidate: 1 of 4 Period: 4.664 d
KOI: K03544.01 Corr: 0.760

Kp: 16.14 R*: 3.58 Rs Teff: 5062.0 K Logg: 3.52 Fe/H: 0.140



TPS TCE Results:

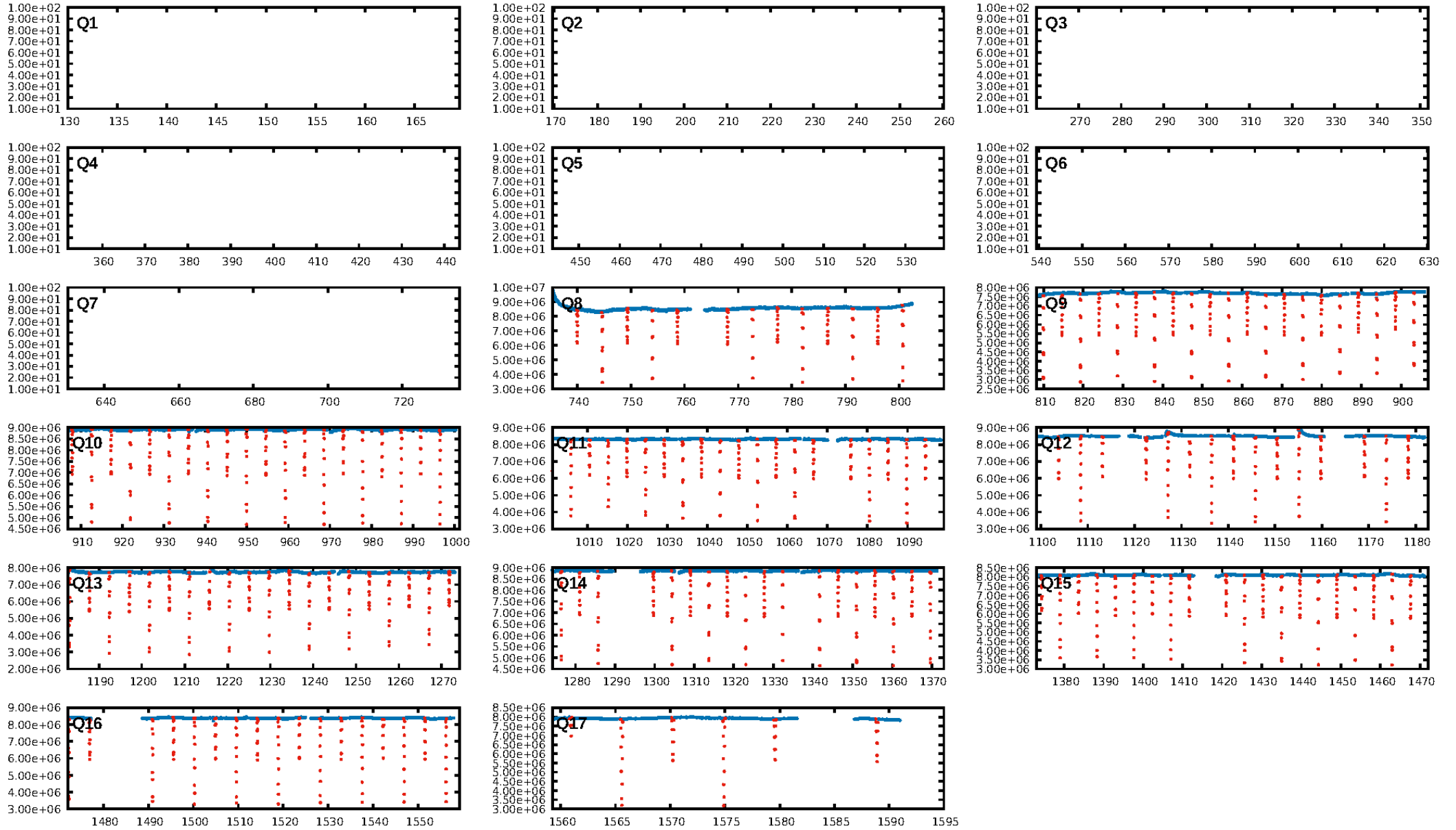
Period = 4.66419 d
Epoch = 133.6672 BKJD

DV fit results are unavailable

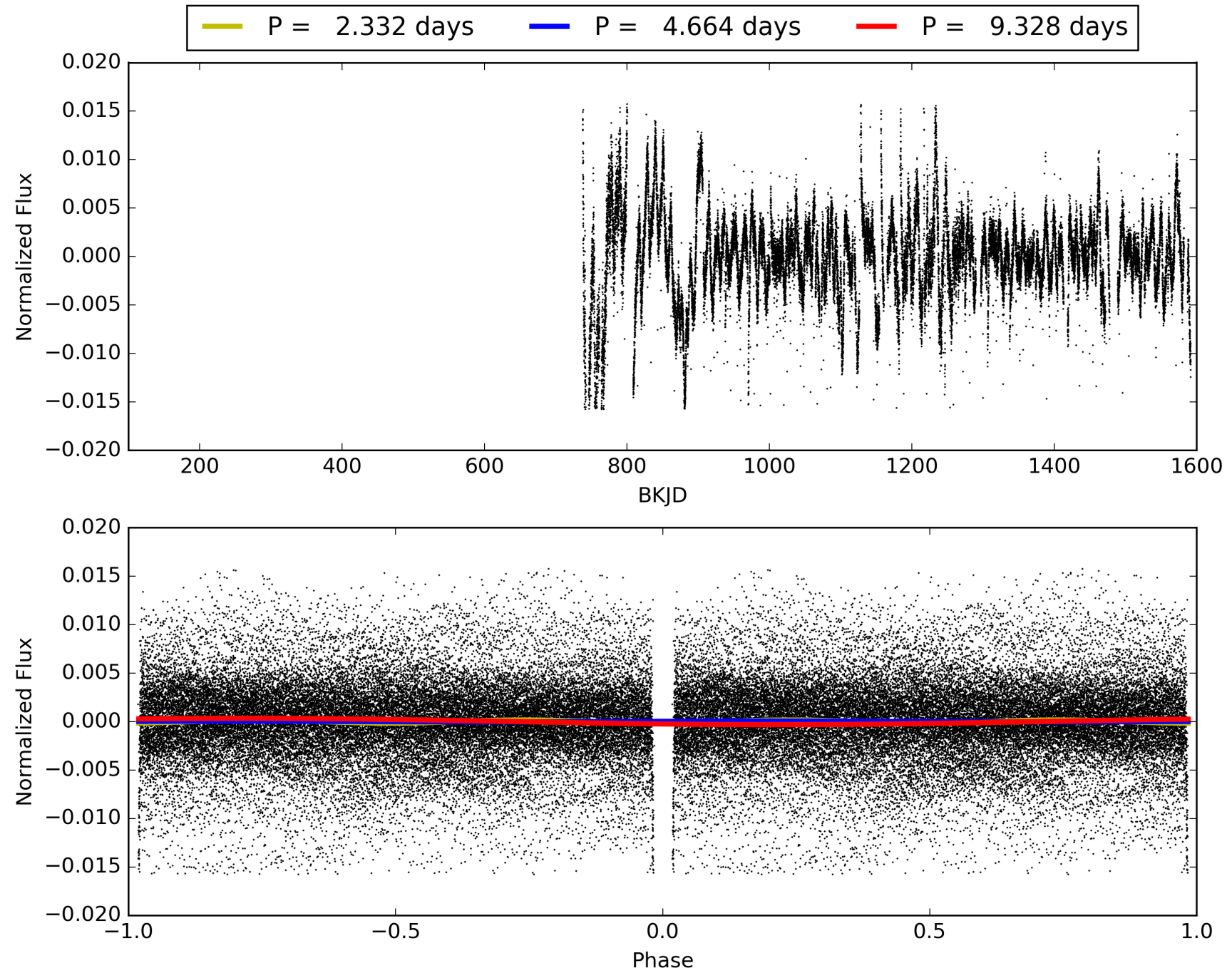
DV Diagnostic Results:

ShortPeriod-sig: 99.3% [2.71 σ]
LongPeriod-sig: 100.0% [4.57 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.96 [157/163]
GhostDiagnostic-chr: 1.274
Centroid-sig: 0.0%
Centroid-so: 2.743 arcsec [4648.59 σ]
OotOffset-rm: 6.455 arcsec [64.40 σ]
KicOffset-rm: 0.112 arcsec [1.63 σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

TCE 003735629-01, PDC Light Curves

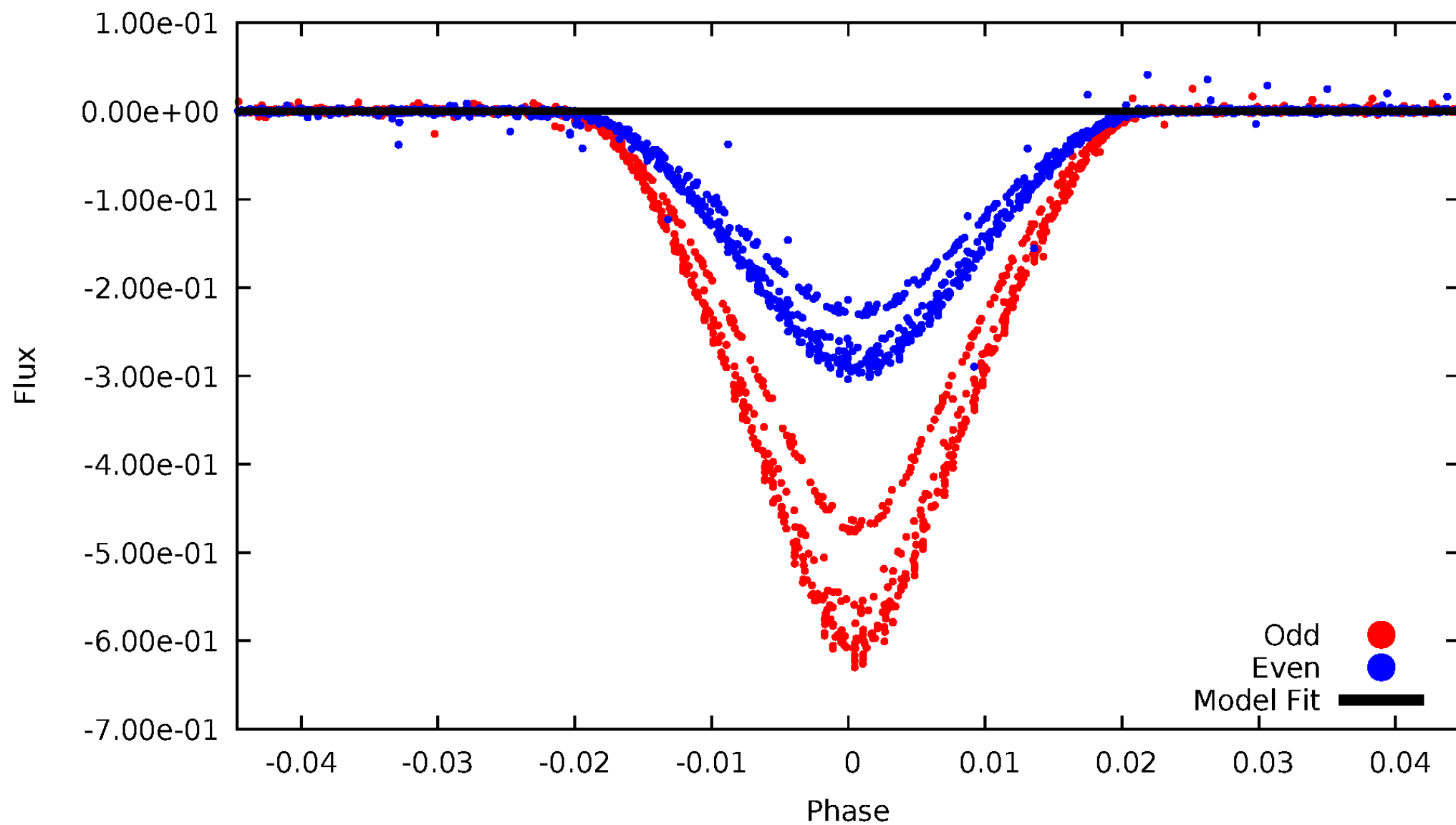


TCE 003735629-01



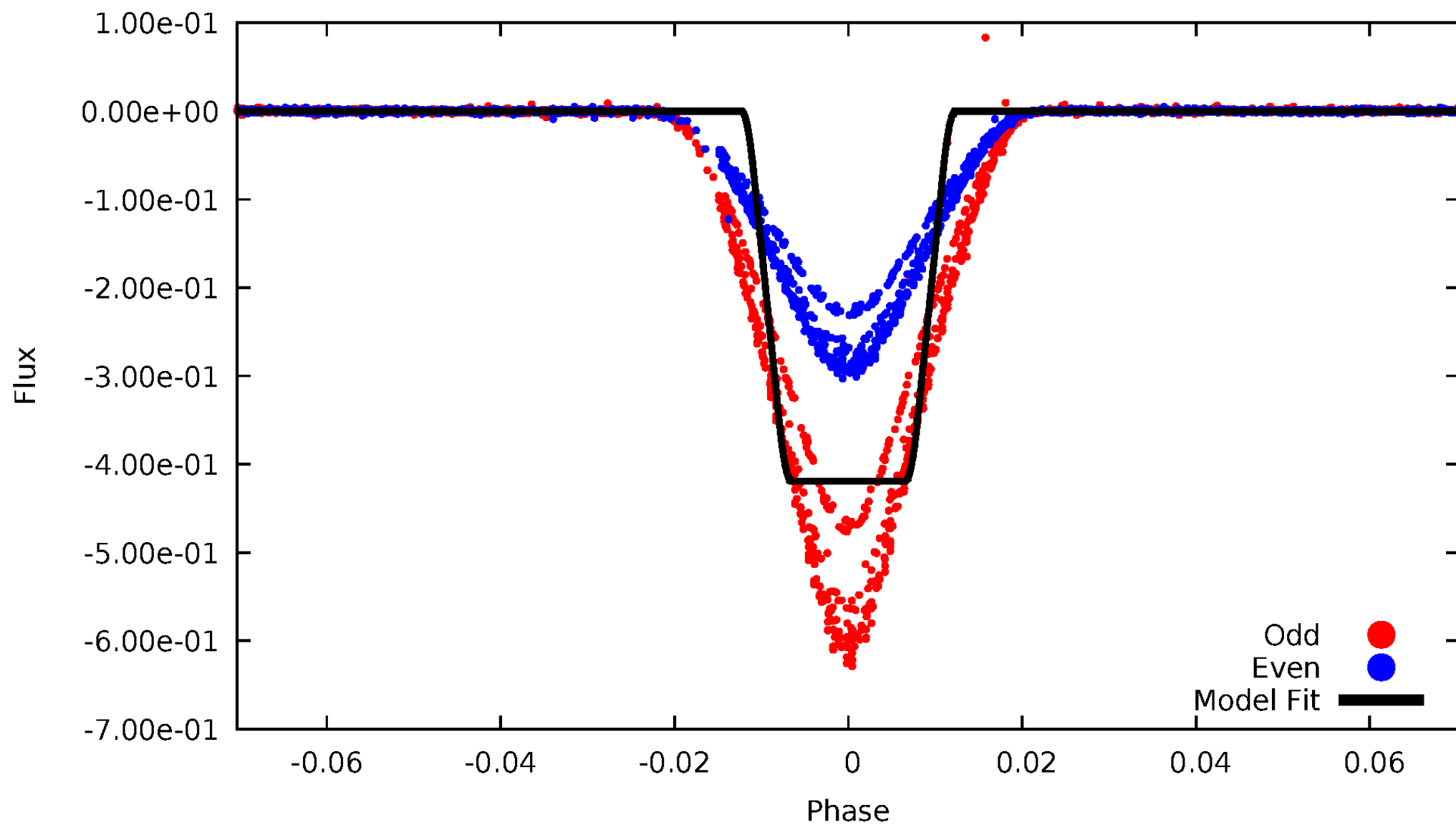
DV Odd/Even

TCE 003735629-01



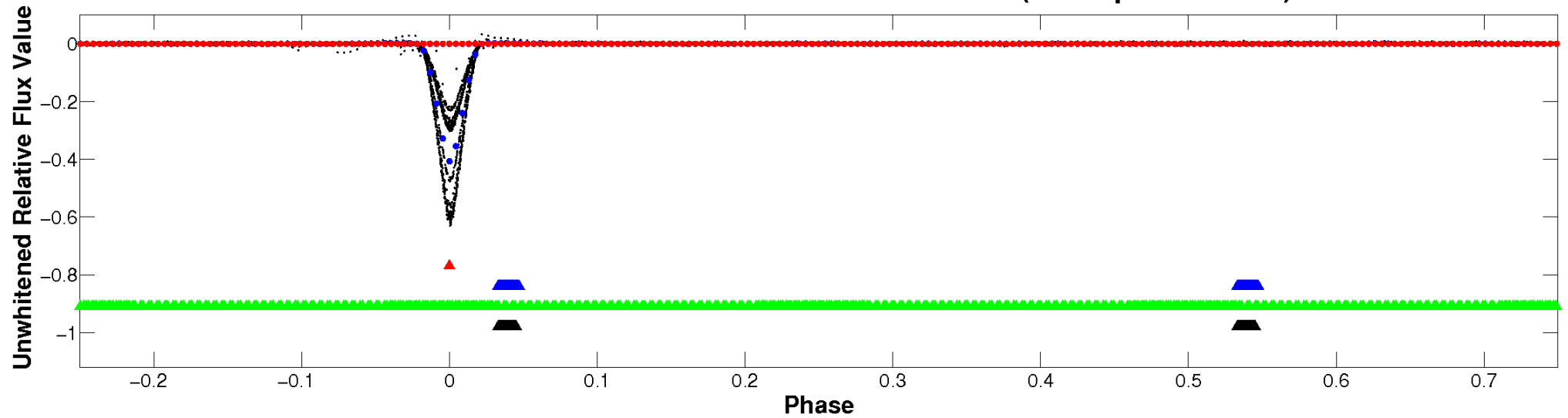
ALT Odd/Even

TCE 003735629-01

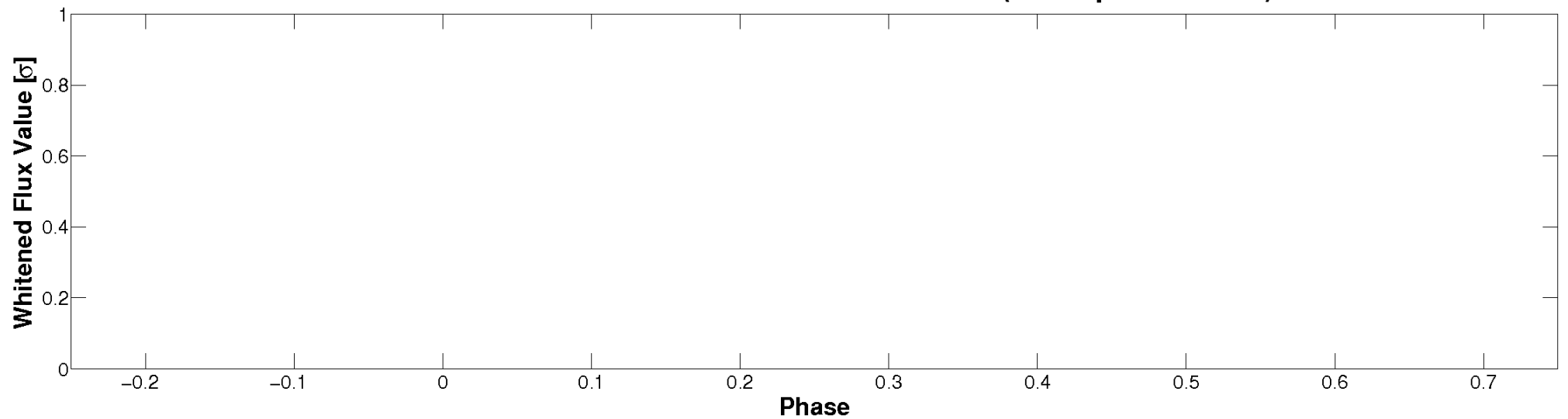


Non-Whitened Vs. Whitened Light Curve

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

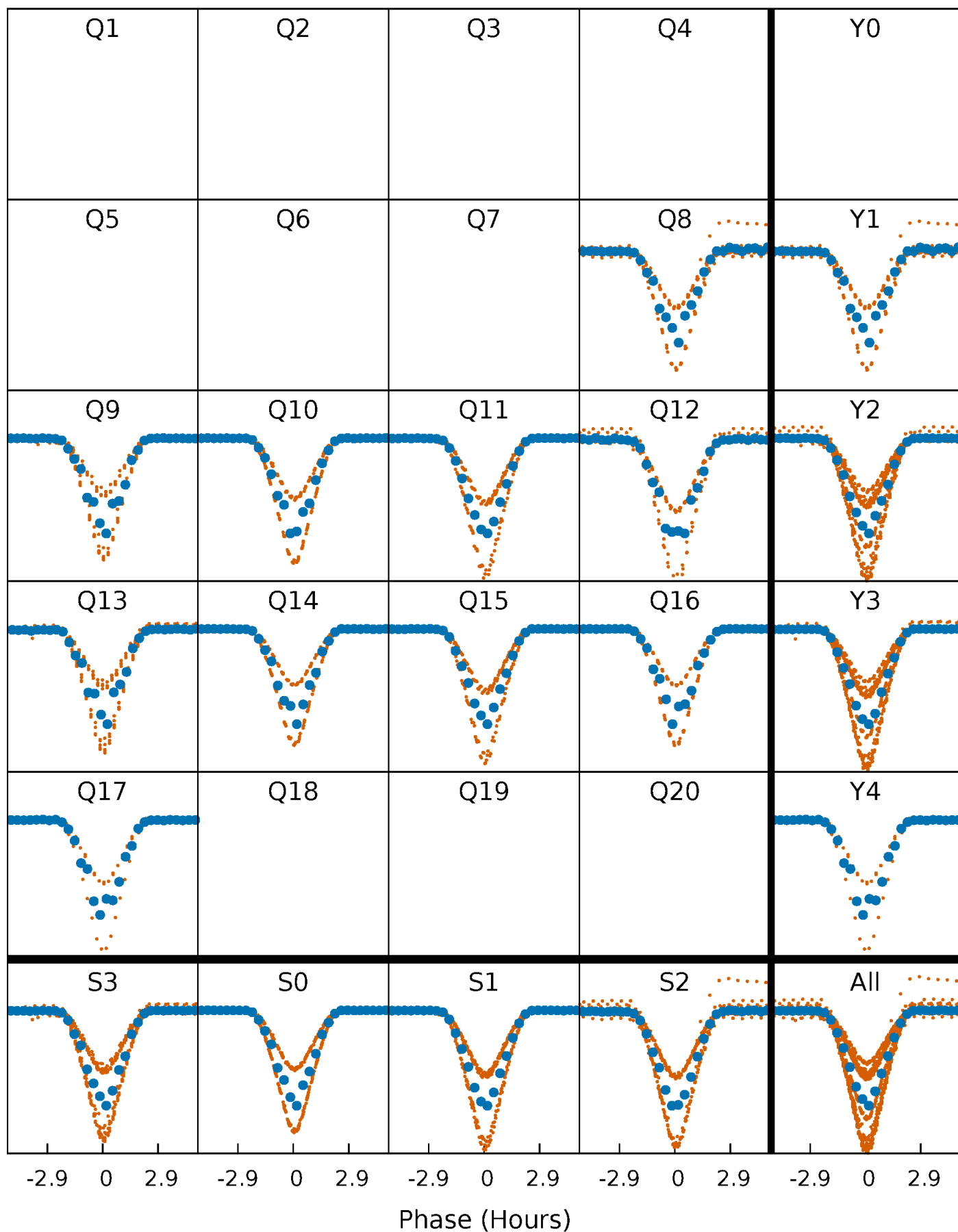


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



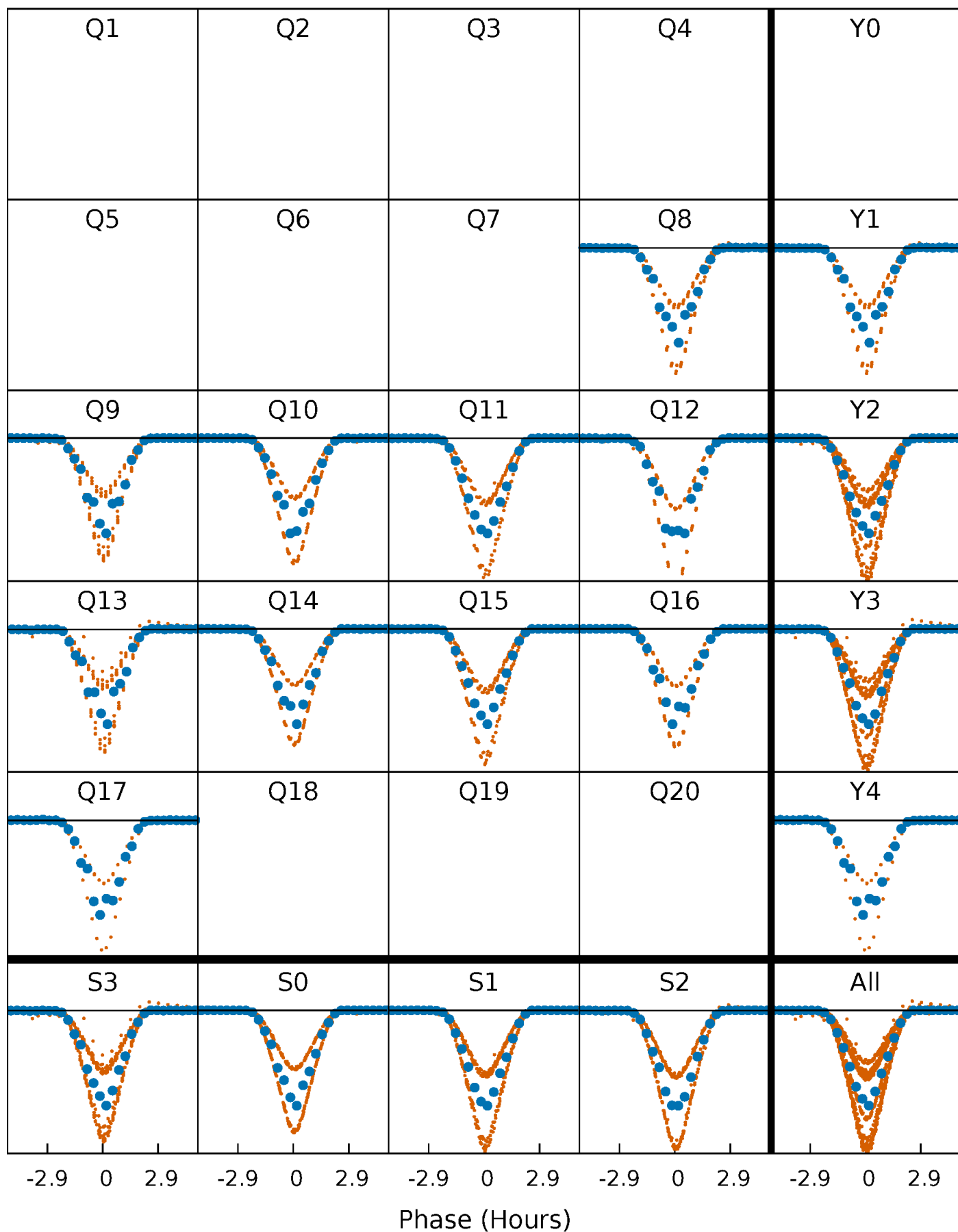
PDC Quarter-Phased Transit Curves

TCE 003735629-01 P= 4.664189 Days $T_0=133.667244$ (BKJD)



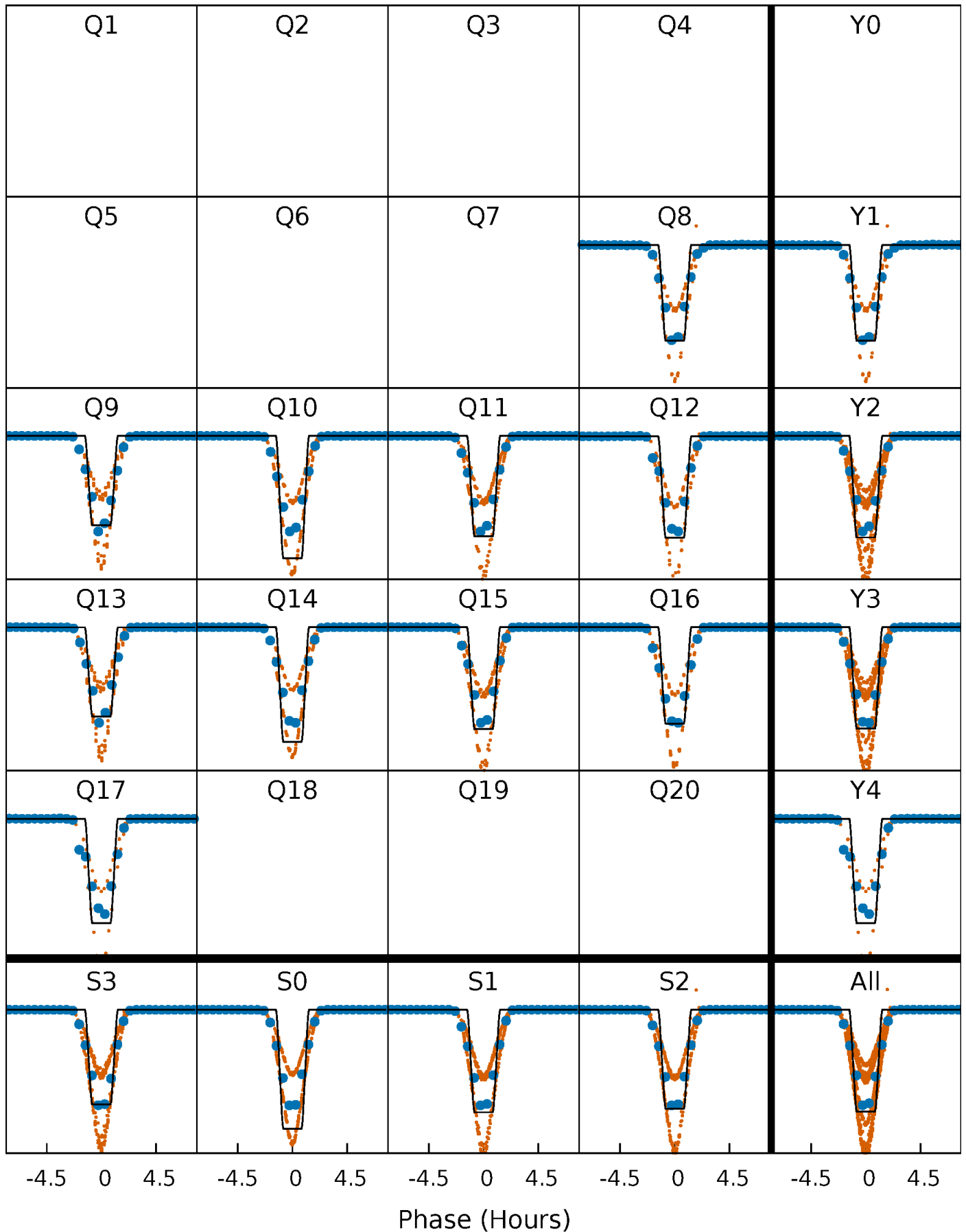
DV Quarter-Phased Transit Curves

TCE 003735629-01 P= 4.664189 Days $T_0=133.667244$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

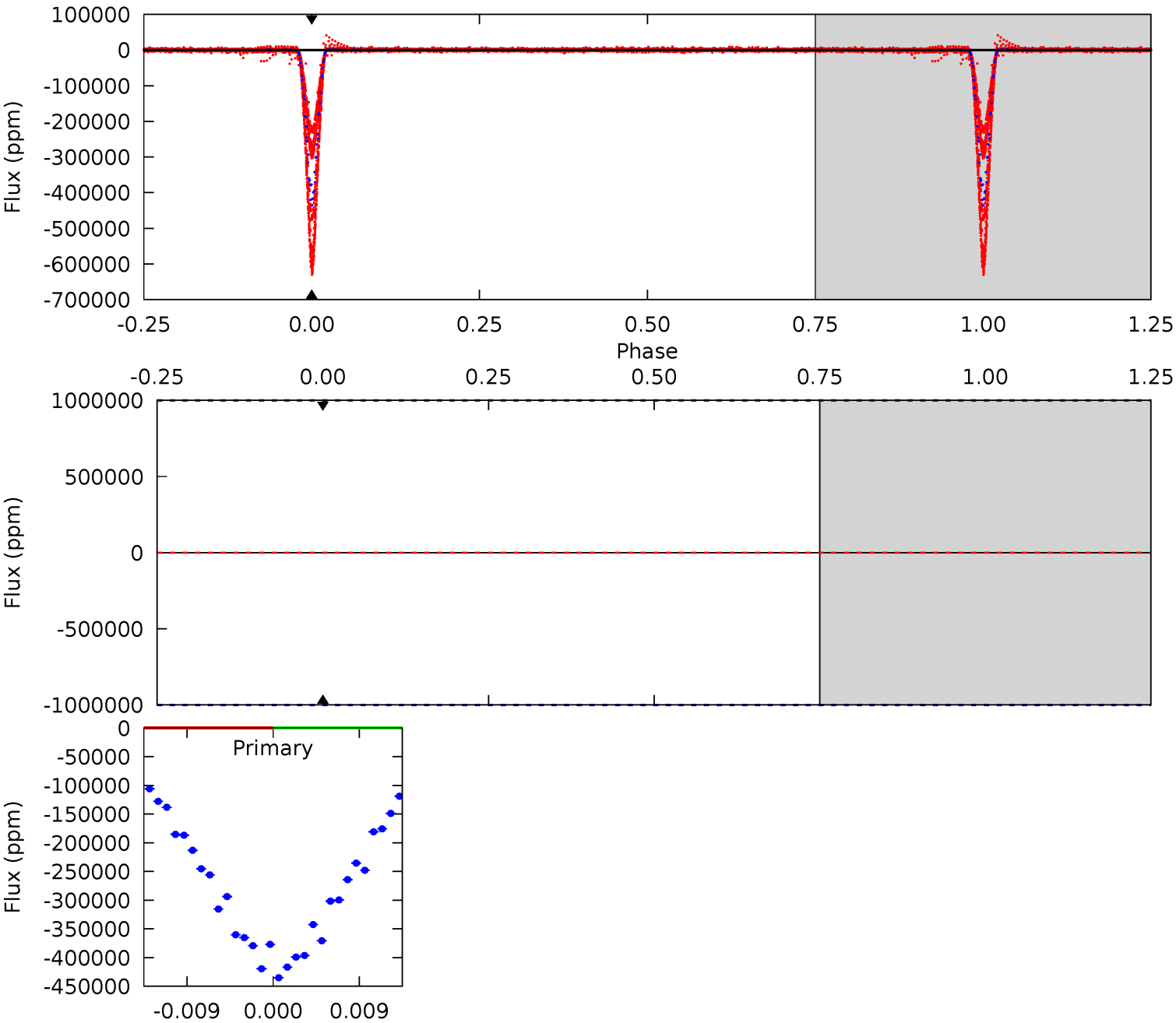
TCE 003735629-01 P= 4.664189 Days $T_0=133.670157$ (BKJD)



DV Model-Shift Uniqueness Test

003735629-01, P = 4.664189 Days, E = 133.667244 Days

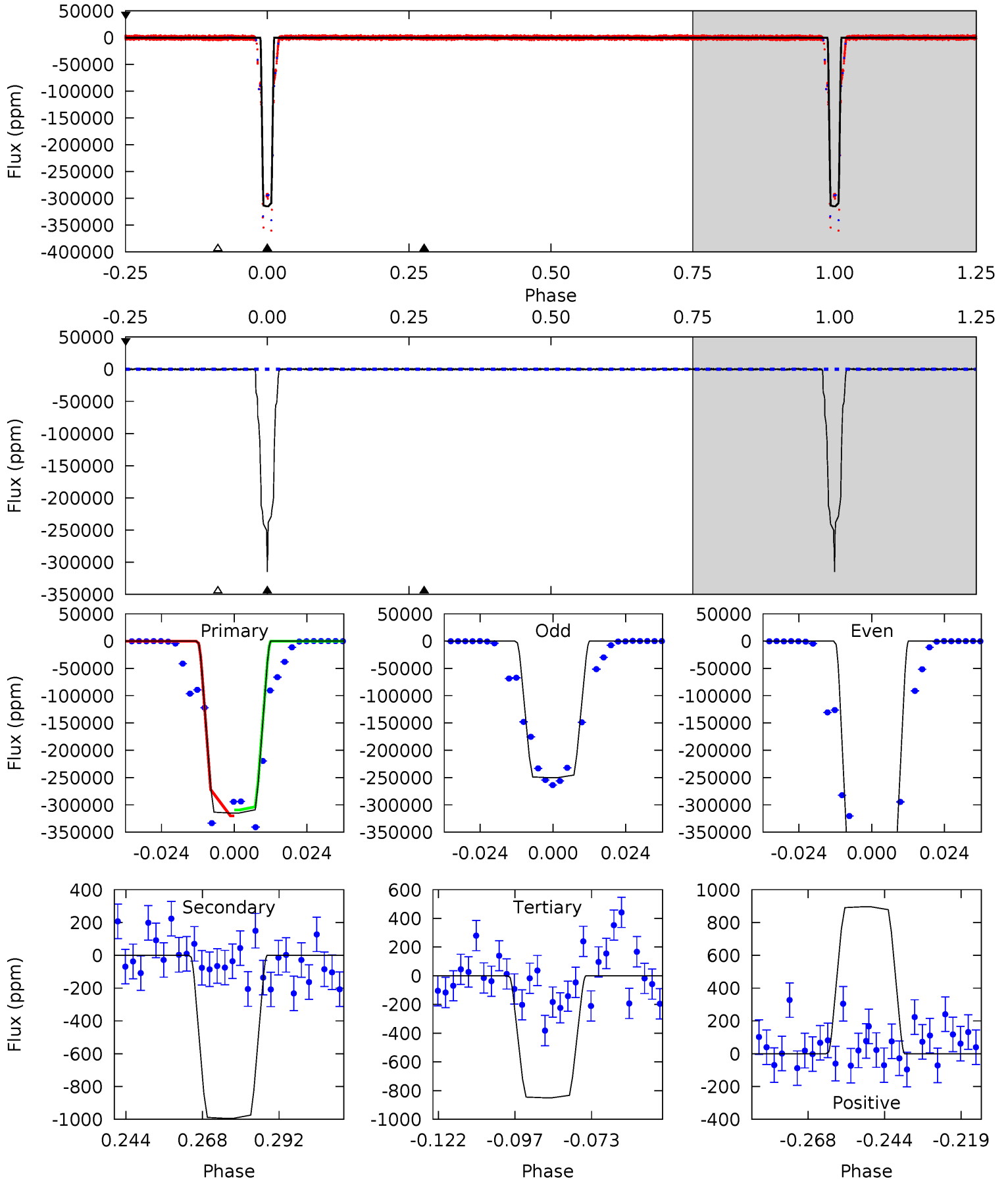
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003735629-01, P = 4.664189 Days, E = 133.670157 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1622	5.12	4.37	4.61	4.85	2.25	1.30	1618	1617	0.74	0.50	771.2	1.34	0.00	0



Stellar Parameters For KIC 003735629

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5062^{+193}_{-176}	$3.515^{+0.904}_{-0.226}$	$0.140^{+0.250}_{-0.300}$	$3.579^{+1.214}_{-2.254}$	$1.530^{+0.251}_{-0.585}$	$0.047^{+1.207}_{-0.028}$
	+4%/-3%	+26%/-6%	+179%/-214%	+34%/-63%	+16%/-38%	+2567%/-60%
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 003735629-01 / KOI 3544.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$172.80^{+67.61}_{-68.15}$	2286^{+268}_{-456}	-2094^{+6469}_{-2174}	$0.274^{+9.263}_{-7.758}$
Alt.	-994 ± 194	$224.04^{+80.72}_{-84.96}$	2266^{+277}_{-455}	-2582^{+337}_{-185}	$0.043^{+0.068}_{-0.021}$

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

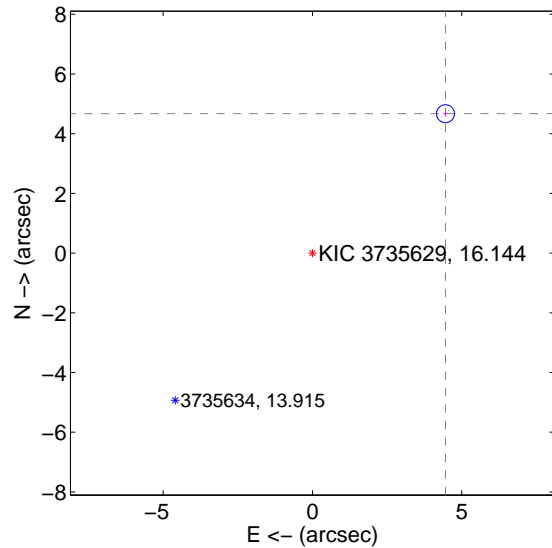
Supplemental centroid analysis for 003735629-01. Kepler magnitude: 16.14. Transit SNR -1.00

There are 10 quarters with good PRF difference image offsets

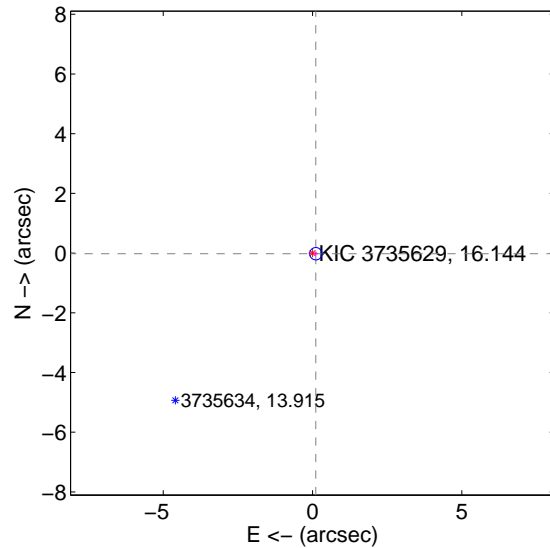
The OOT PRF centroid is offset from the target star catalog position by about 6.23 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.455 ± 0.100	64.40	-4.457 ± 0.078	4.670 ± 0.097
PRF-fit source offset from KIC position	0.112 ± 0.069	1.63	-0.110 ± 0.068	-0.021 ± 0.075
photometric centroid source offset	2.74 ± 0.00	4648.59	1.86 ± 0.00	-2.02 ± 0.00

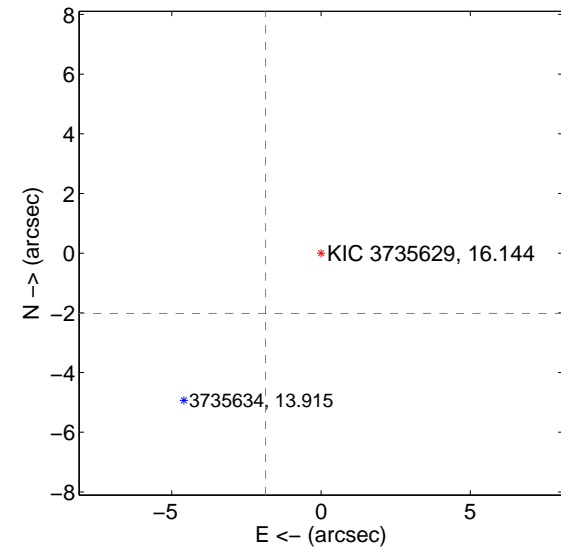
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

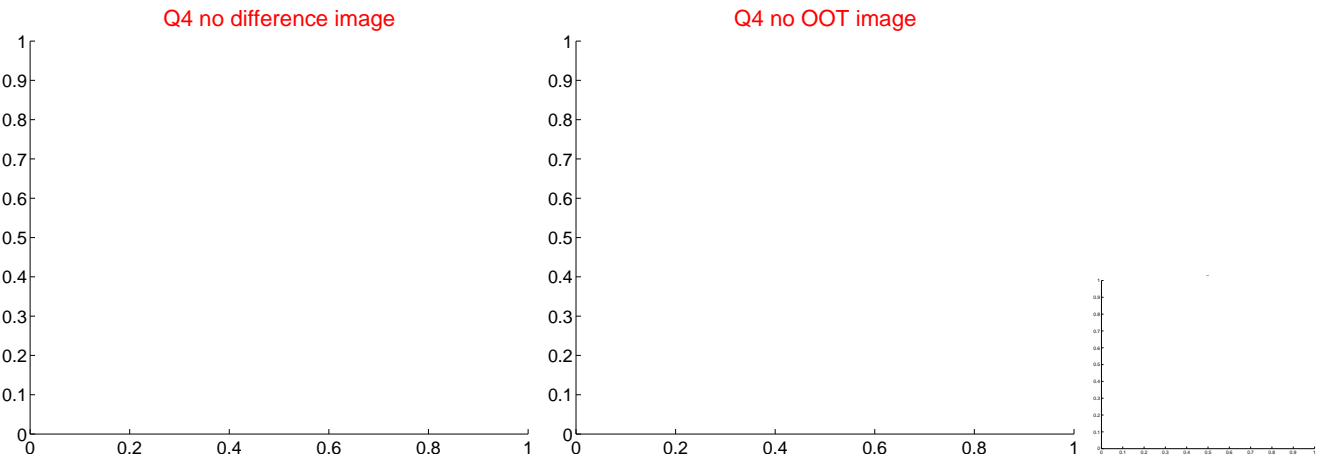
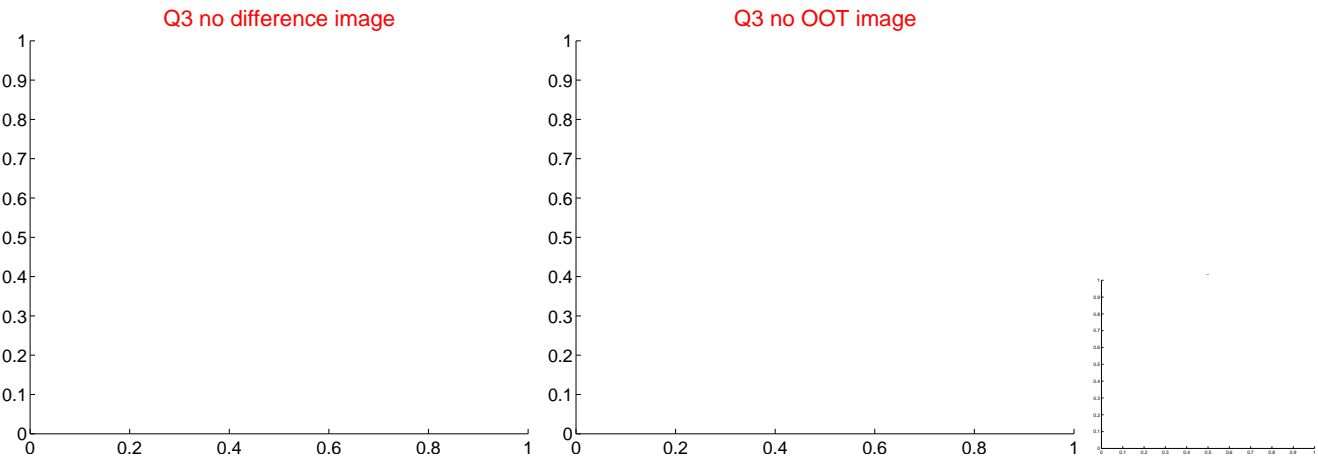
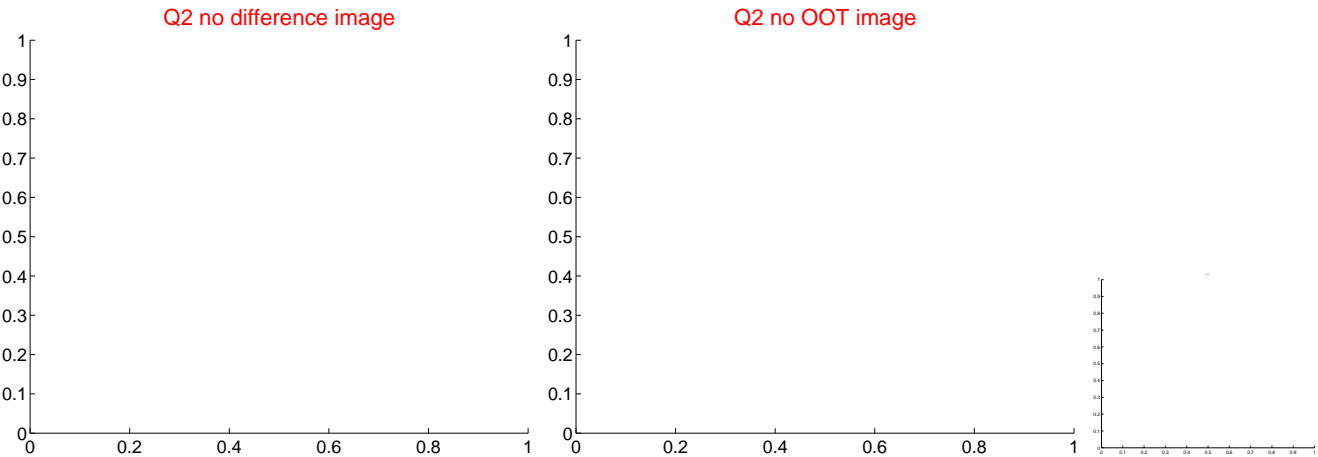
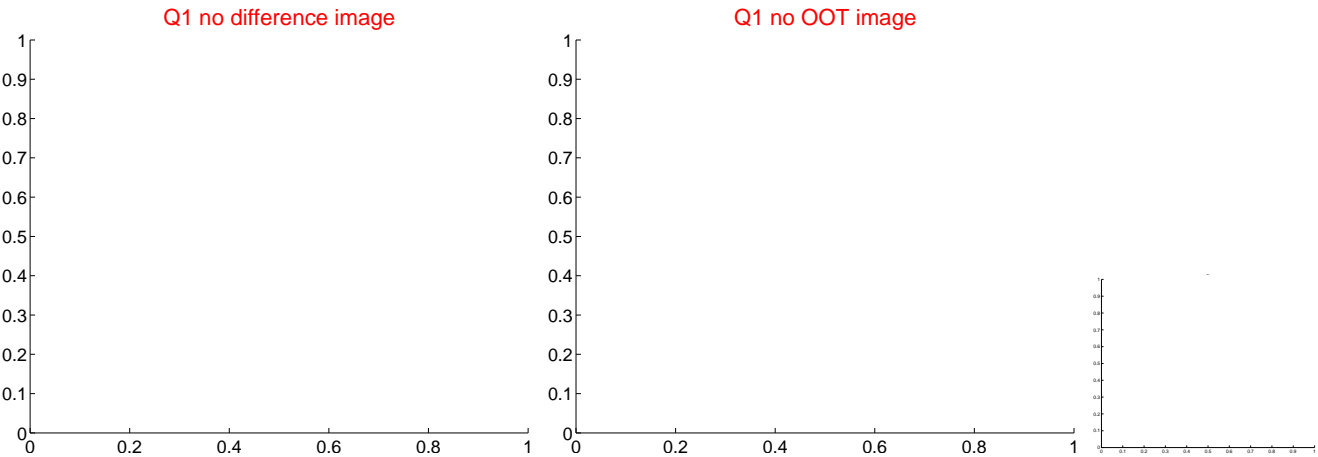


offset from photometric centroids

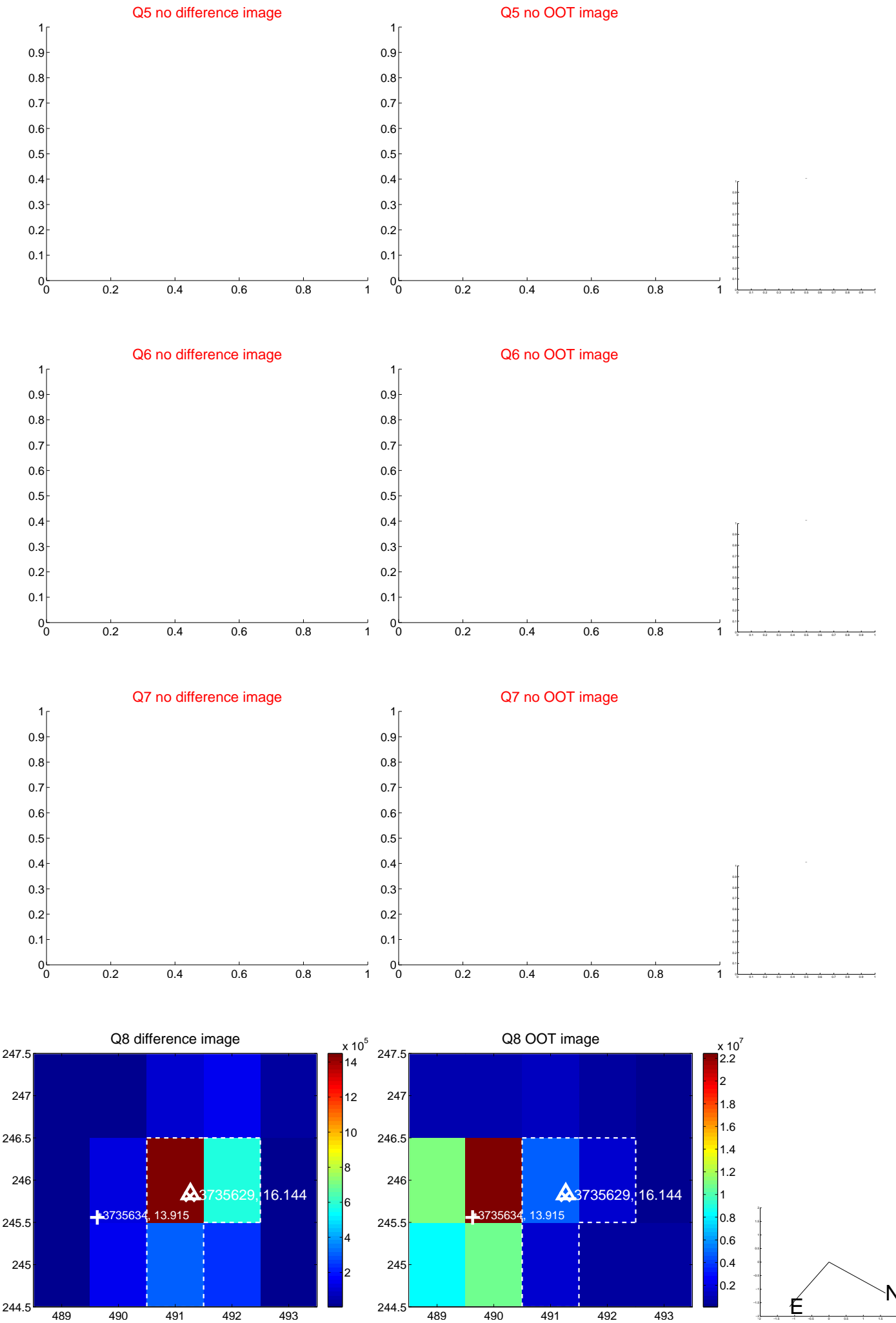


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

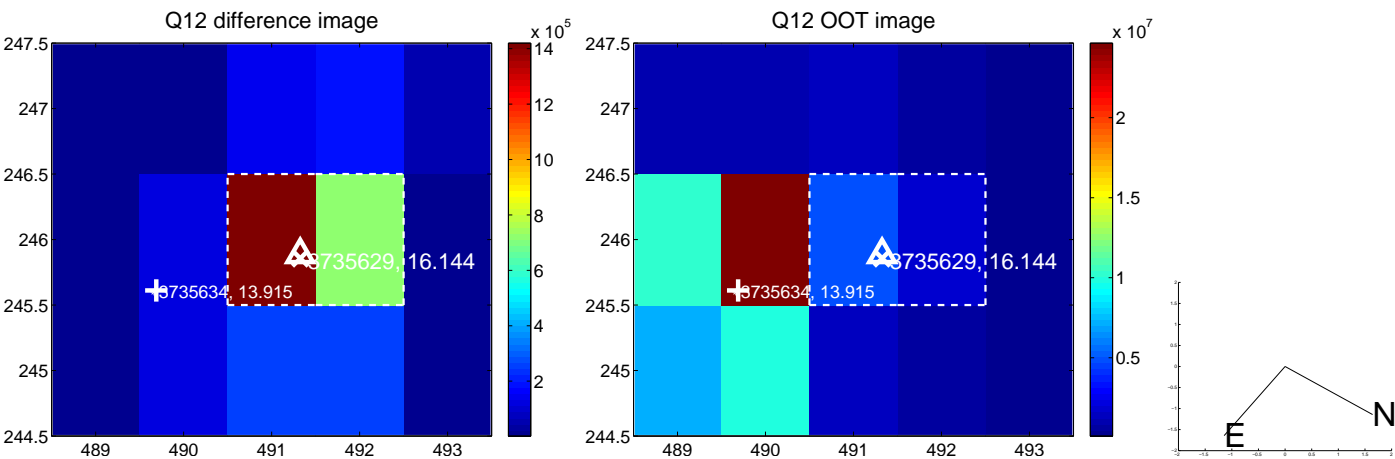
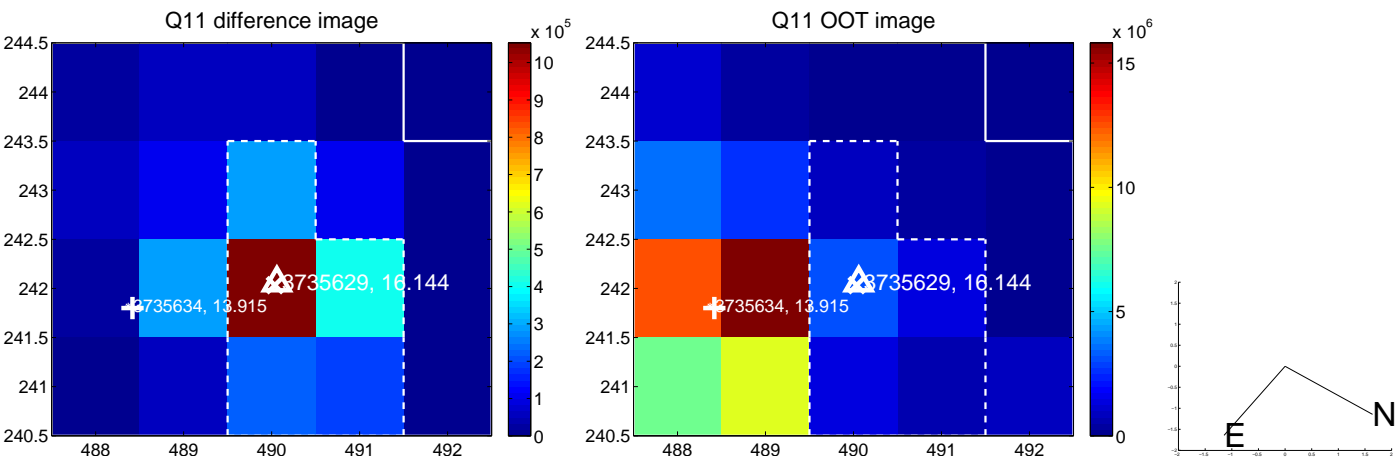
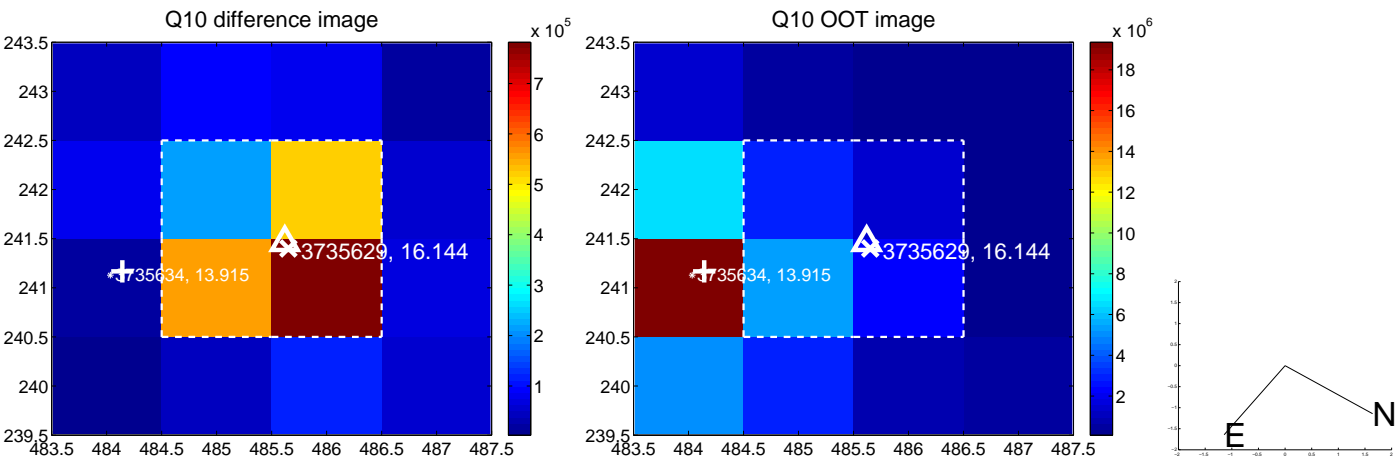
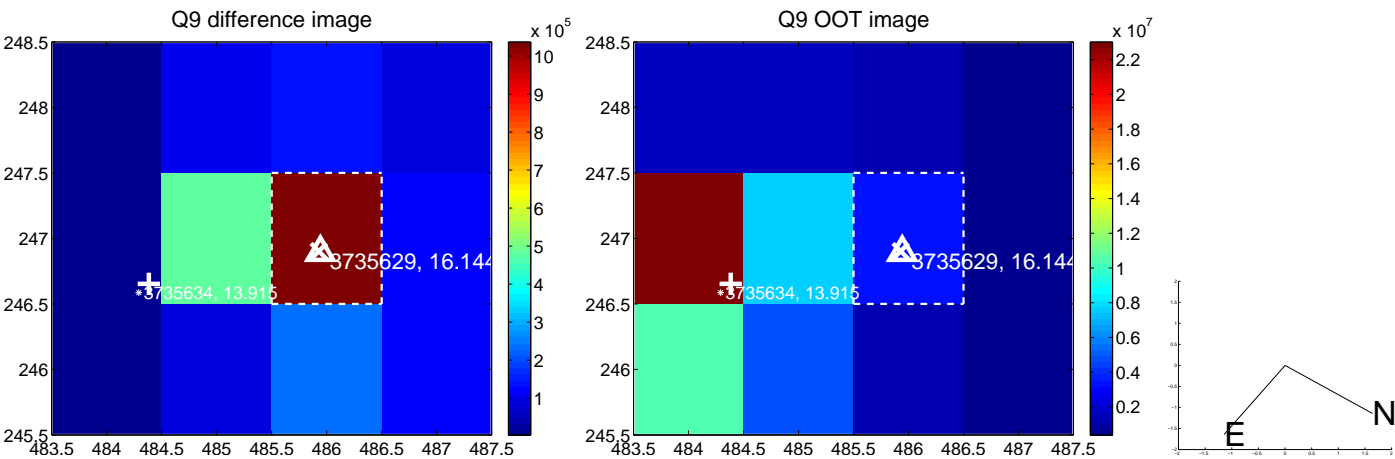
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



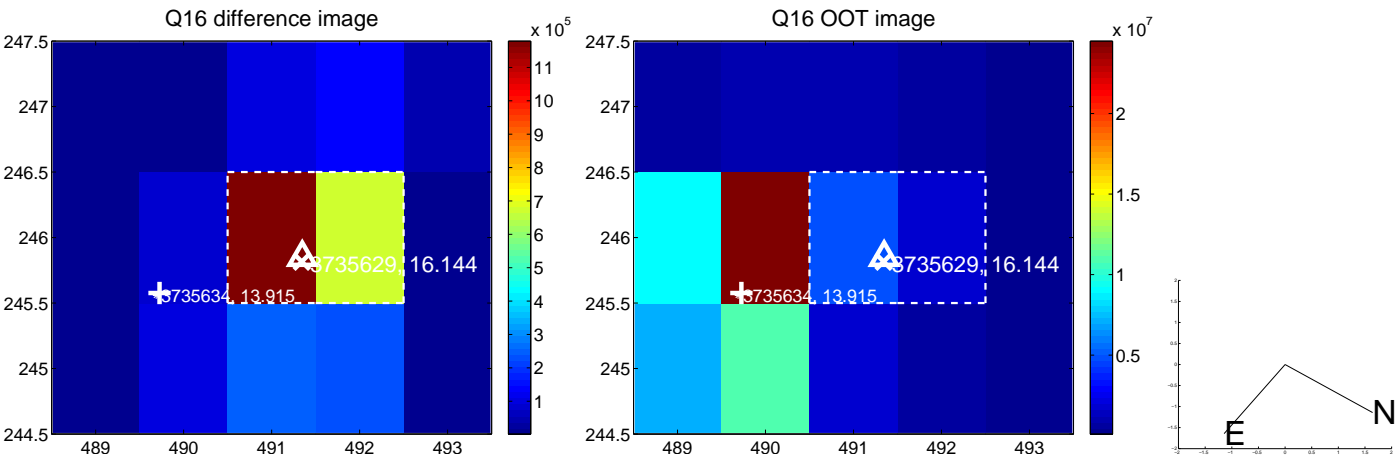
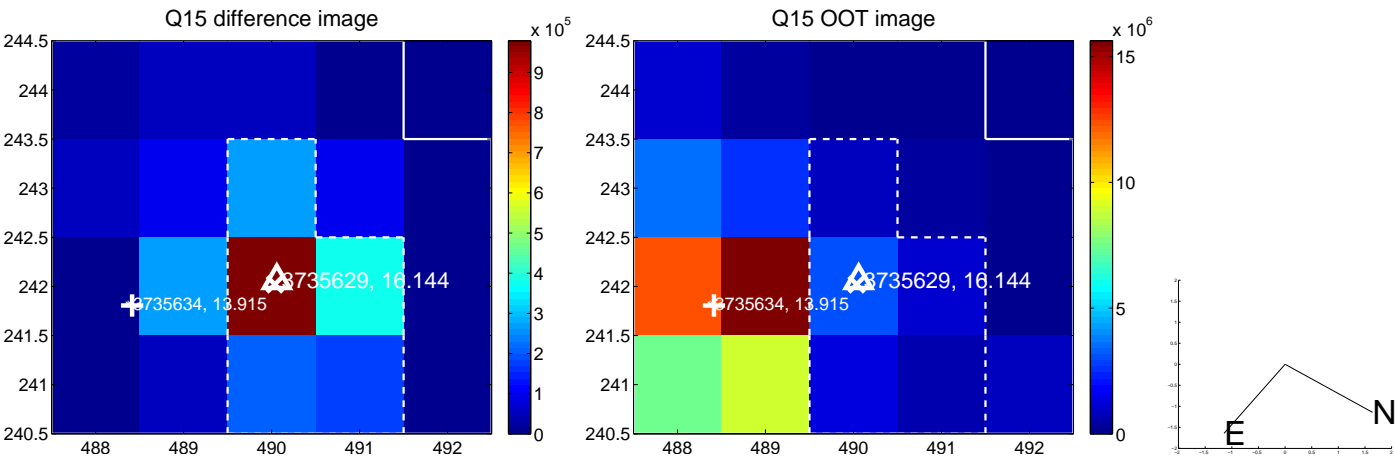
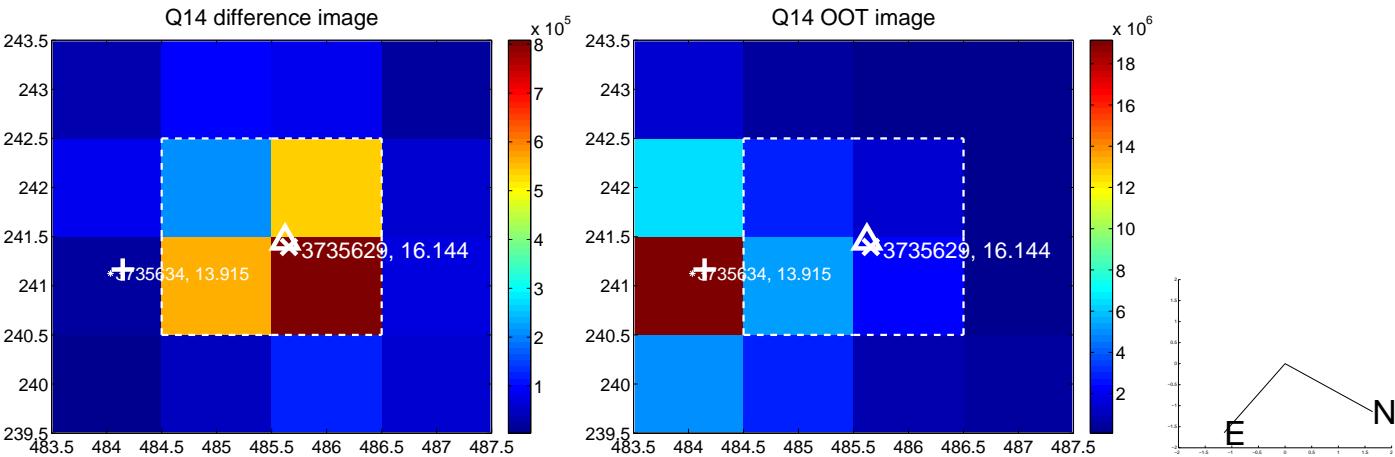
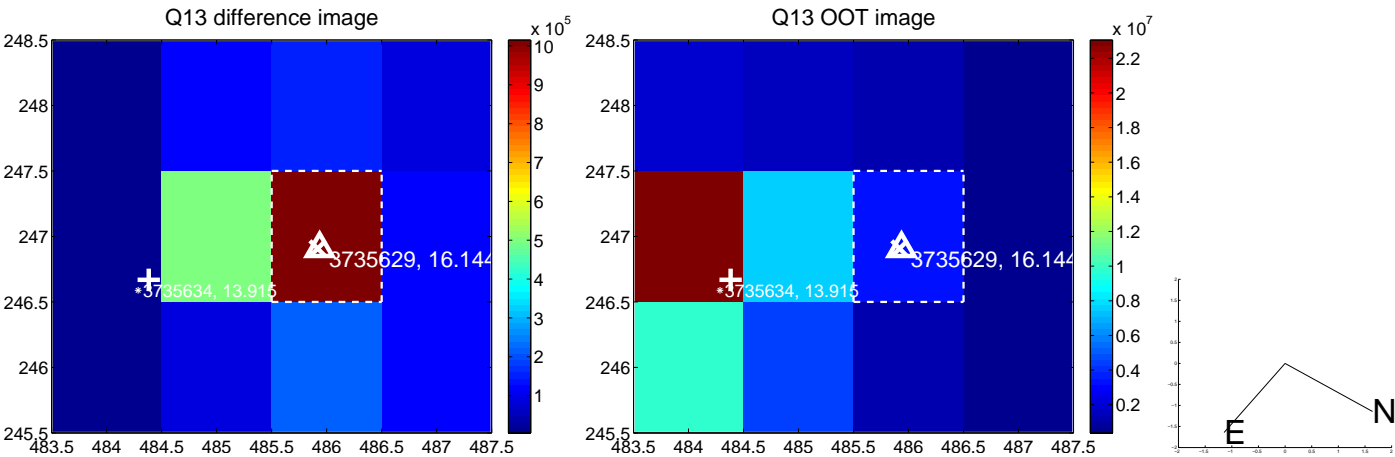
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



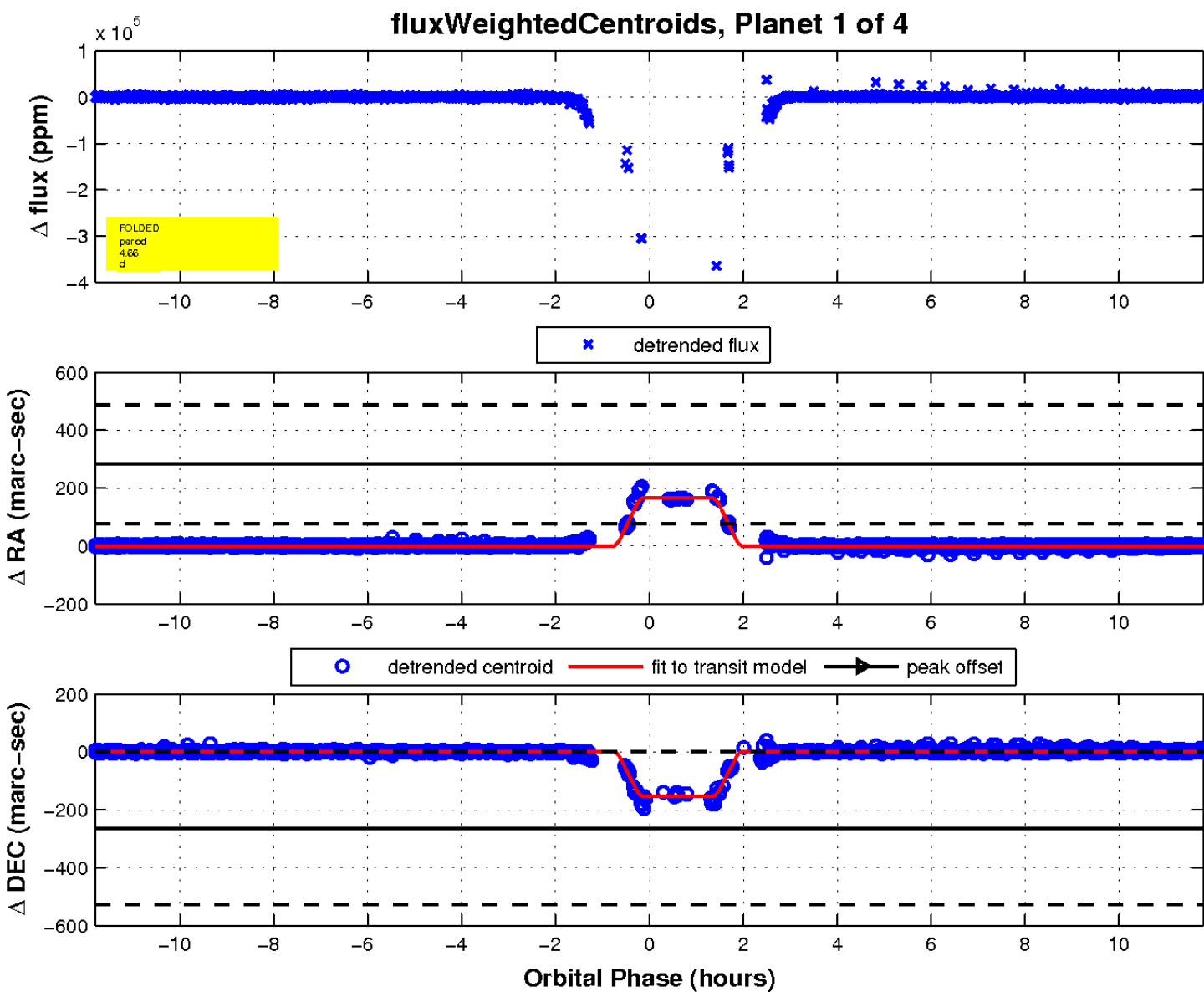
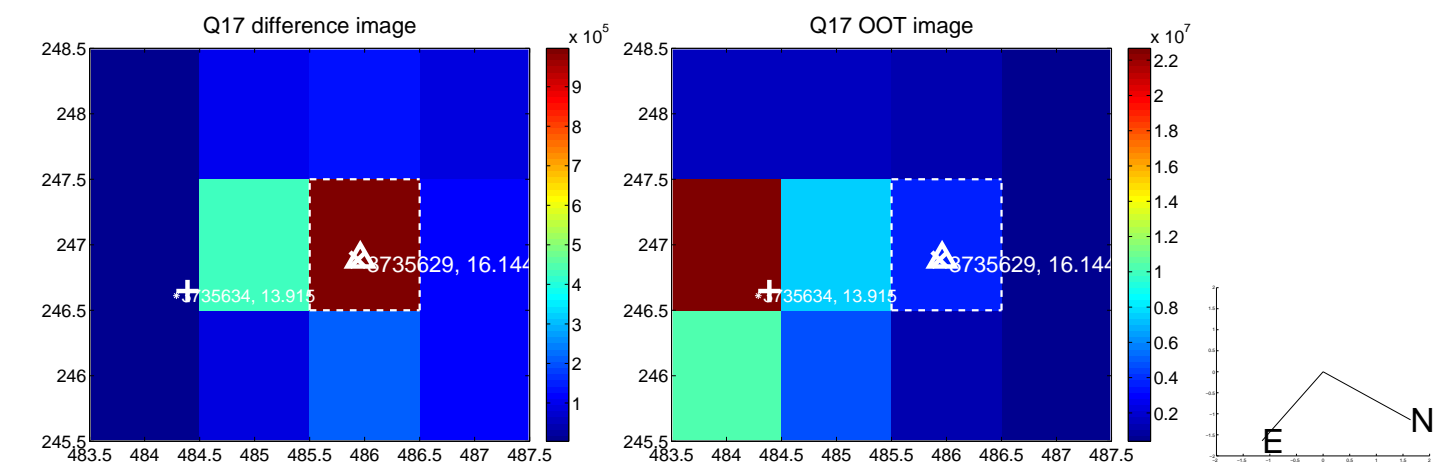
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

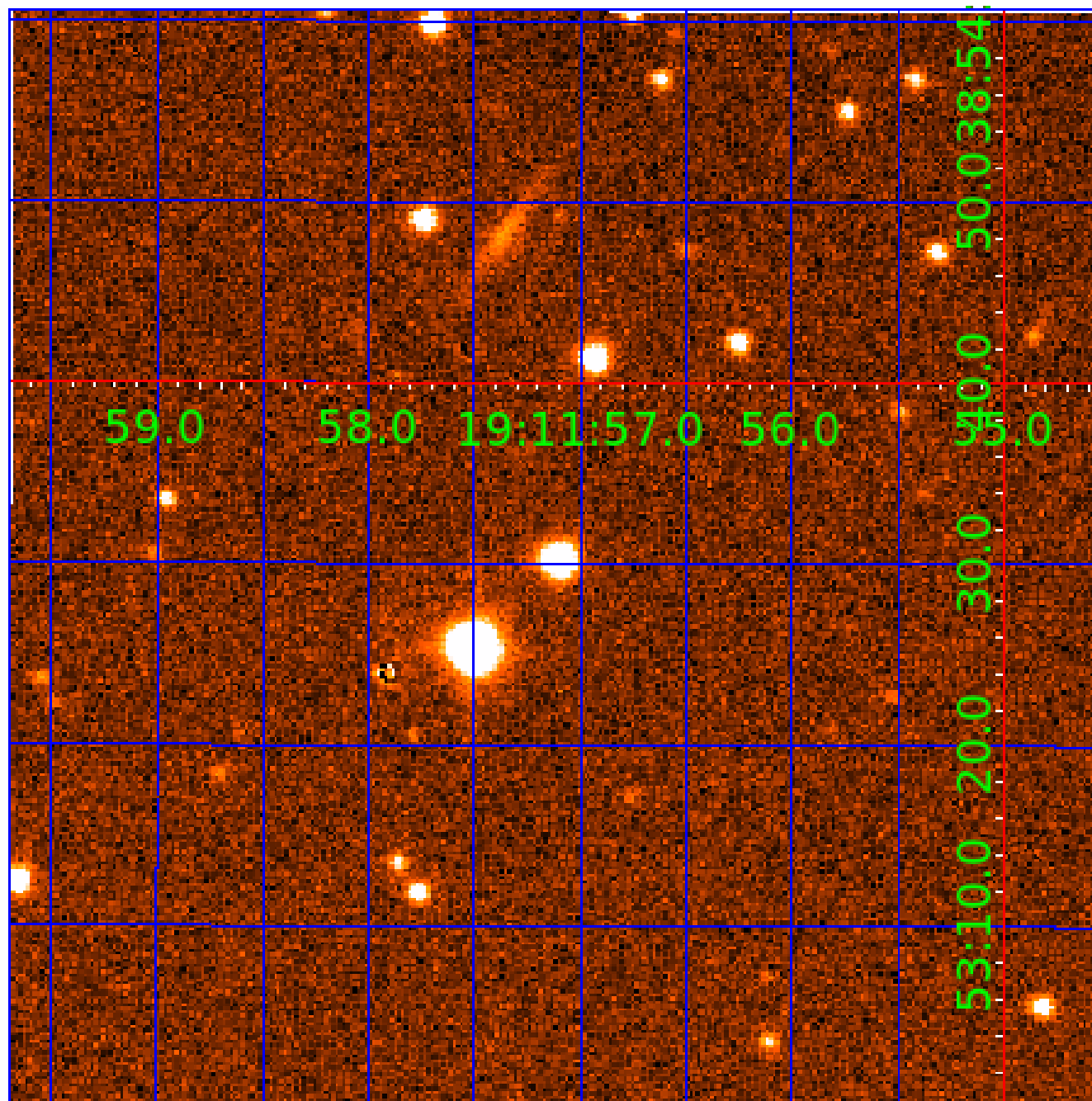


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003735629

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})
003735629-01	OBS	3544.01	4.664189	133.667244	415354.6	2.500	6682.5	-1.0	3.58	5062	195.28	1901.03
003735629-02	OBS	No	6.996601	138.485649	44808.4	15.000	483.1	-1.0	3.58	5062	73.61	1107.07
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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003735629-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003735629-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
003735629-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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 003735629-02

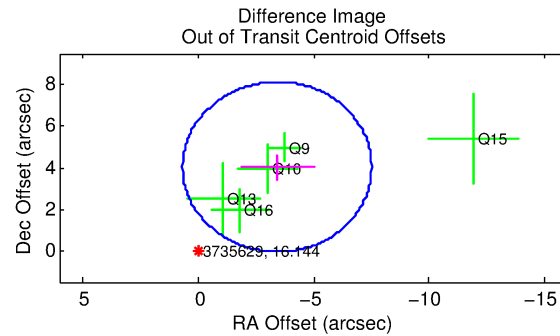
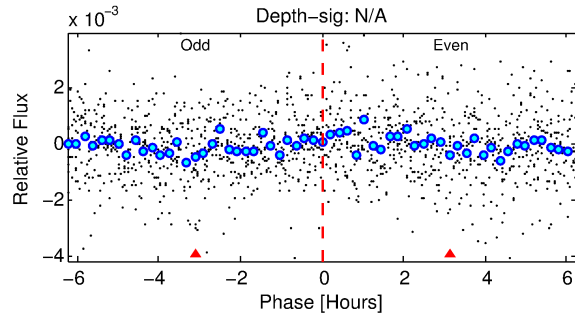
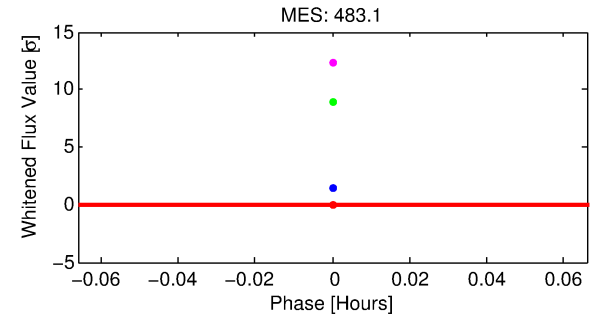
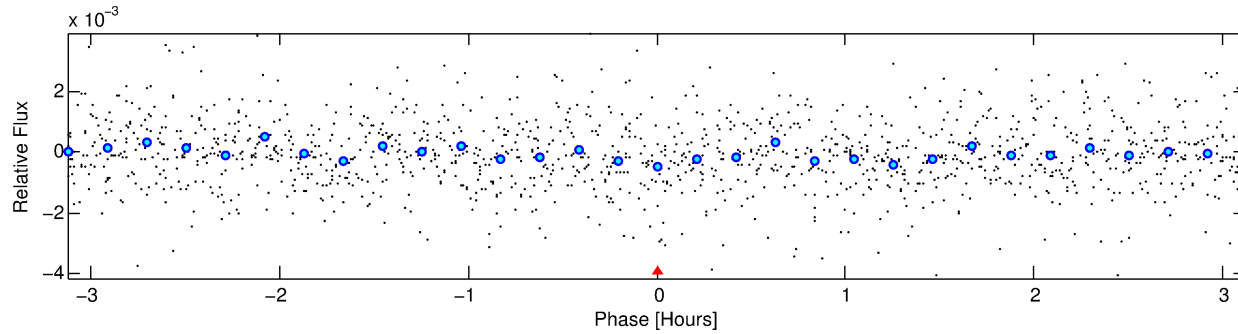
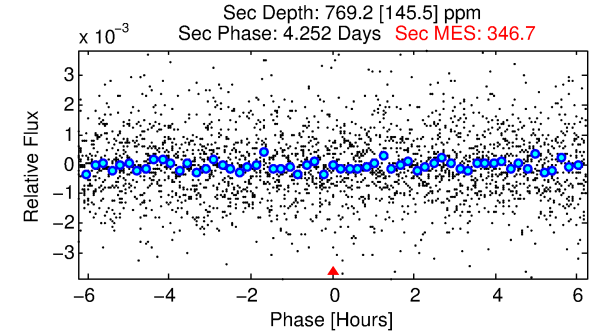
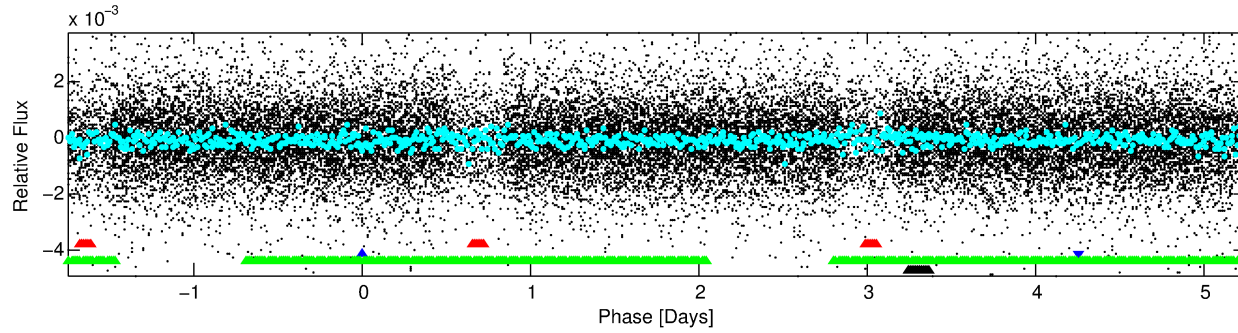
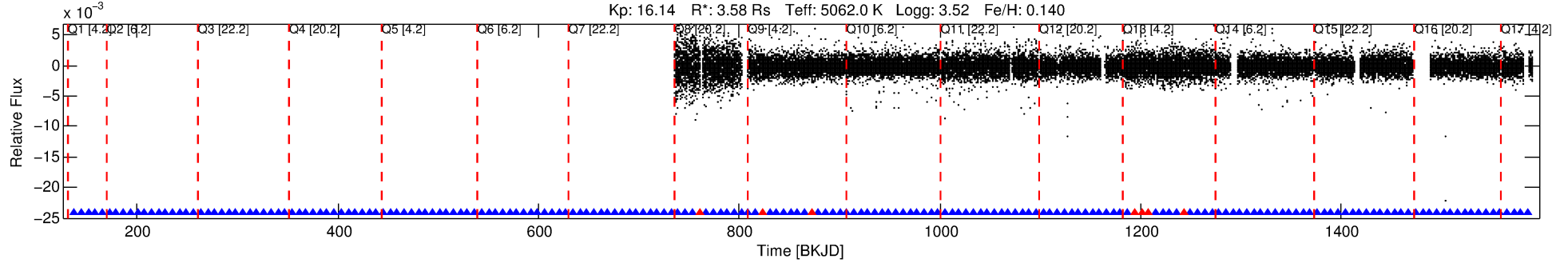
No Significant Match Found

DV One-Page Summary

KIC: 3735629 Candidate: 2 of 4 Period: 6.997 d

KOI: K03544 Corr: No Ephemeris Match

Kp: 16.14 R*: 3.58 Rs Teff: 5062.0 K Logg: 3.52 Fe/H: 0.140



TPS TCE Results:

Period = 6.99660 d
Epoch = 138.4856 BKJD

DV fit results are unavailable

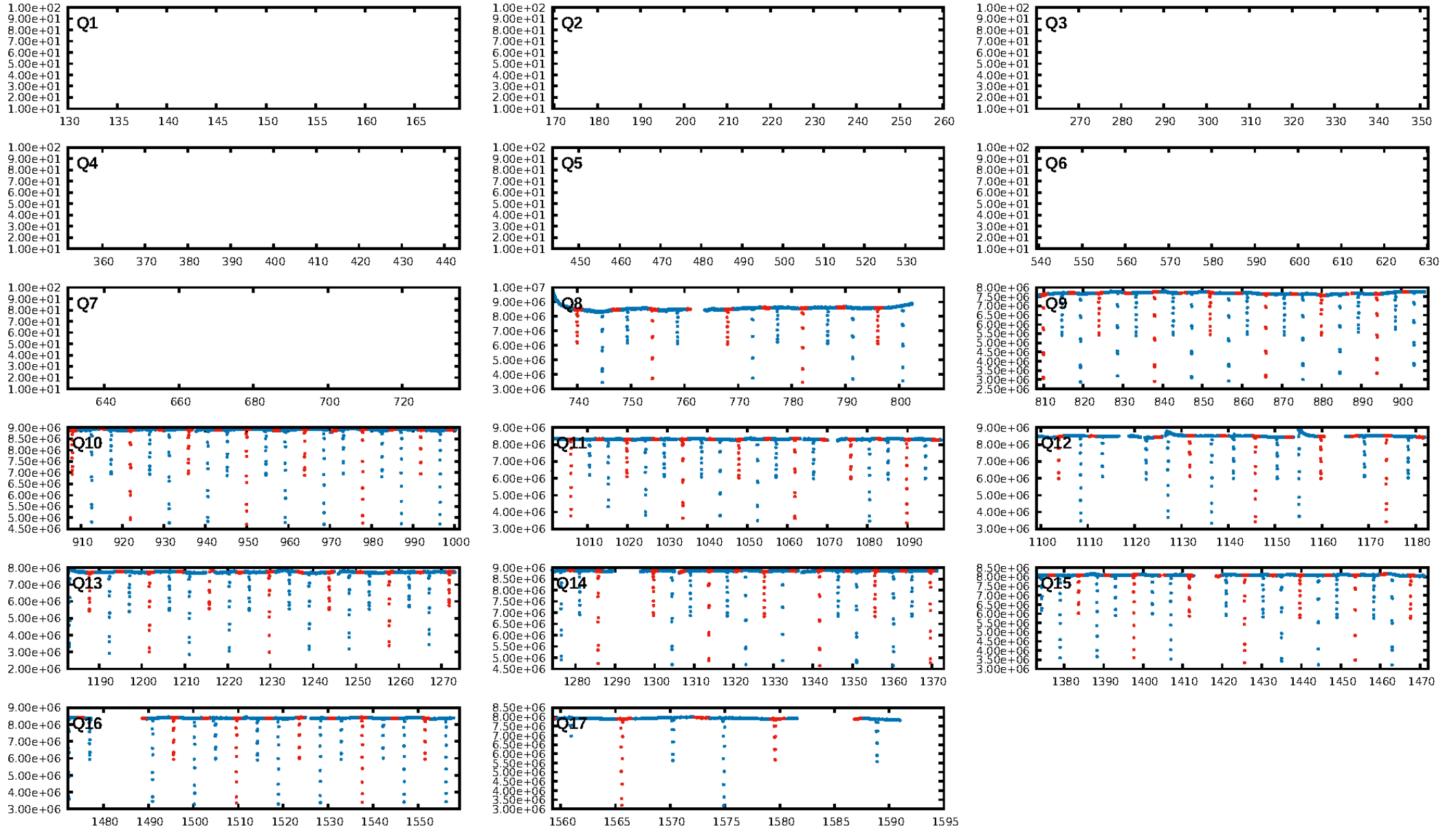
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.66e-39
RollingBand-fgt: 0.94 [103/110]
GhostDiagnostic-chr: 0.6563
Centroid-sig: 5.1%
Centroid-so: 1.466 arcsec [0.75σ]
OotOffset-rm: 5.297 arcsec [3.88σ]
KicOffset-rm: 0.987 arcsec [0.53σ]
OotOffset-st: 1/1/1/2 [5]
KicOffset-st: 1/1/1/2 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 0.60 [6/10]

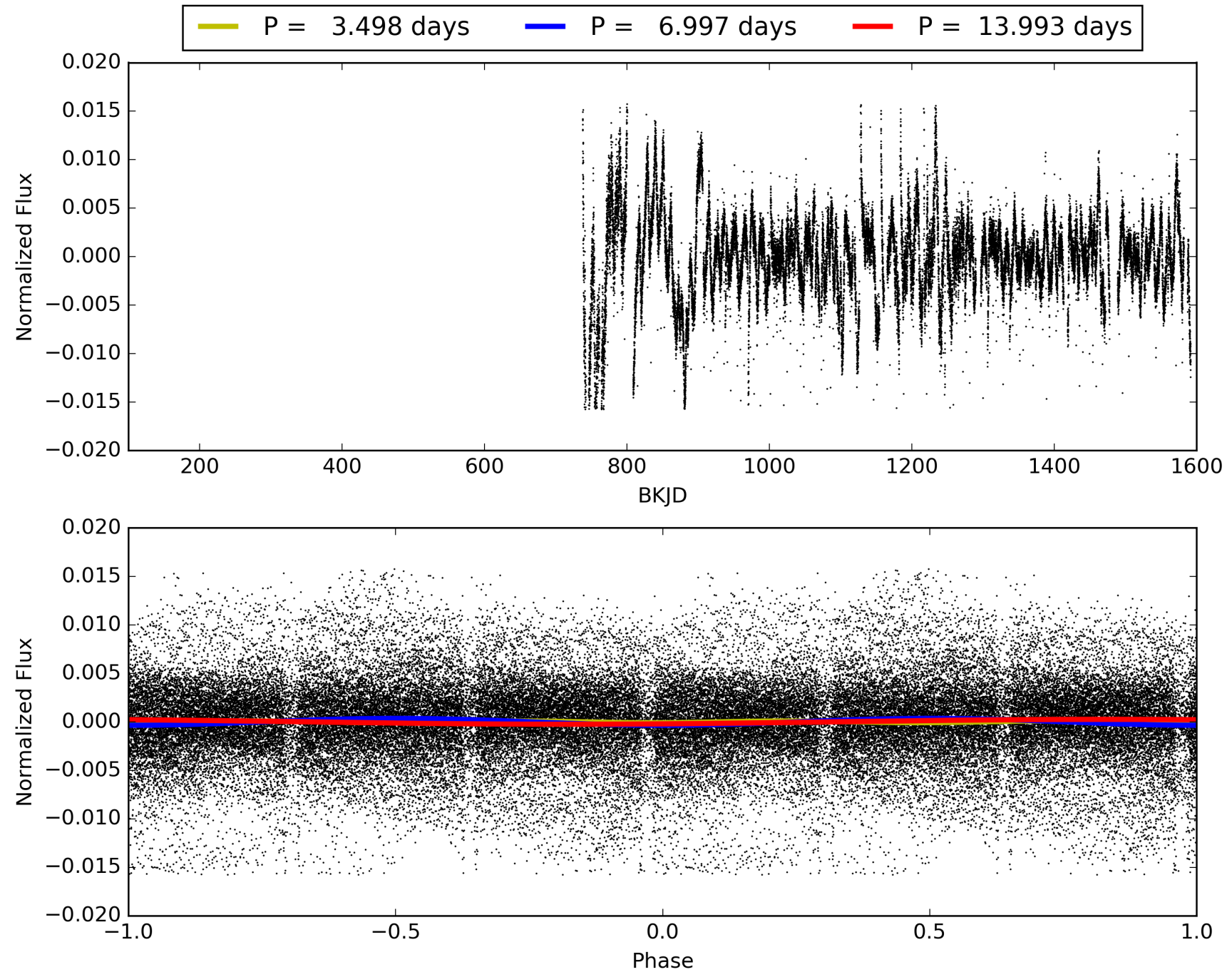
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:35:22 Z

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

TCE 003735629-02, PDC Light Curves

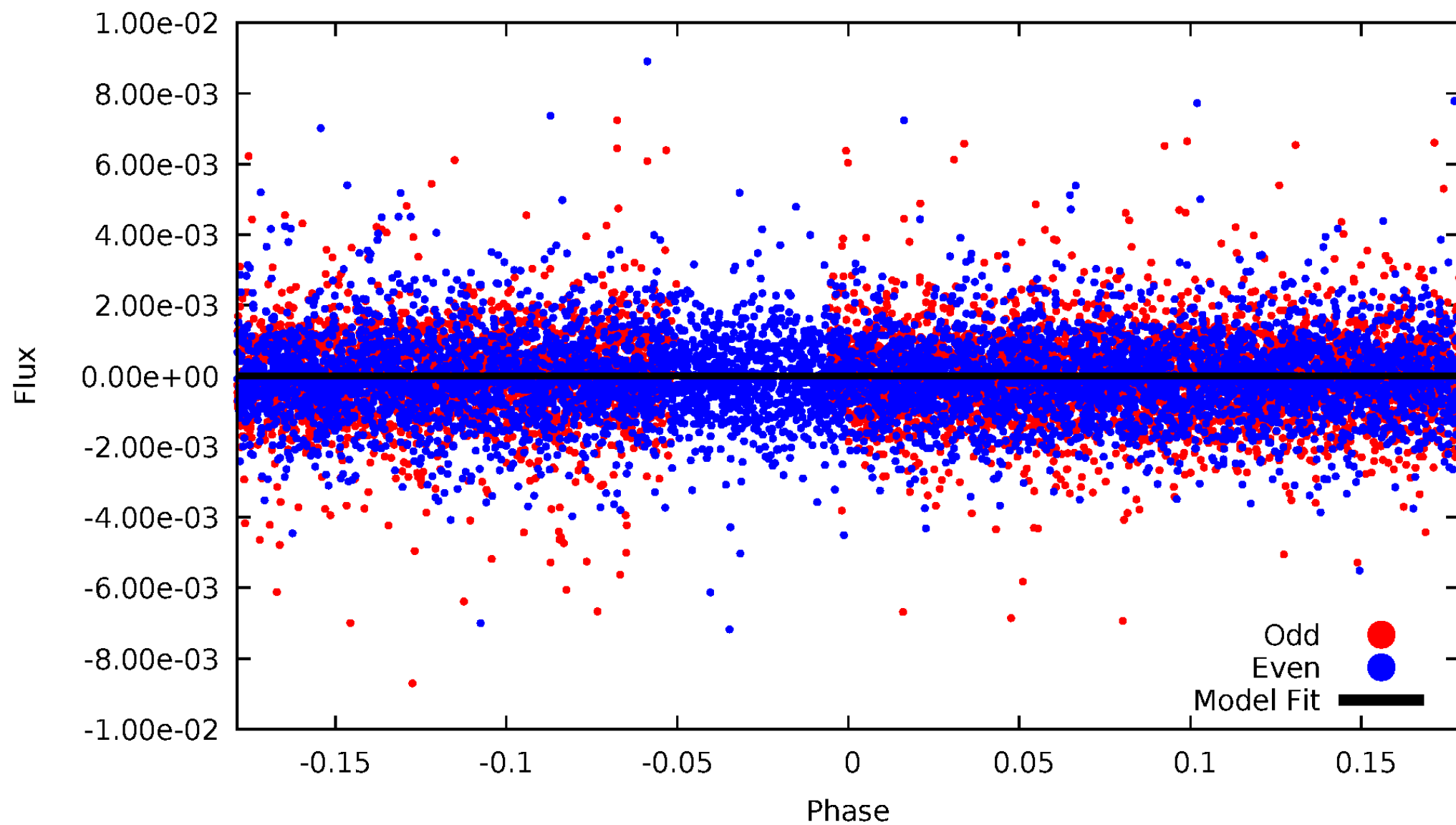


TCE 003735629-02



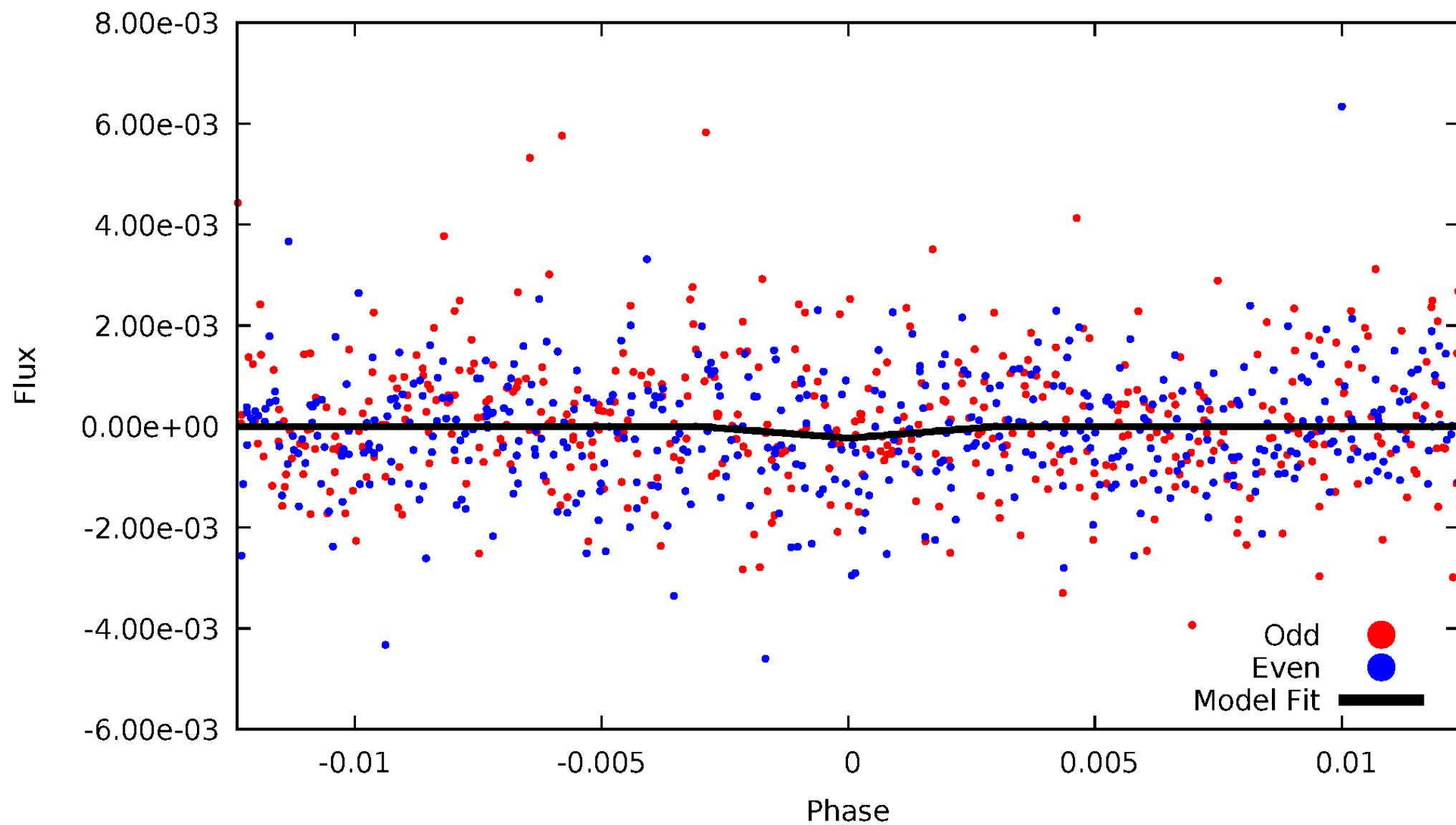
DV Odd/Even

TCE 003735629-02



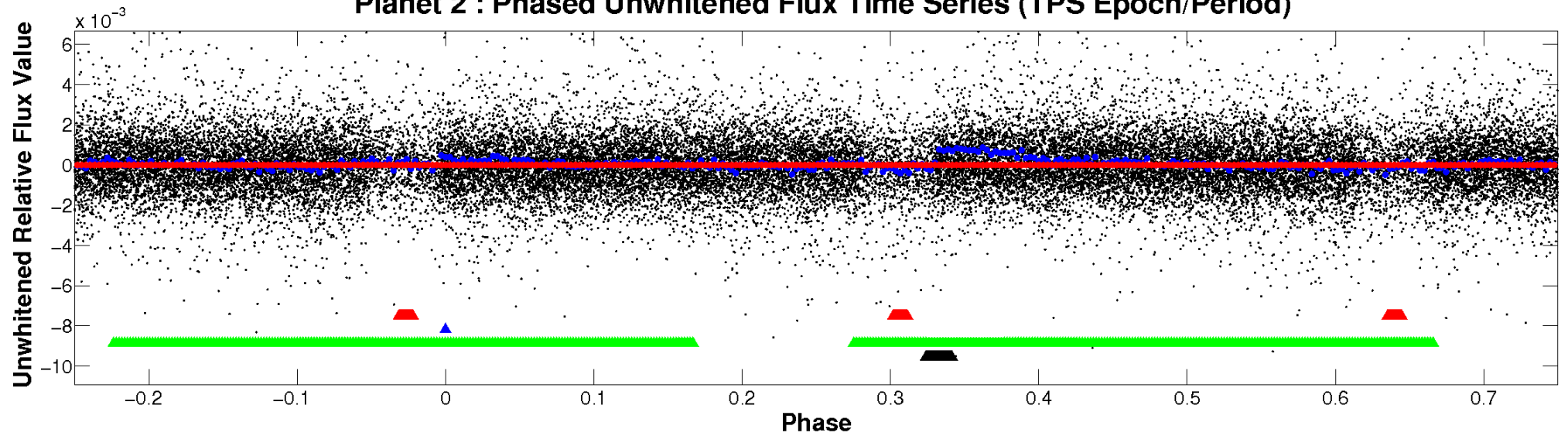
ALT Odd/Even

TCE 003735629-02

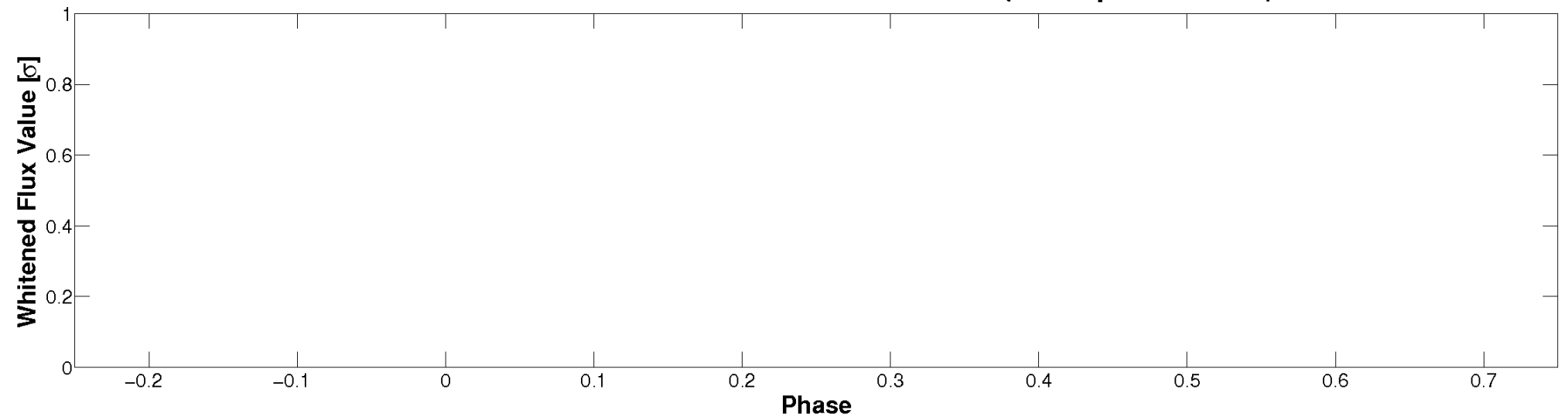


Non-Whitened Vs. Whitened Light Curve

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

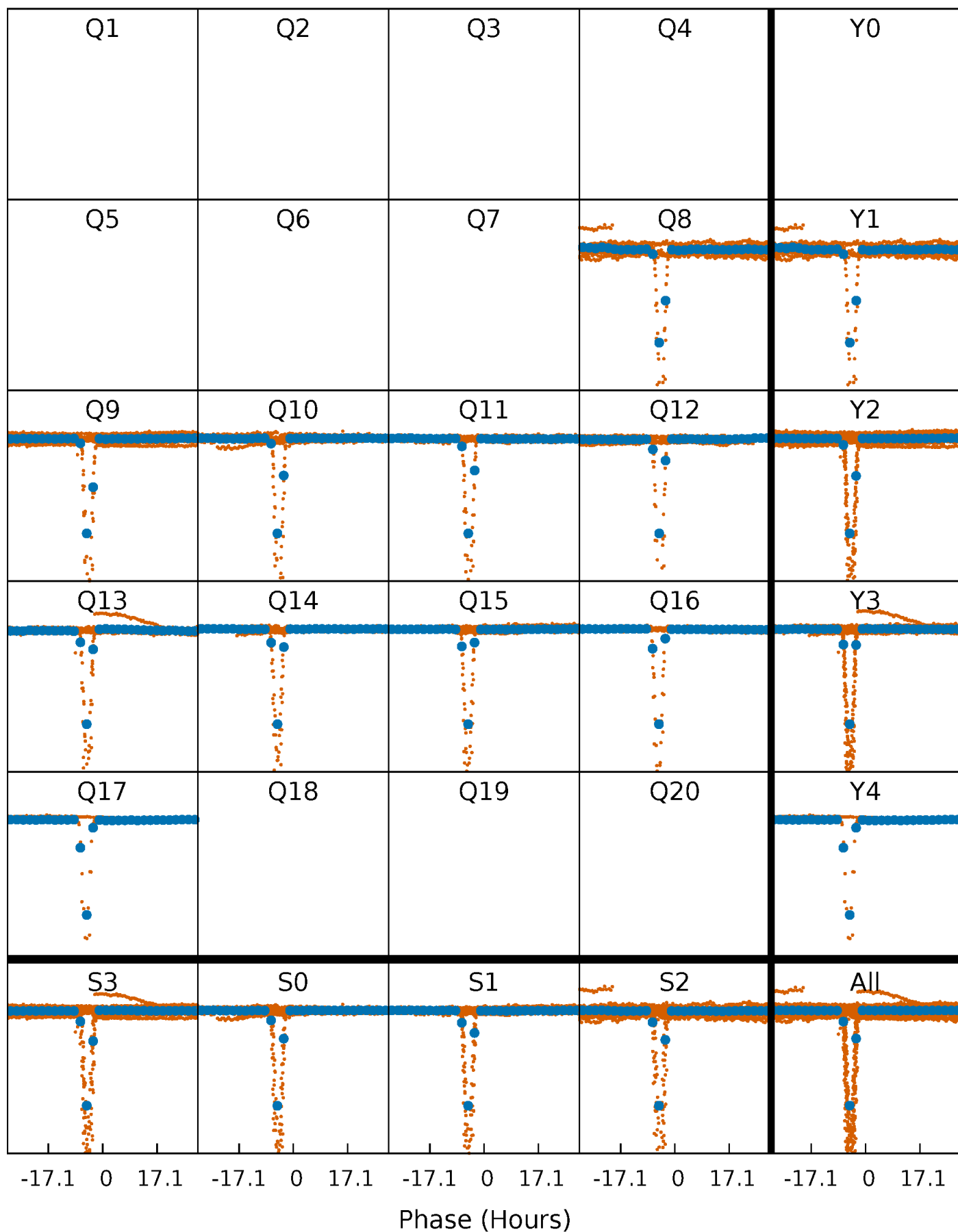


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



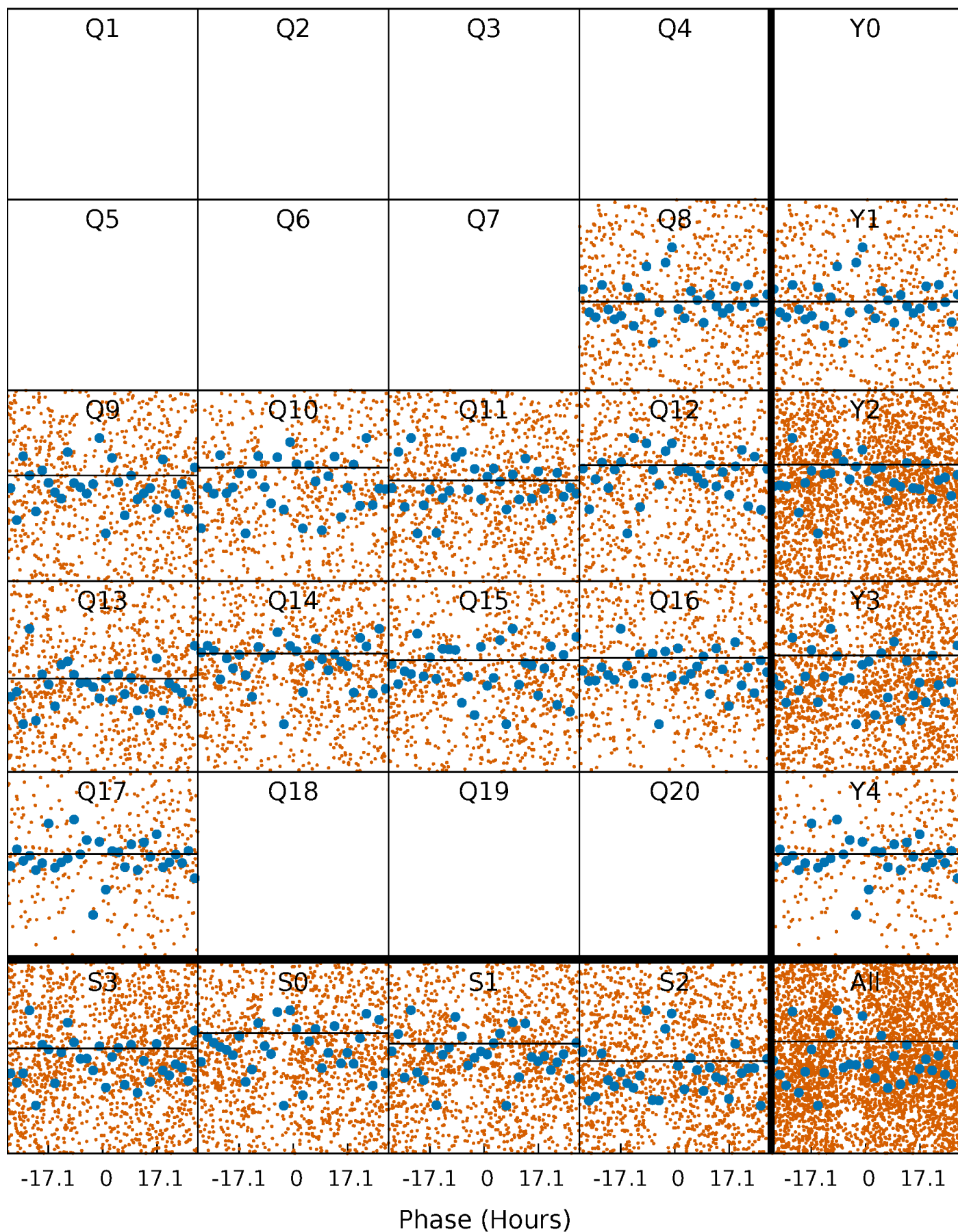
PDC Quarter-Phased Transit Curves

TCE 003735629-02 P= 6.996601 Days $T_0=138.485649$ (BKJD)



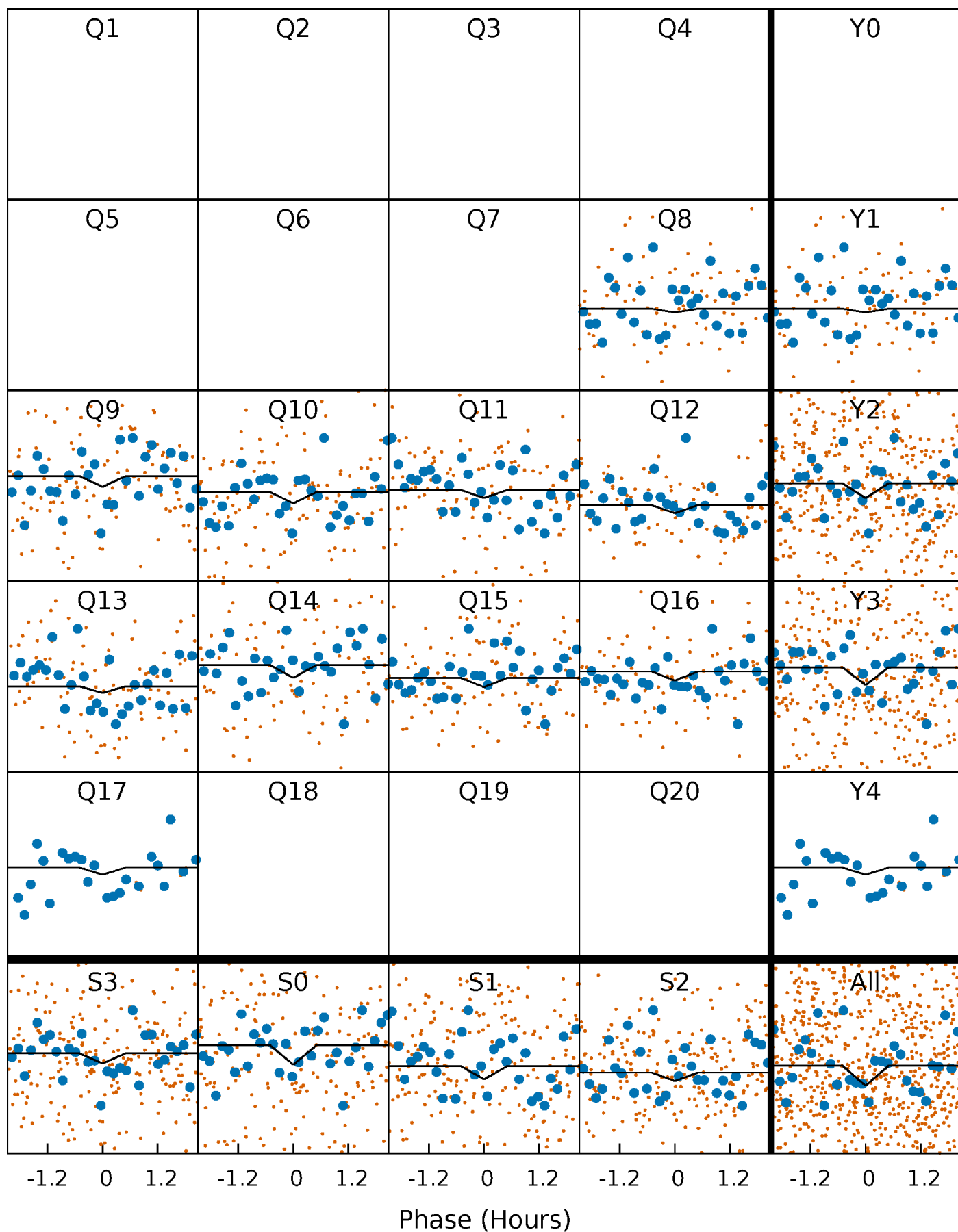
DV Quarter-Phased Transit Curves

TCE 003735629-02 P= 6.996601 Days $T_0=138.485649$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

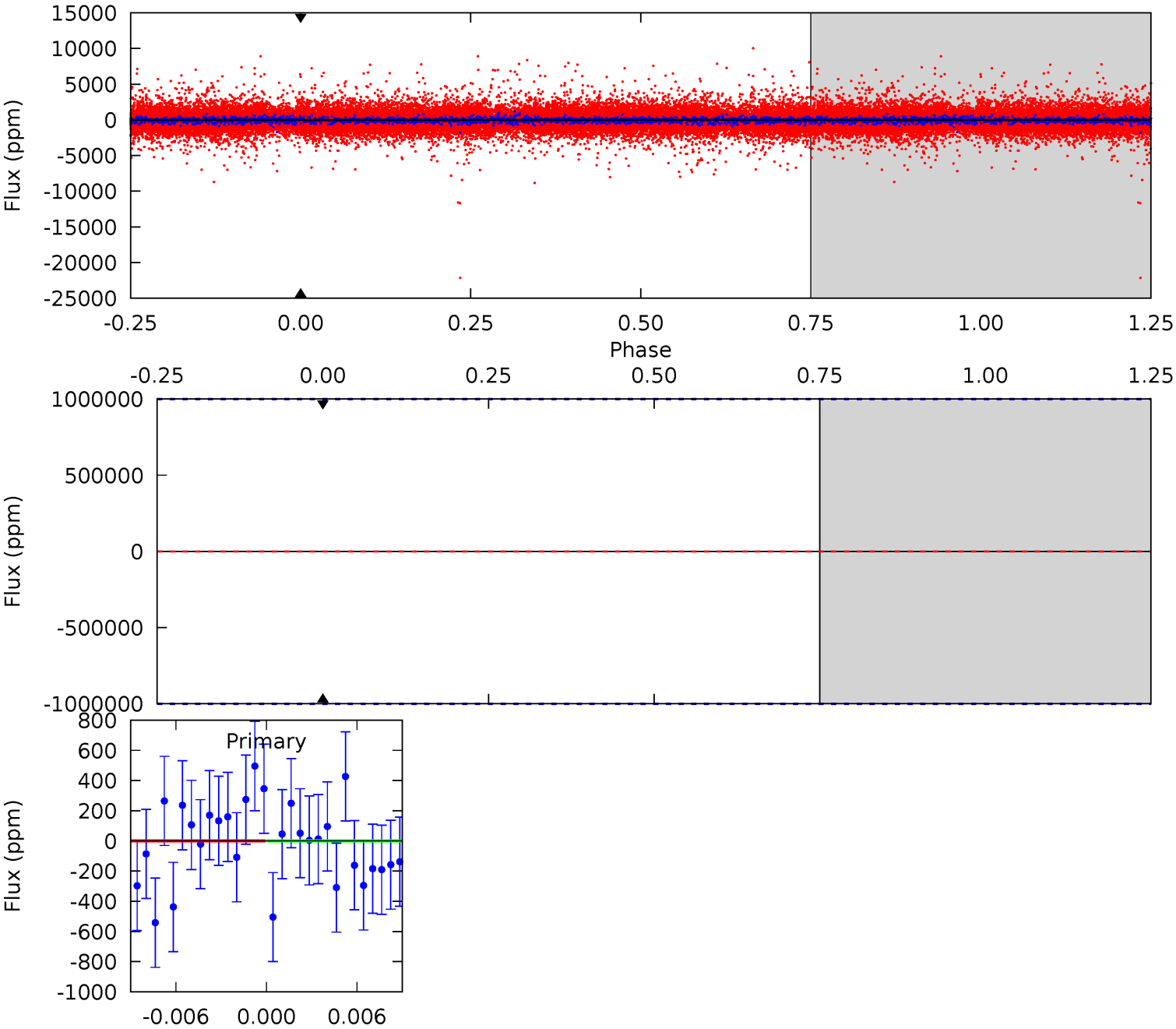
TCE 003735629-02 P= 6.996601 Days $T_0=137.610530$ (BKJD)



DV Model-Shift Uniqueness Test

003735629-02, P = 6.996601 Days, E = 138.485649 Days

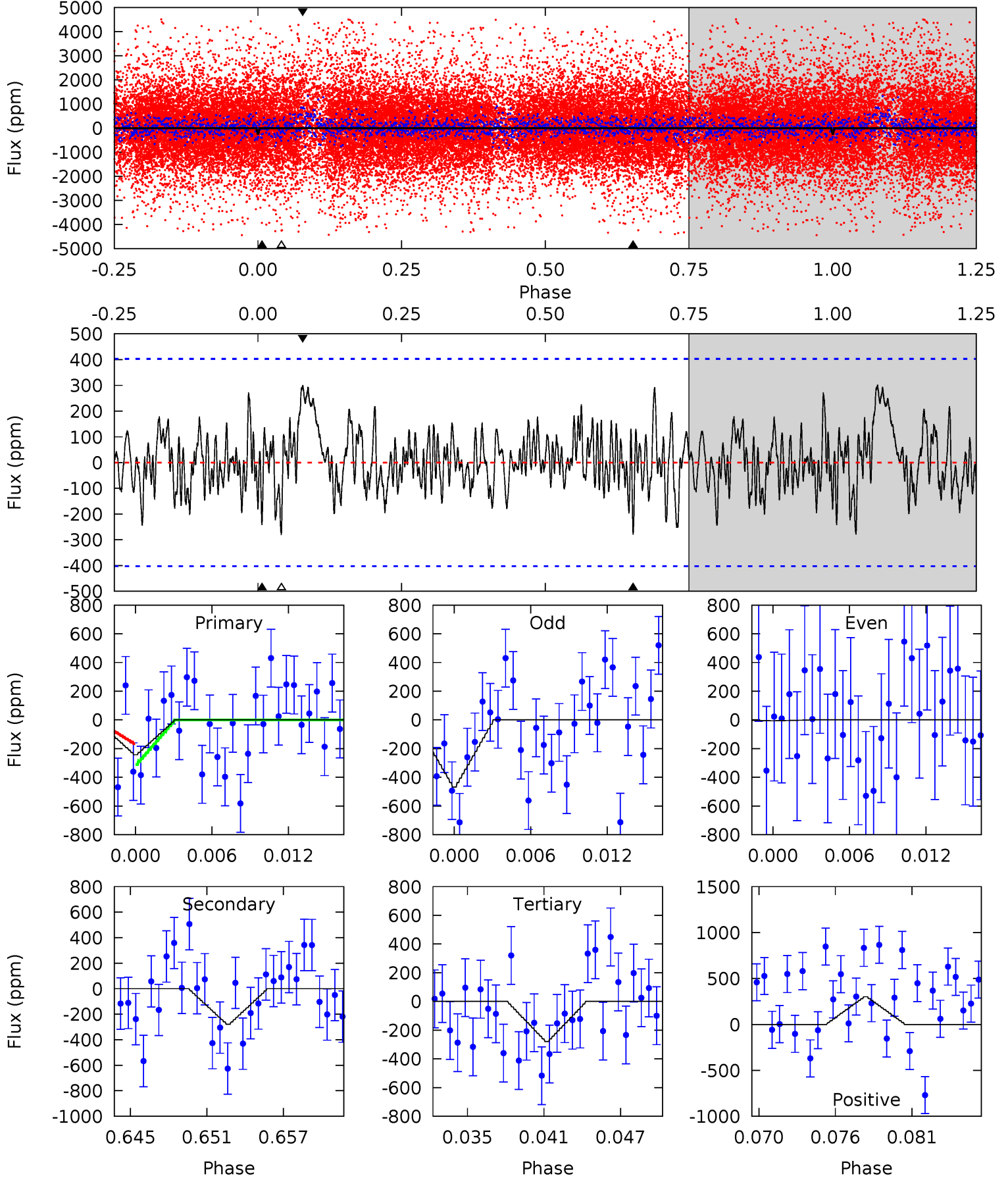
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003735629-02, P = 6.996601 Days, E = 137.610530 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.09	3.56	3.56	3.84	5.13	2.76	1.23	-0.47	-0.75	0.00	-0.28	2.96	0.88	0.52	0.93



Stellar Parameters For KIC 003735629

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5062^{+193}_{-176}	$3.515^{+0.904}_{-0.226}$	$0.140^{+0.250}_{-0.300}$	$3.579^{+1.214}_{-2.254}$	$1.530^{+0.251}_{-0.585}$	$0.047^{+1.207}_{-0.028}$
	+4%/-3%	+26%/-6%	+179%/-214%	+34%/-63%	+16%/-38%	+2567%/-60%
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 003735629-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$64.63^{+48.60}_{-36.43}$	2006^{+231}_{-390}	-3118^{+10082}_{-3380}	$-0.661^{+124.092}_{-100.954}$
Alt.	-280 ± 79	$23.95^{+28.94}_{-17.23}$	1985^{+242}_{-389}	2930^{+1683}_{-944}	$1.678^{+20.093}_{-1.331}$

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

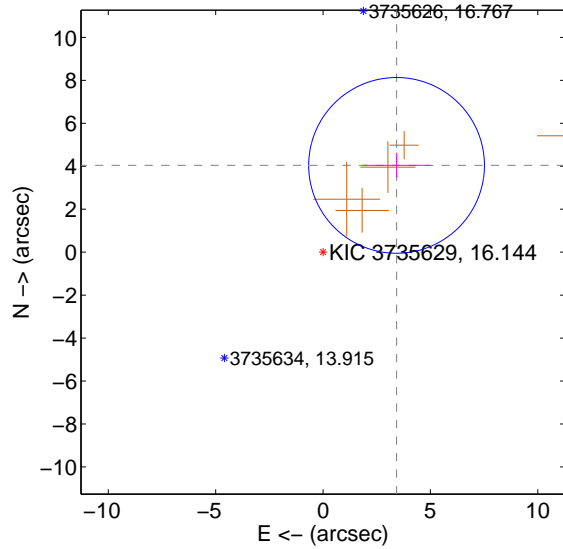
Supplemental centroid analysis for 003735629-02. Kepler magnitude: 16.14. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

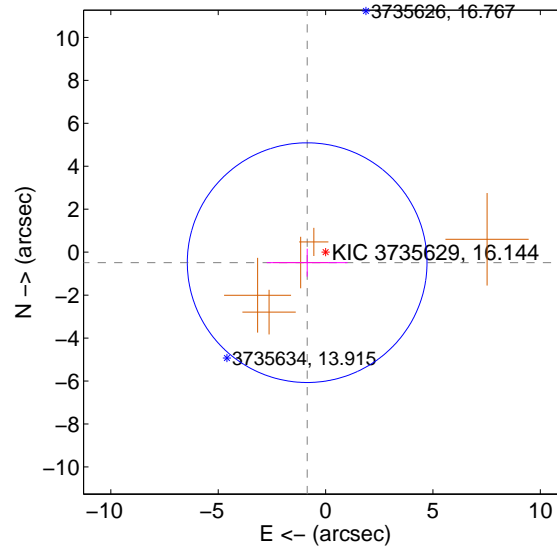
The OOT PRF centroid is offset from the target star catalog position by about 6.50 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.297 ± 1.364	3.88	-3.424 ± 1.577	4.042 ± 0.585
PRF-fit source offset from KIC position	0.987 ± 1.860	0.53	0.858 ± 1.879	-0.489 ± 0.651
photometric centroid source offset	1.47 ± 1.96	0.75	1.46 ± 1.96	0.14 ± 2.03

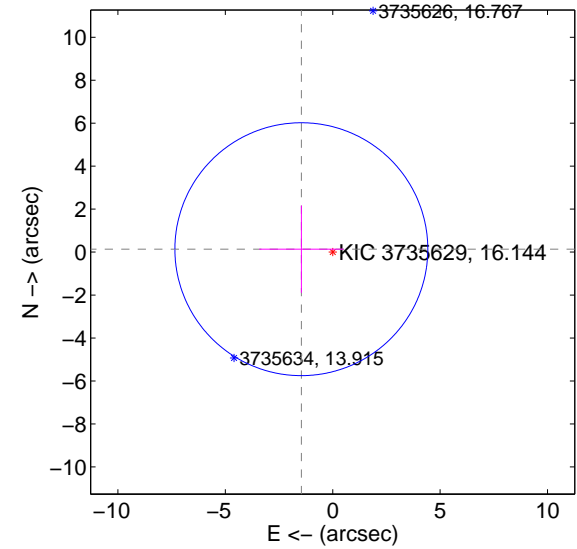
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

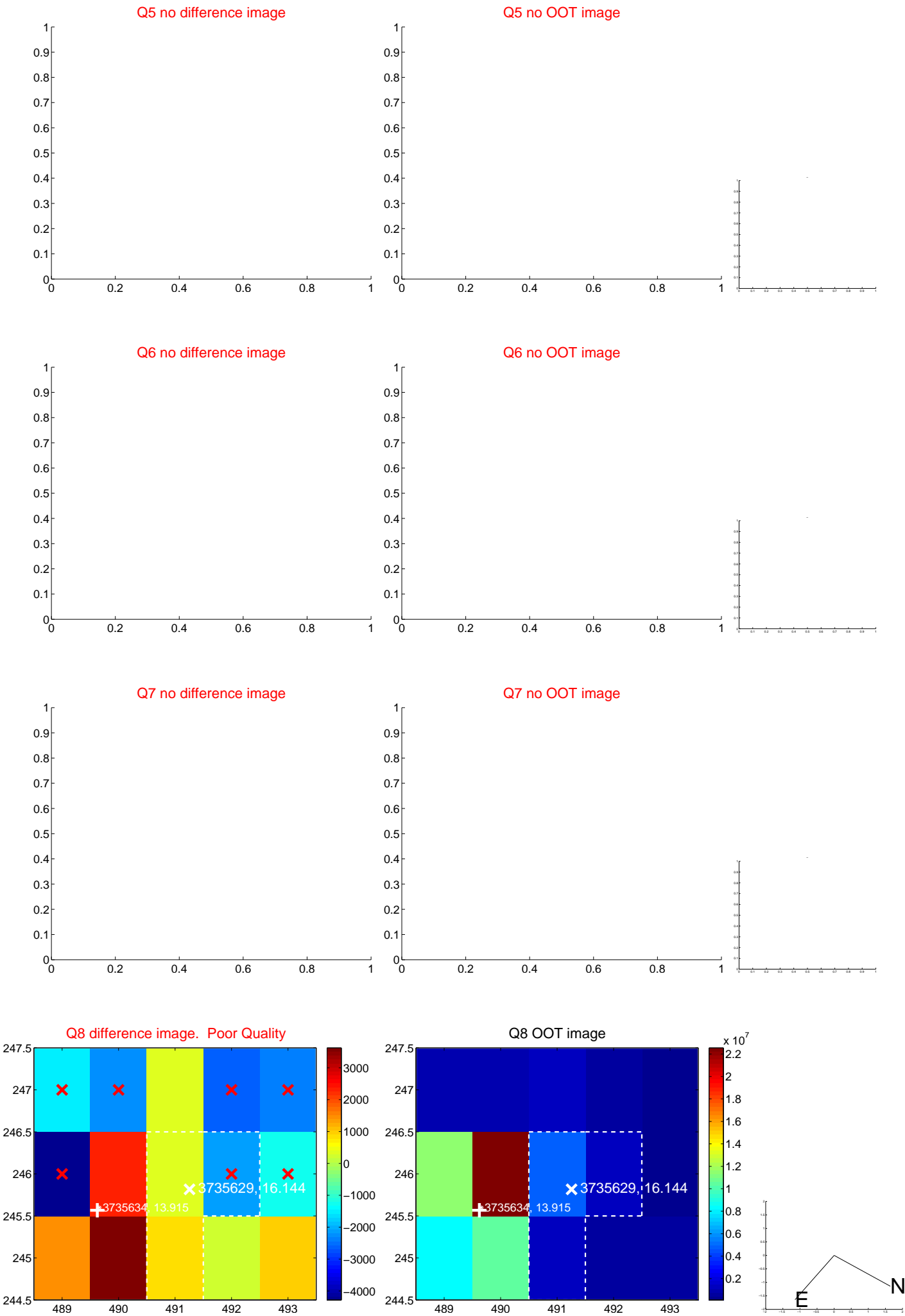


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

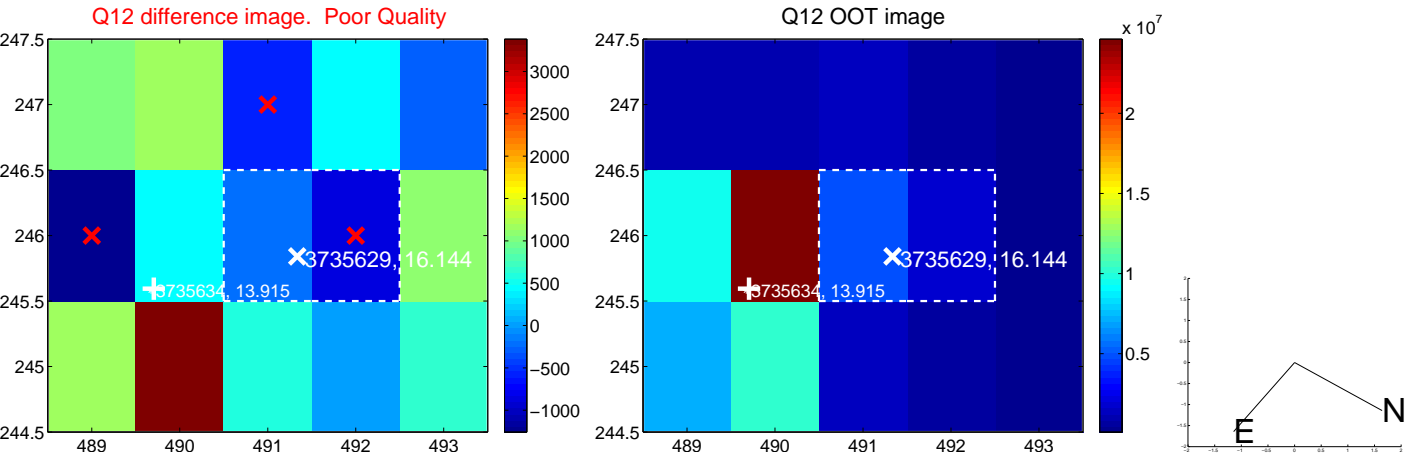
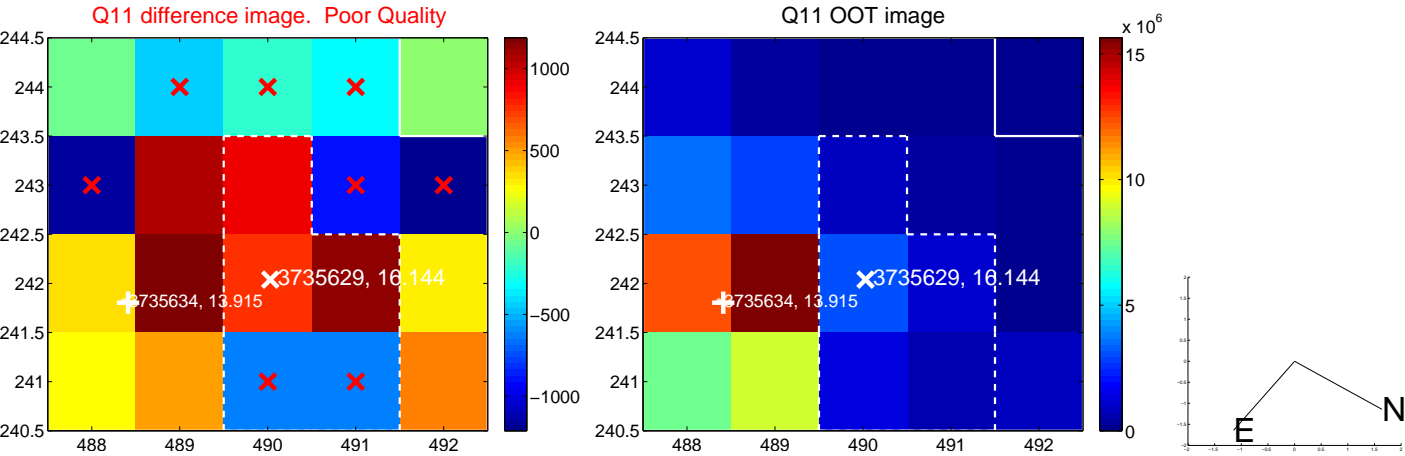
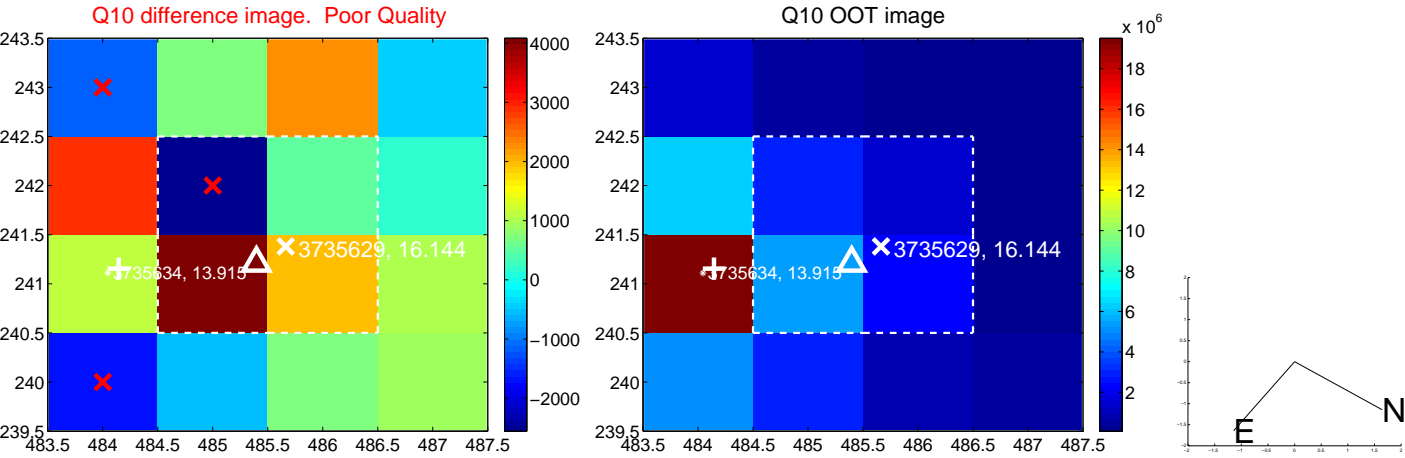
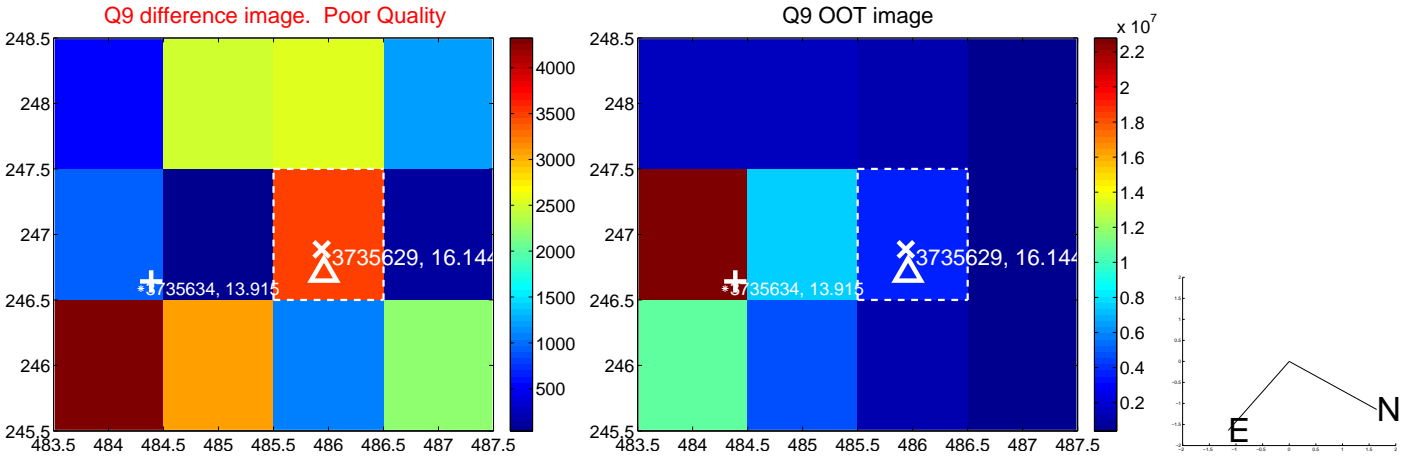
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



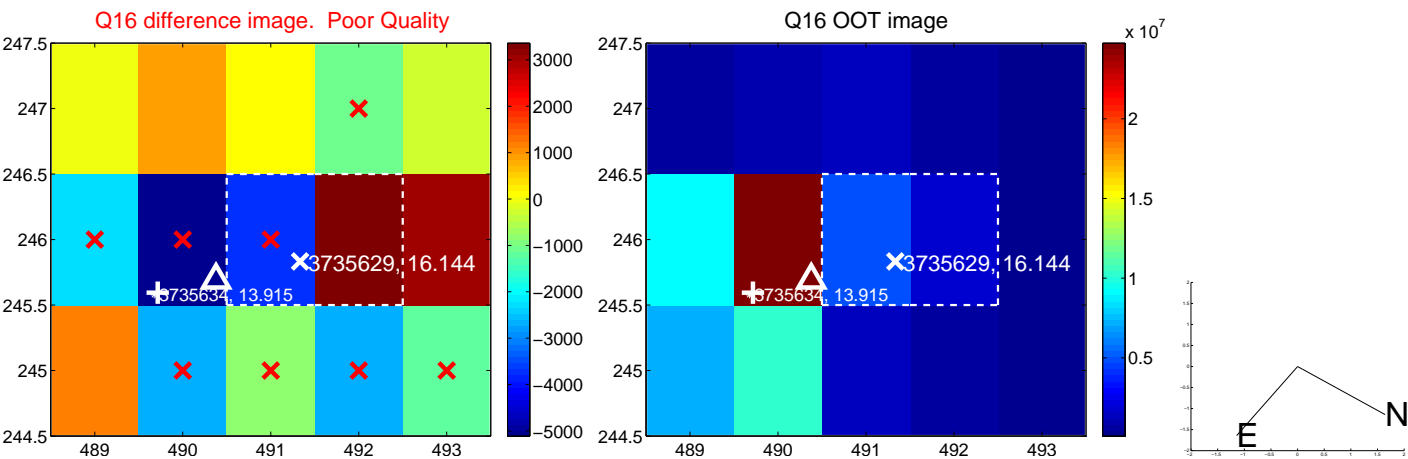
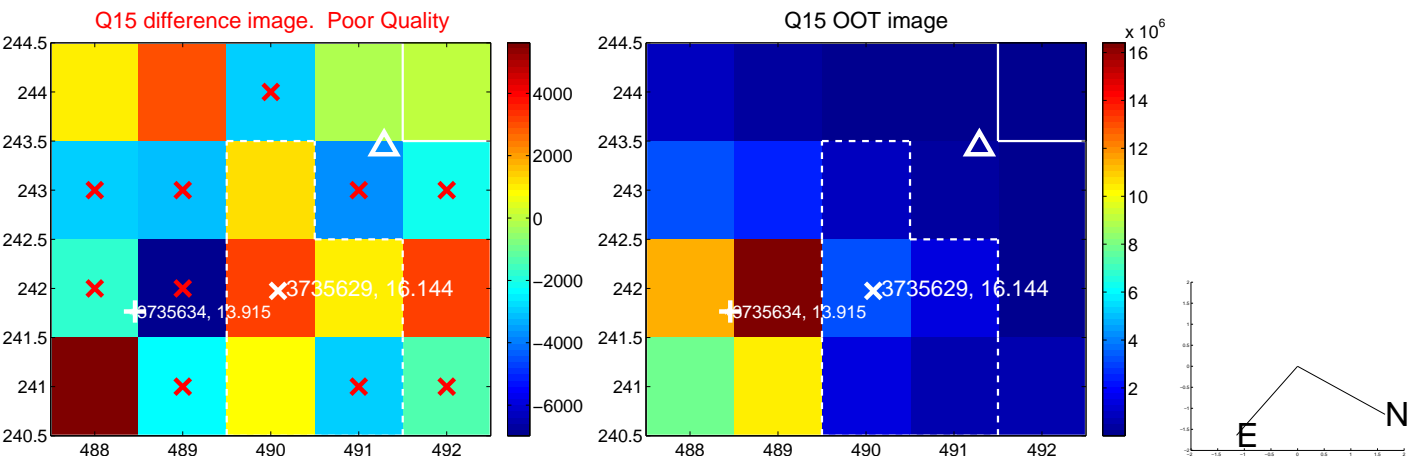
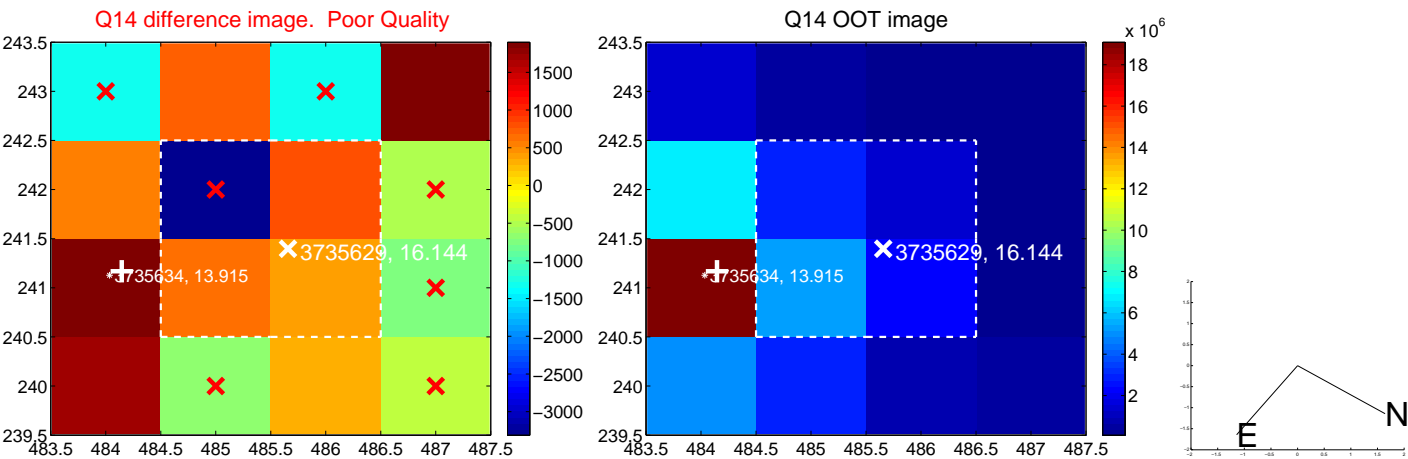
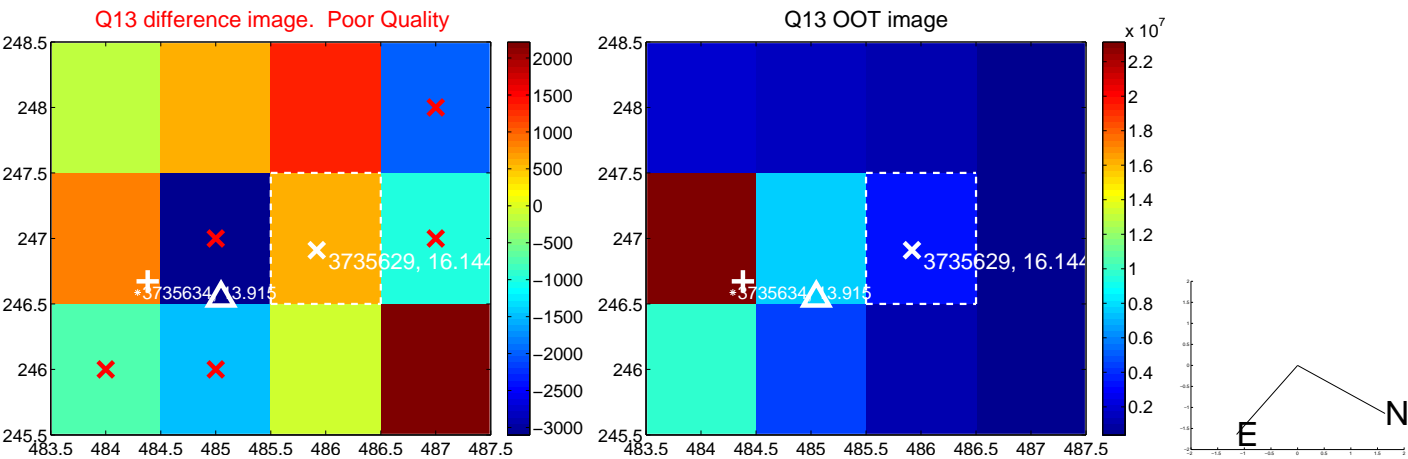
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



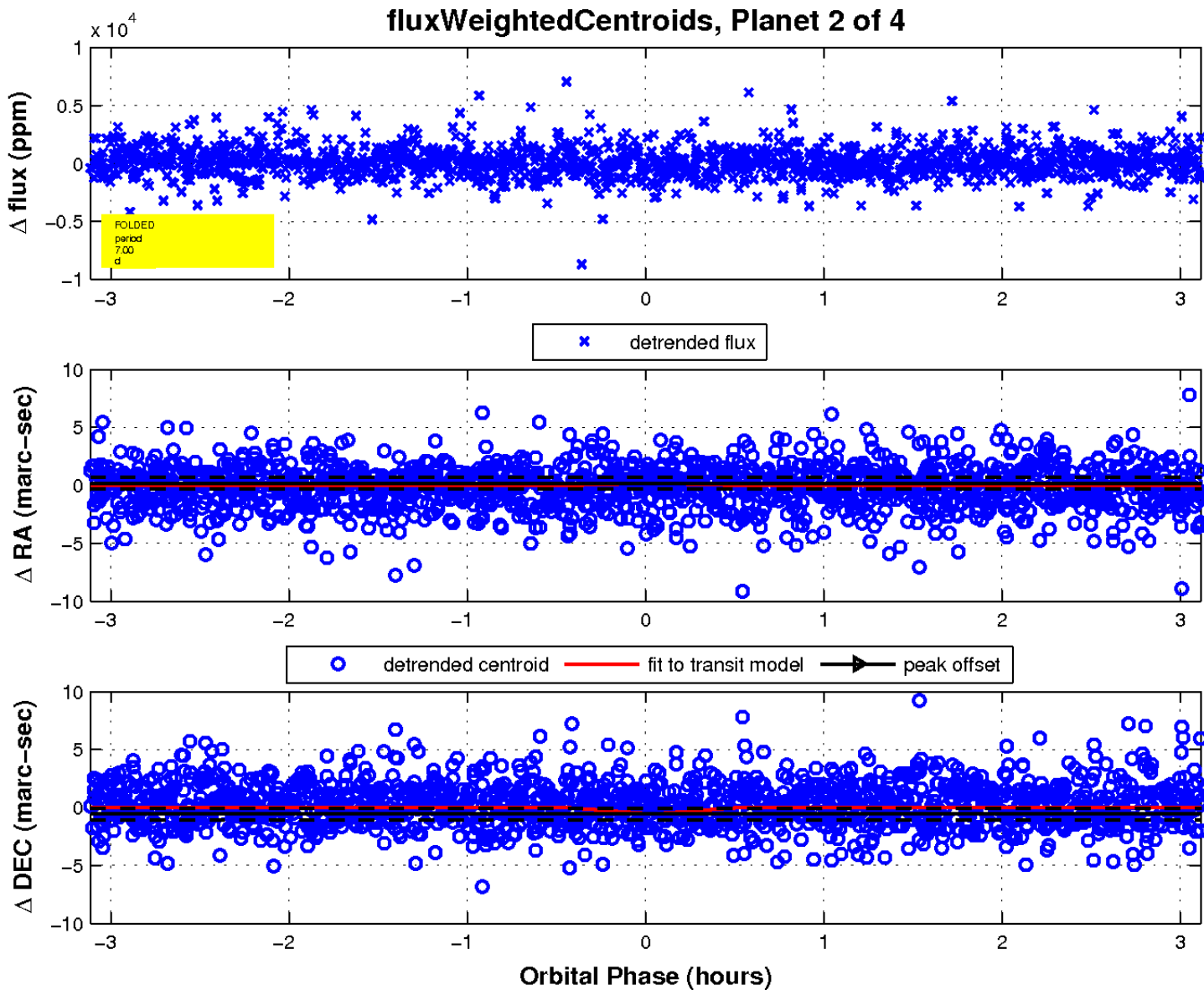
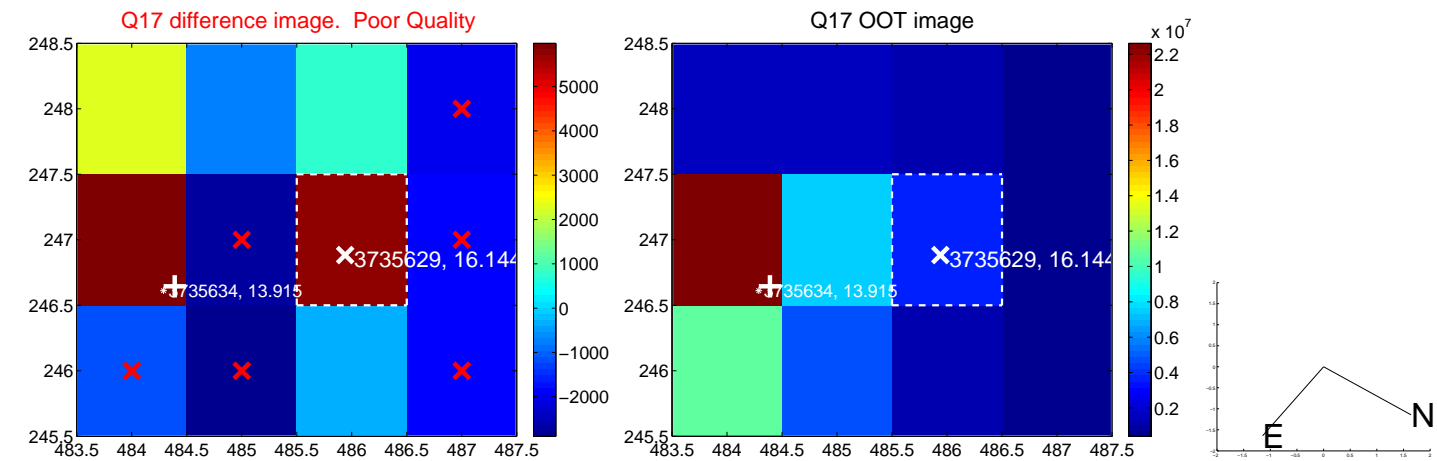
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

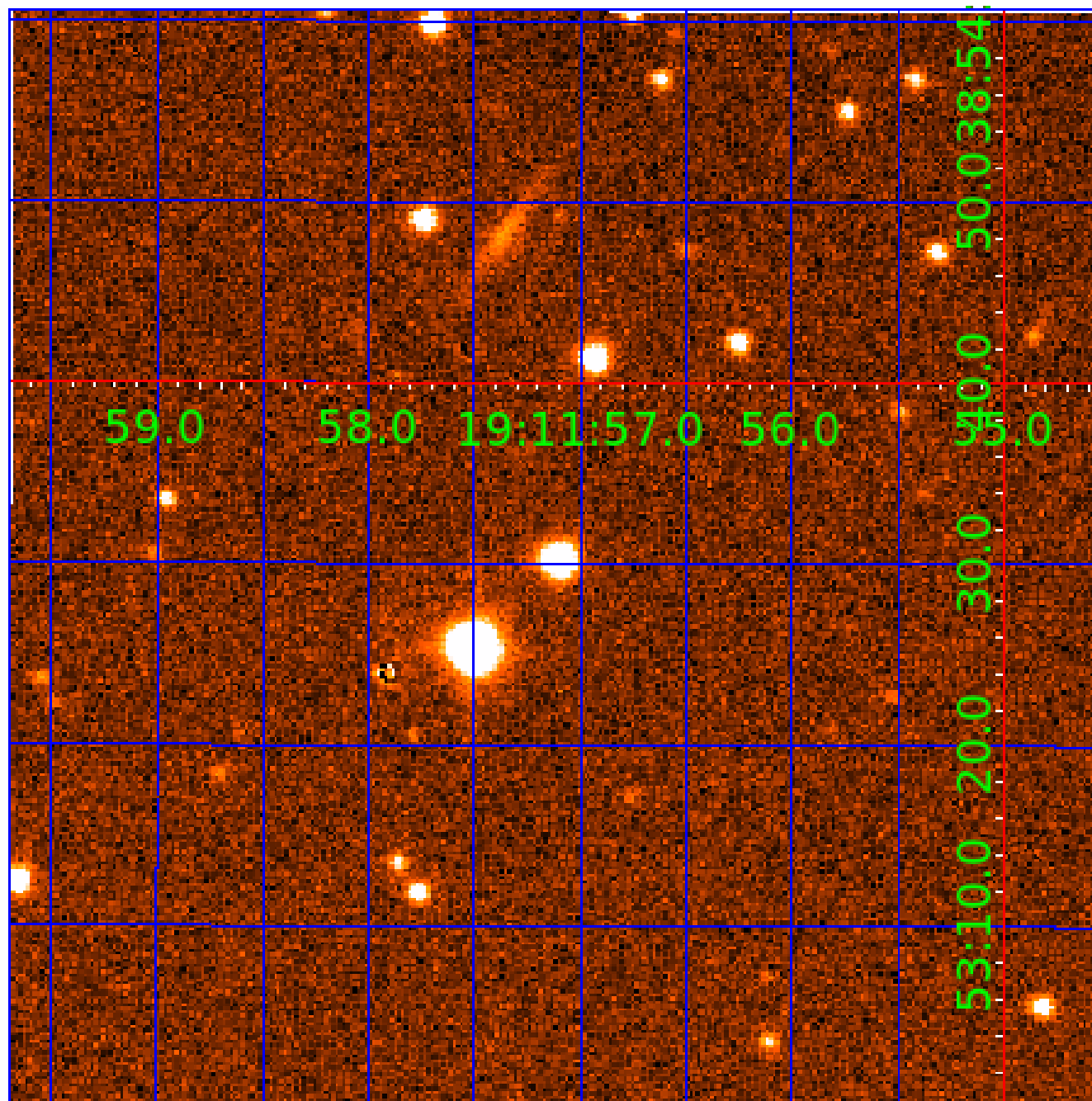


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003735629

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})
003735629-01	OBS	3544.01	4.664189	133.667244	415354.6	2.500	6682.5	-1.0	3.58	5062	195.28	1901.03
003735629-02	OBS	No	6.996601	138.485649	44808.4	15.000	483.1	-1.0	3.58	5062	73.61	1107.07
003735629-03	OBS	No	3.491730	132.656513	425.0	10.078	512.0	8.6	3.58	5062	15.46	2796.64
003735629-04	OBS	No	6.996013	133.877881	48570.3	12.000	248.5	-1.0	3.58	5062	76.66	1107.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003735629-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
003735629-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003735629-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
003735629-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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.

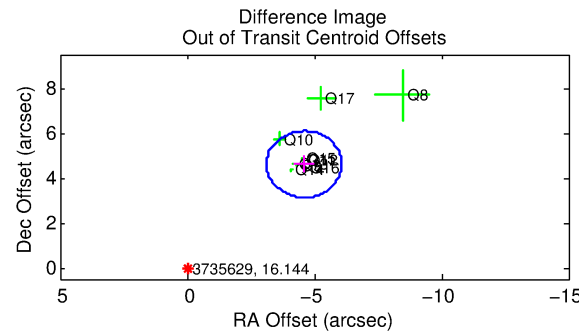
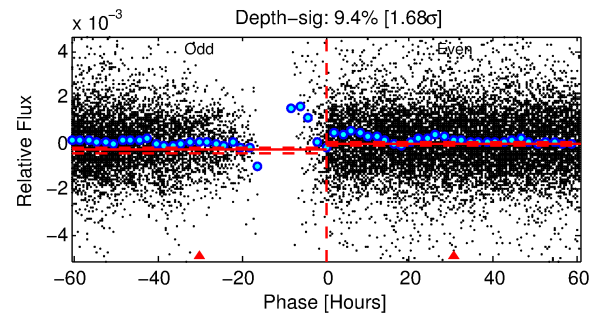
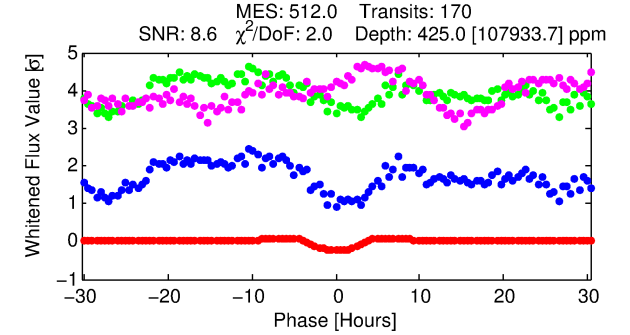
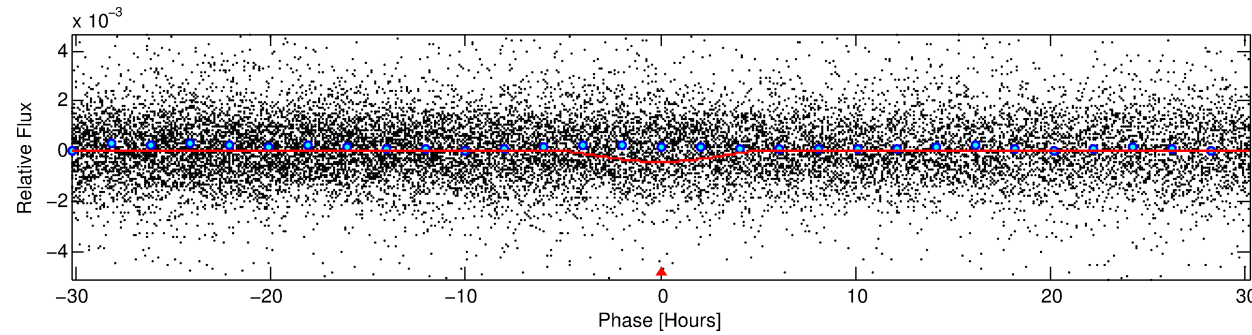
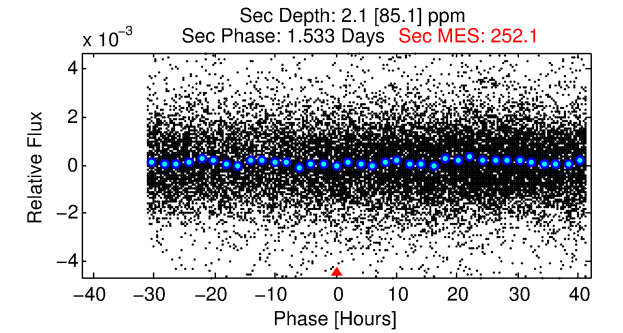
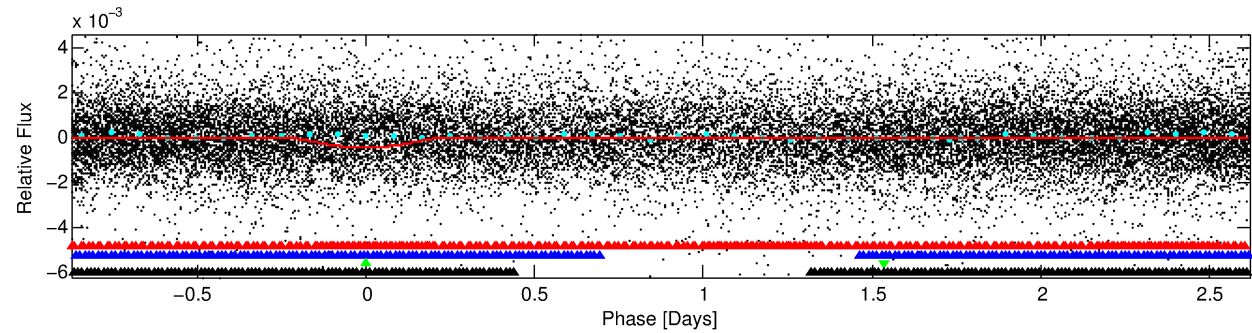
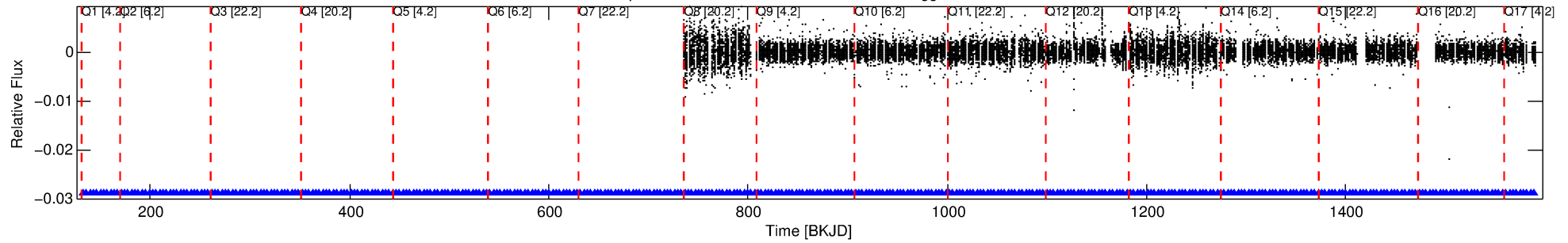
Ephemeris Match Information For 003735629-03

No Significant Match Found

DV One-Page Summary

KIC: 3735629 Candidate: 3 of 4 Period: 3.492 d
KOI: K03544 Corr: No Ephemeris Match

Kp: 16.14 R*: 3.58 Rs Teff: 5062.0 K Logg: 3.52 Fe/H: 0.140



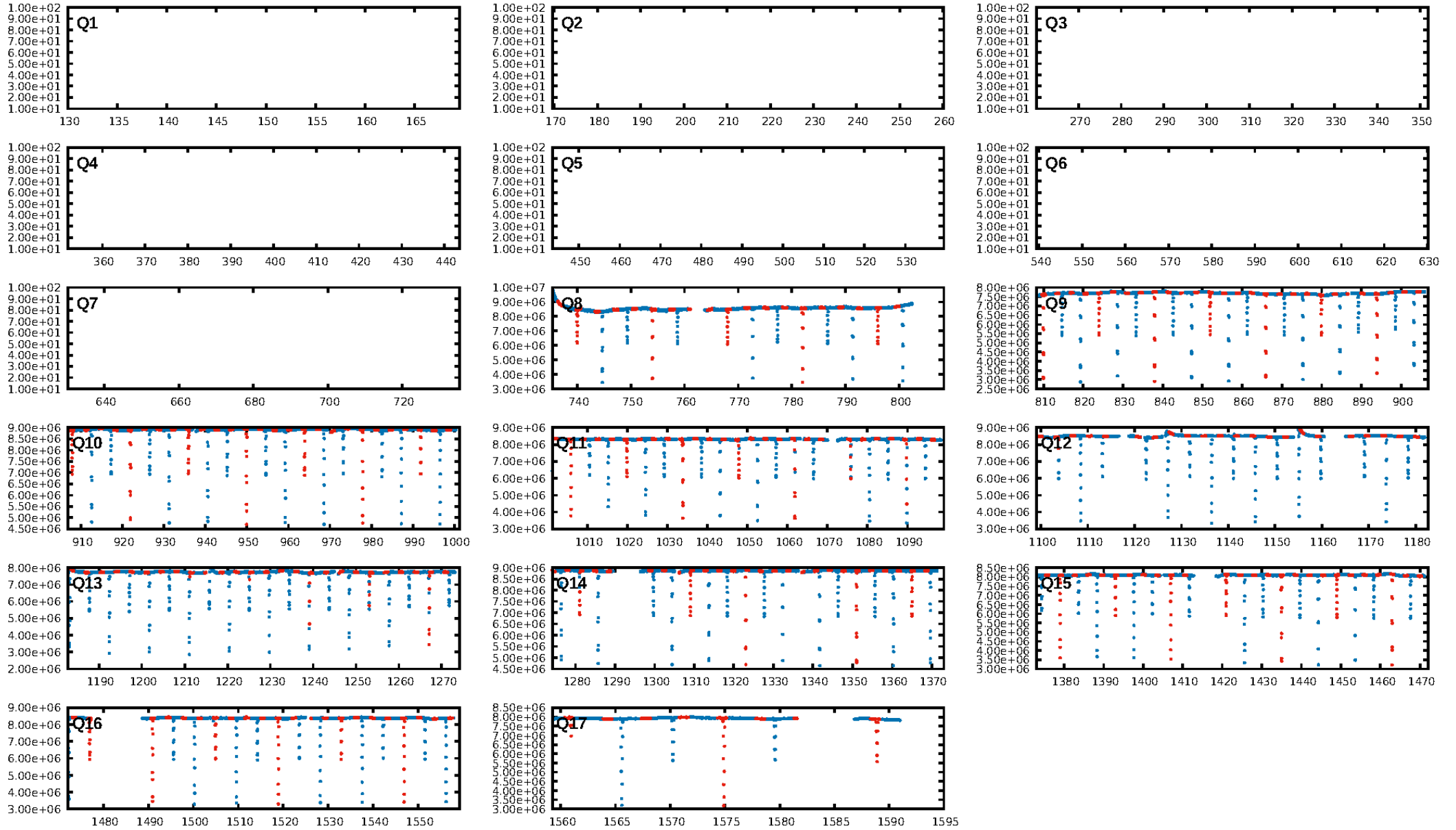
DV Fit Results:

Period = 3.49173 [0.00021] d
Epoch = 132.6565 [0.0675] BKJD
Rp/R* = 0.0396 [0.2140]
a/R* = 1.26 [0.40]
b = 1.00 [6.38]
Seff = 2796.64 [4076.98]
Teq = 1854 [676] K
Rp = 15.46 [84.13] Re
a = 0.0519 [0.0421] AU
Ag = 0.01 [0.55] [-1.81σ]
Teffp = 963 [10294] K [-0.09σ]

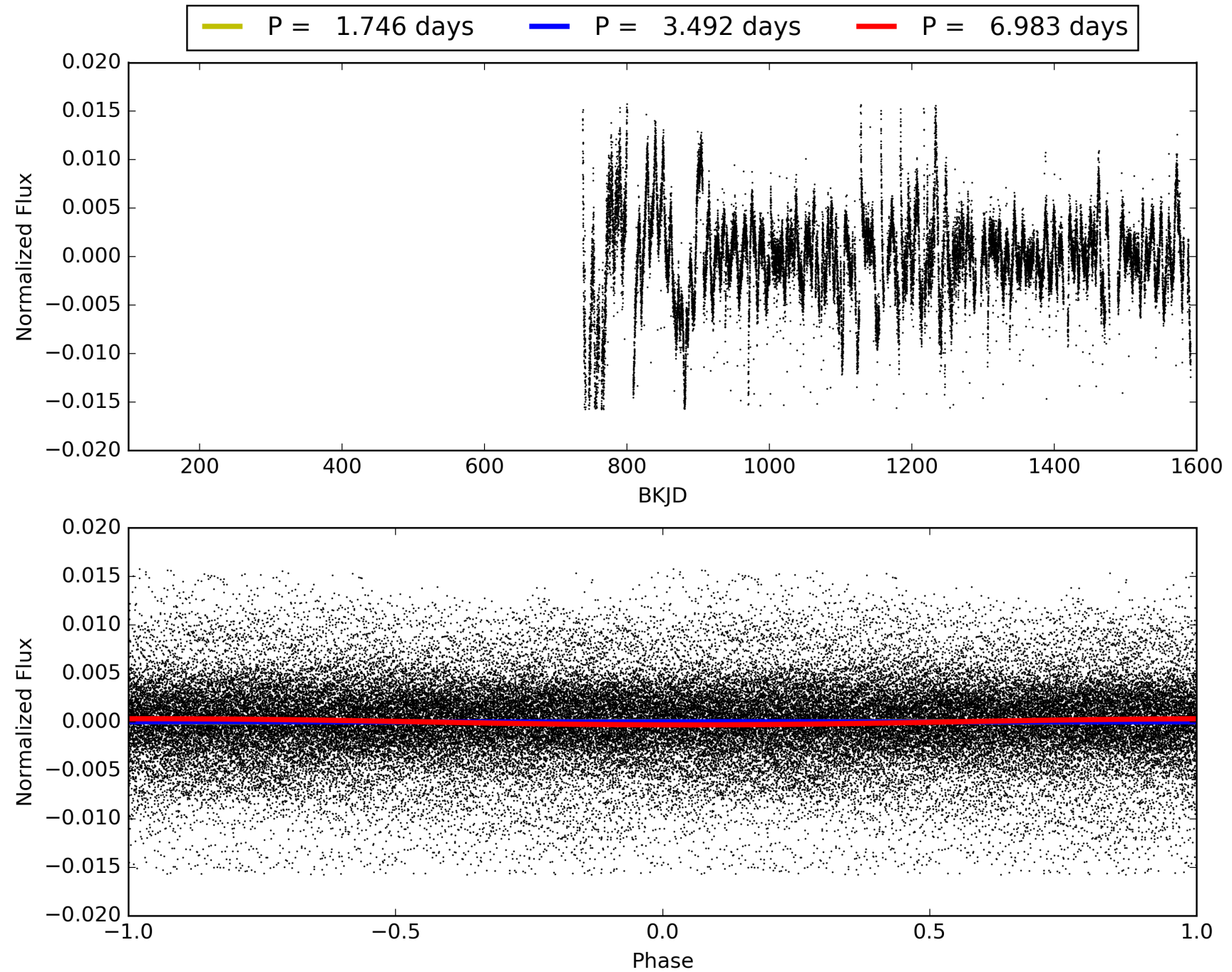
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.3% [2.71σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 91.3%
Bootstrap-pfa: 4.31e-81
RollingBand-fgt: 1.00 [162/162]
GhostDiagnostic-chr: -1.922
Centroid-sig: 0.0%
Centroid-so: 1.792 arcsec [5.68σ]
OotOffset-rm: 6.507 arcsec [13.21σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-rm: 0.169 arcsec [0.36σ]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 0.10 [1/10]

TCE 003735629-03, PDC Light Curves

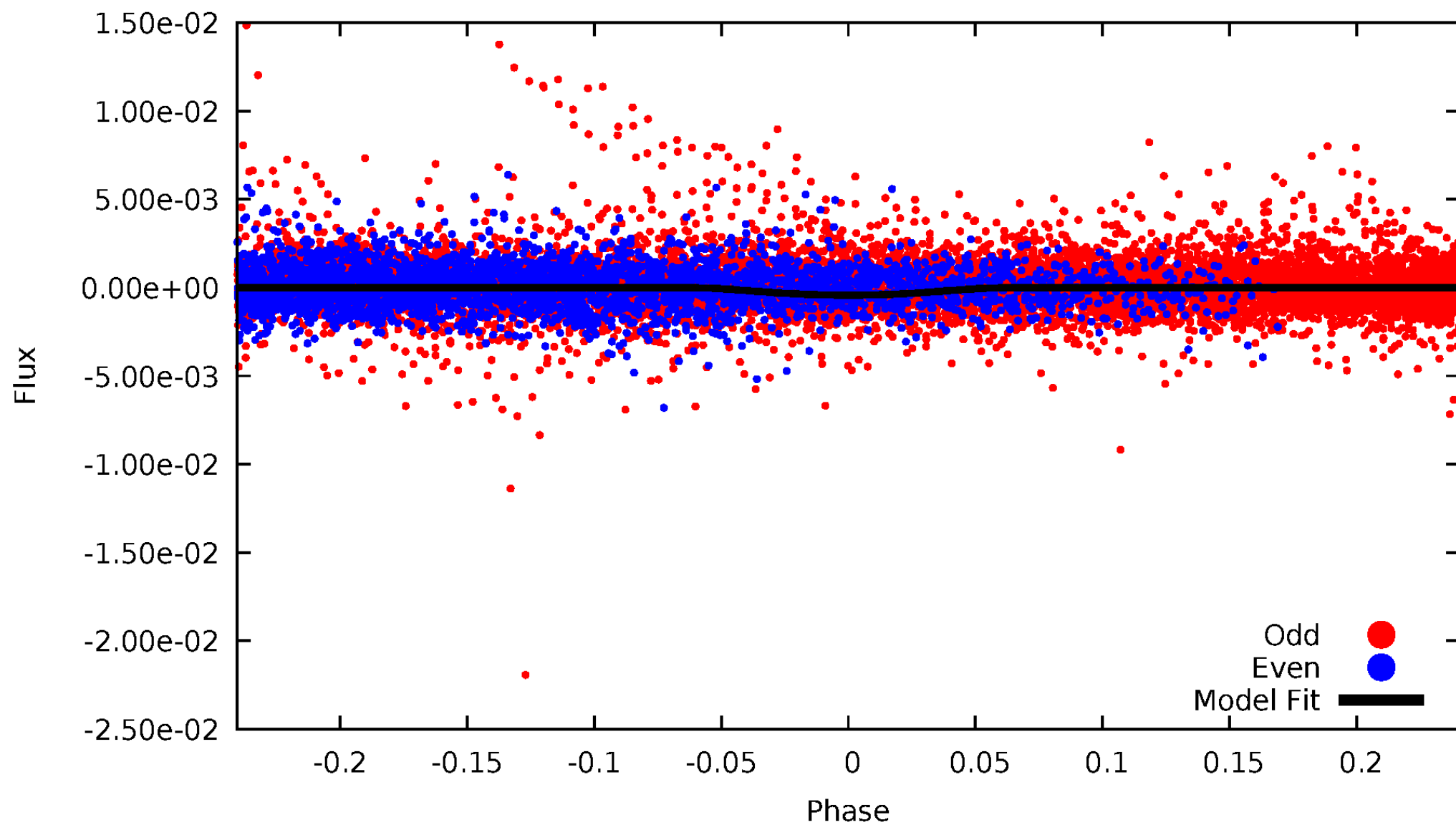


TCE 003735629-03



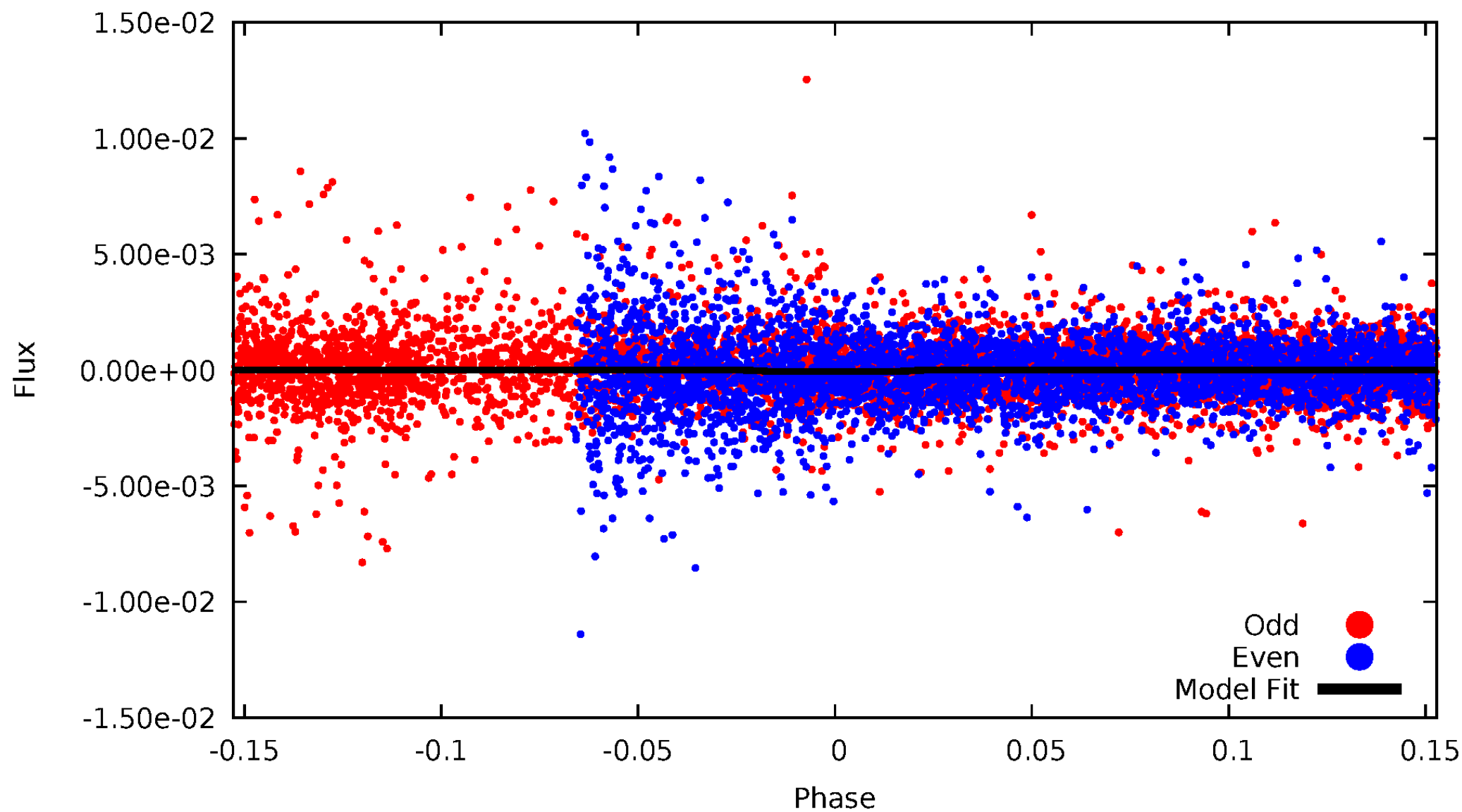
DV Odd/Even

TCE 003735629-03



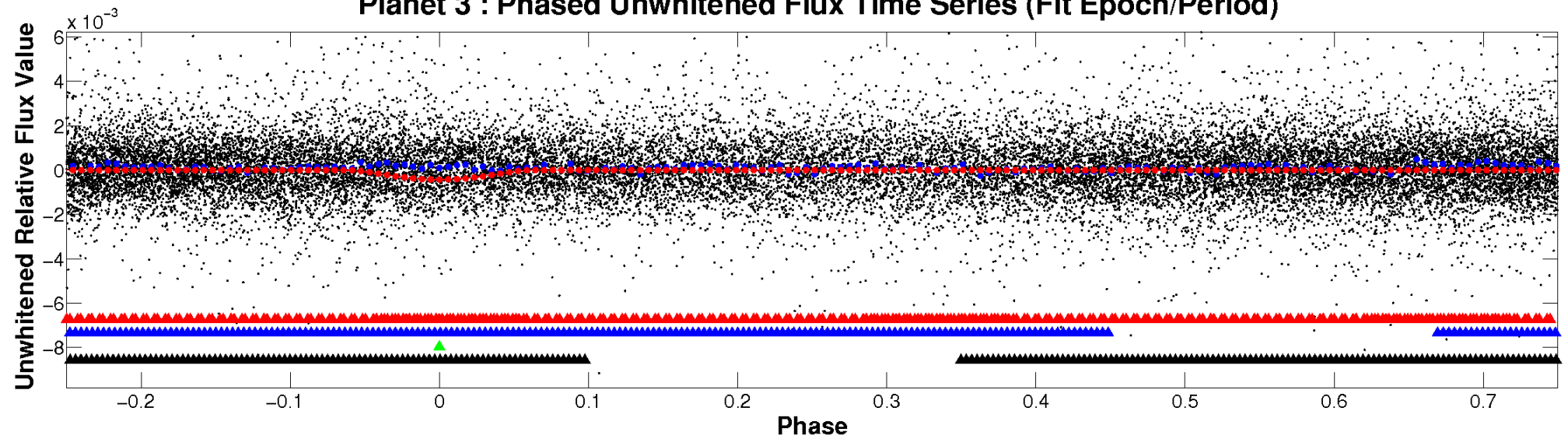
ALT Odd/Even

TCE 003735629-03

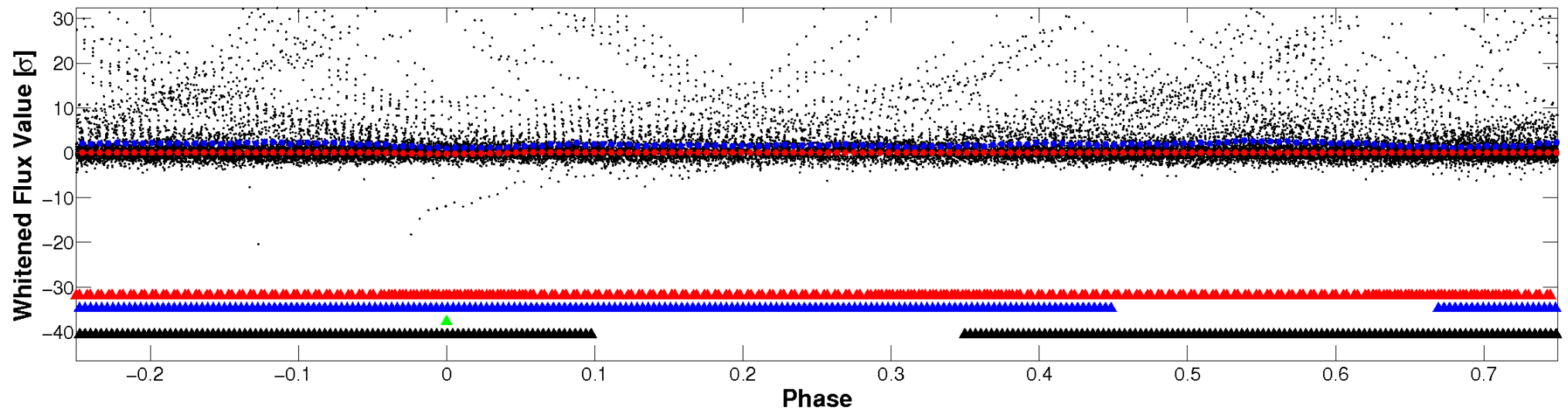


Non-Whitened Vs. Whitened Light Curve

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

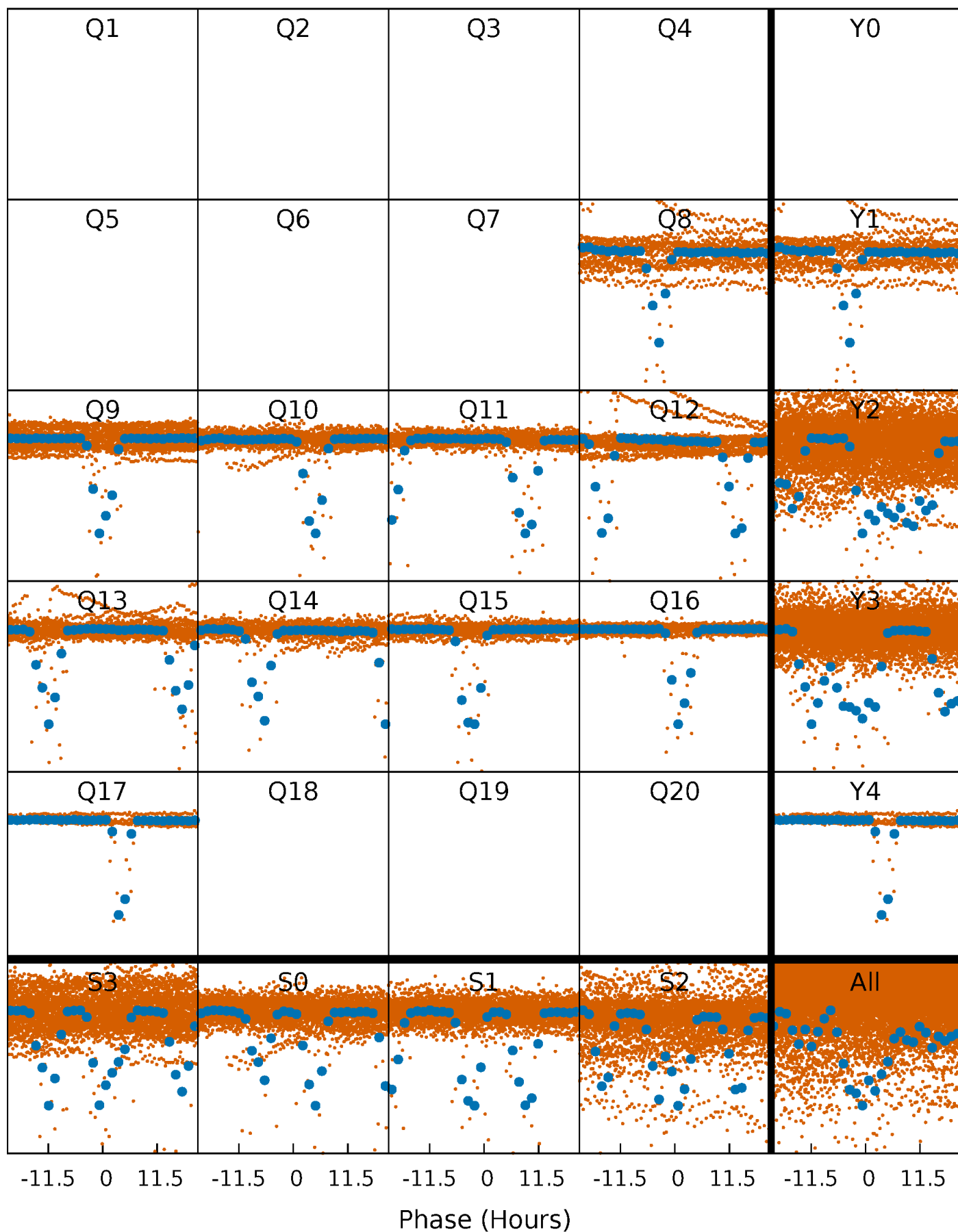


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



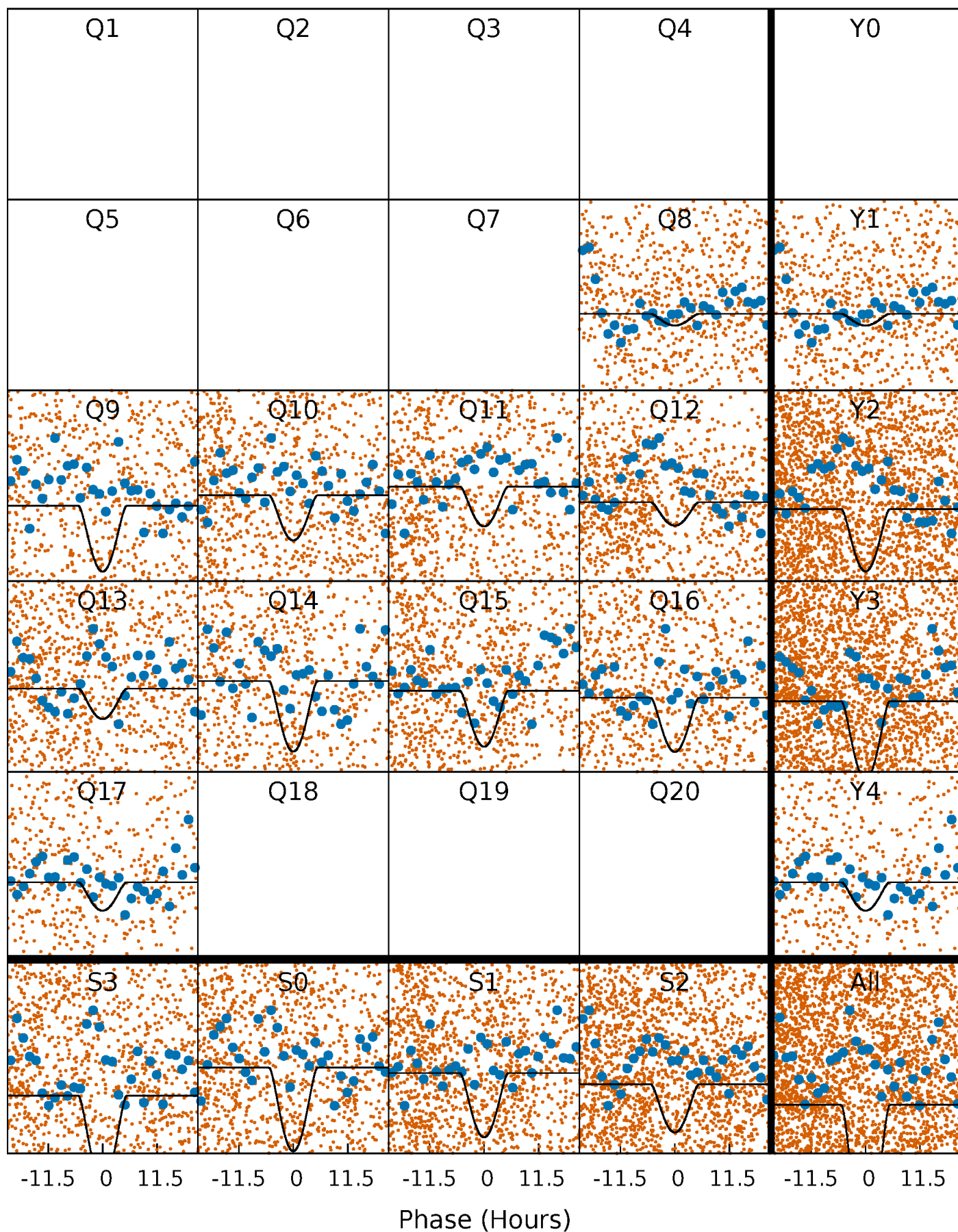
PDC Quarter-Phased Transit Curves

TCE 003735629-03 P= 3.491730 Days $T_0=132.656513$ (BKJD)



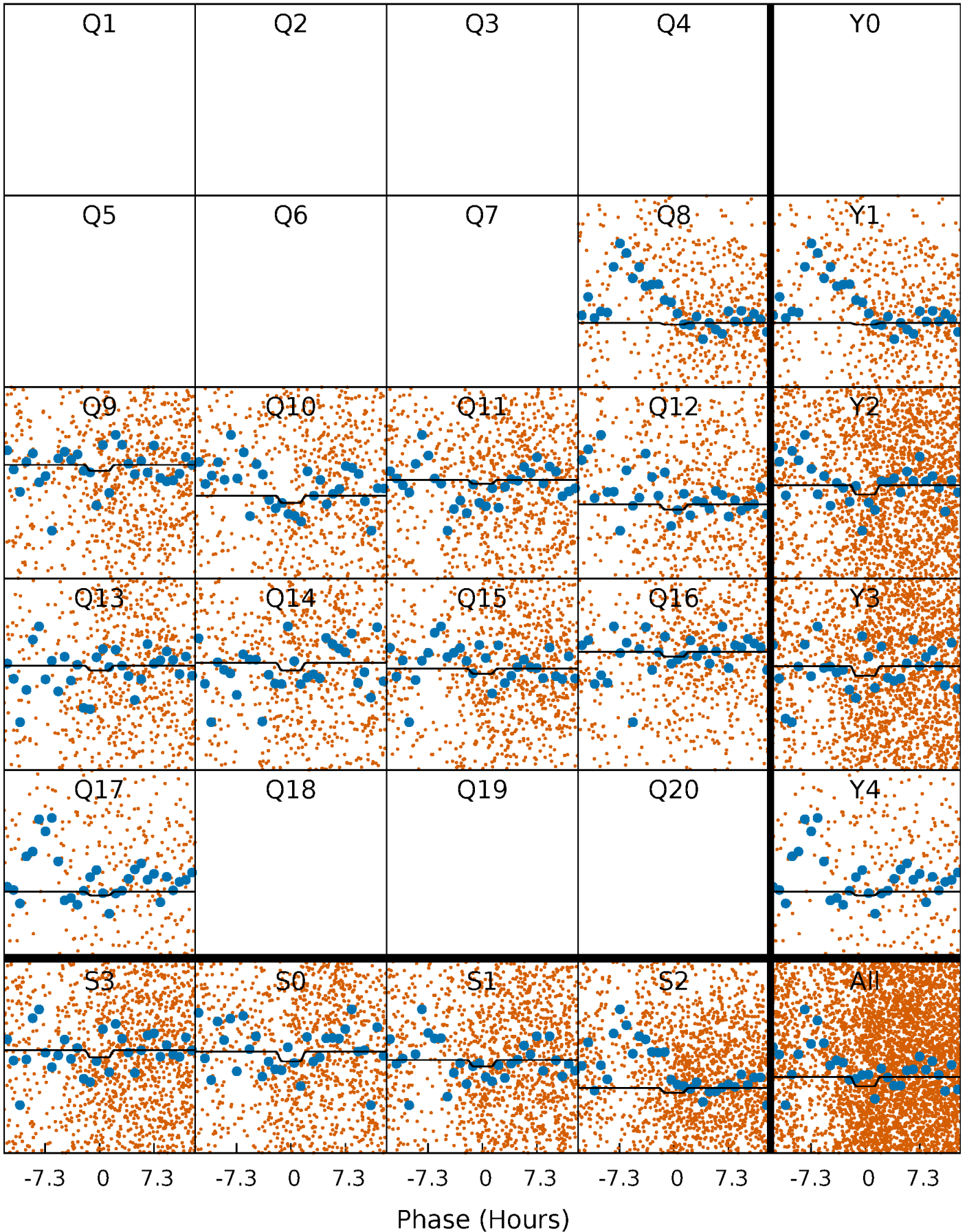
DV Quarter-Phased Transit Curves

TCE 003735629-03 P= 3.491730 Days $T_0=132.656513$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

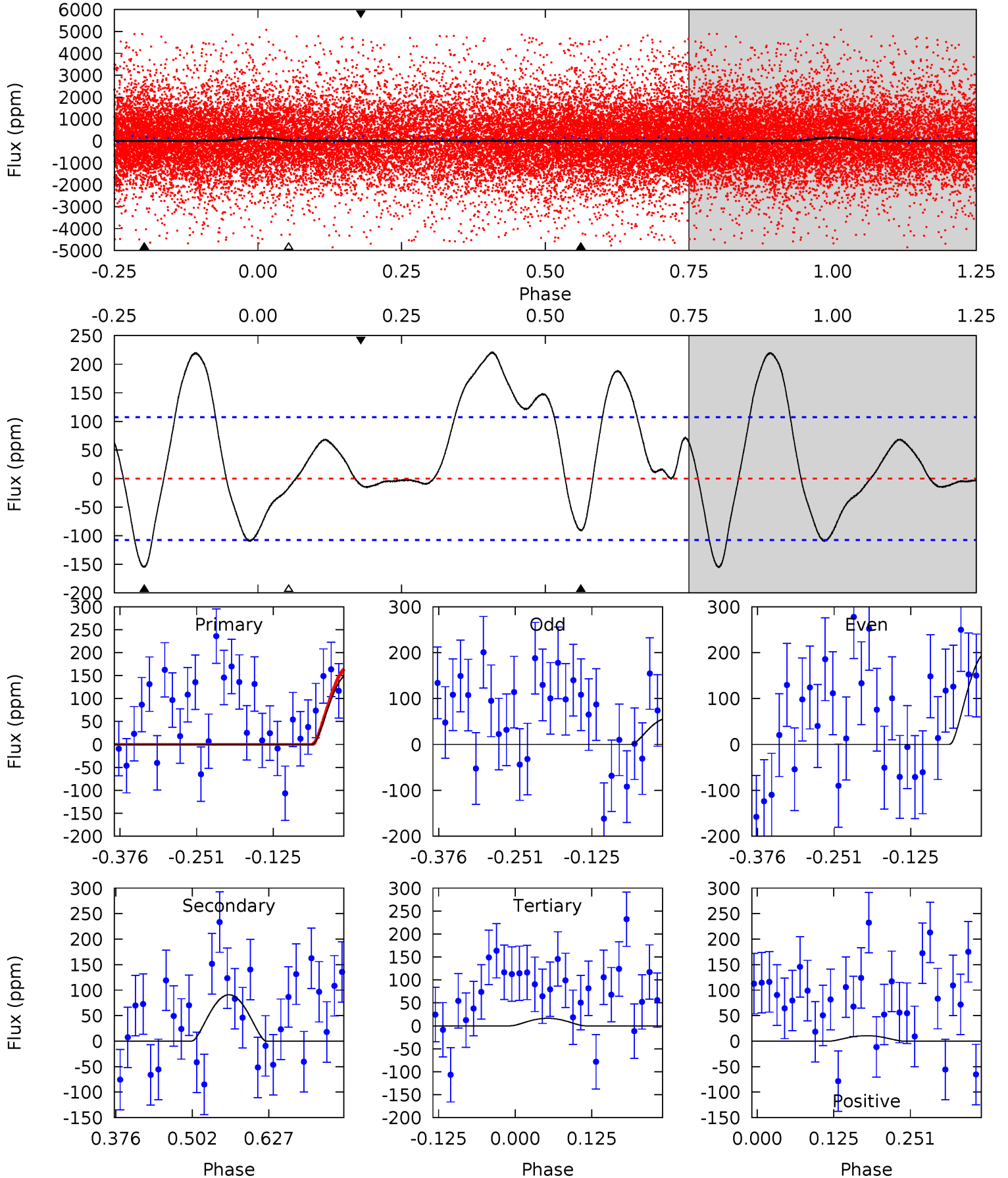
TCE 003735629-03 $P = 3.498223$ Days $T_0 = 132.684670$ (BKJD)



DV Model-Shift Uniqueness Test

003735629-03, P = 3.491730 Days, E = 132.656513 Days

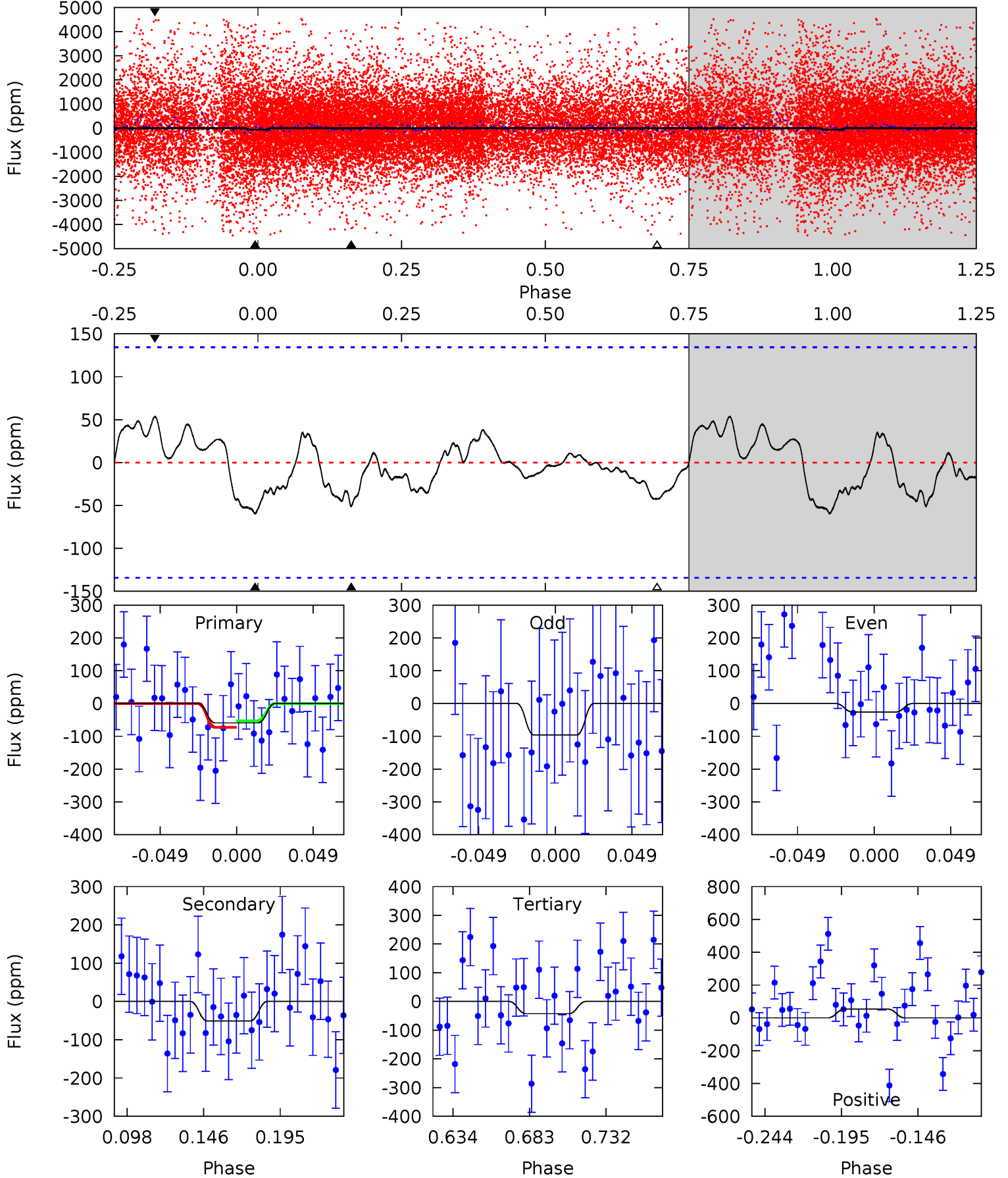
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.52	3.82	0.69	-0.45	4.52	1.53	3.66	5.83	6.97	3.13	4.27	2.82	1.73	0.59	0.70



Alt Model-Shift Uniqueness Test

003735629-03, P = 3.498223 Days, E = 132.684670 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.08	1.79	1.50	1.88	4.71	1.97	0.80	0.58	0.20	0.29	-0.09	1.26	0.52	0.48	0.34



Stellar Parameters For KIC 003735629

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5062^{+193}_{-176}	$3.515^{+0.904}_{-0.226}$	$0.140^{+0.250}_{-0.300}$	$3.579^{+1.214}_{-2.254}$	$1.530^{+0.251}_{-0.585}$	$0.047^{+1.207}_{-0.028}$
	+4%/-3%	+26%/-6%	+179%/-214%	+34%/-63%	+16%/-38%	+2567%/-60%
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 003735629-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-91 ± 24	$52.85^{+69.13}_{-38.40}$	2539^{+280}_{-490}	-2649^{+5152}_{-257}	$0.045^{+0.530}_{-0.037}$
Alt.	-51 ± 29	$46.50^{+65.64}_{-33.78}$	2493^{+321}_{-455}	-2675^{+4741}_{-234}	$0.026^{+0.316}_{-0.022}$

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

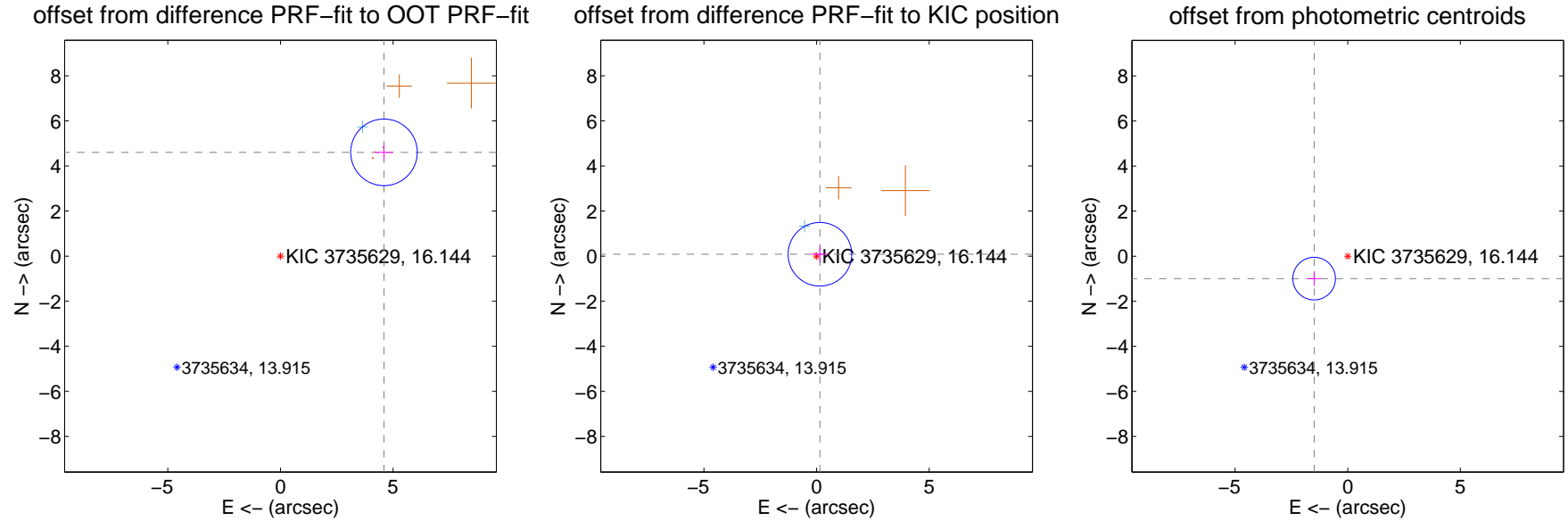
DV Centroid Data

Supplemental centroid analysis for 003735629-03. Kepler magnitude: 16.14. Transit SNR 8.61

There are 4 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.23 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.507 ± 0.493	13.21	-4.596 ± 0.396	4.607 ± 0.353
PRF-fit source offset from KIC position	0.169 ± 0.470	0.36	-0.148 ± 0.380	0.083 ± 0.368
photometric centroid source offset	1.79 ± 0.32	5.68	1.49 ± 0.31	-0.99 ± 0.32



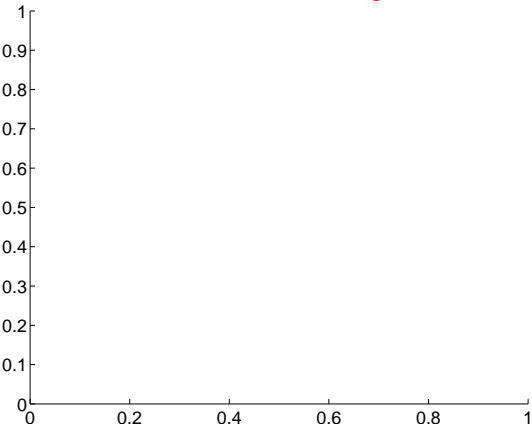
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

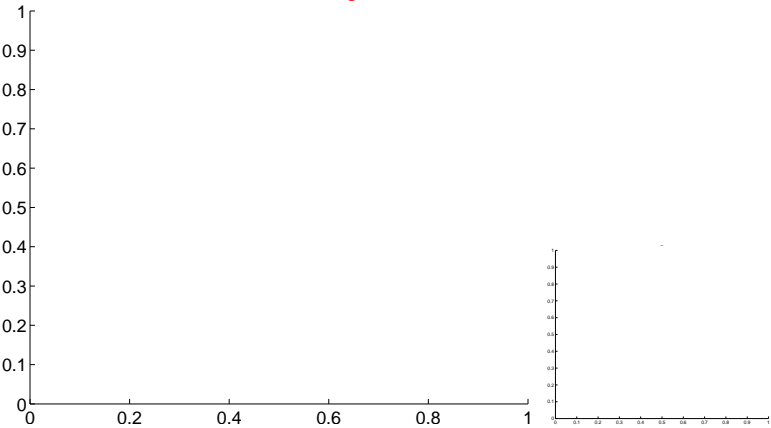


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

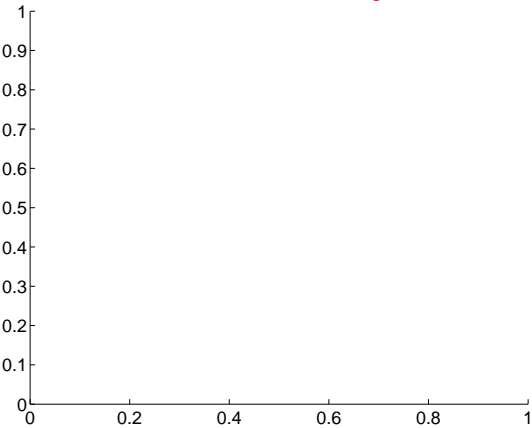
Q5 no difference image



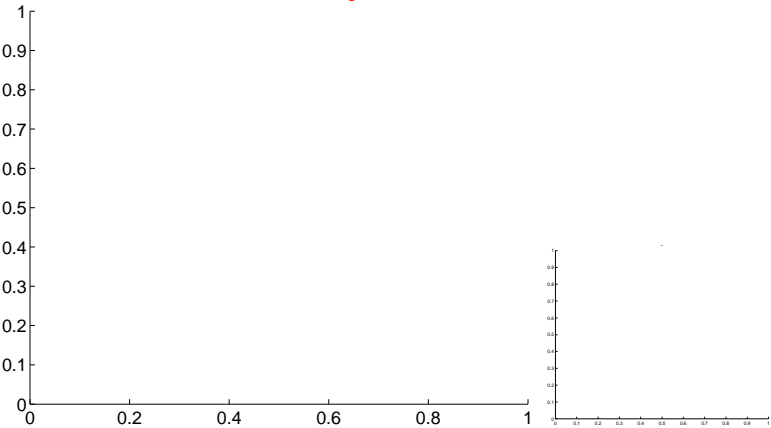
Q5 no OOT image



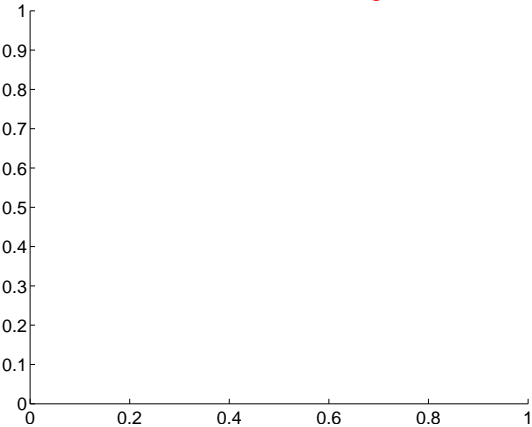
Q6 no difference image



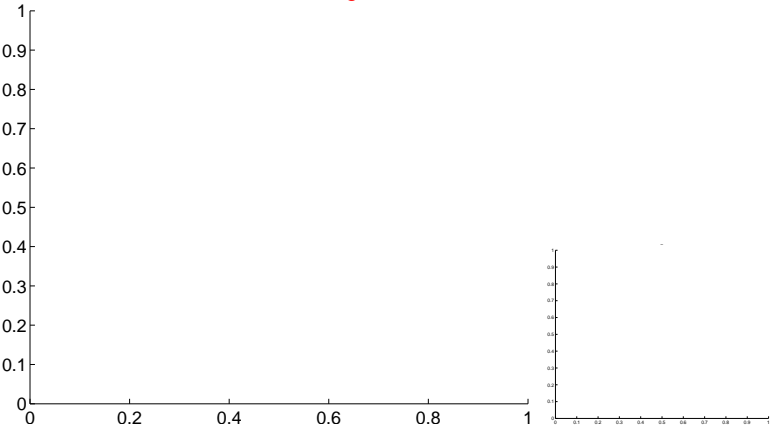
Q6 no OOT image



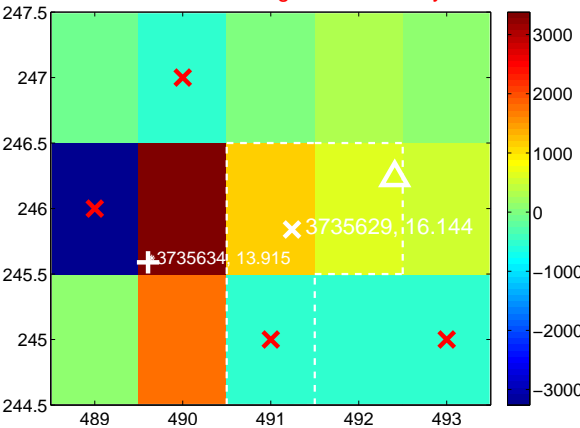
Q7 no difference image



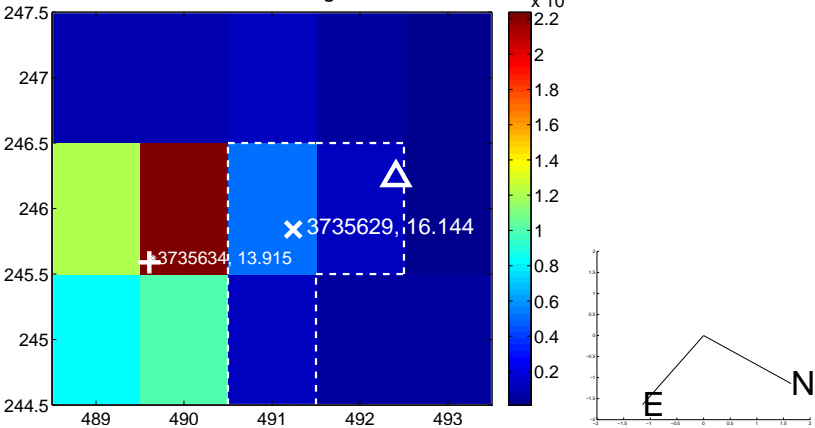
Q7 no OOT image



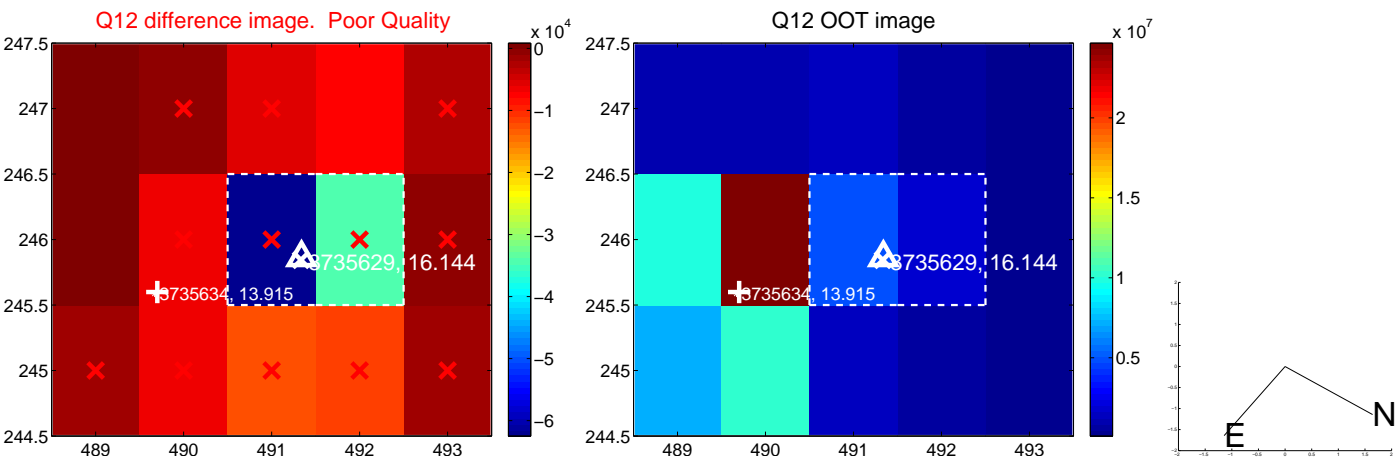
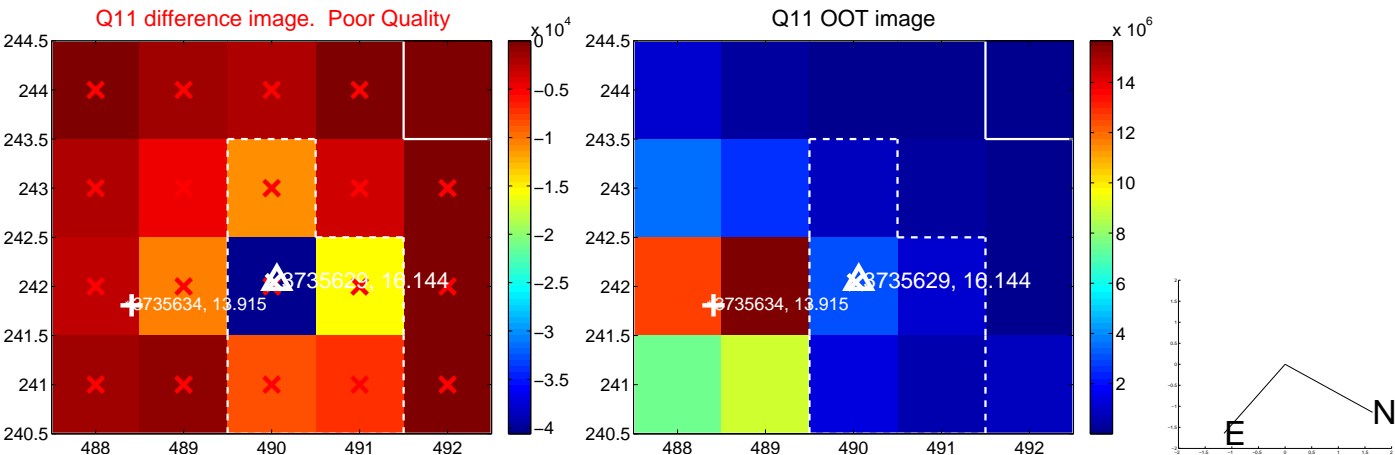
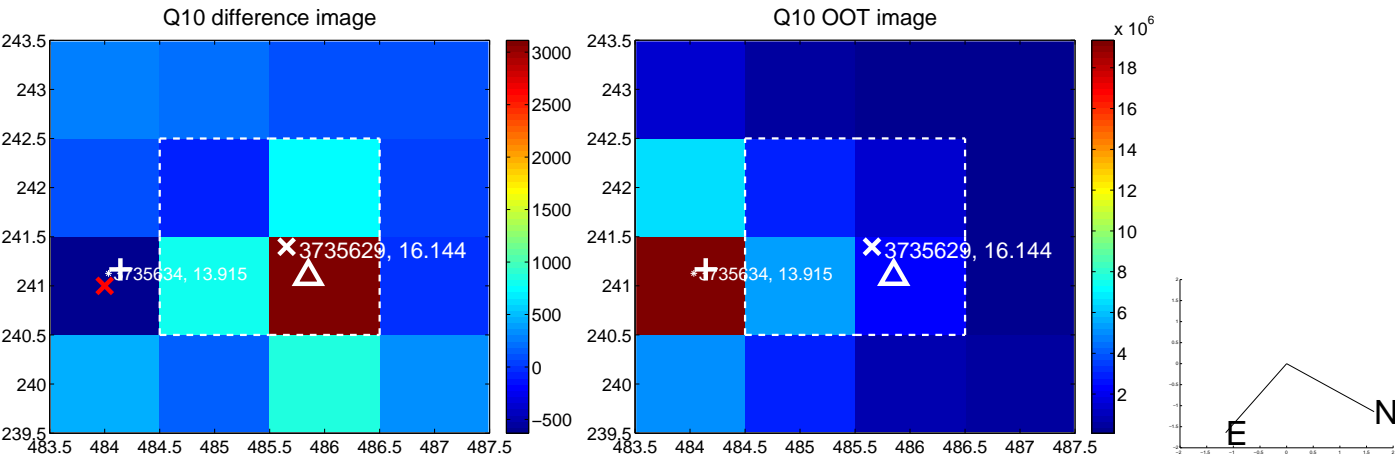
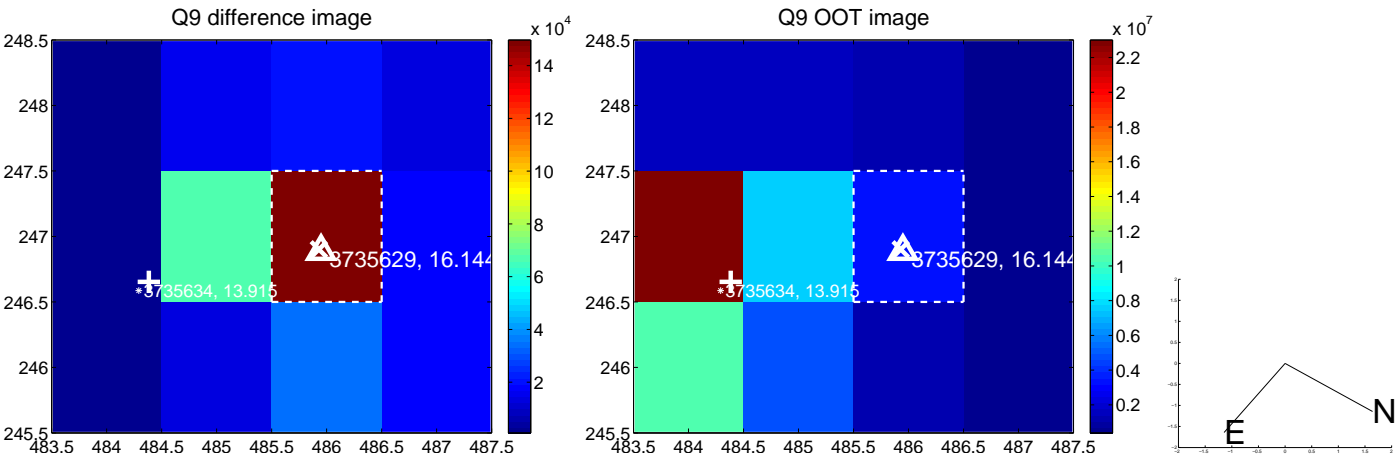
Q8 difference image. Poor Quality



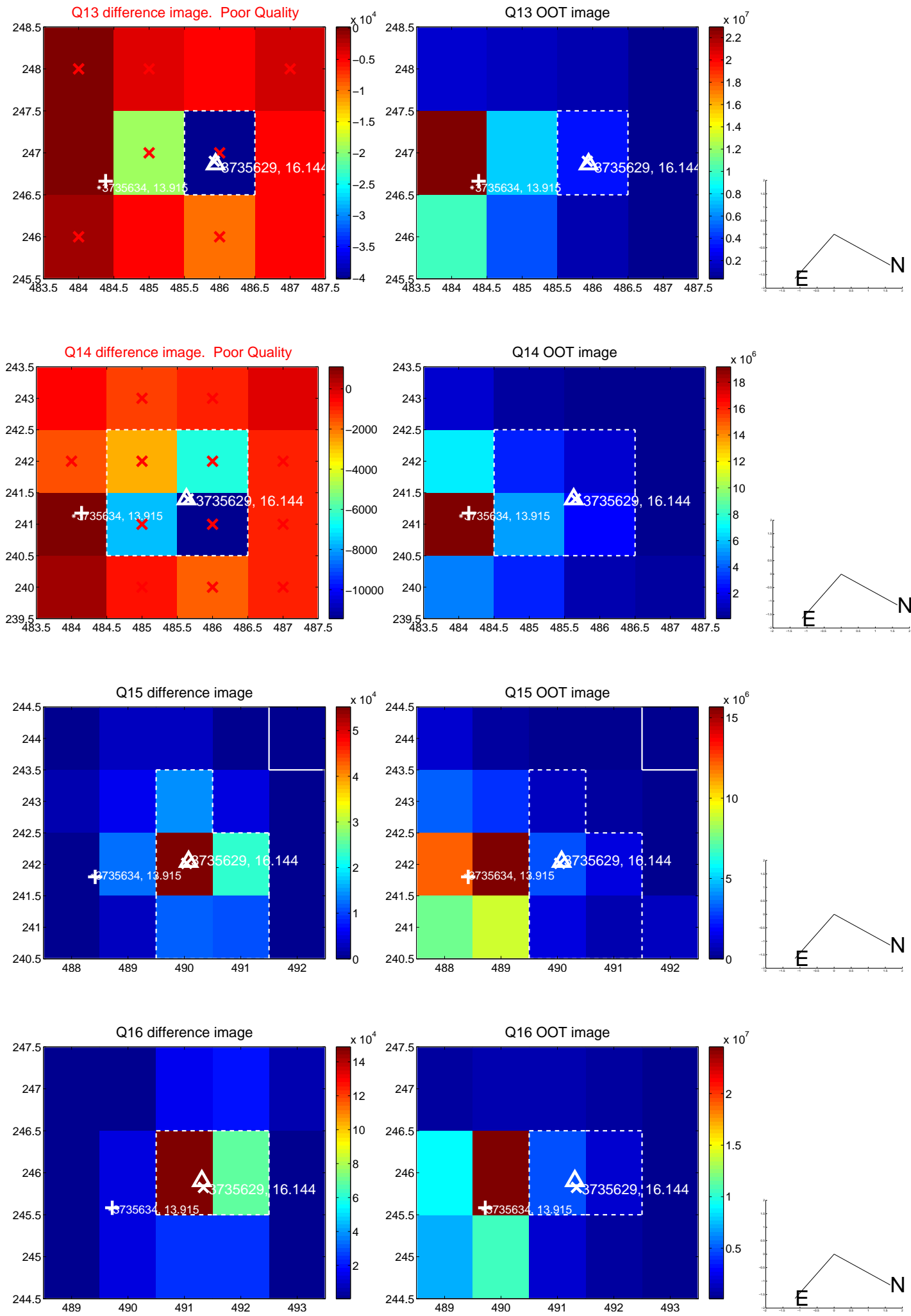
Q8 OOT image



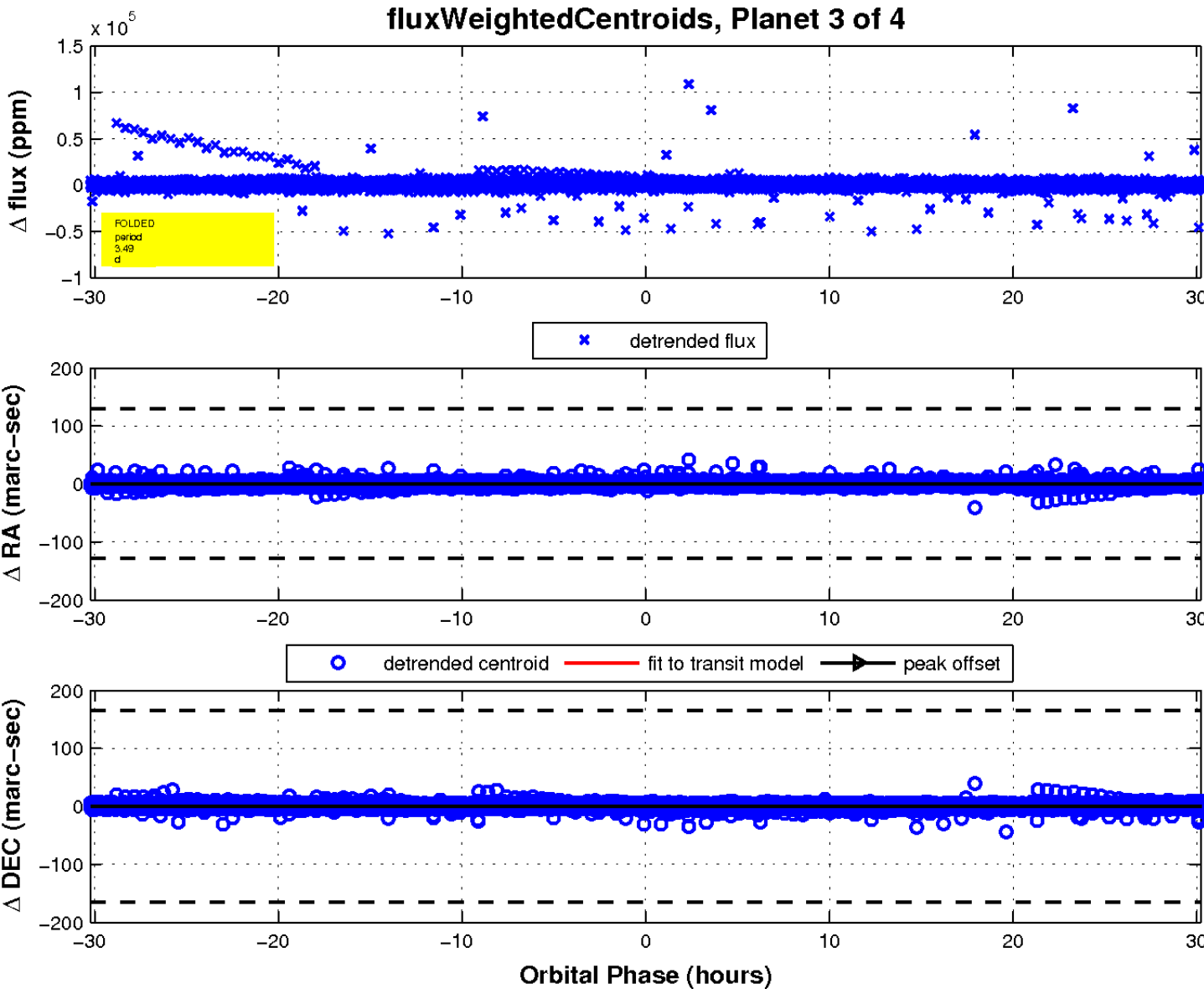
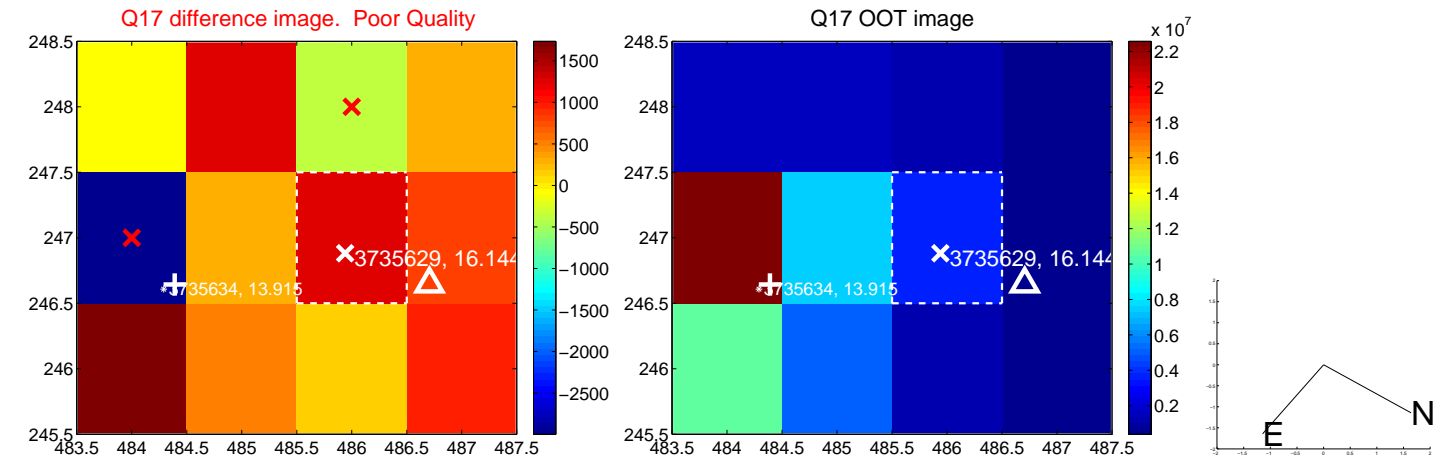
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

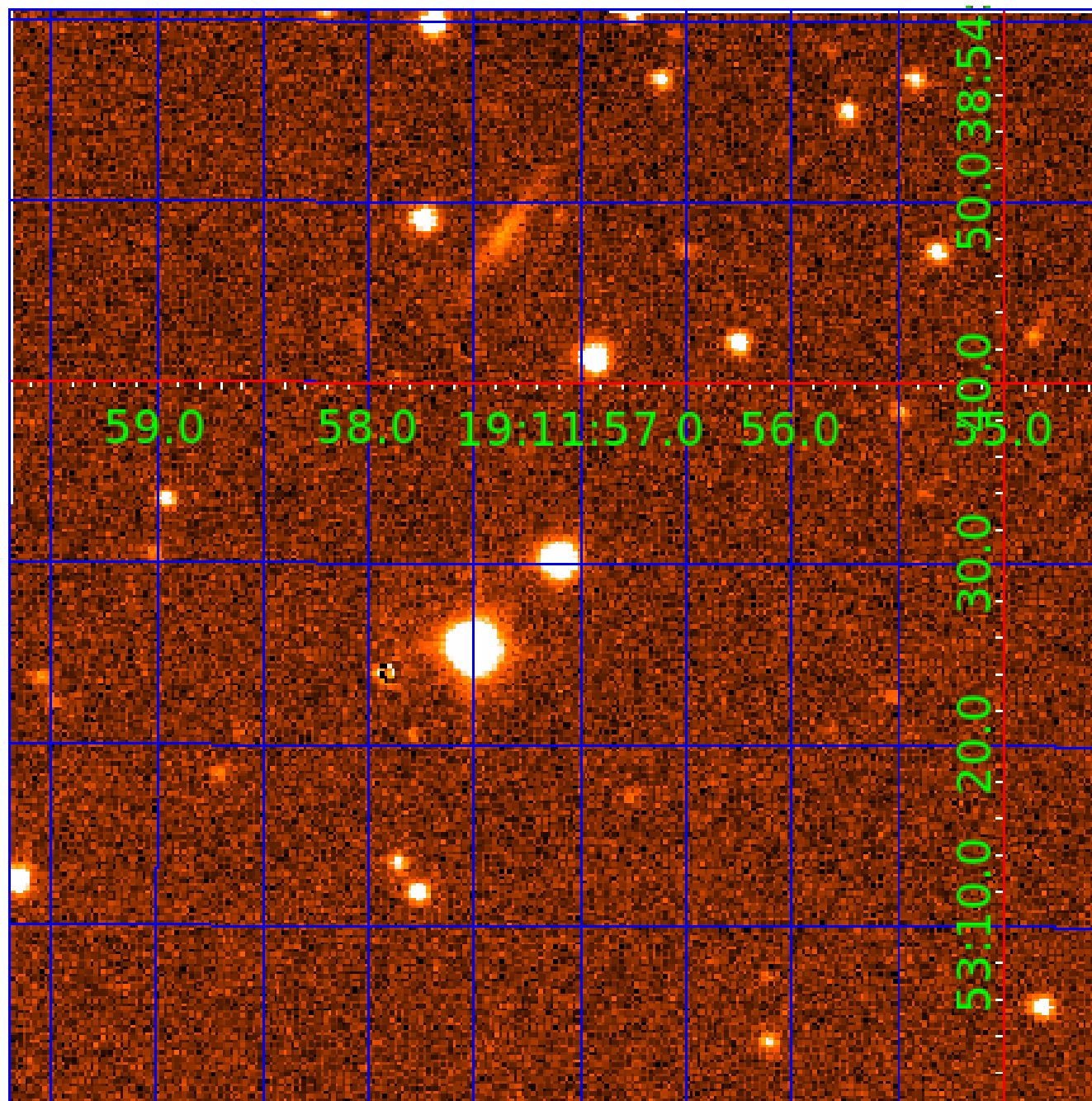


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003735629

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})
003735629-01	OBS	3544.01	4.664189	133.667244	415354.6	2.500	6682.5	-1.0	3.58	5062	195.28	1901.03
003735629-02	OBS	No	6.996601	138.485649	44808.4	15.000	483.1	-1.0	3.58	5062	73.61	1107.07
003735629-03	OBS	No	3.491730	132.656513	425.0	10.078	512.0	8.6	3.58	5062	15.46	2796.64
003735629-04	OBS	No	6.996013	133.877881	48570.3	12.000	248.5	-1.0	3.58	5062	76.66	1107.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003735629-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
003735629-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
003735629-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_KIC_POS
003735629-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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.

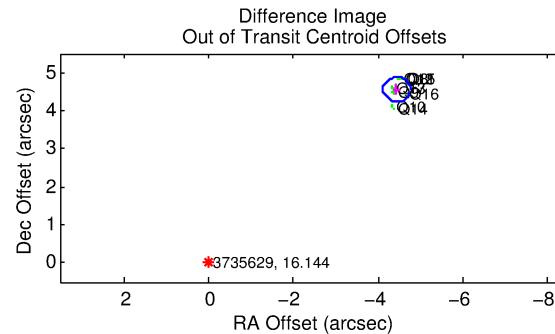
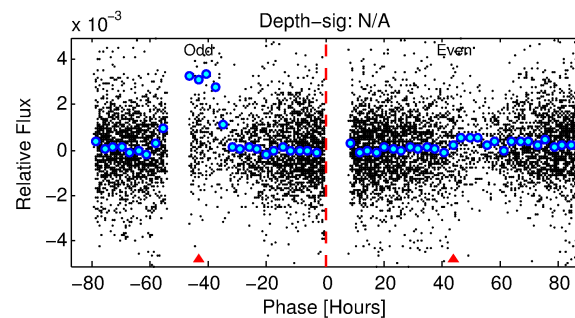
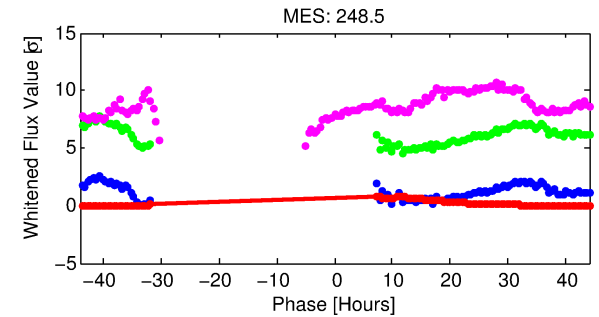
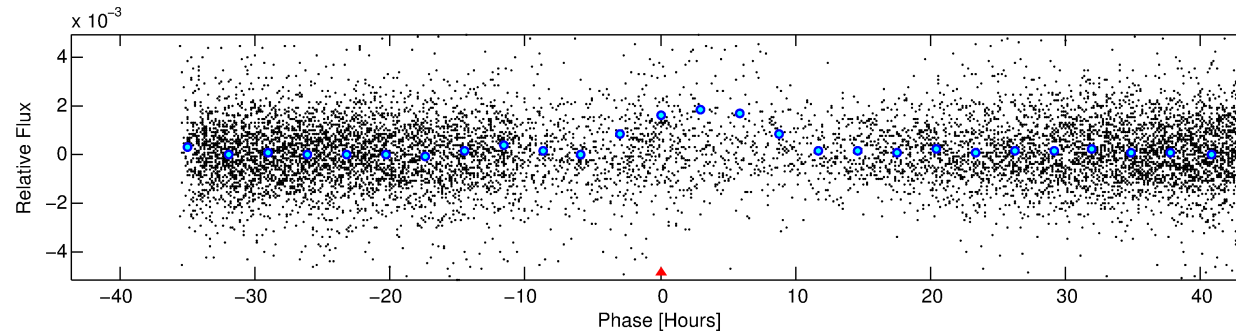
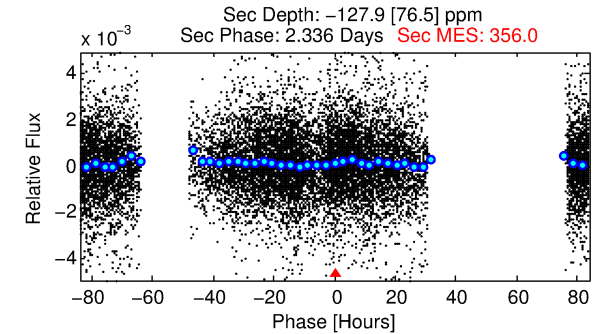
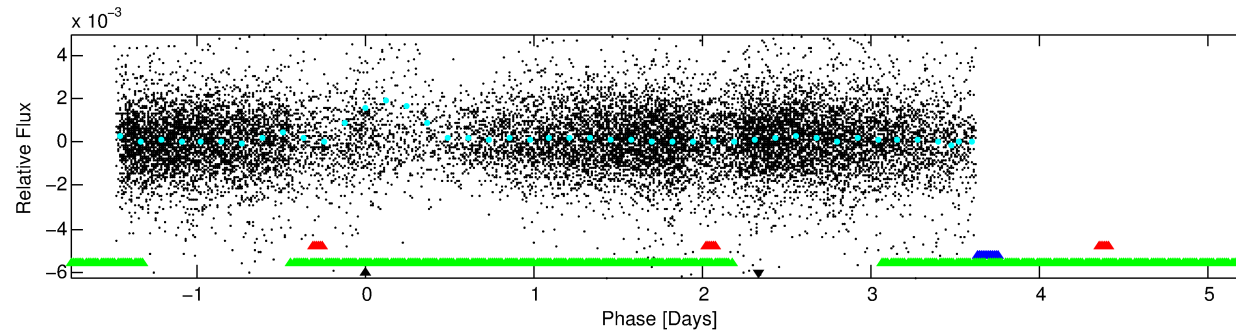
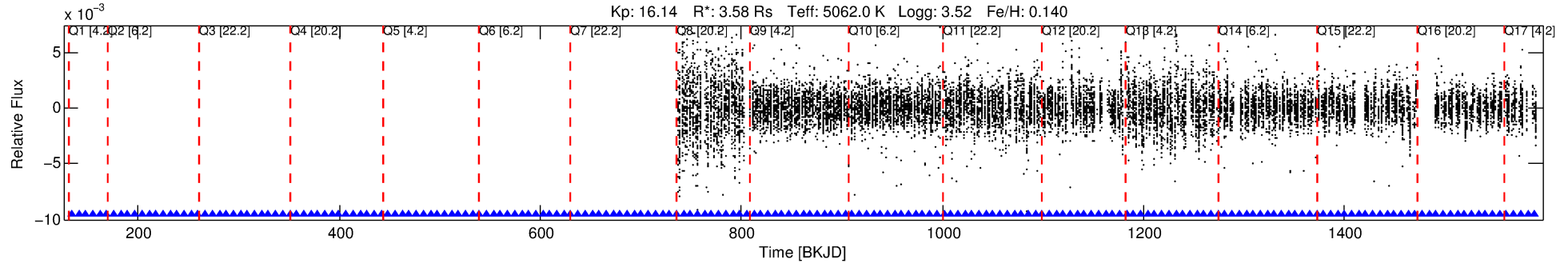
Ephemeris Match Information For 003735629-04

No Significant Match Found

DV One-Page Summary

KIC: 3735629 Candidate: 4 of 4 Period: 6.996 d
KOI: K03544 Corr: No Ephemeris Match

Kp: 16.14 R*: 3.58 Rs Teff: 5062.0 K Logg: 3.52 Fe/H: 0.140



TPS TCE Results:

Period = 6.99601 d
Epoch = 133.8779 BKJD

DV fit results are unavailable

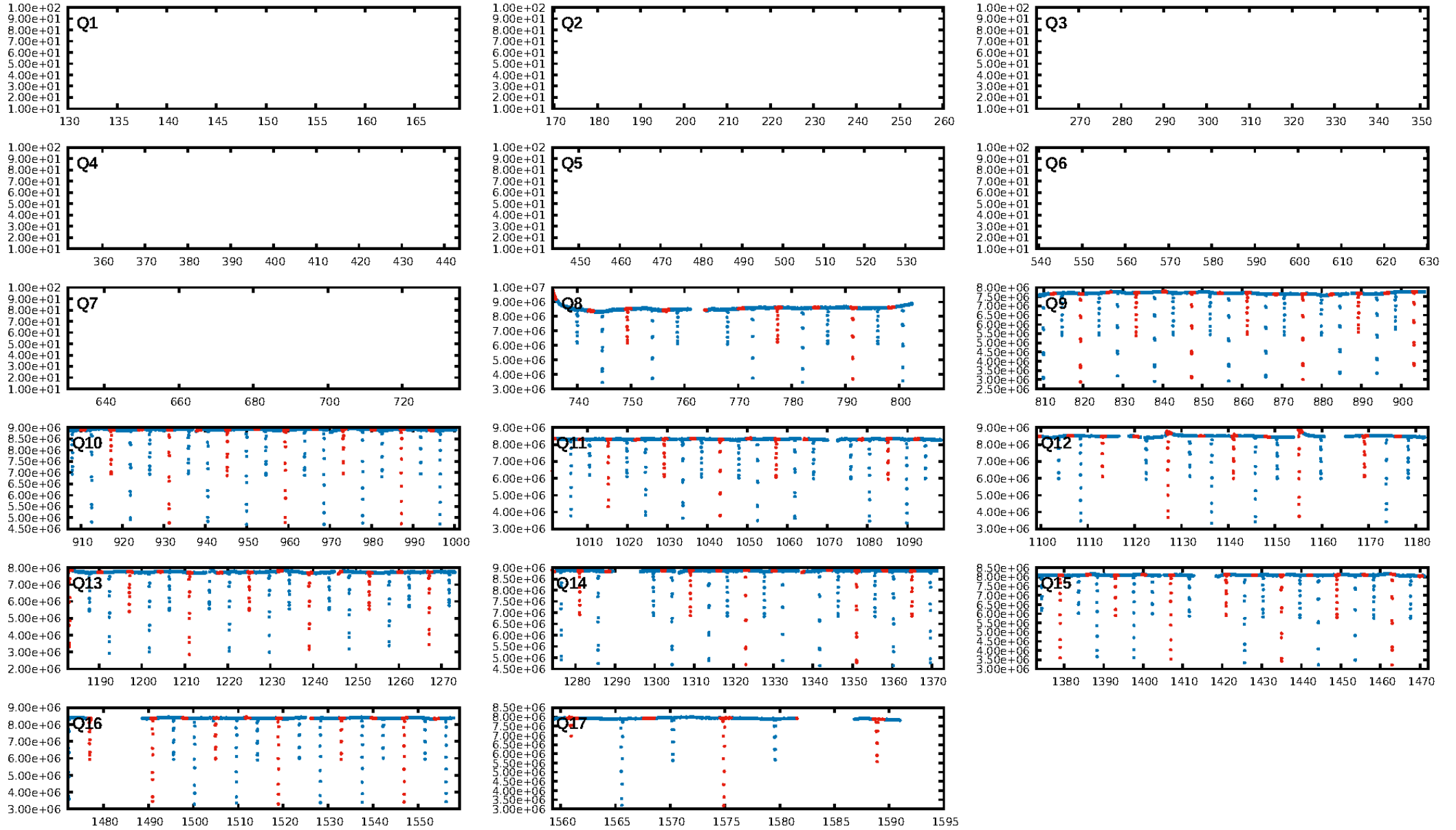
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.57 σ]
LongPeriod-sig: 0.1% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.22e-26
RollingBand-fgt: 1.00 [54/54]
GhostDiagnostic-chr: 15.51
Centroid-sig: 0.0%
Centroid-so: 5.638 arcsec [5.13 σ]
OotOffset-rm: 6.364 arcsec [59.49 σ]
KicOffset-rm: 0.131 arcsec [1.72 σ]
OotOffset-st: 2/2/3/3 [10]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 0.00 [0/10]

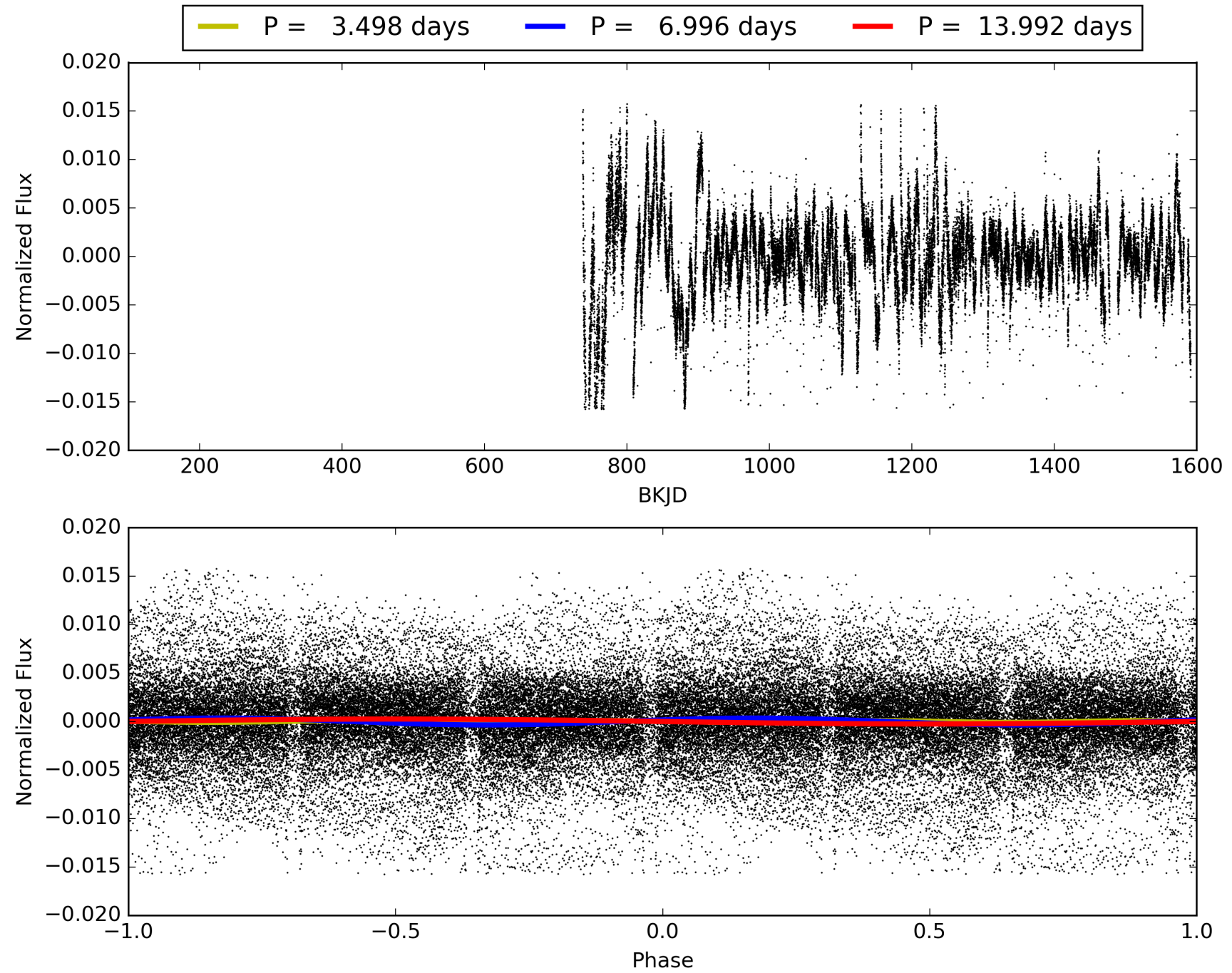
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 01:35:35 Z

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

TCE 003735629-04, PDC Light Curves

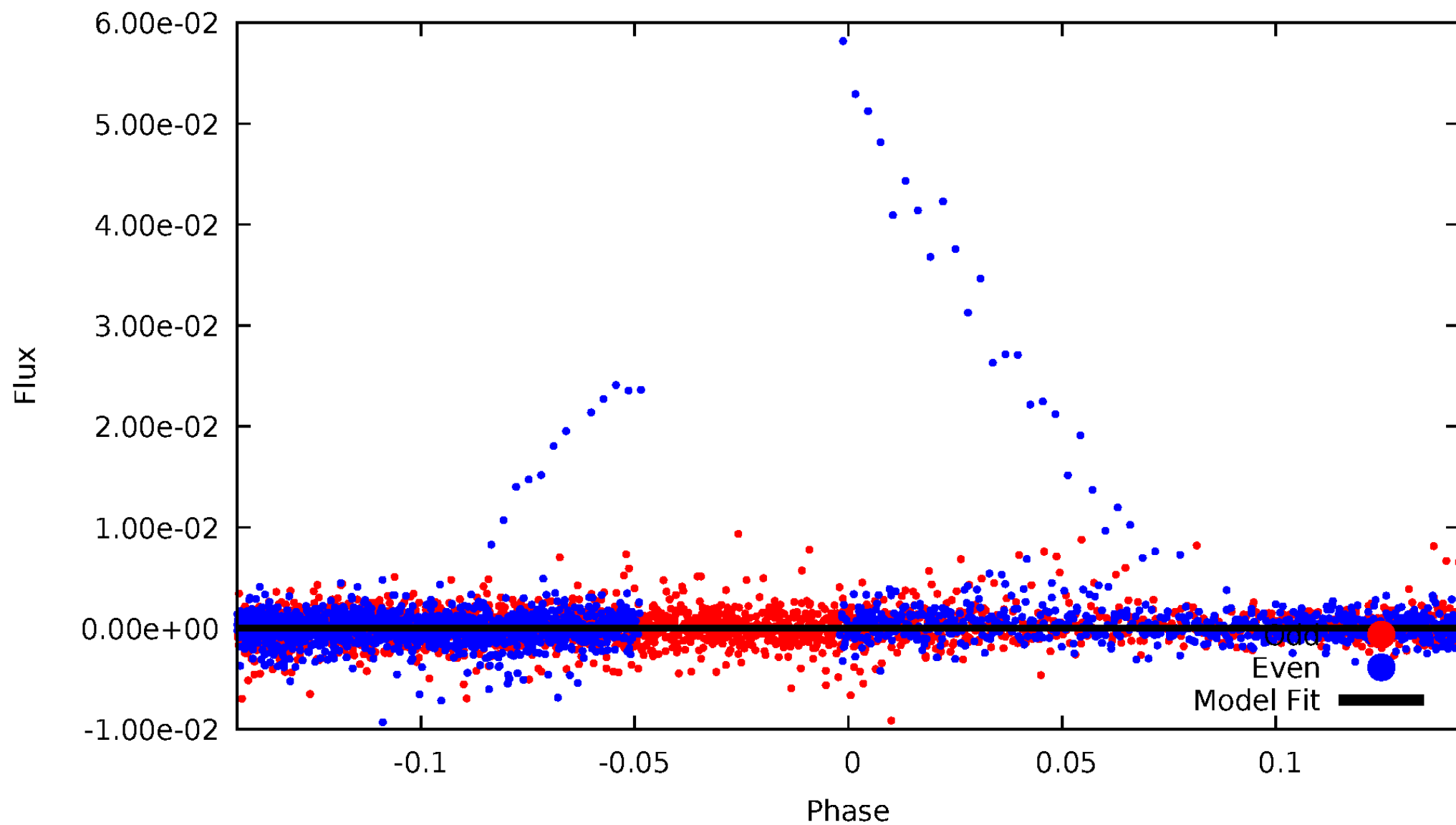


TCE 003735629-04



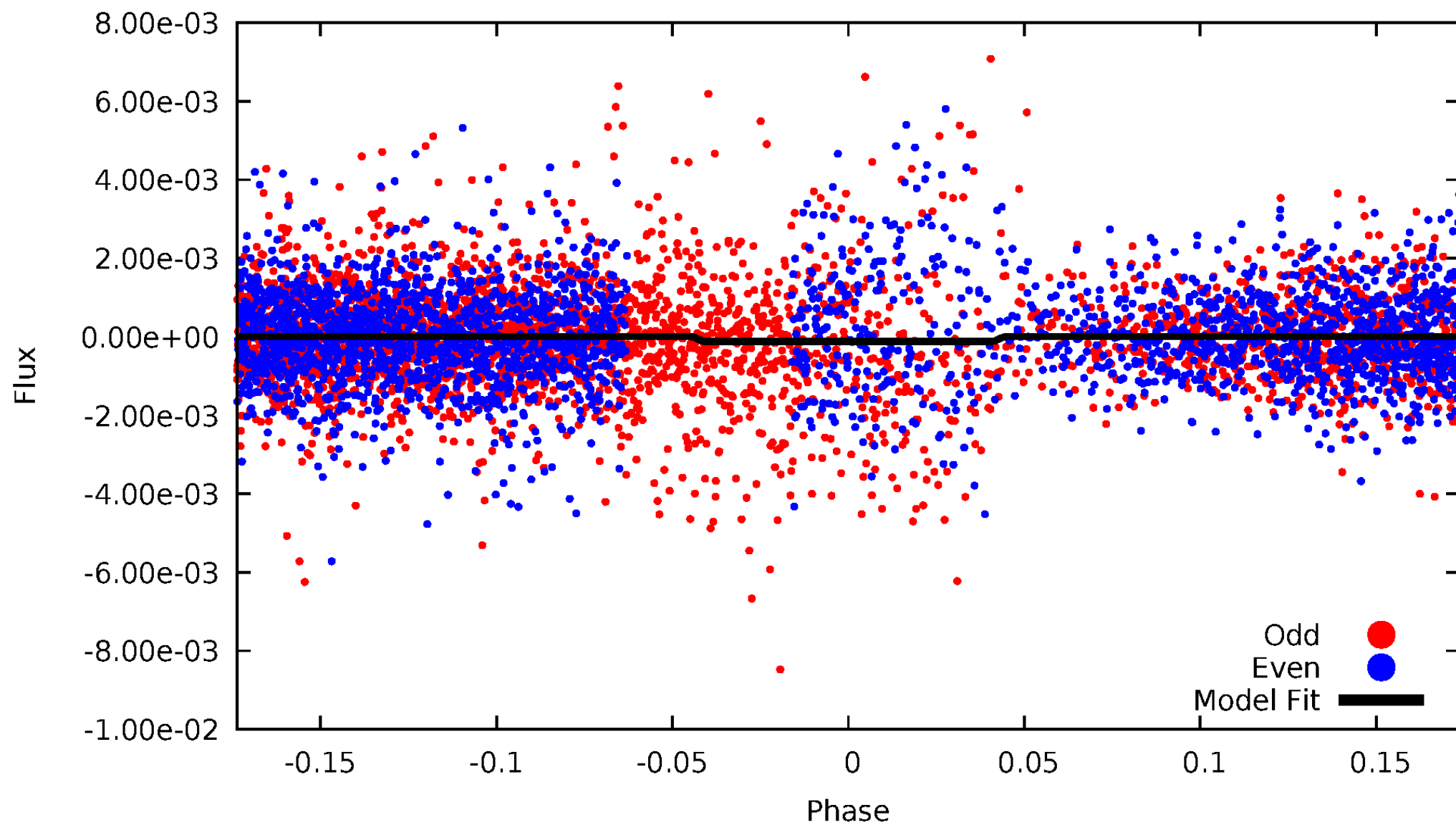
DV Odd/Even

TCE 003735629-04



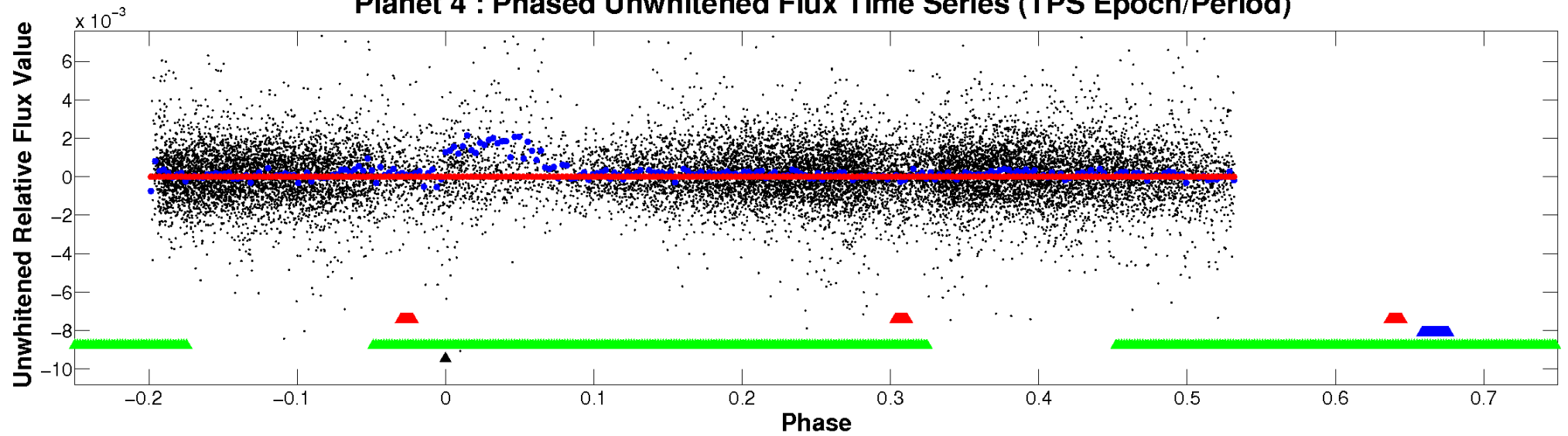
ALT Odd/Even

TCE 003735629-04

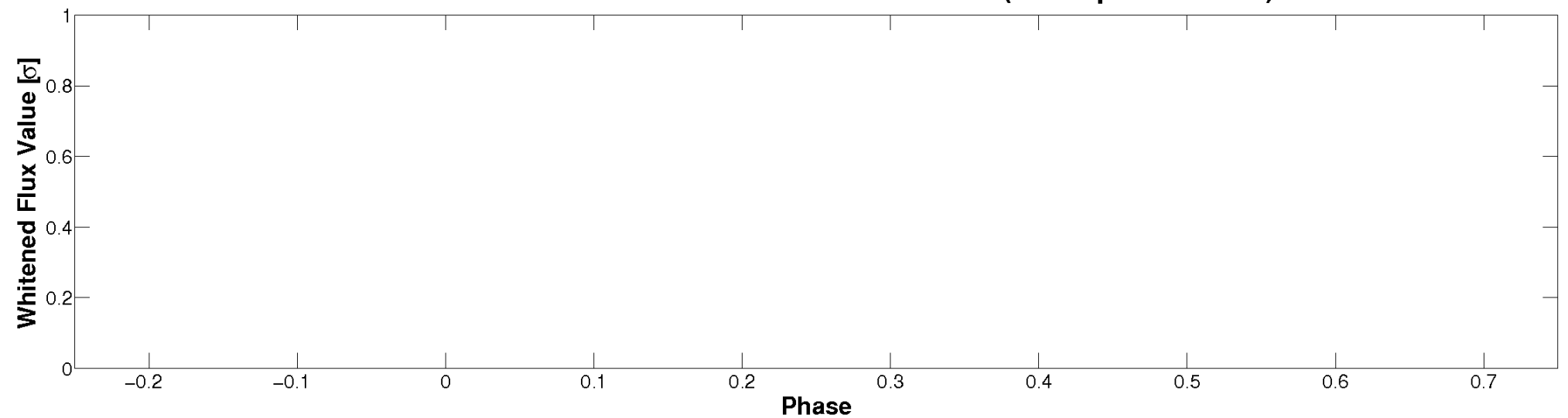


Non-Whitened Vs. Whitened Light Curve

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

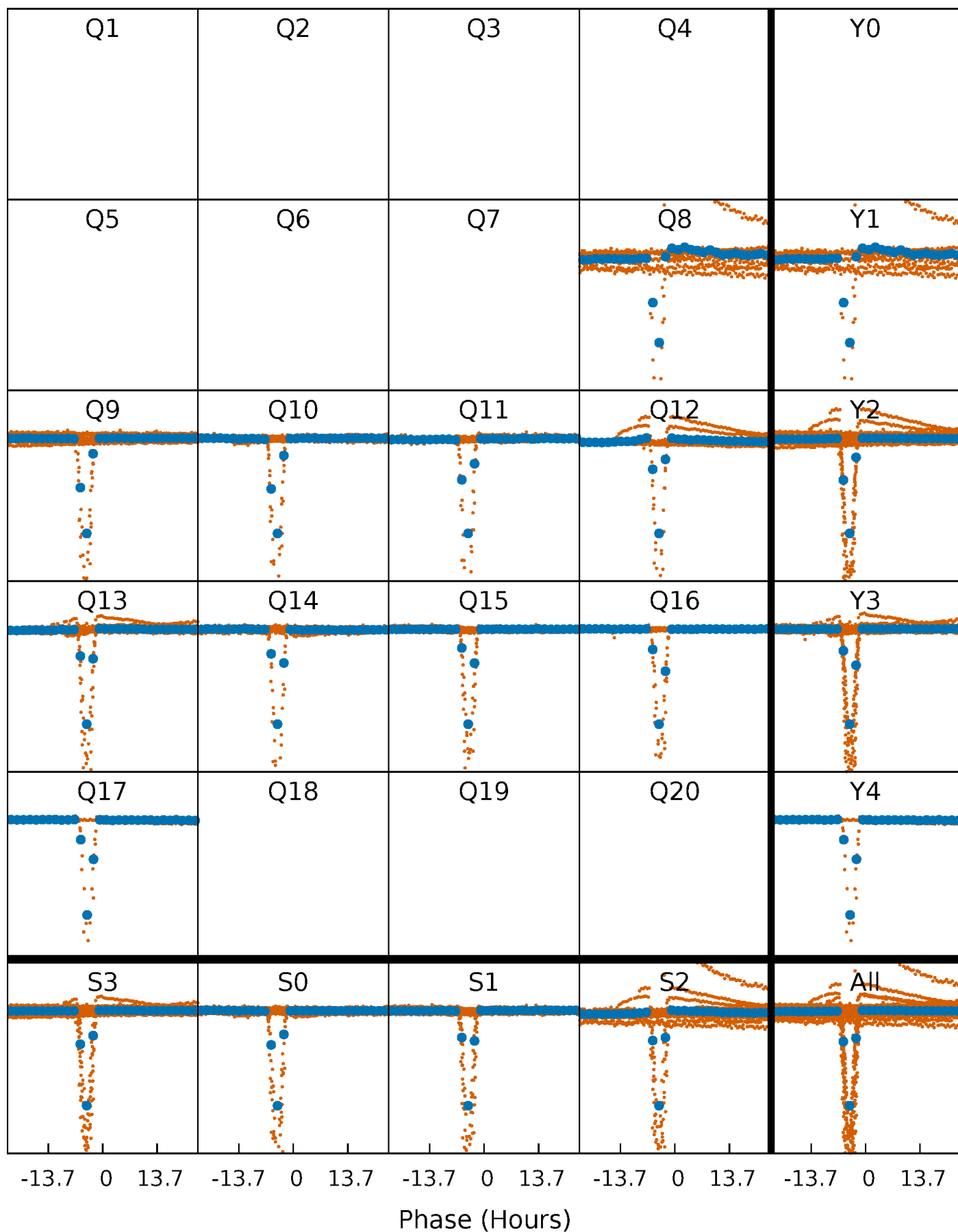


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



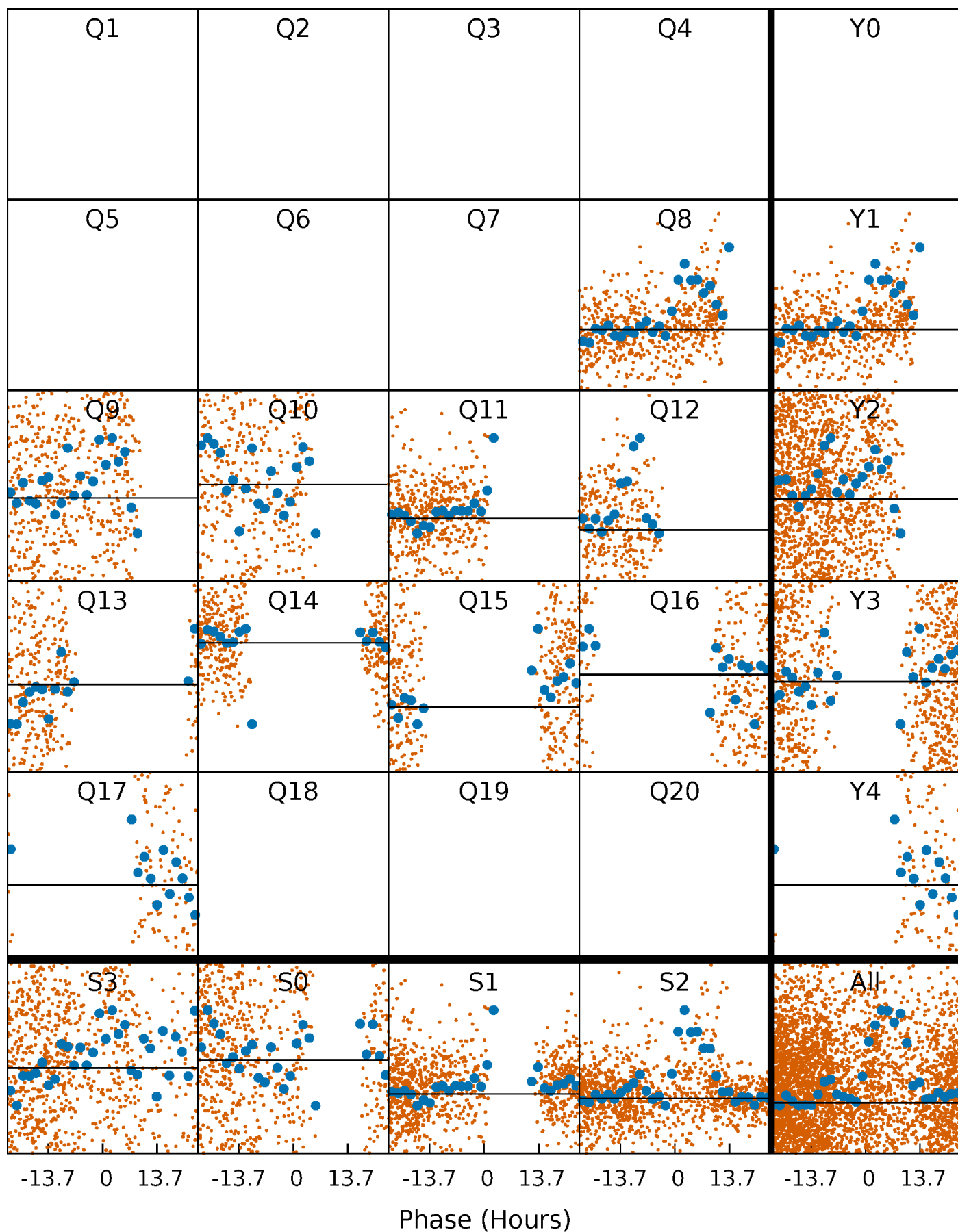
PDC Quarter-Phased Transit Curves

TCE 003735629-04 P= 6.996013 Days $T_0=133.877881$ (BKJD)



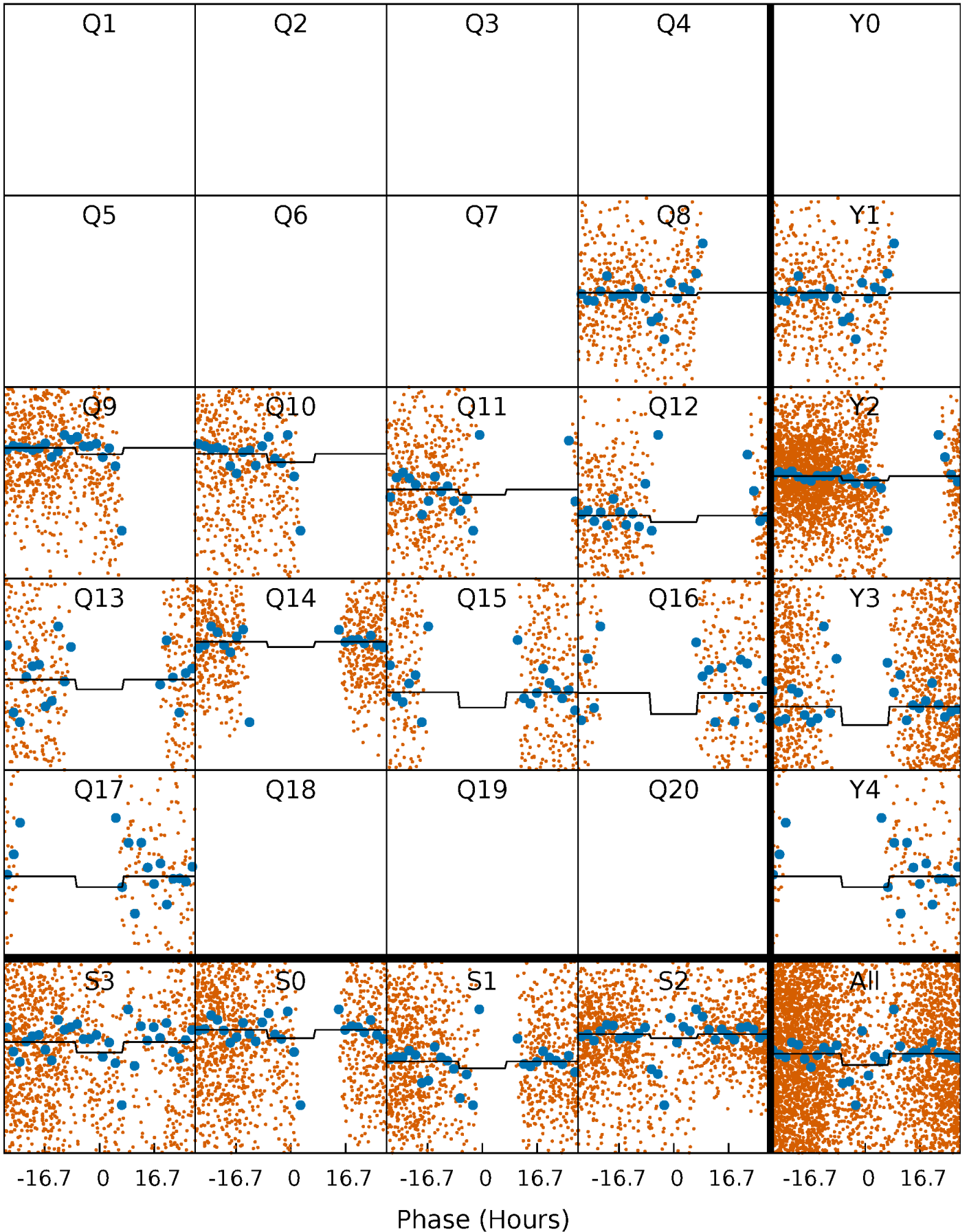
DV Quarter-Phased Transit Curves

TCE 003735629-04 P= 6.996013 Days $T_0=133.877881$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

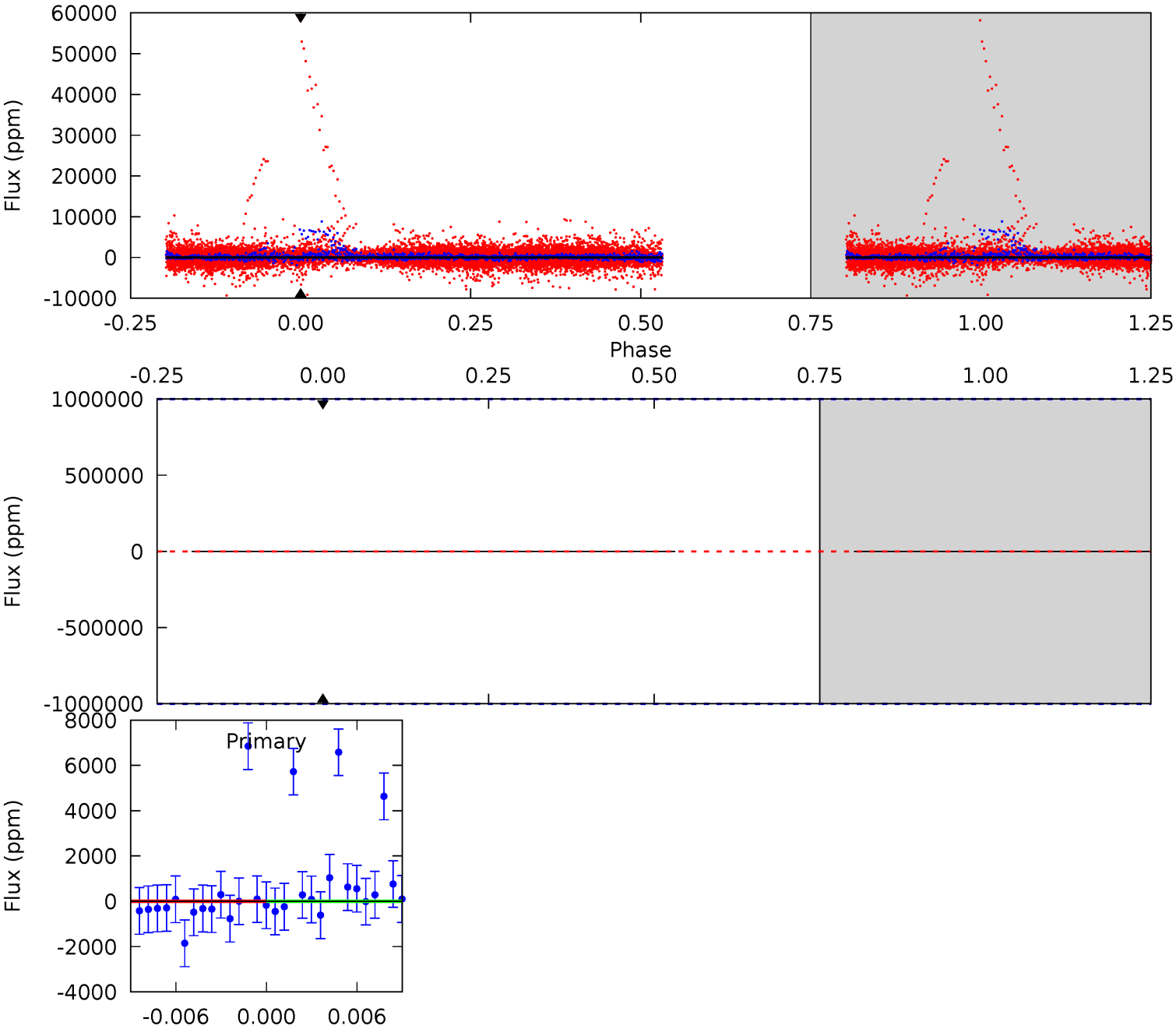
TCE 003735629-04 P= 6.996013 Days $T_0=133.976461$ (BKJD)



DV Model-Shift Uniqueness Test

003735629-04, P = 6.996013 Days, E = 133.877881 Days

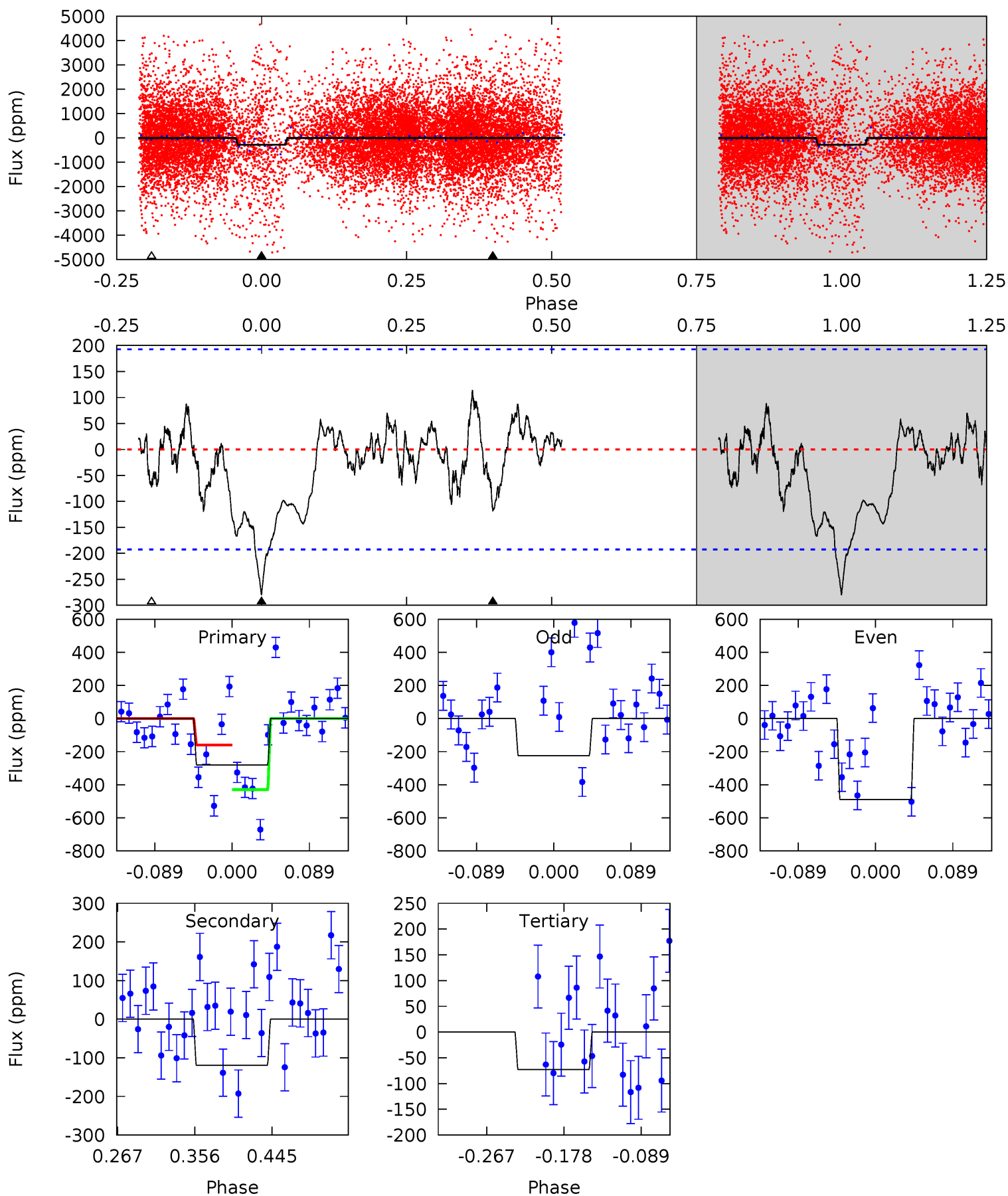
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003735629-04, P = 6.996013 Days, E = 133.976461 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.68	2.84	1.73	0	4.59	1.70	0.90	4.94	6.68	1.10	2.84	2.91	1.26	0.29	3.18



Stellar Parameters For KIC 003735629

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5062^{+193}_{-176}	$3.515^{+0.904}_{-0.226}$	$0.140^{+0.250}_{-0.300}$	$3.579^{+1.214}_{-2.254}$	$1.530^{+0.251}_{-0.585}$	$0.047^{+1.207}_{-0.028}$
	+4%/-3%	+26%/-6%	+179%/-214%	+34%/-63%	+16%/-38%	+2567%/-60%
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 003735629-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$66.18^{+45.51}_{-37.49}$	2003^{+226}_{-409}	3249^{+3509}_{-9501}	$3.012^{+125.983}_{-92.505}$
Alt.	-119 ± 42	$22.82^{+29.92}_{-16.29}$	1968^{+242}_{-364}	2536^{+1341}_{-4857}	$0.734^{+8.675}_{-0.600}$

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 $A_{obs} \gg 1.0$

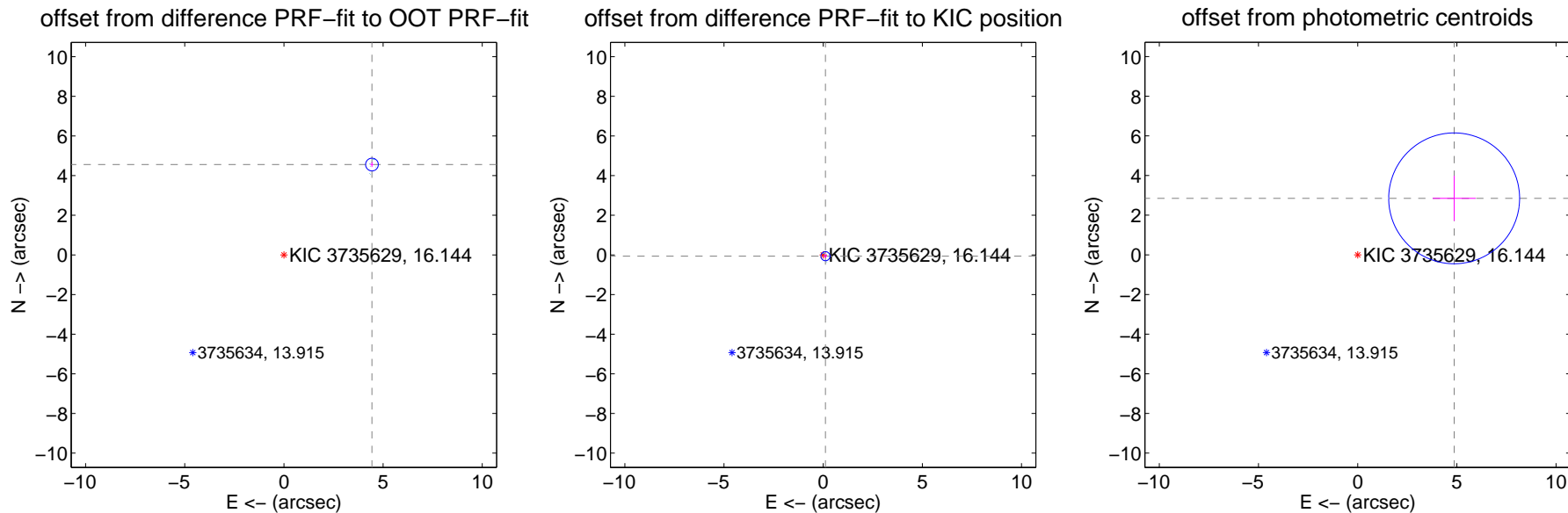
DV Centroid Data

Supplemental centroid analysis for 003735629-04. Kepler magnitude: 16.14. Transit SNR -1.00

There are 10 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 6.23 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.364 ± 0.107	59.49	-4.440 ± 0.080	4.559 ± 0.127
PRF-fit source offset from KIC position	0.131 ± 0.076	1.72	-0.114 ± 0.070	-0.065 ± 0.094
photometric centroid source offset	5.64 ± 1.10	5.13	-4.86 ± 1.09	2.85 ± 1.14

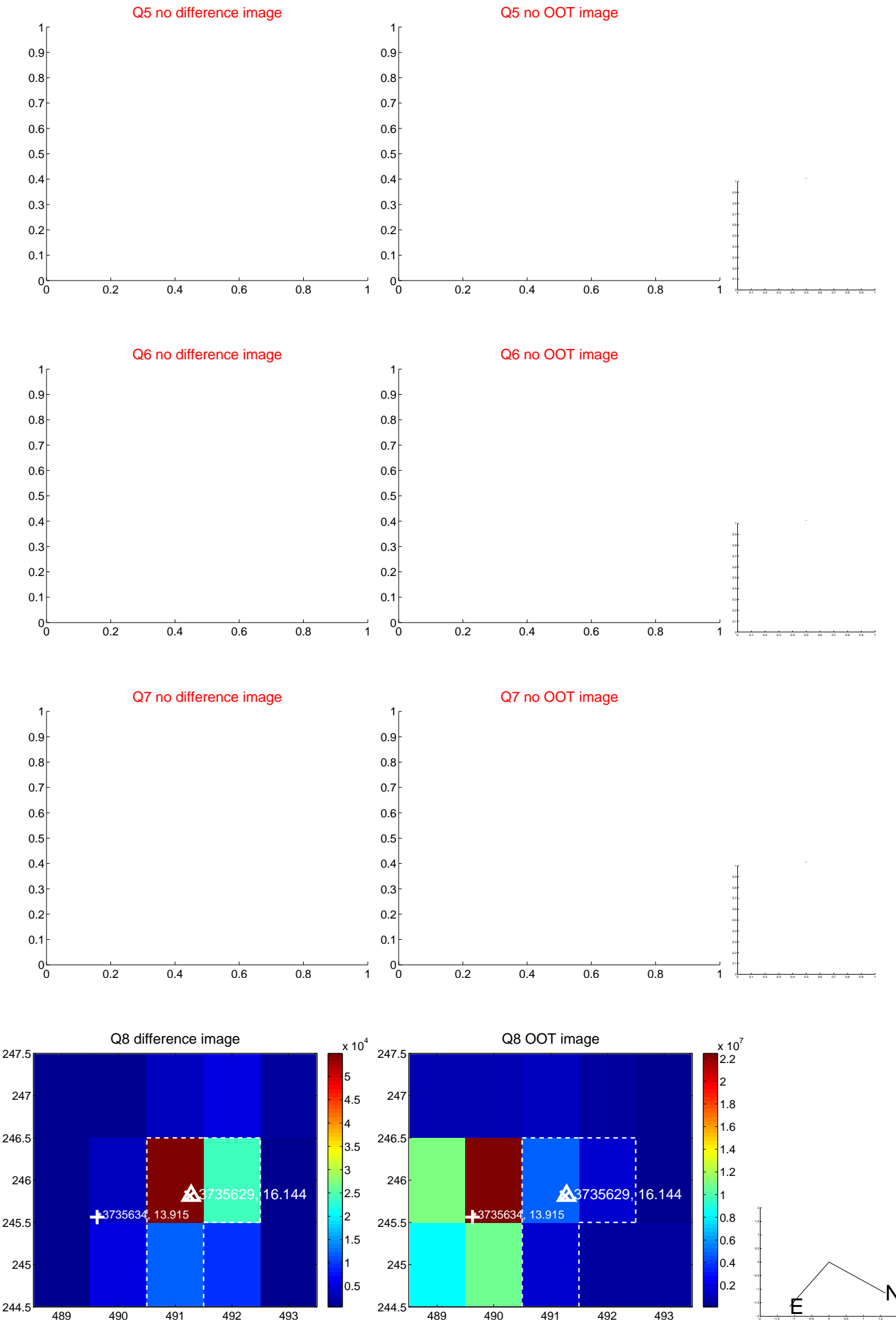


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

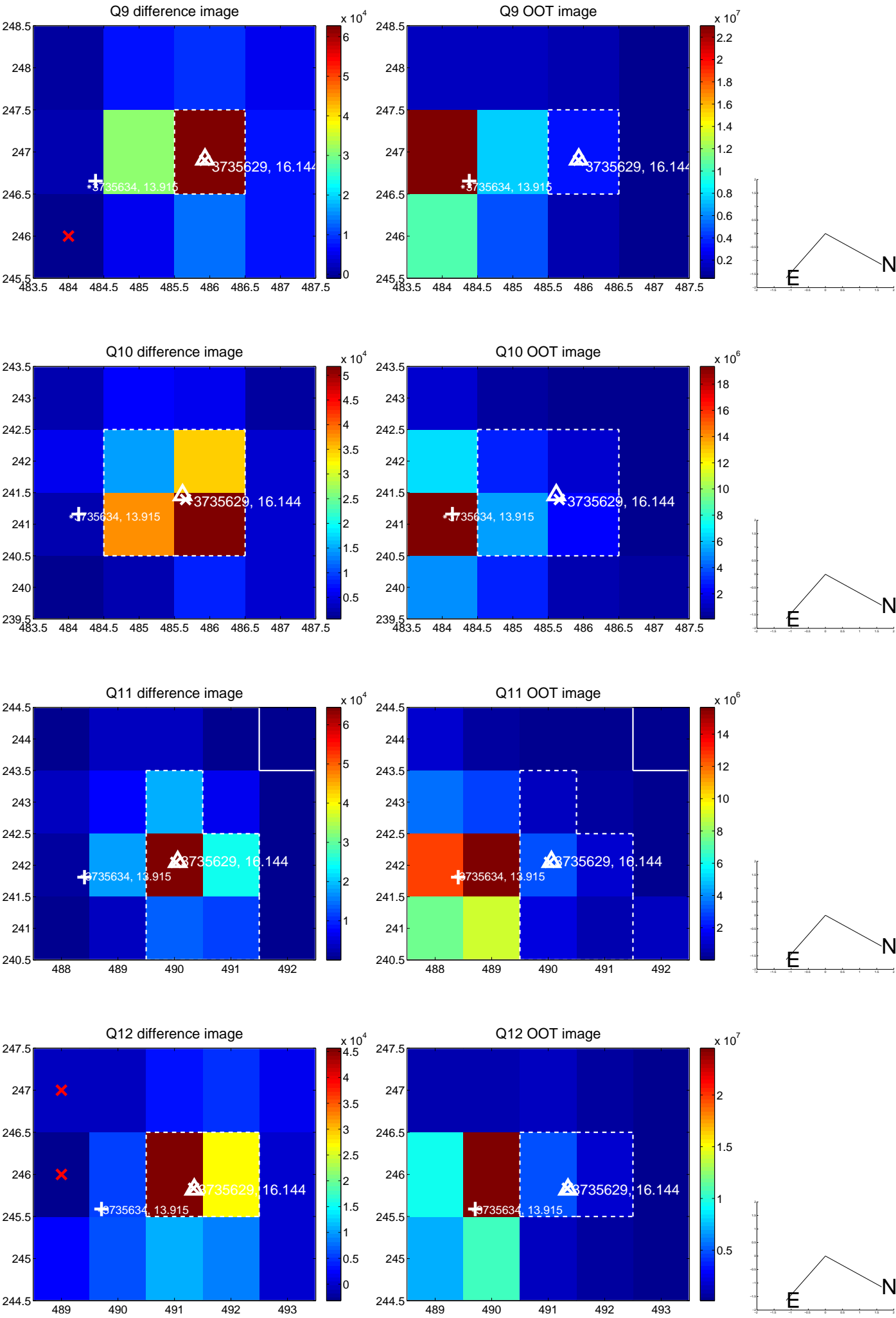
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



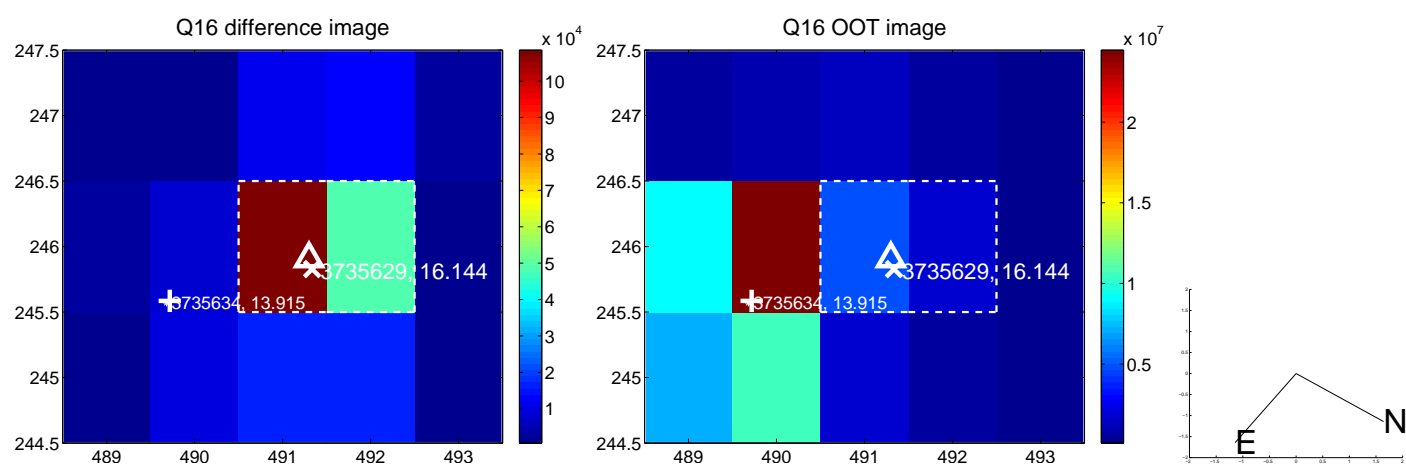
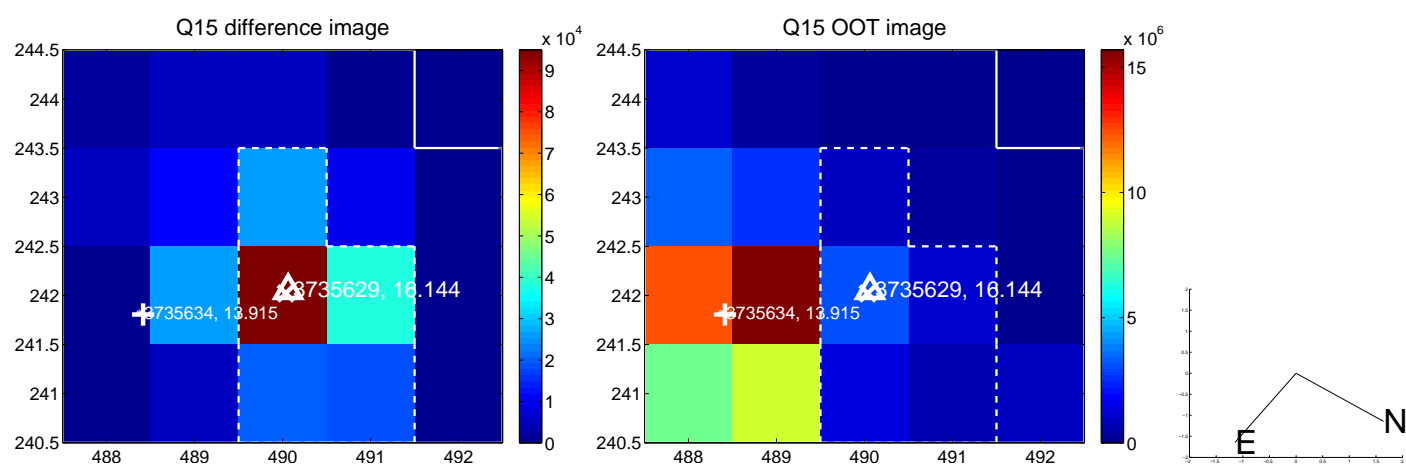
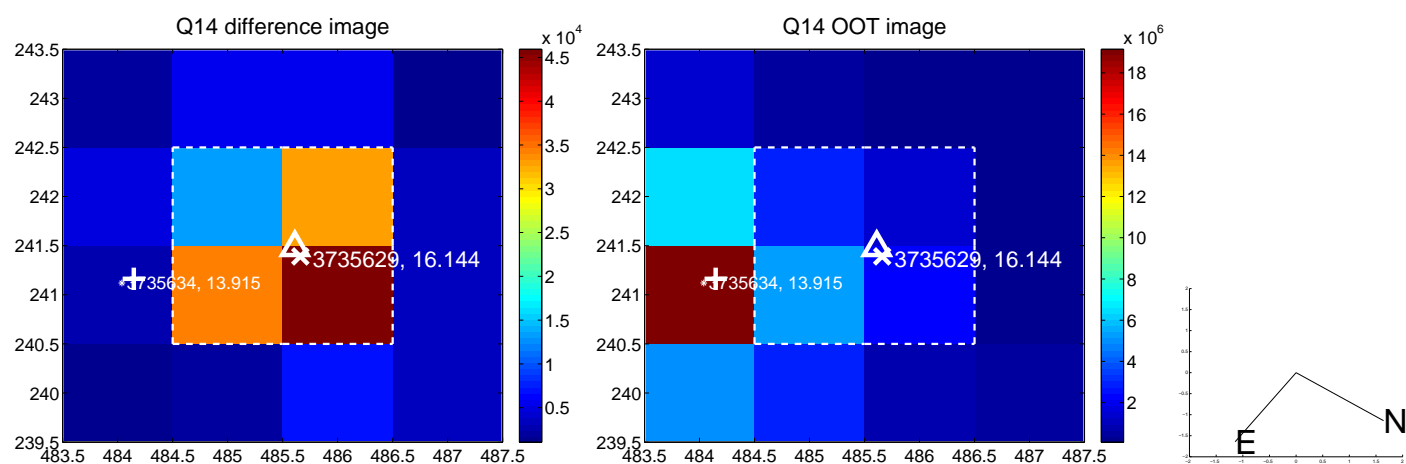
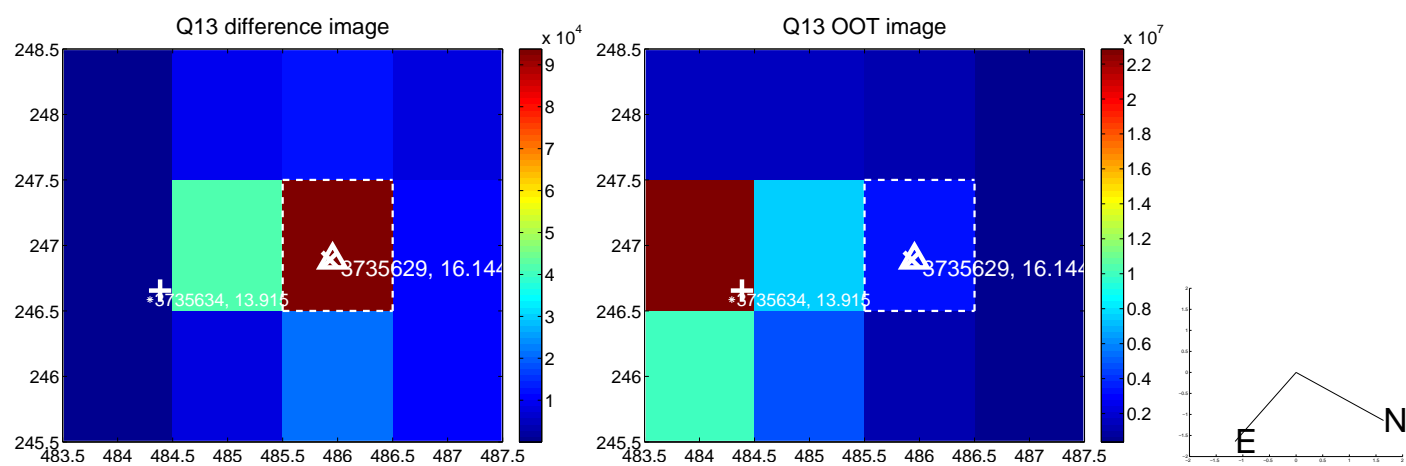
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



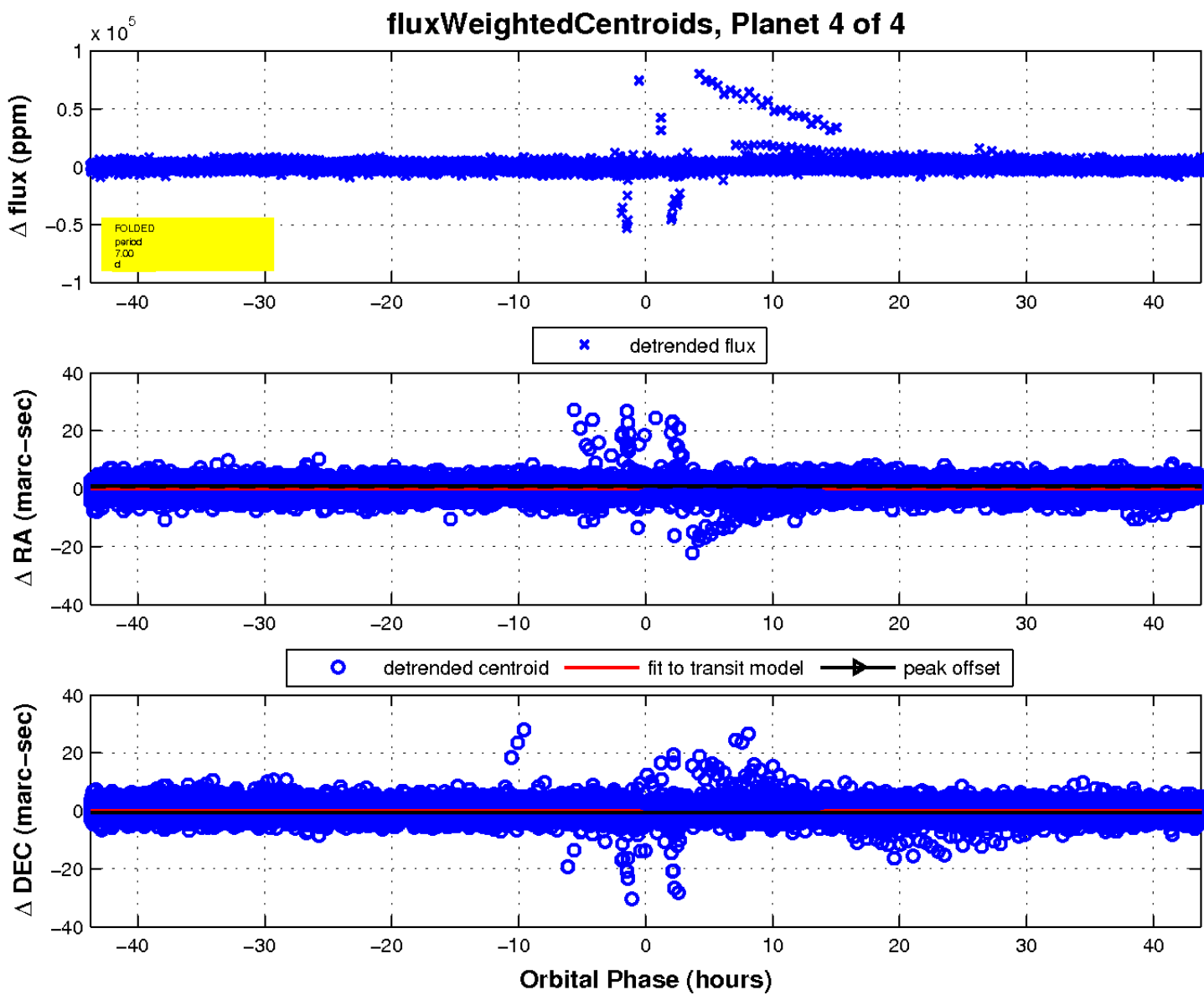
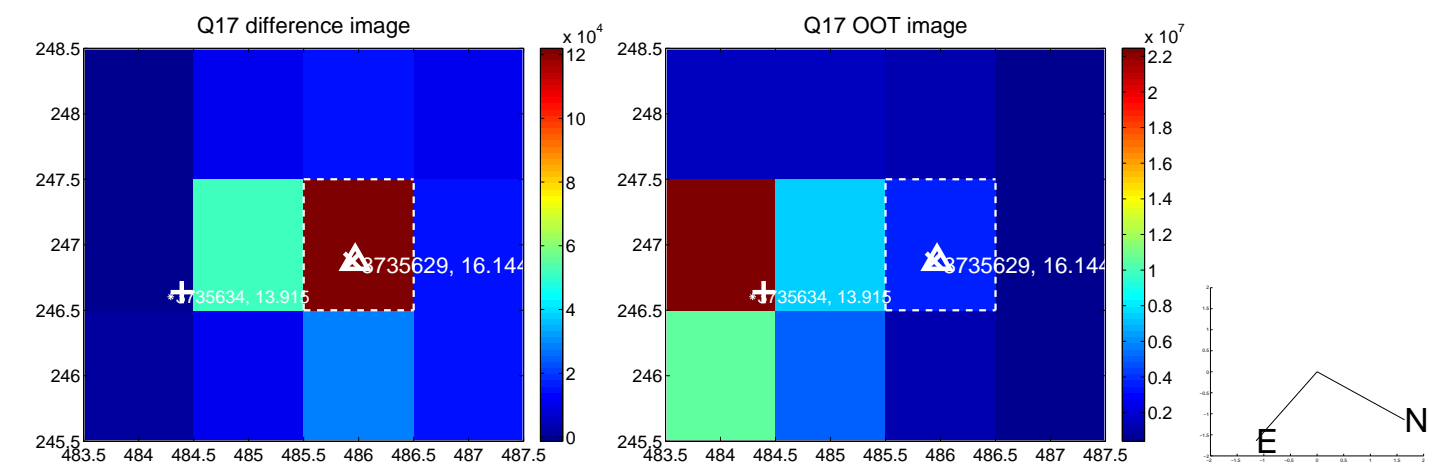
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

