

KIC 007617709

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})
007617709-01	OBS	No	2.121147	133.485079	25.4	3.233	10.2	3.6	4.53	7046	2.75	26155.20
007617709-02	OBS	No	2.121265	132.500330	7.5	1.378	9.1	1.1	4.53	7046	1.26	26153.28
007617709-03	OBS	No	2.120895	132.907673	36.8	2.663	8.3	5.0	4.53	7046	3.20	26159.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007617709-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007617709-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
007617709-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—HALO_GHOST

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

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

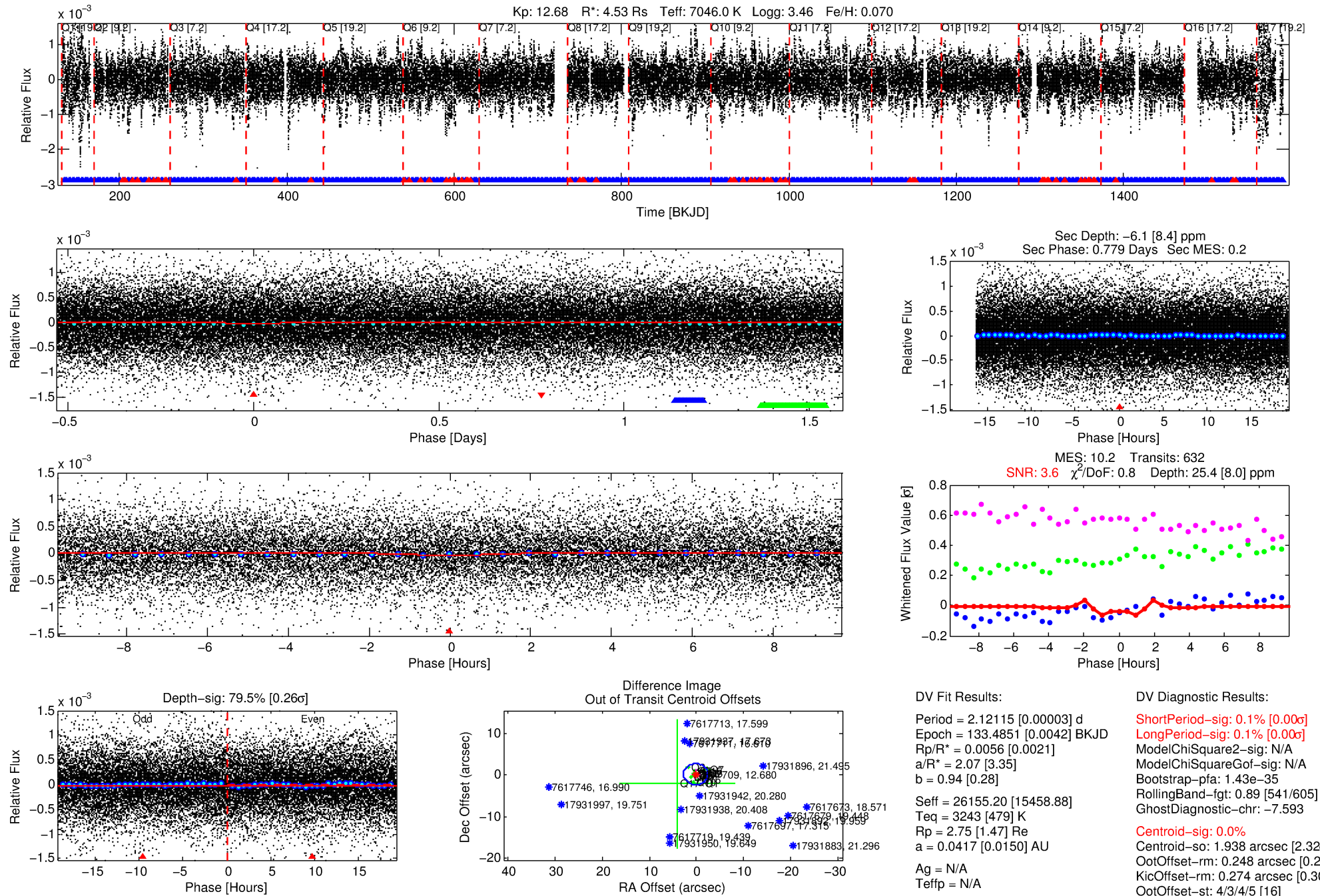
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007617709-01

No Significant Match Found

DV One-Page Summary

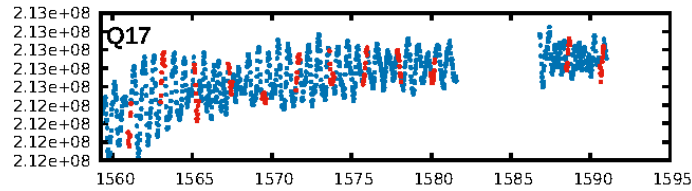
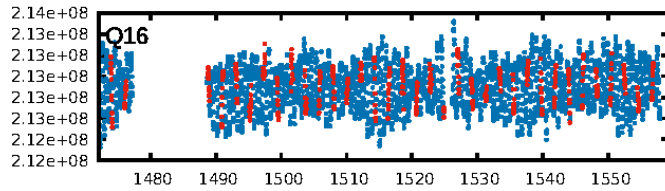
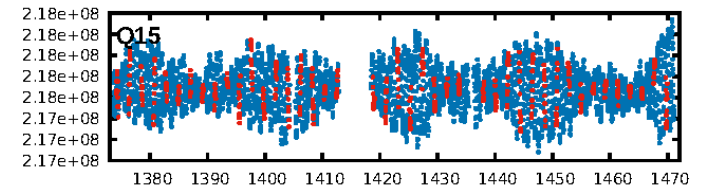
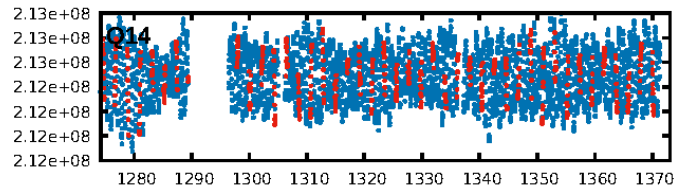
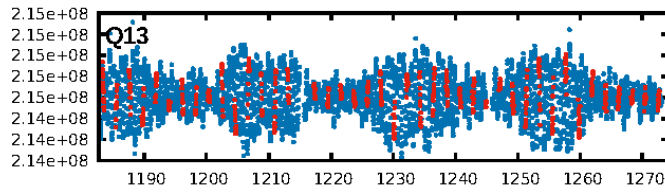
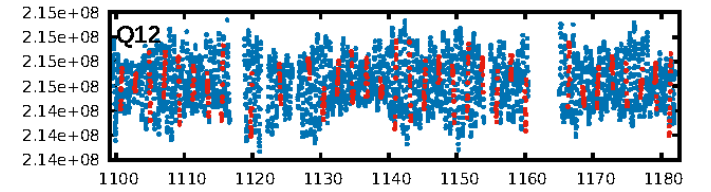
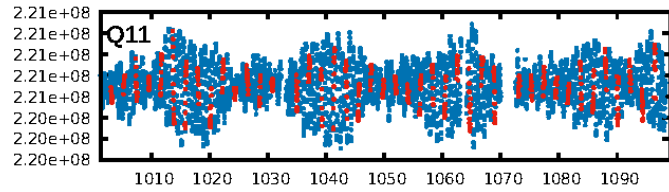
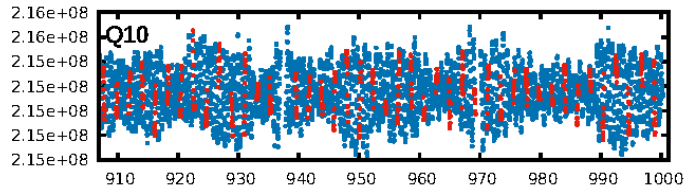
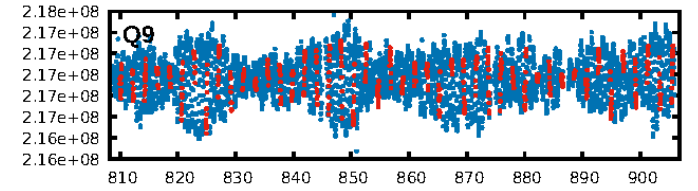
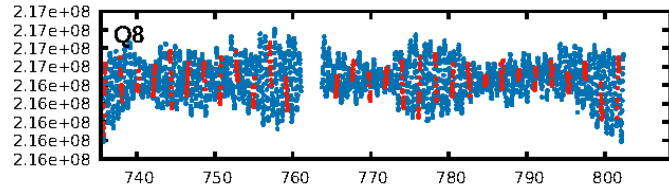
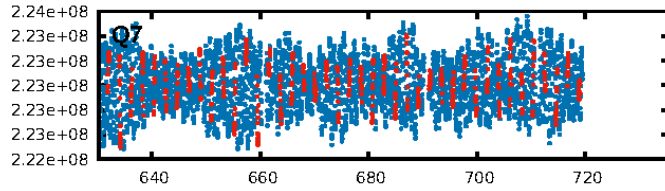
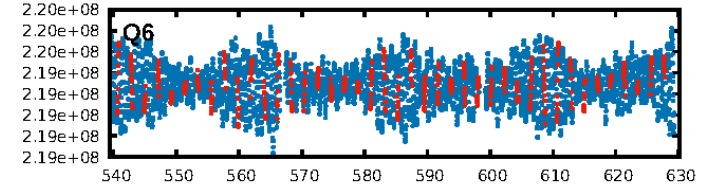
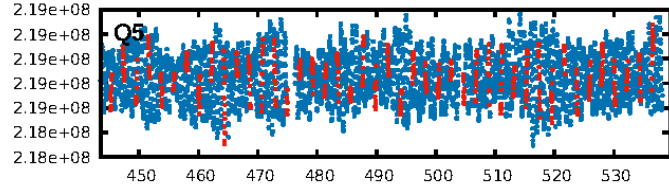
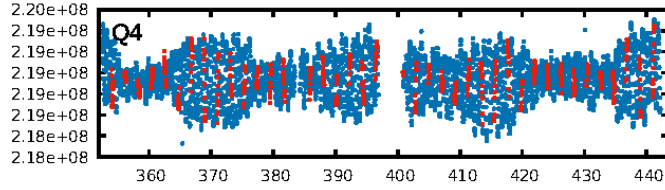
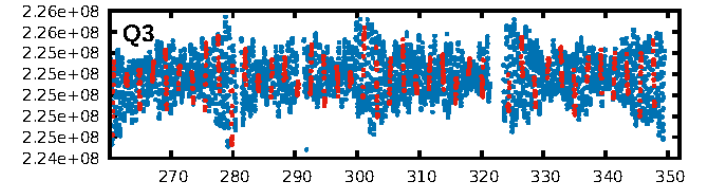
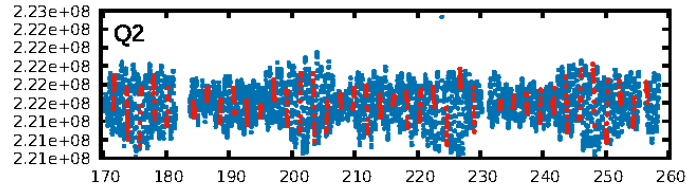
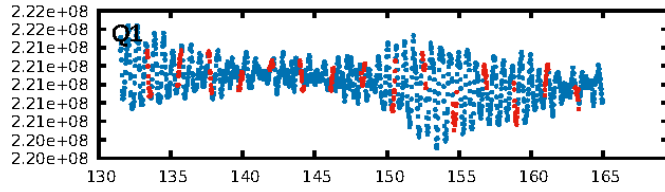
KIC: 7617709 Candidate: 1 of 3 Period: 2.121 d



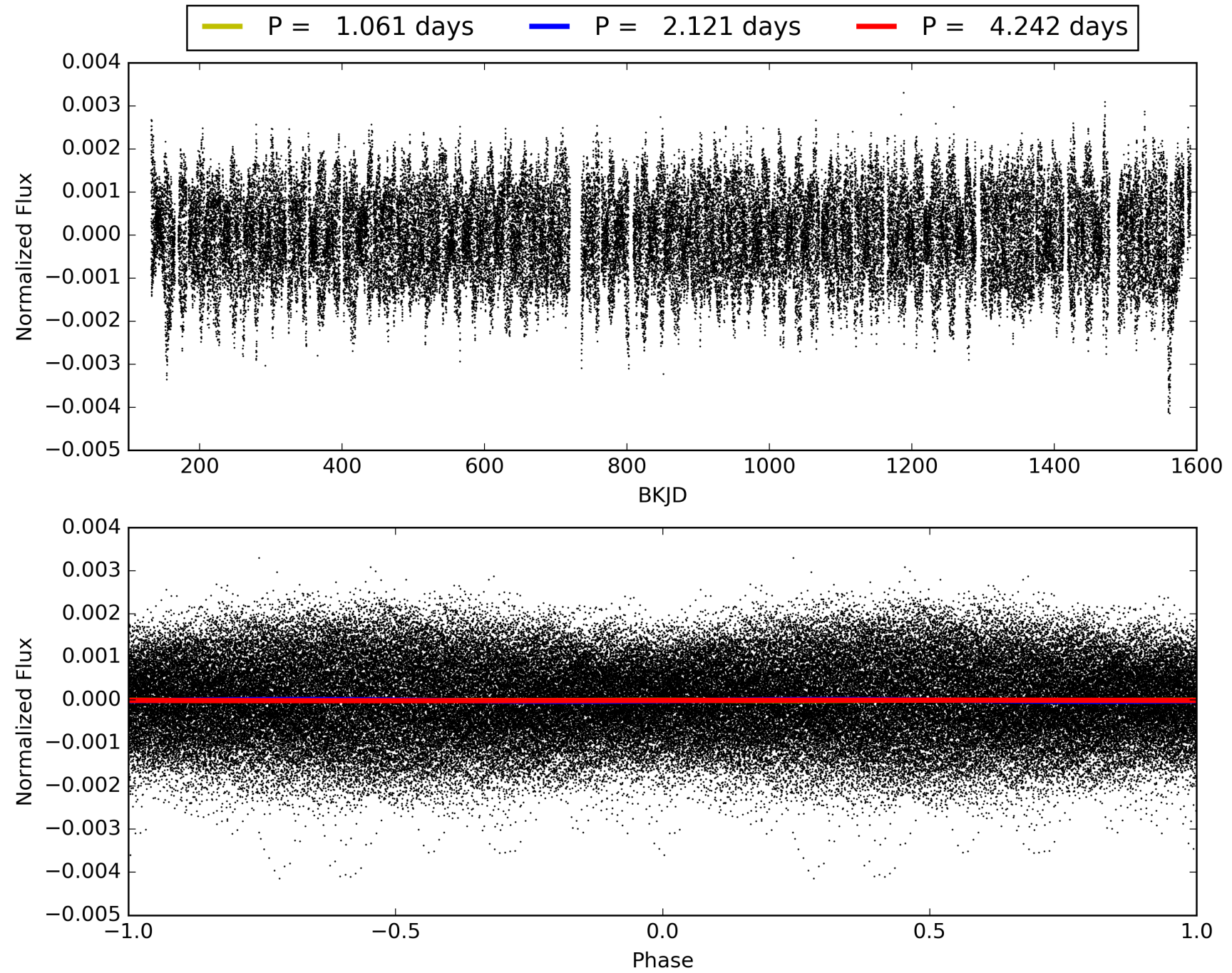
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:12:42 Z

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

TCE 007617709-01, PDC Light Curves

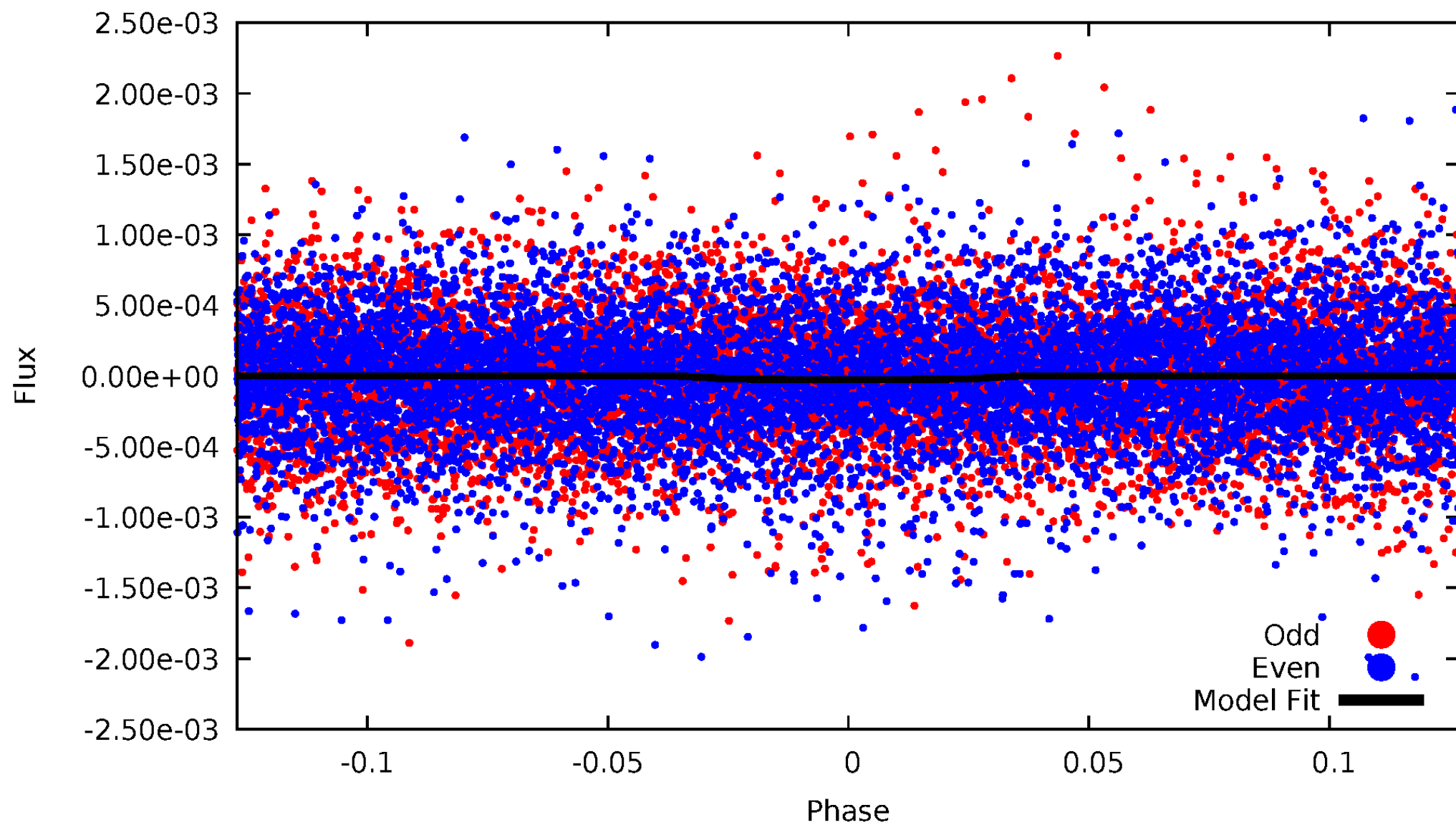


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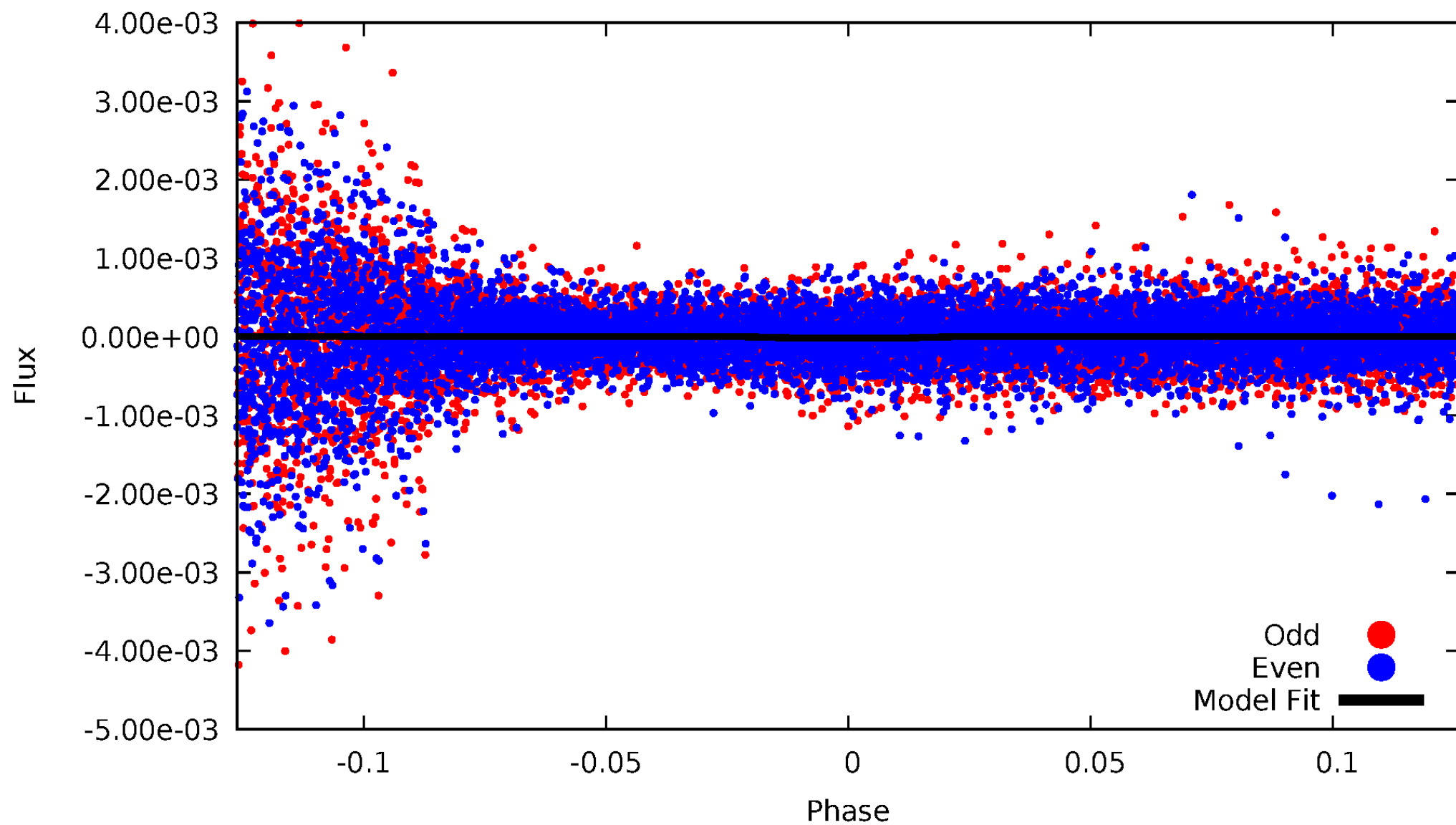
DV Odd/Even

TCE 007617709-01

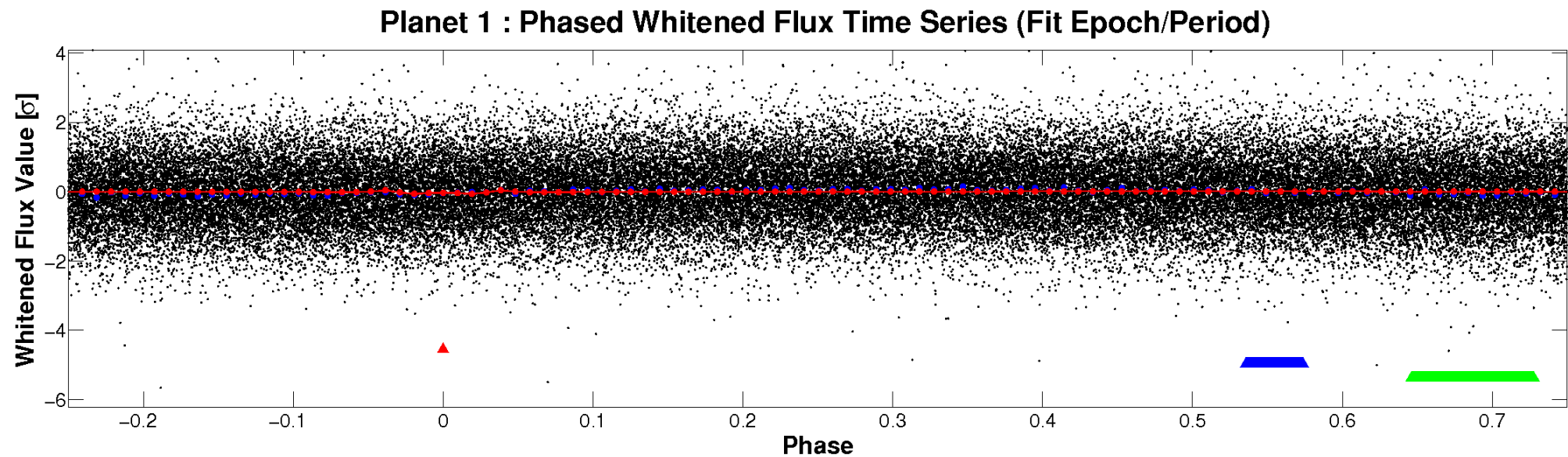
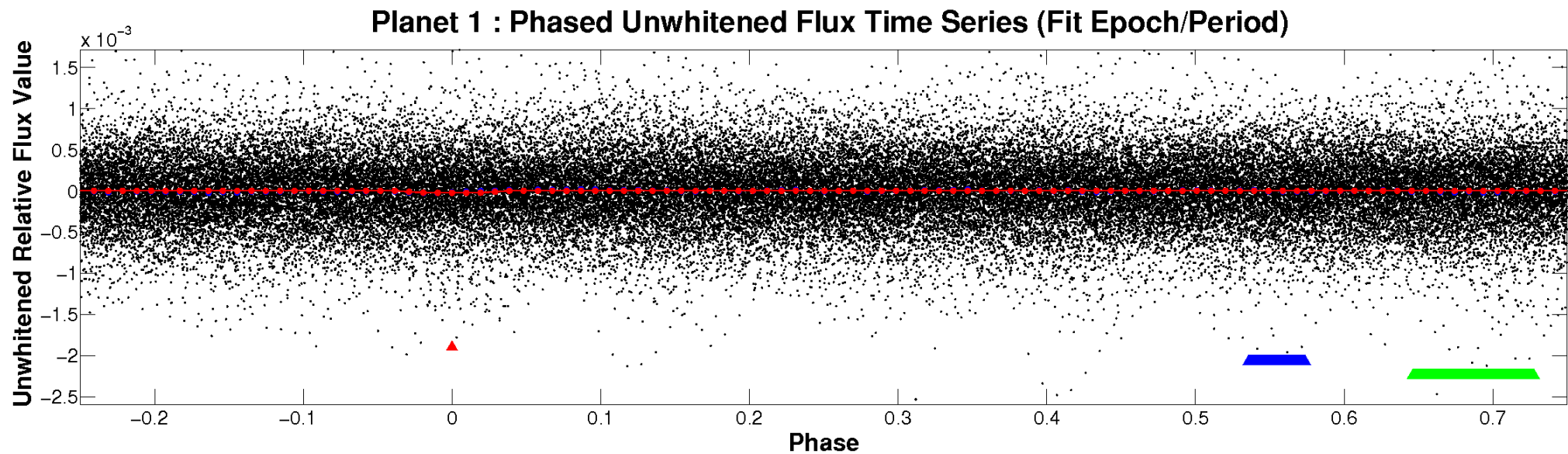


ALT Odd/Even

TCE 007617709-01

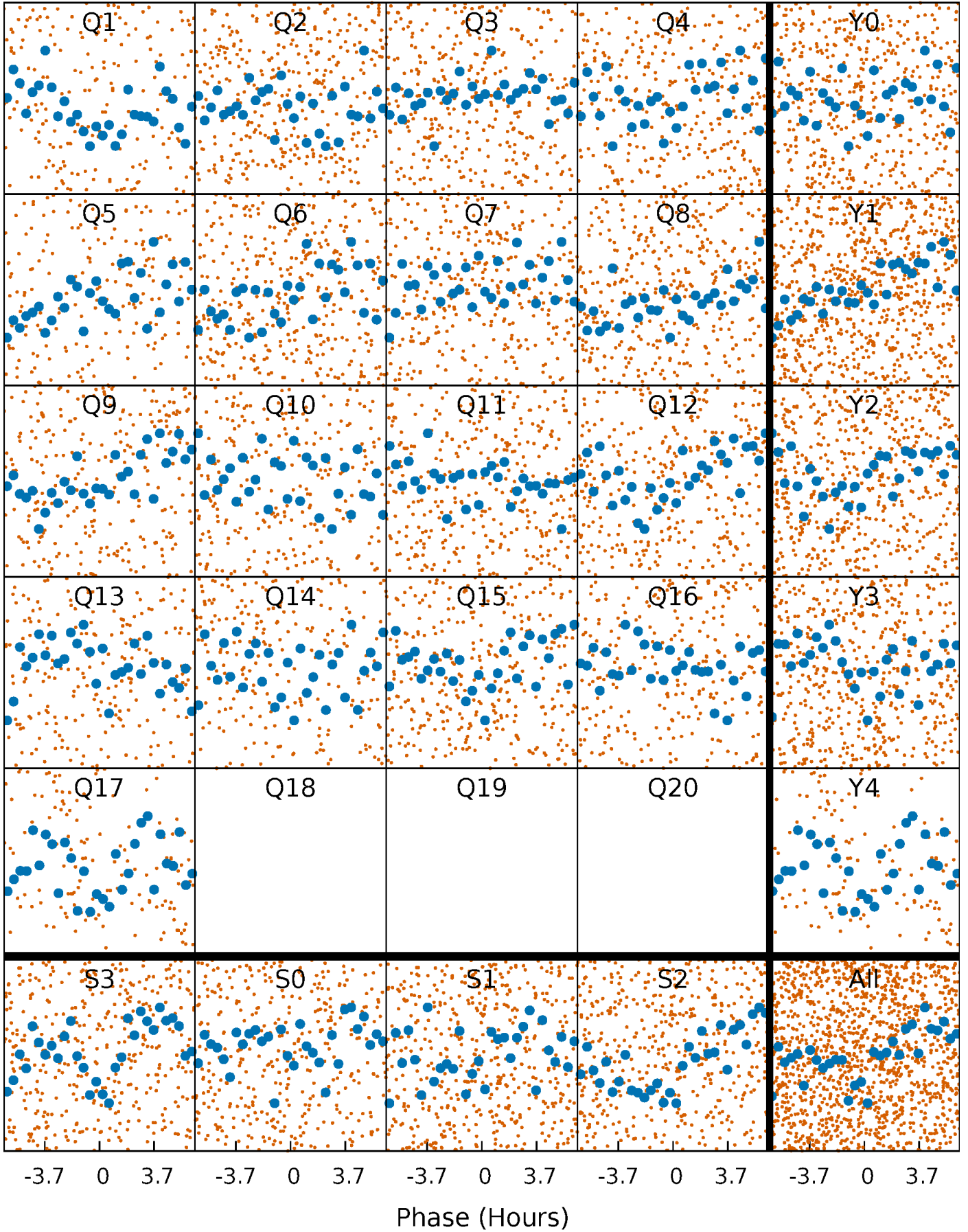


Non-Whitened Vs. Whitened Light Curve



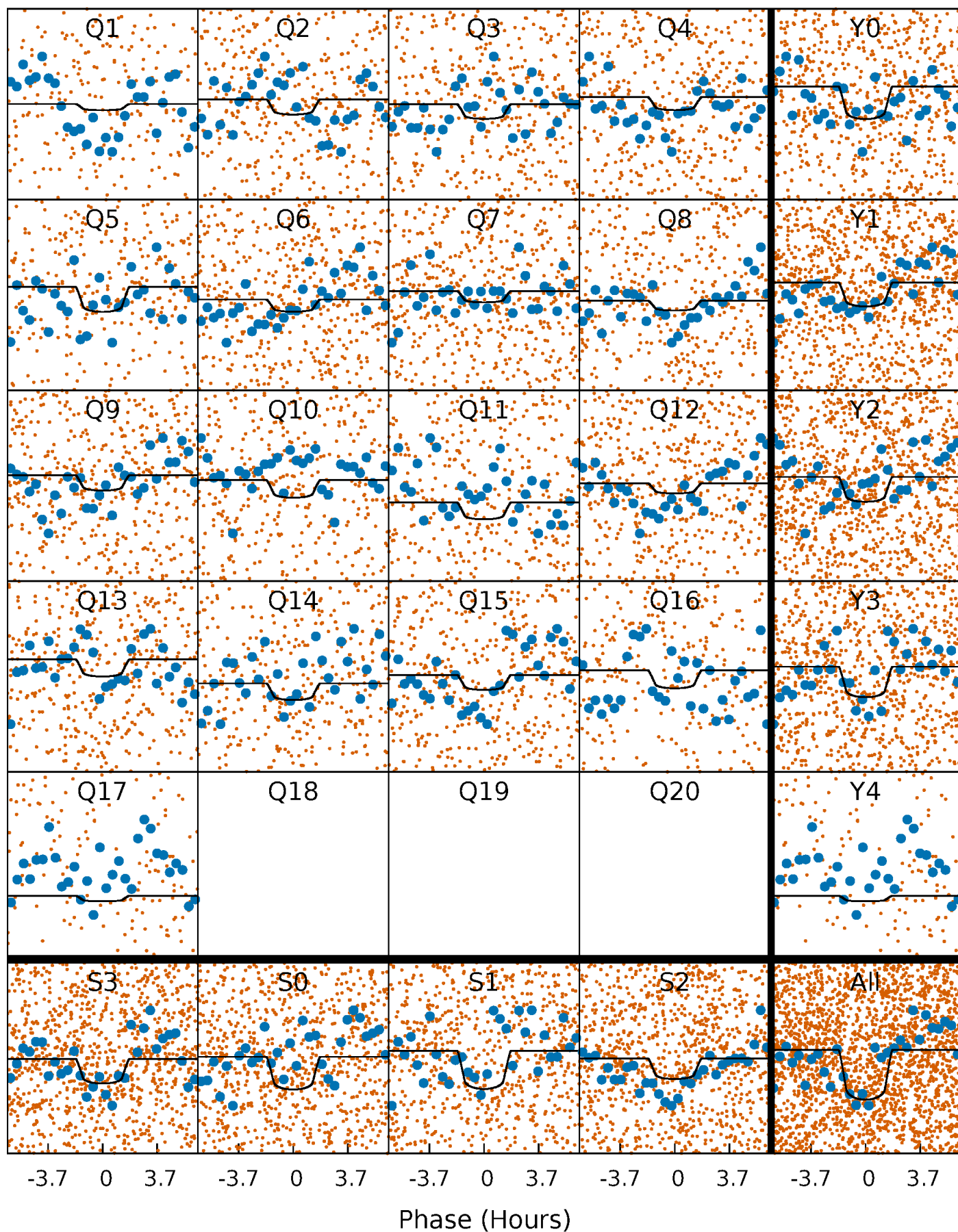
PDC Quarter-Phased Transit Curves

TCE 007617709-01 P= 2.121147 Days $T_0=133.485079$ (BKJD)



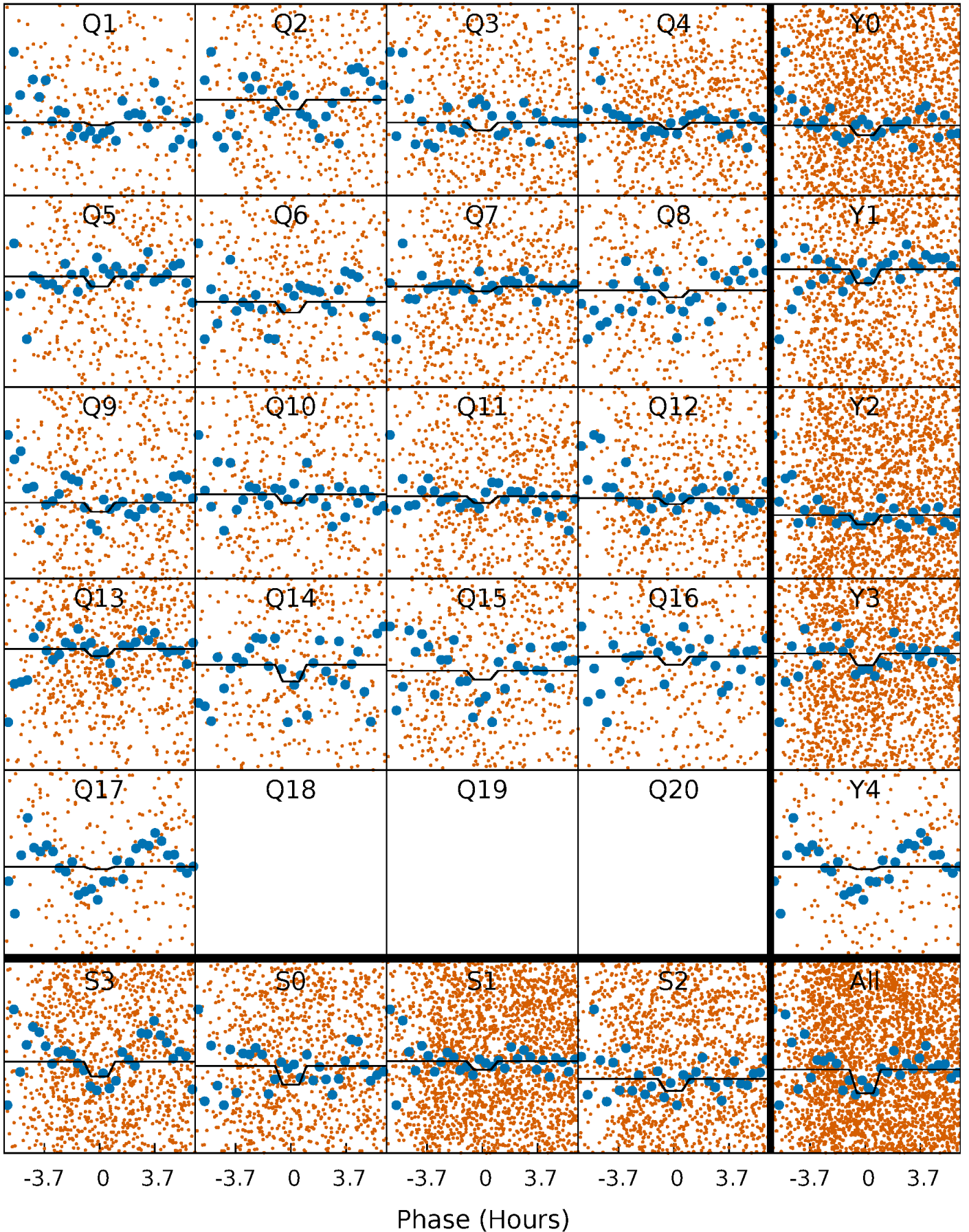
DV Quarter-Phased Transit Curves

TCE 007617709-01 P= 2.121147 Days $T_0=133.485079$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

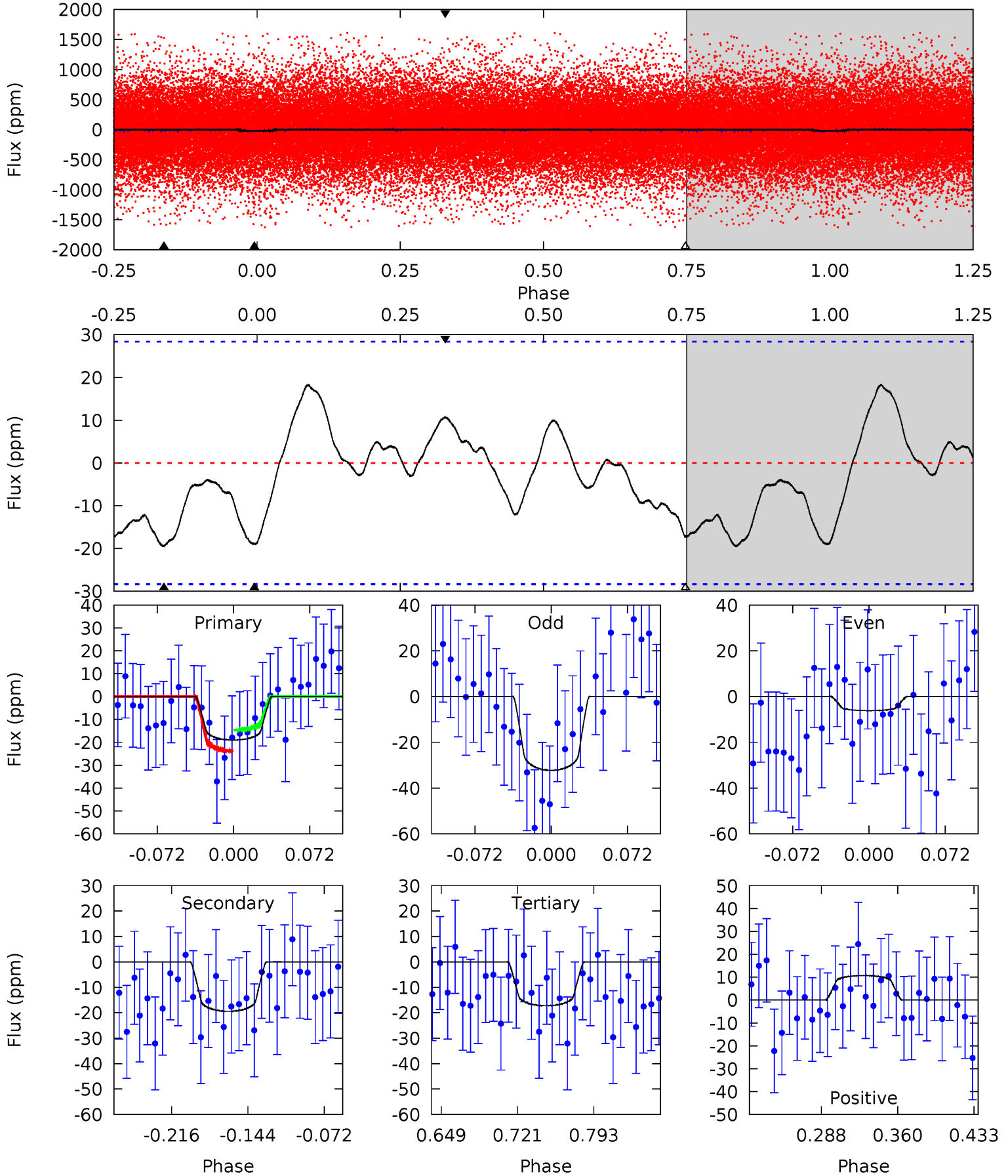
TCE 007617709-01 P= 2.121097 Days $T_0=133.503154$ (BKJD)



DV Model-Shift Uniqueness Test

007617709-01, P = 2.121147 Days, E = 131.363932 Days

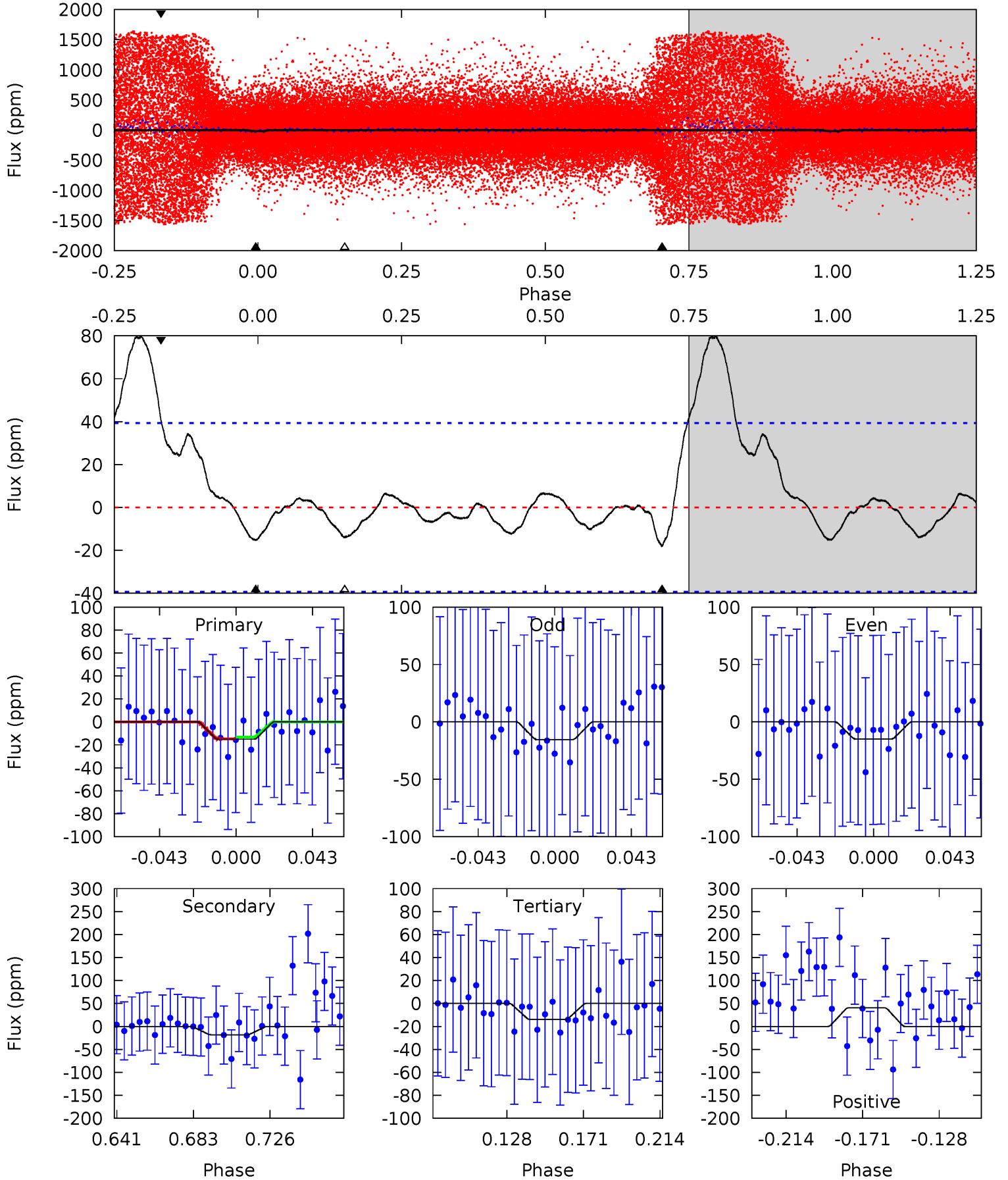
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.11	3.18	2.82	1.75	4.63	1.80	1.29	0.29	1.36	0.36	1.43	2.14	2.22	0.48	0.74



Alt Model-Shift Uniqueness Test

007617709-01, P = 2.121097 Days, E = 131.382057 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.82	2.18	1.67	4.89	4.74	2.03	2.22	0.15	-3.07	0.52	-2.70	0.03	5.82	0.82	0.08



Stellar Parameters For KIC 007617709

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7046^{+171}_{-245}	$3.456^{+0.336}_{-0.063}$	$0.070^{+0.250}_{-0.250}$	$4.534^{+0.202}_{-1.720}$	$2.142^{+0.174}_{-0.376}$	$0.032^{+0.082}_{-0.006}$
	+2%/-3%	+10%/-2%	+357%/-357%	+4%/-38%	+8%/-18%	+253%/-20%
Source	PHO1	FLK73	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 007617709-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-19 ± 6	$2.57^{+1.18}_{-1.01}$	4453^{+191}_{-374}	5911^{+2285}_{-1076}	$2.656^{+5.146}_{-1.437}$
Alt.	-18 ± 8	$1.96^{+1.00}_{-0.98}$	4423^{+220}_{-363}	6870^{+3944}_{-1651}	$4.590^{+12.564}_{-2.959}$

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 $A_{obs} \gg 1.0$

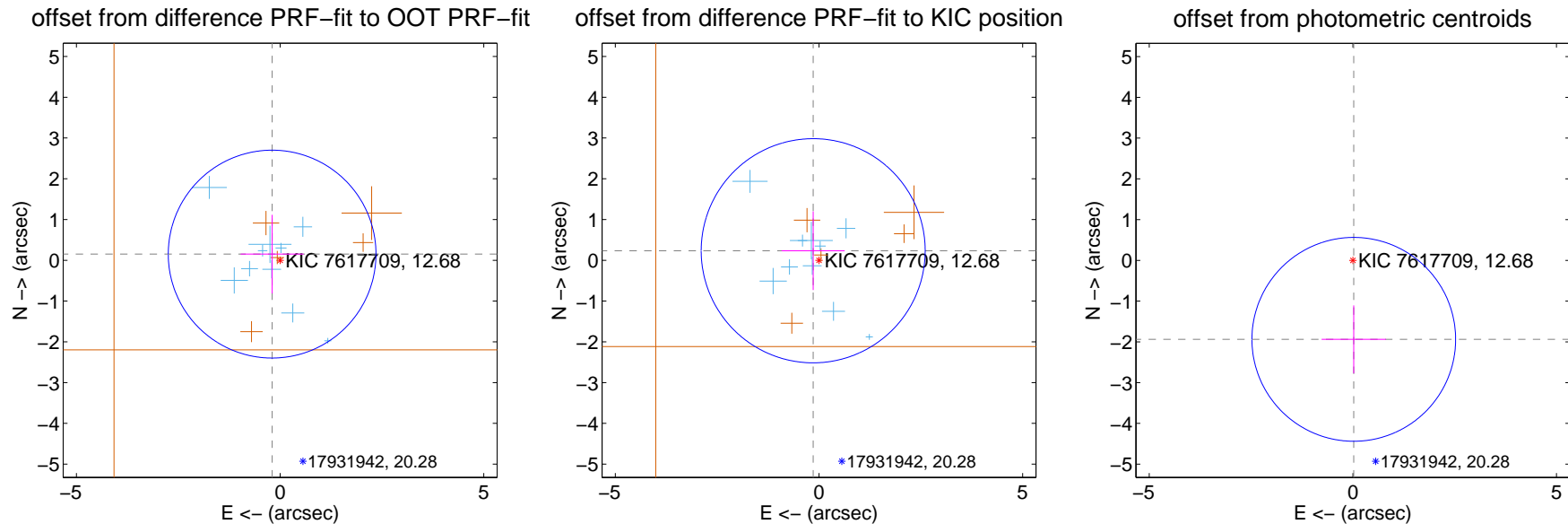
DV Centroid Data

Supplemental centroid analysis for 007617709-01. Kepler magnitude: 12.68. Transit SNR 3.63

There are 10 quarters with good PRF difference image offsets

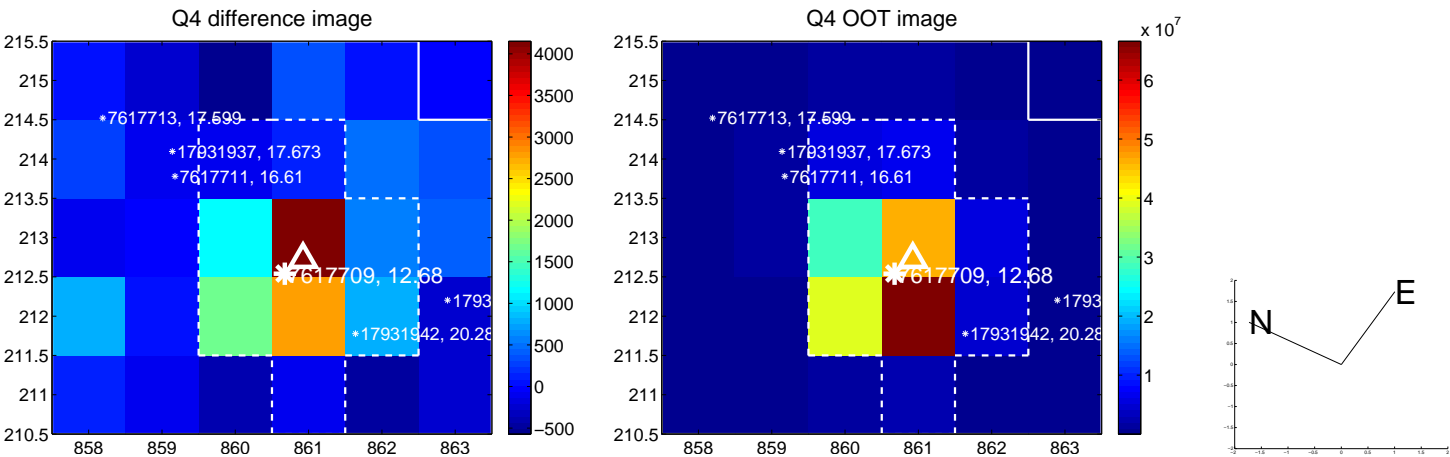
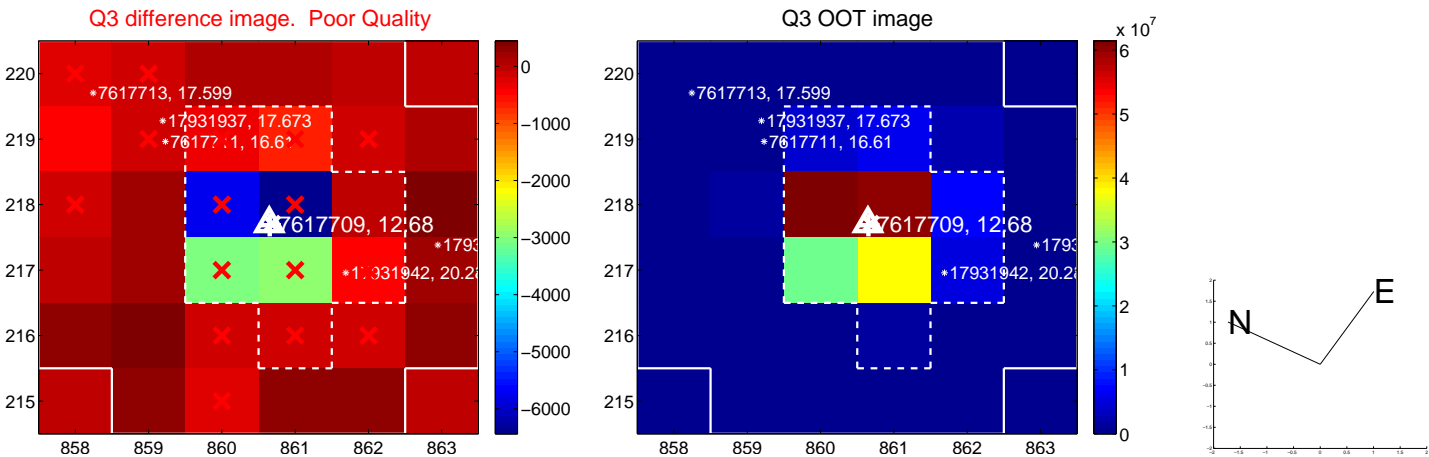
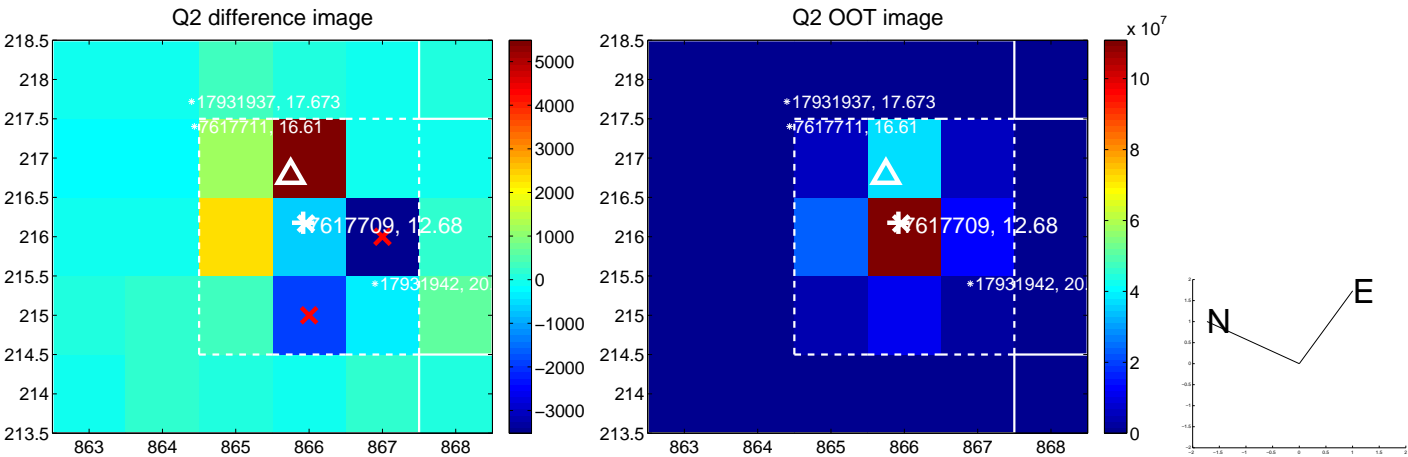
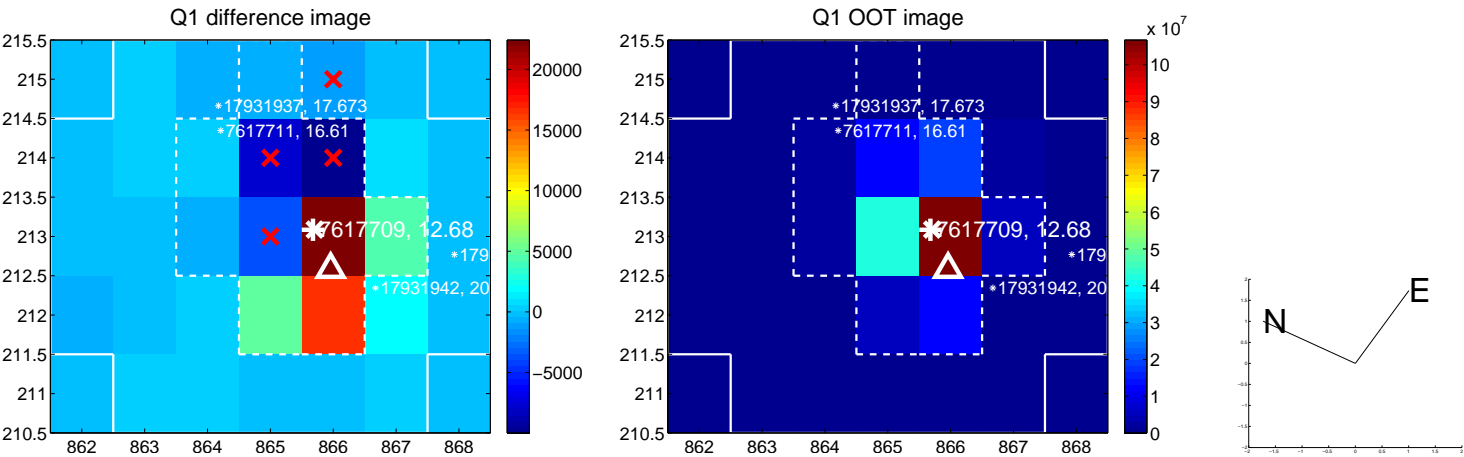
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.248 ± 0.850	0.29	0.196 ± 0.773	0.152 ± 0.964
PRF-fit source offset from KIC position	0.274 ± 0.916	0.30	0.142 ± 0.773	0.234 ± 0.964
photometric centroid source offset	1.94 ± 0.83	2.32	-0.02 ± 0.79	-1.94 ± 0.83

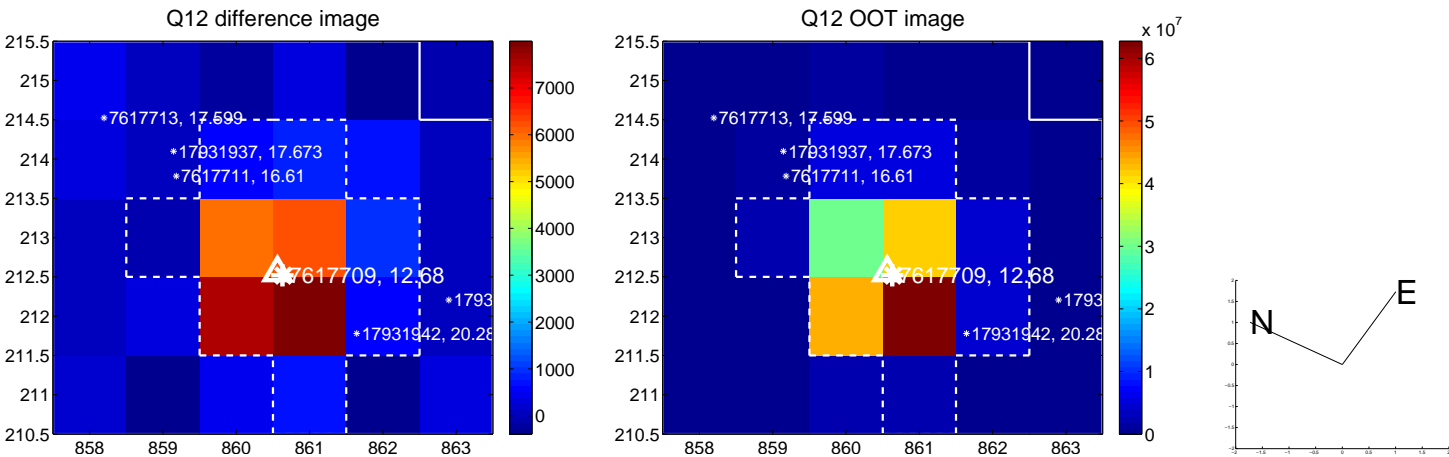
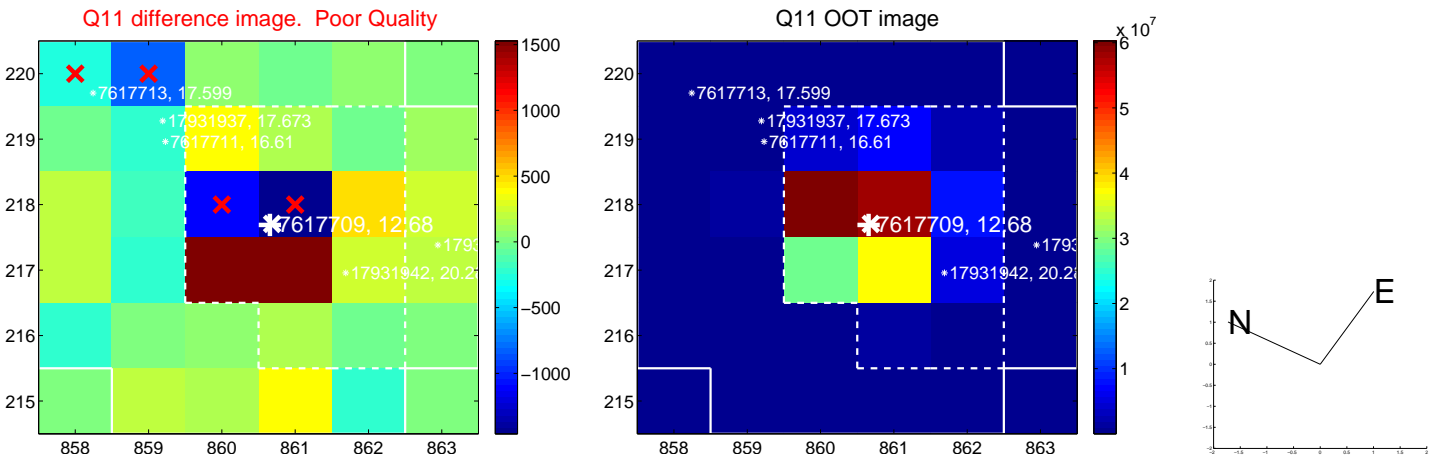
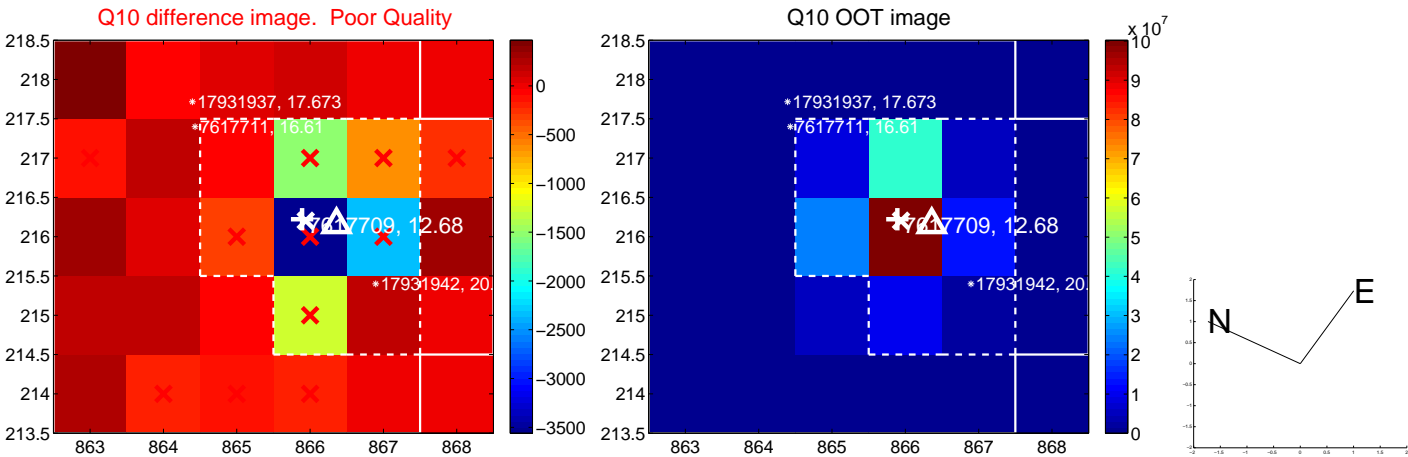
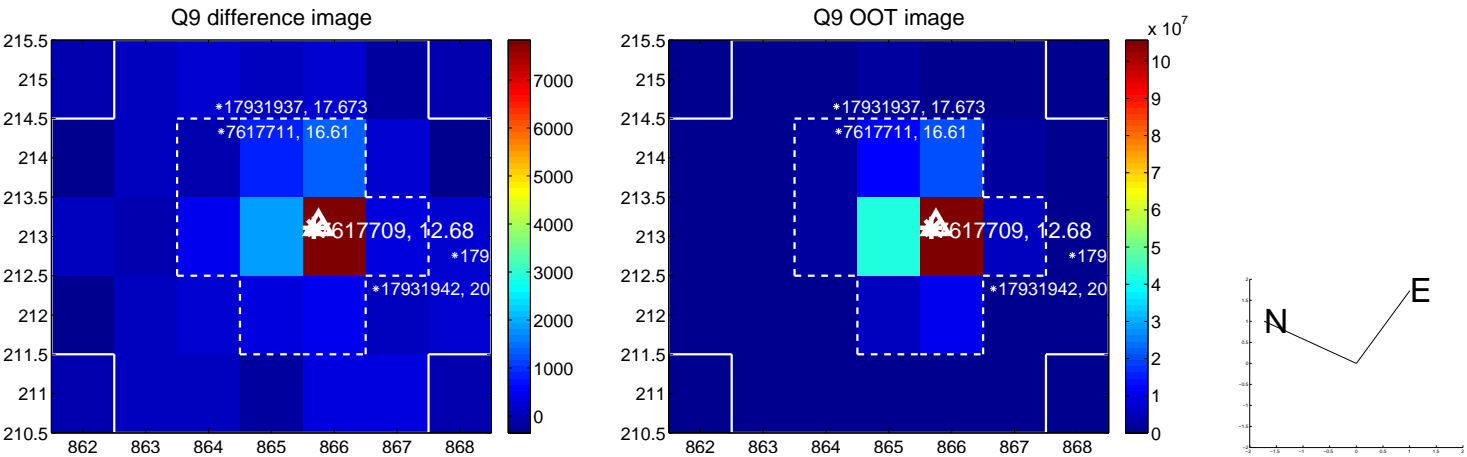


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

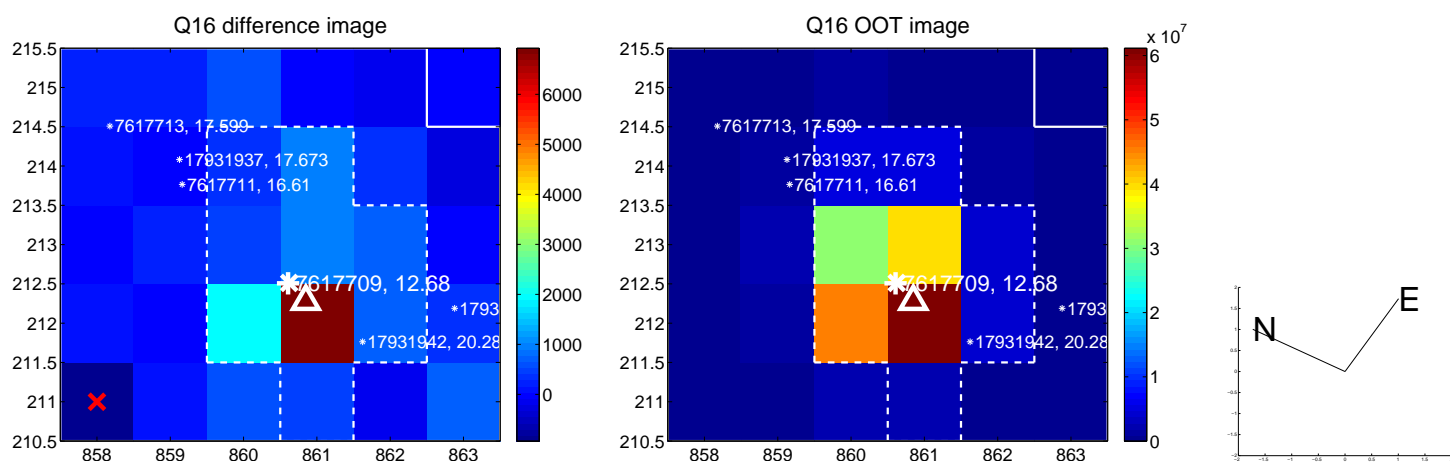
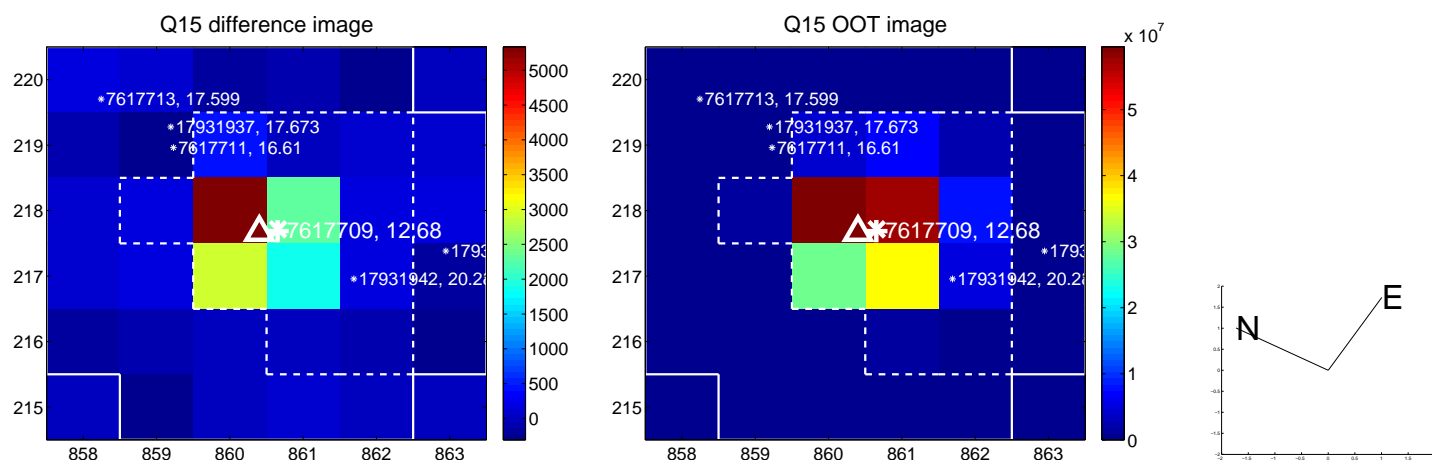
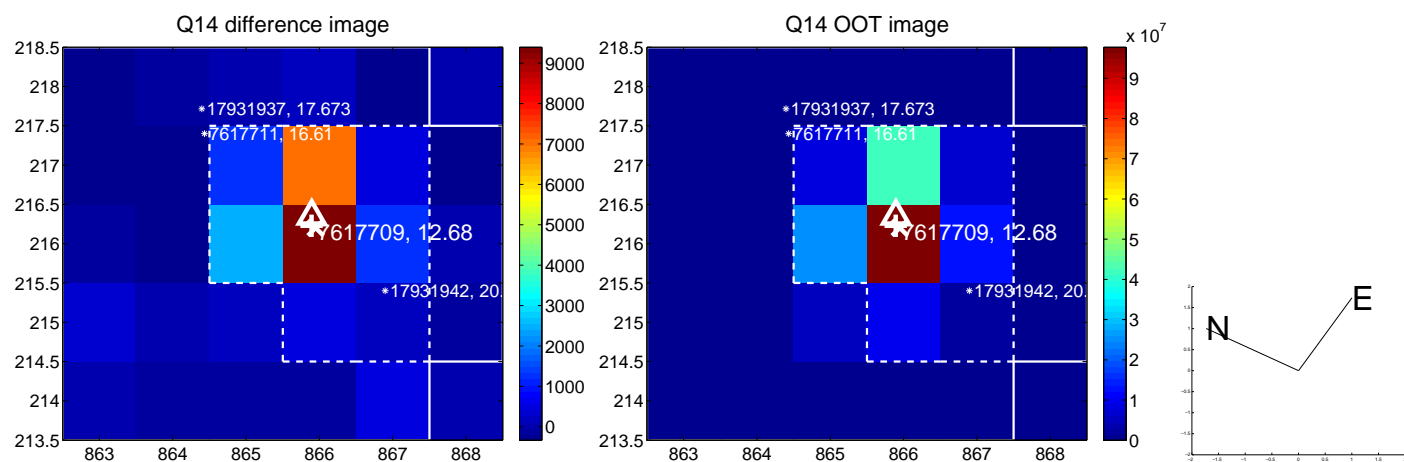
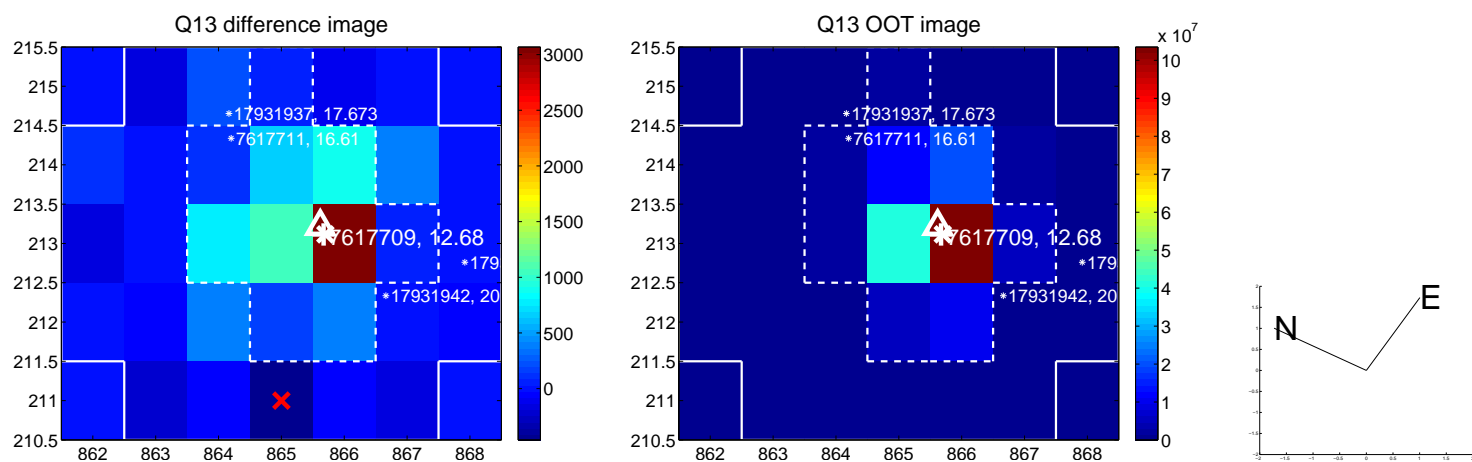
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



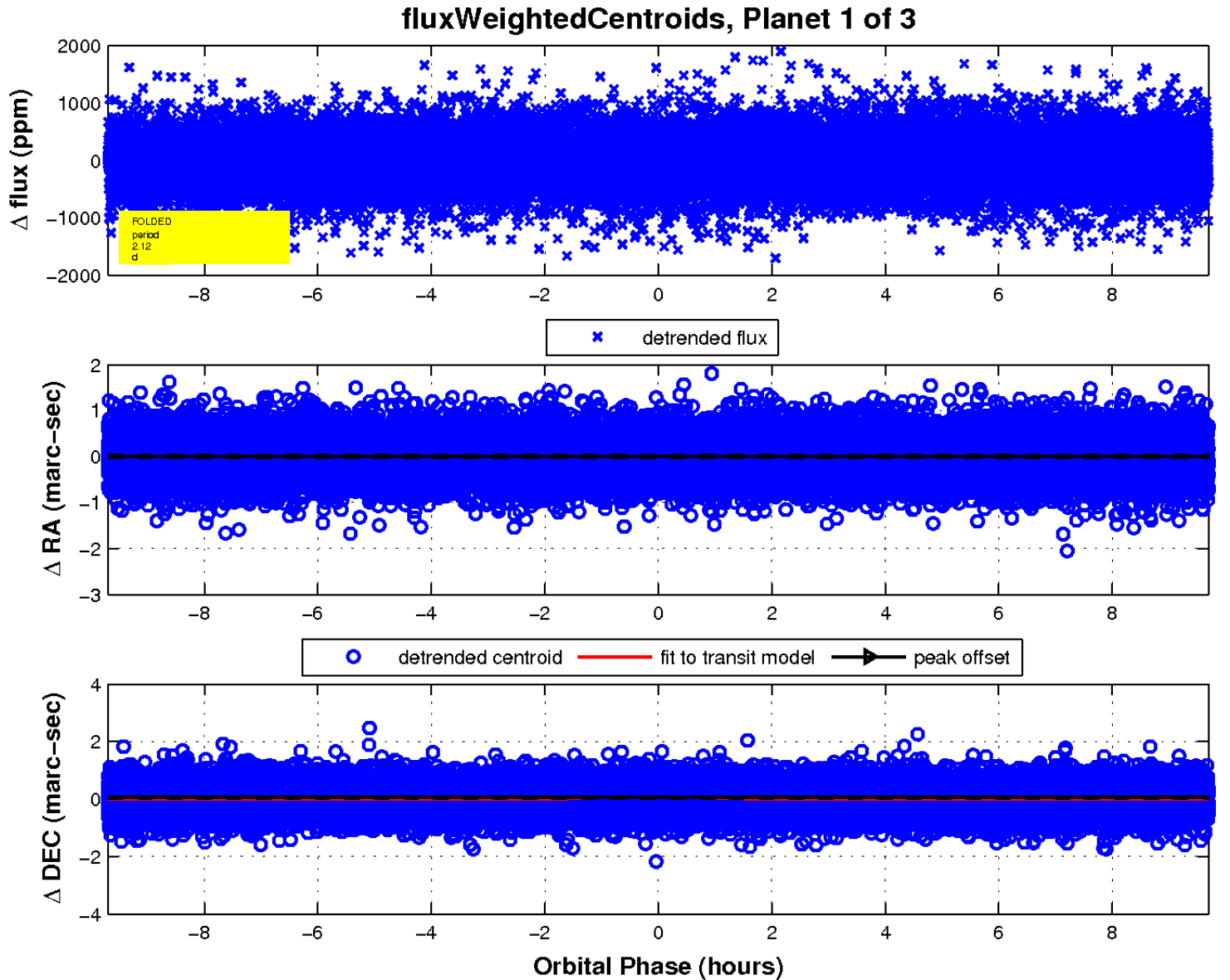
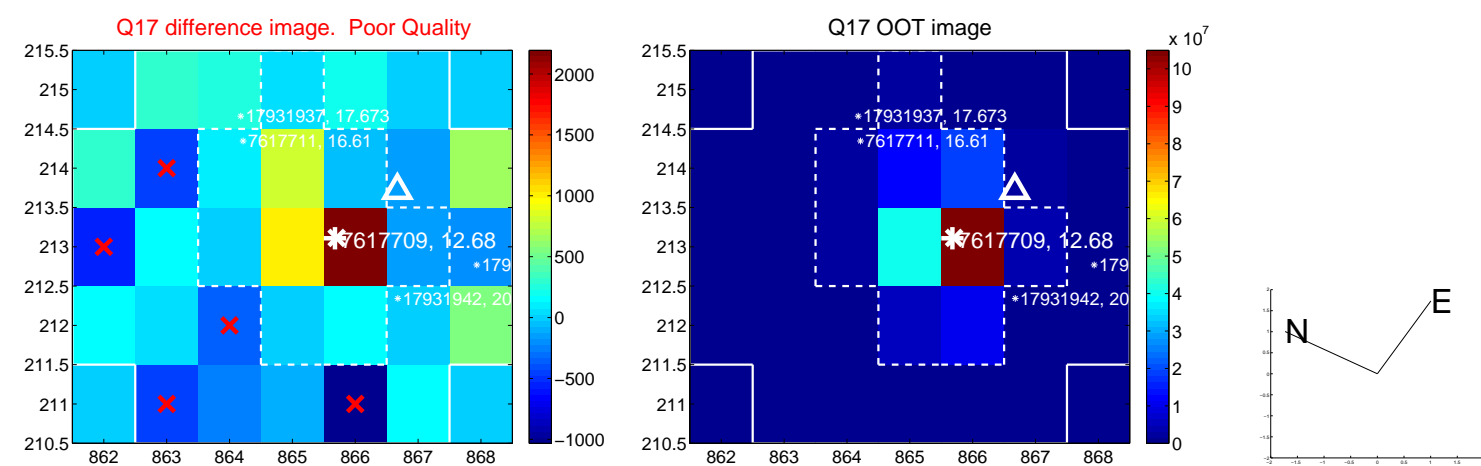
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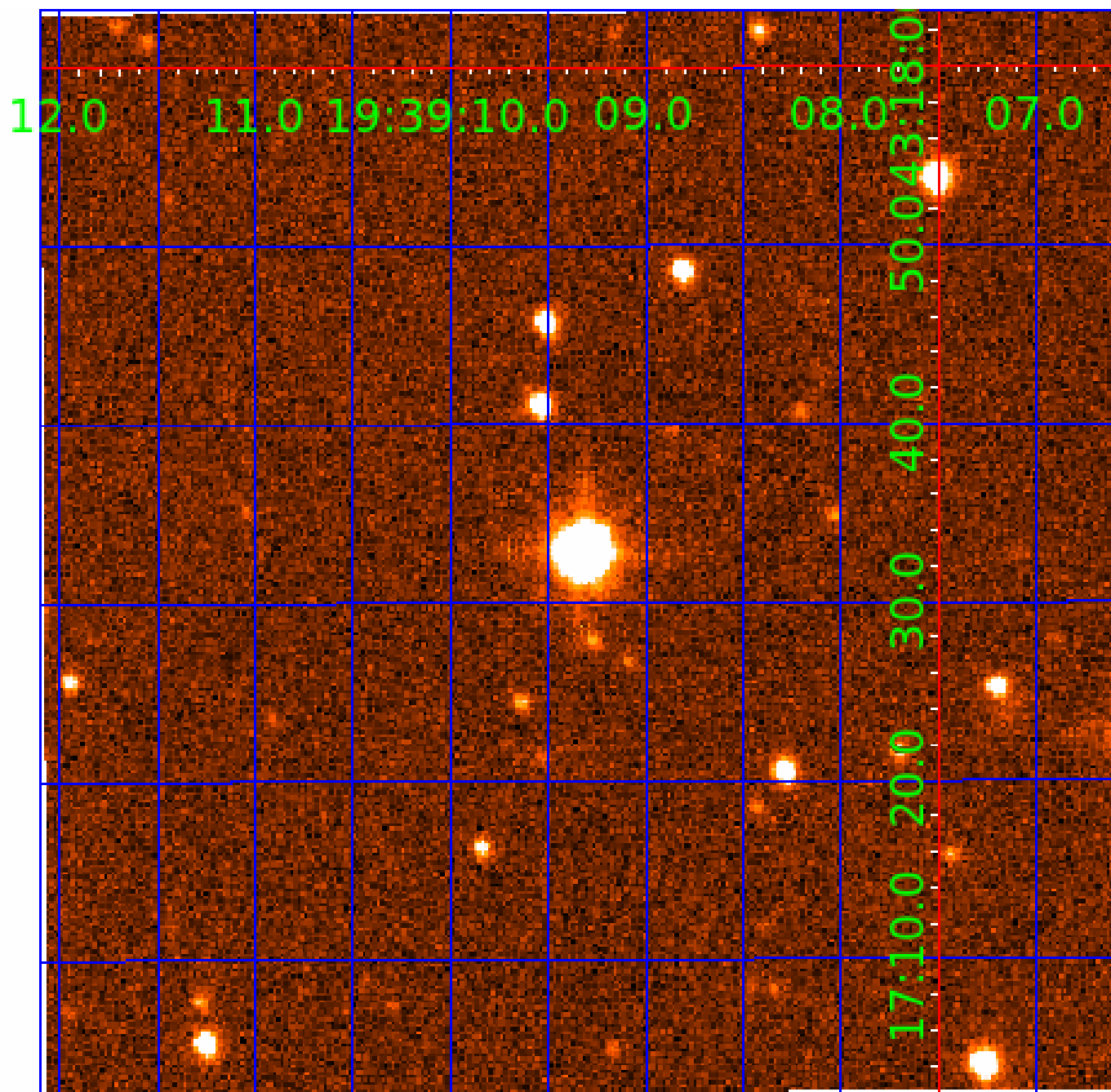


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007617709

Q1-17 DR25 TCE Parameters

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007617709-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
007617709-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—HALO_GHOST

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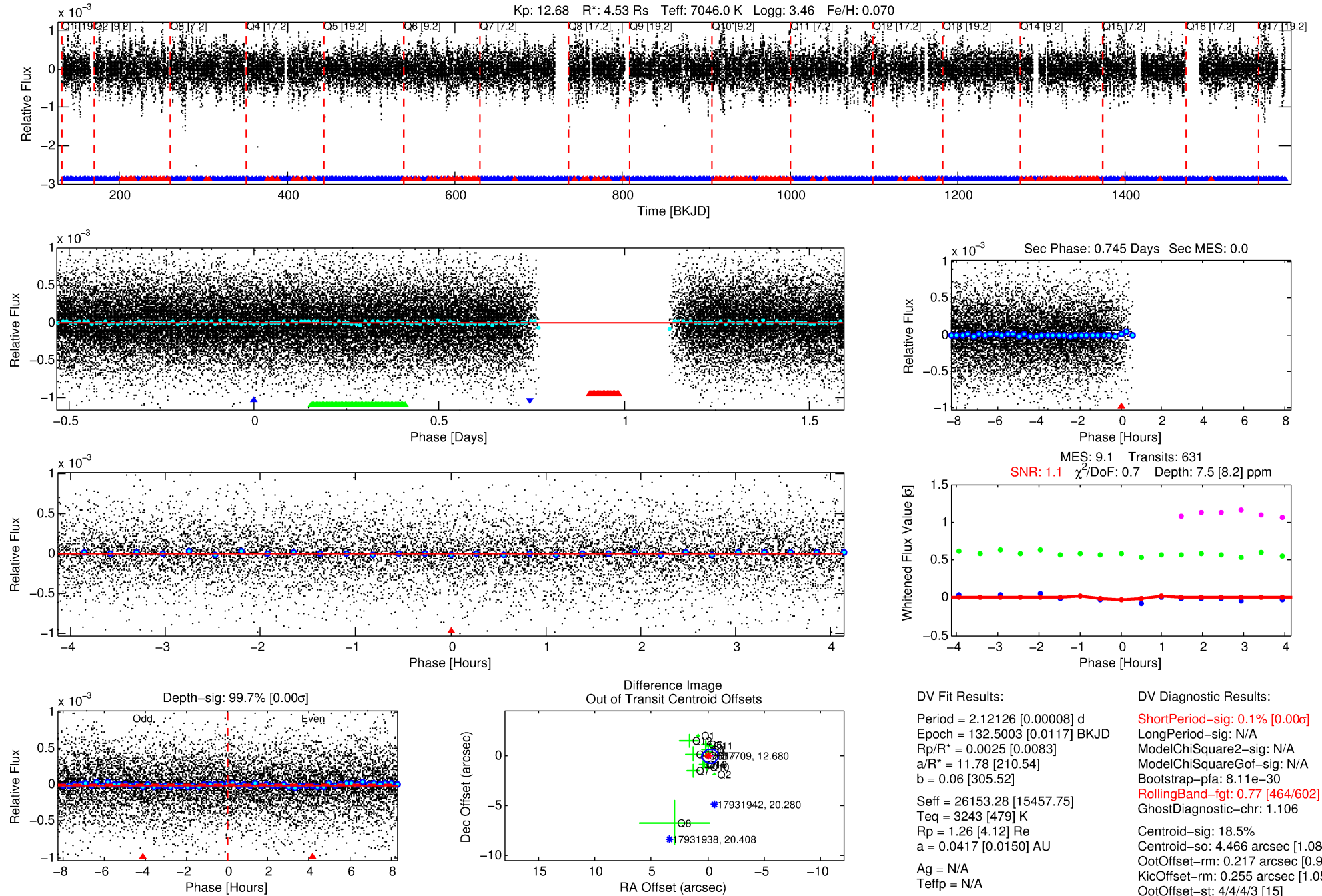
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007617709-02

No Significant Match Found

DV One-Page Summary

KIC: 7617709 Candidate: 2 of 3 Period: 2.121 d



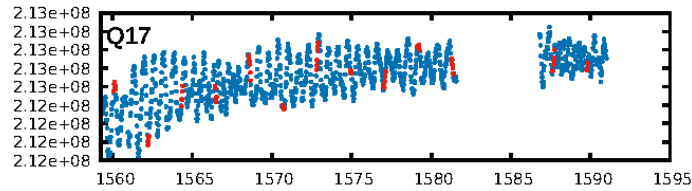
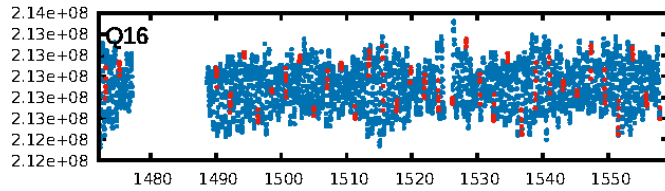
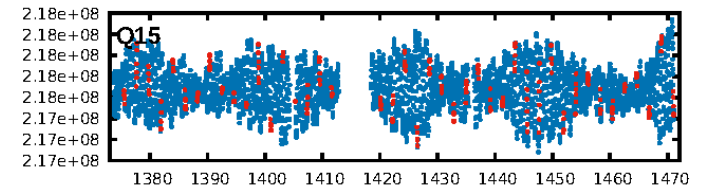
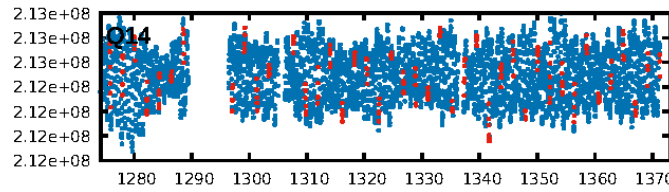
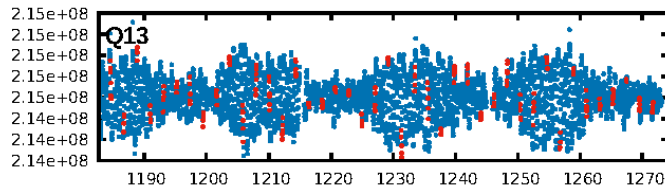
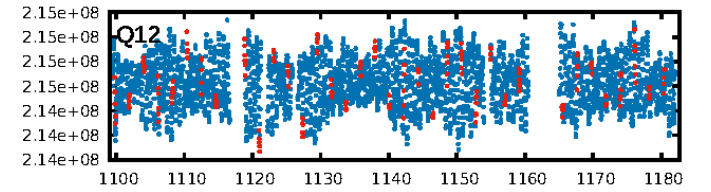
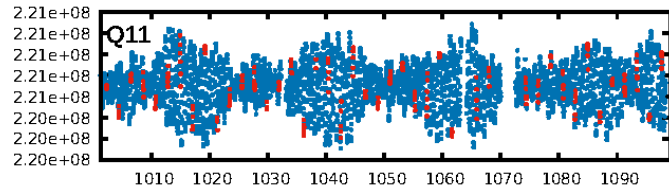
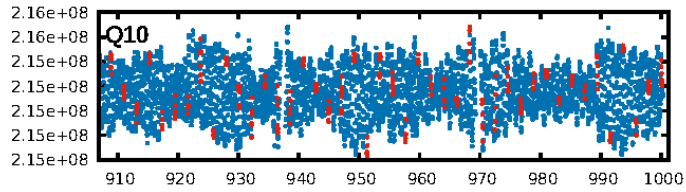
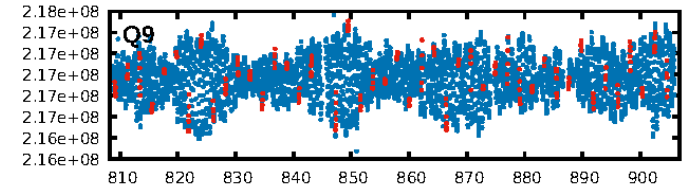
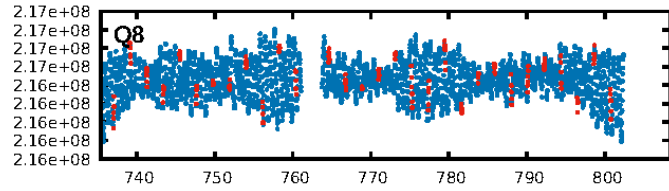
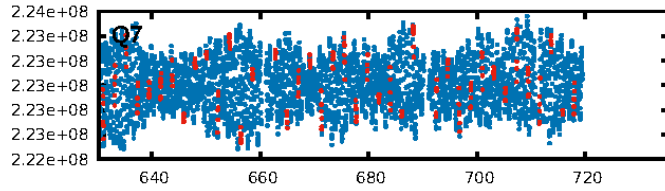
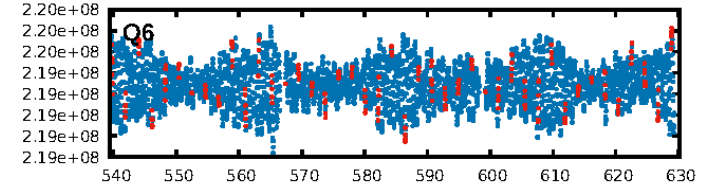
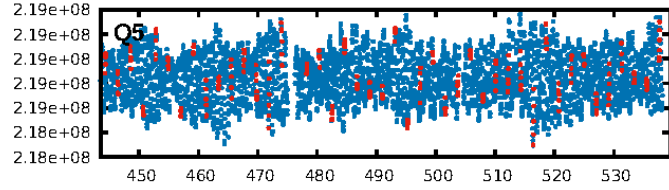
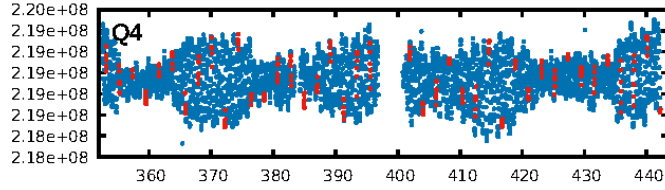
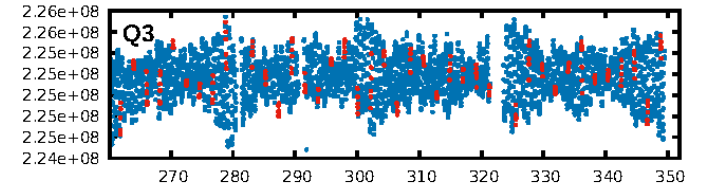
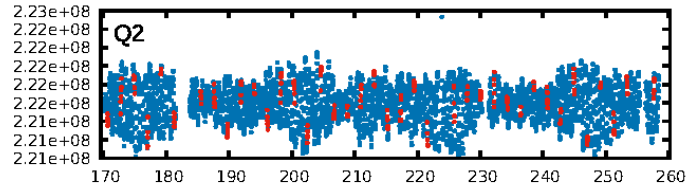
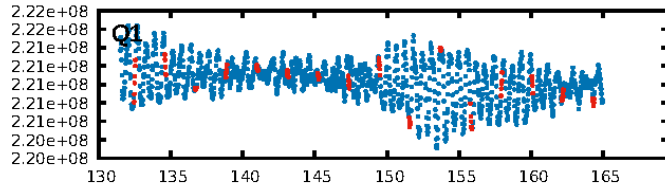
DV Fit Results:

Period = 2.12126 [0.00008] d
Epoch = 132.5003 [0.0117] BKJD
Rp/R* = 0.0025 [0.0083]
a/R* = 11.78 [210.54]
b = 0.06 [305.52]
Seff = 26153.28 [15457.75]
Teff = 3243 [479] K
Rp = 1.26 [4.12] Re
a = 0.0417 [0.0150] AU
Ag = N/A
Teffp = N/A

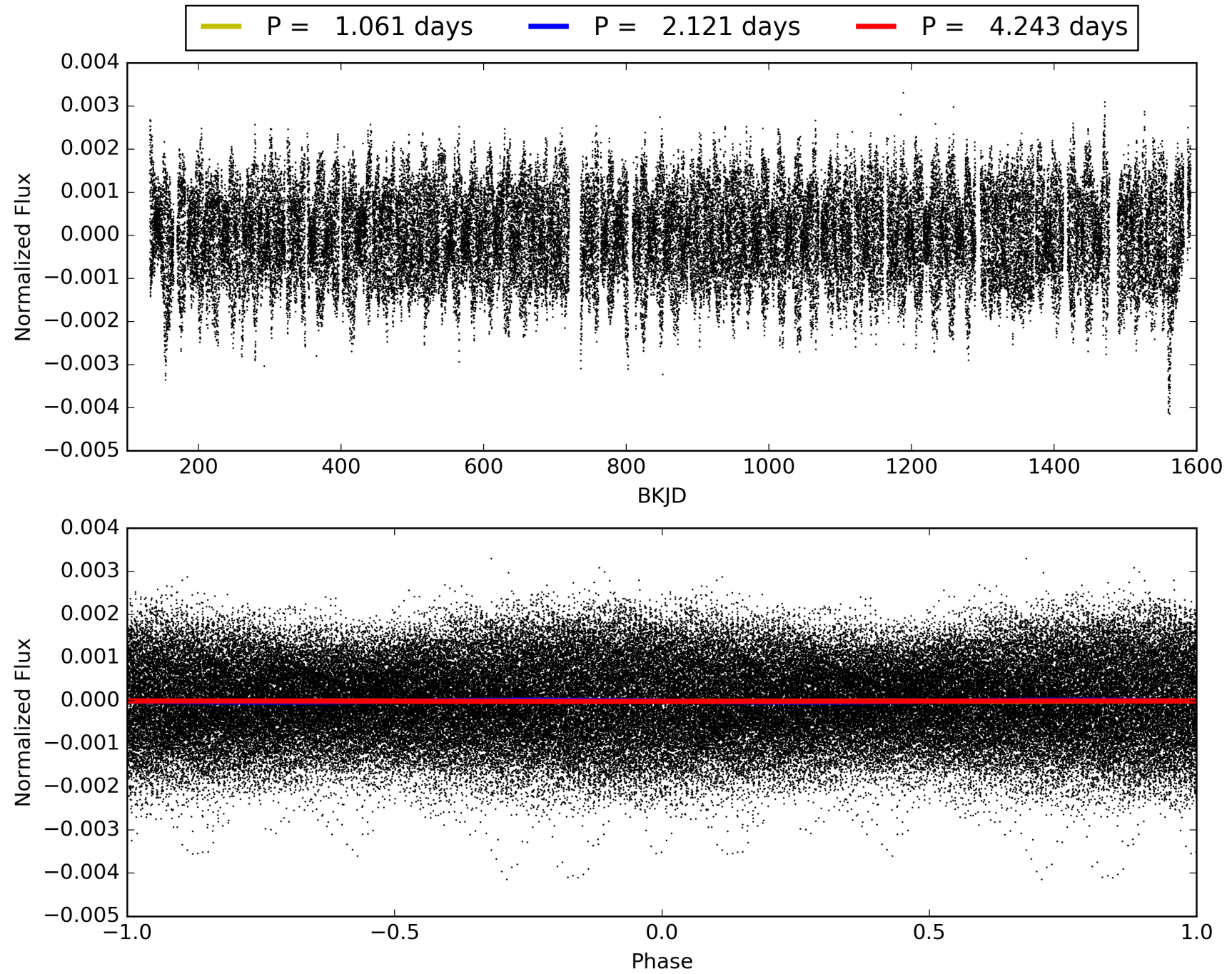
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.11e-30
RollingBand-fgt: 0.77 [464/602]
GhostDiagnostic-chr: 1.106
Centroid-sig: 18.5%
Centroid-so: 4.466 arcsec [1.08 σ]
OotOffset-rm: 0.217 arcsec [0.93 σ]
KicOffset-rm: 0.255 arcsec [1.05 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 0.53 [9/17]

TCE 007617709-02, PDC Light Curves

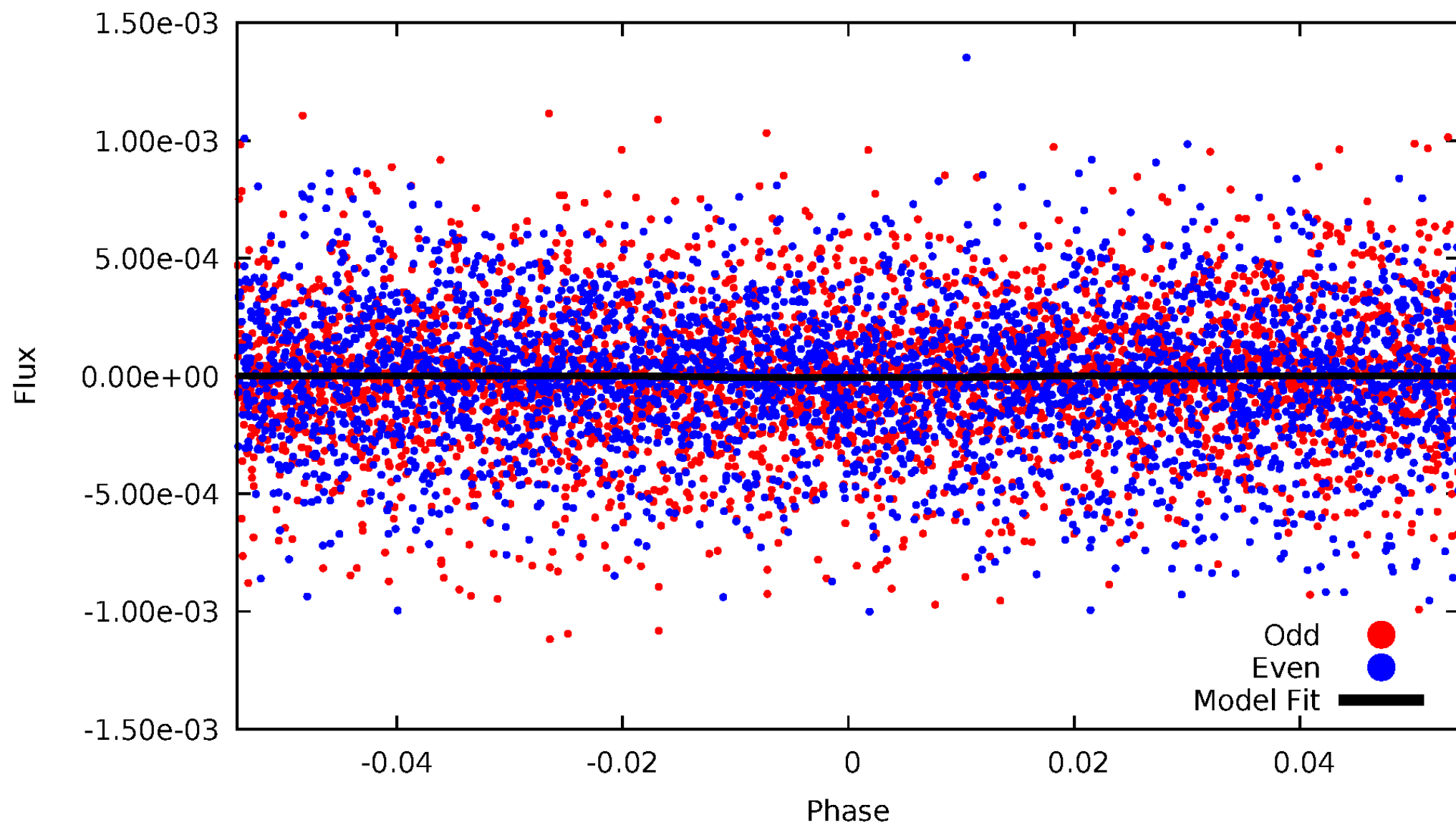


TCE 007617709-02



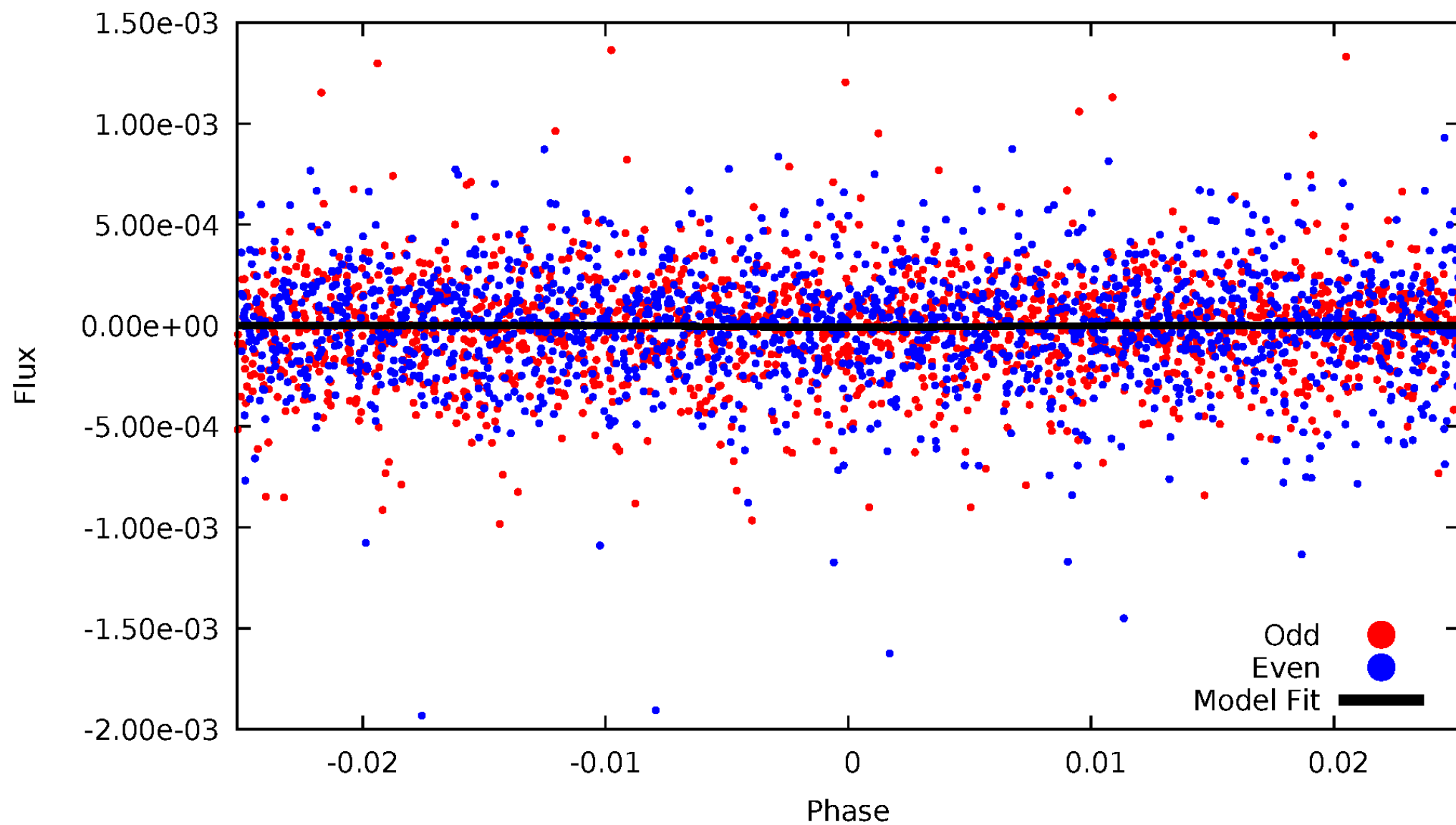
DV Odd/Even

TCE 007617709-02



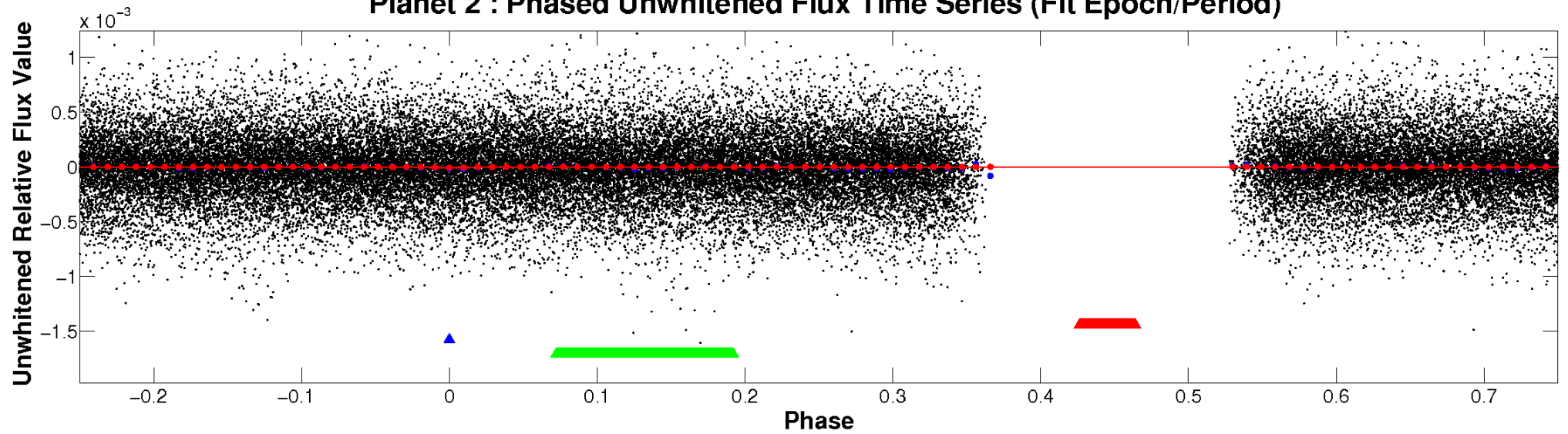
ALT Odd/Even

TCE 007617709-02

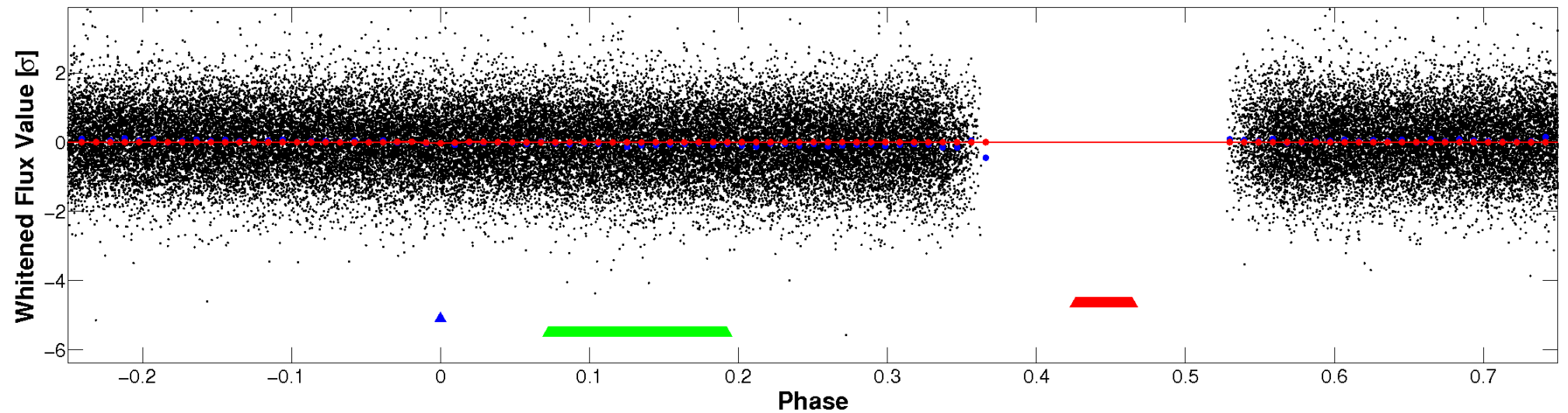


Non-Whitened Vs. Whitened Light Curve

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

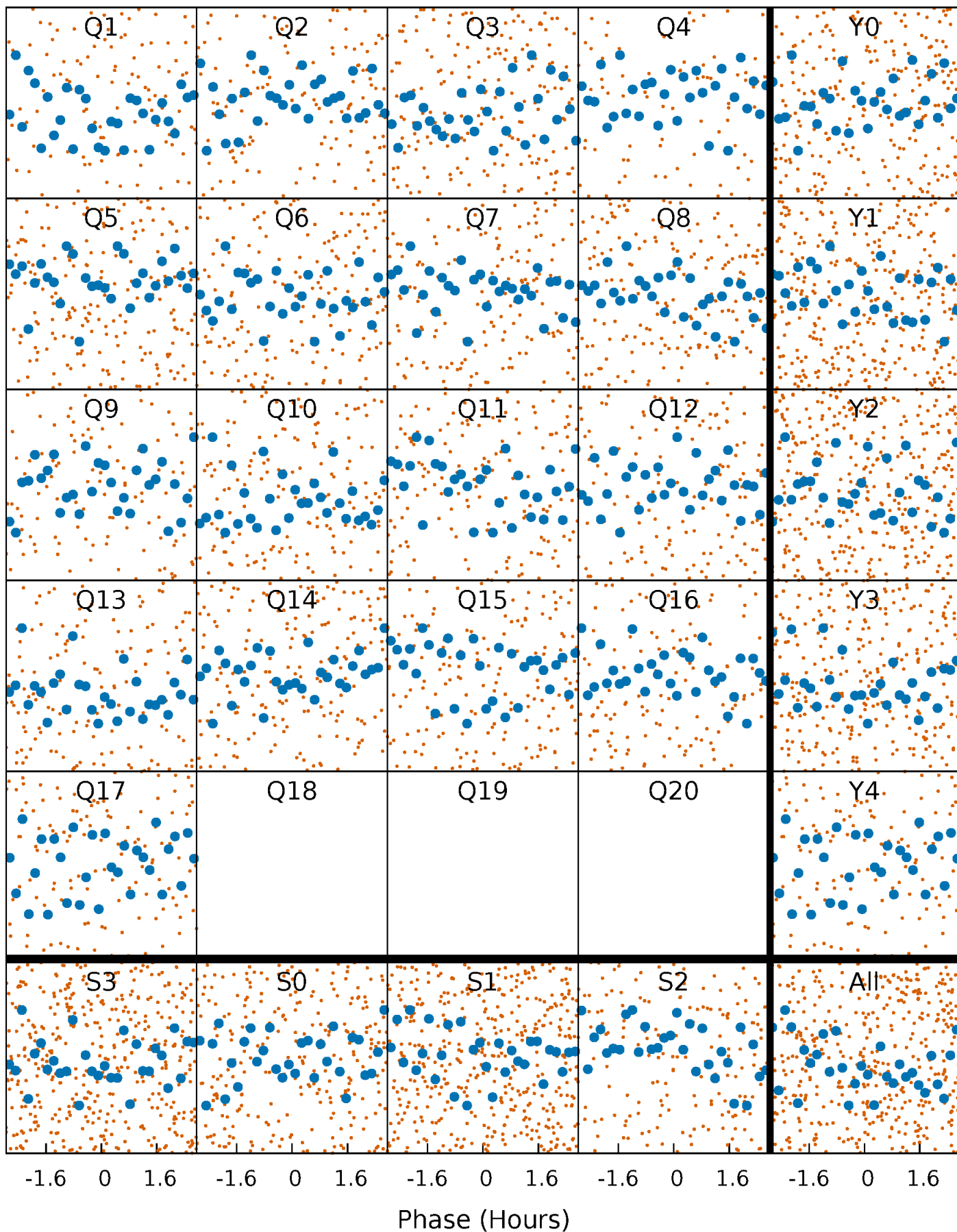


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



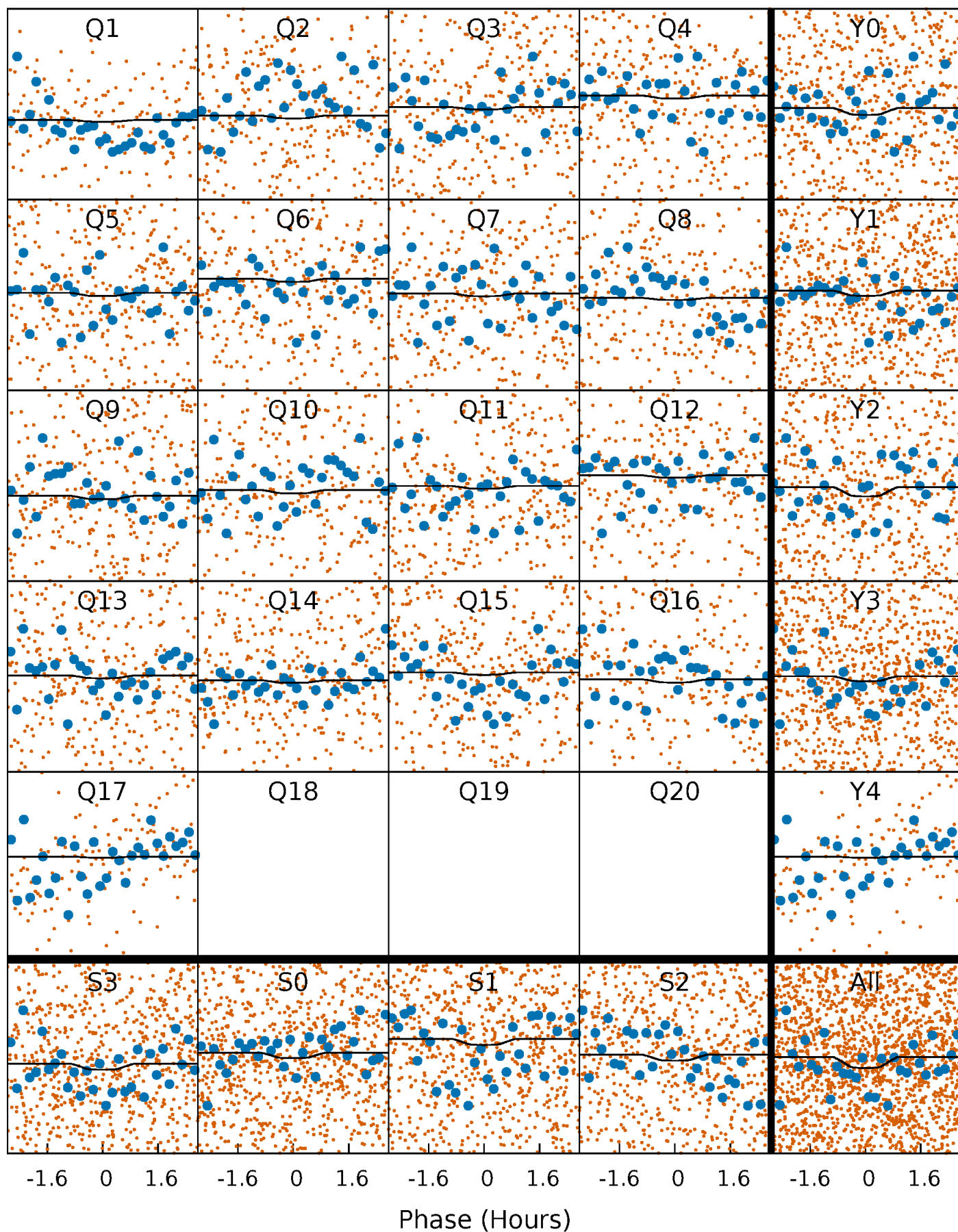
PDC Quarter-Phased Transit Curves

TCE 007617709-02 P= 2.121265 Days $T_0=132.500330$ (BKJD)



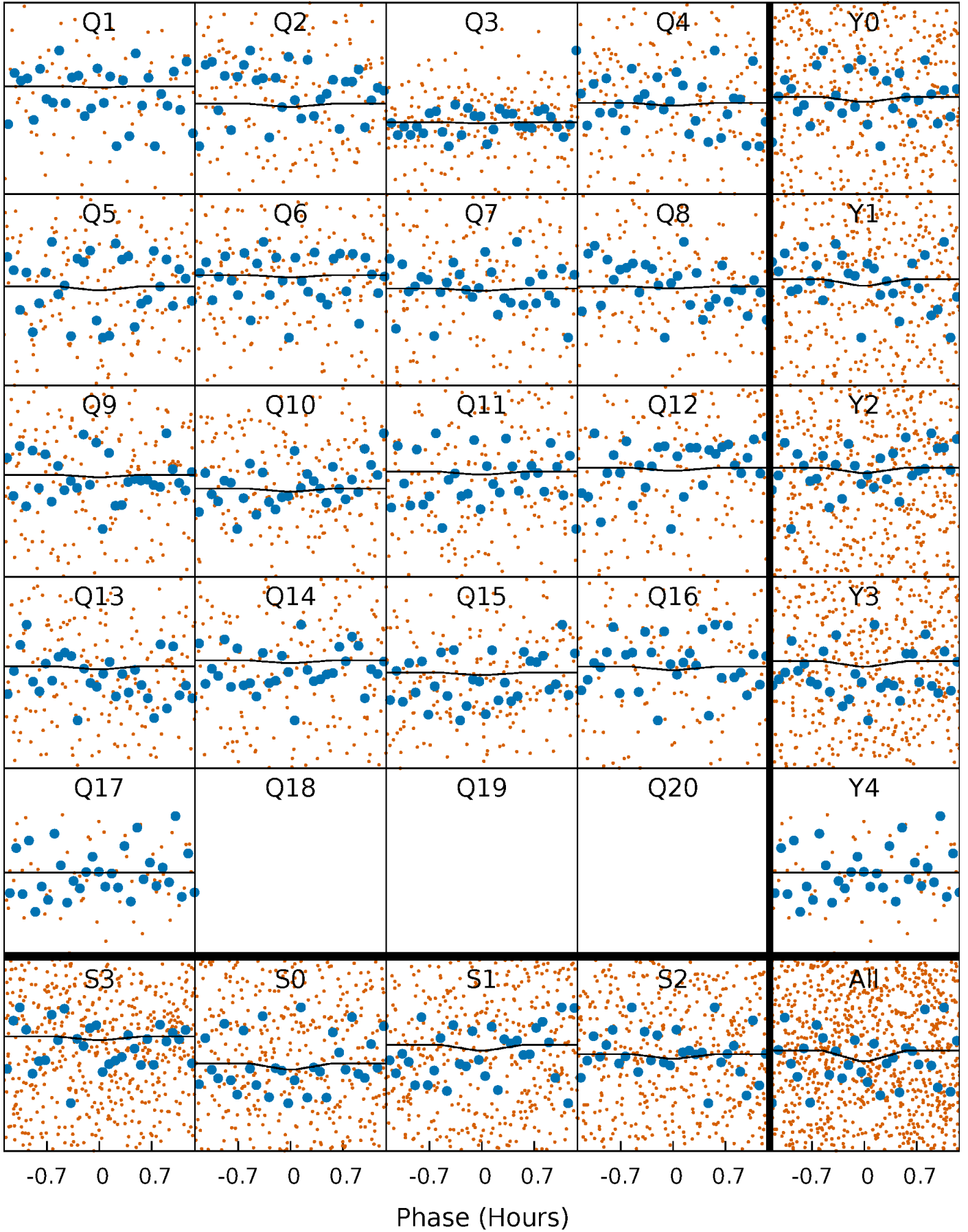
DV Quarter-Phased Transit Curves

TCE 007617709-02 P= 2.121265 Days $T_0=132.500330$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

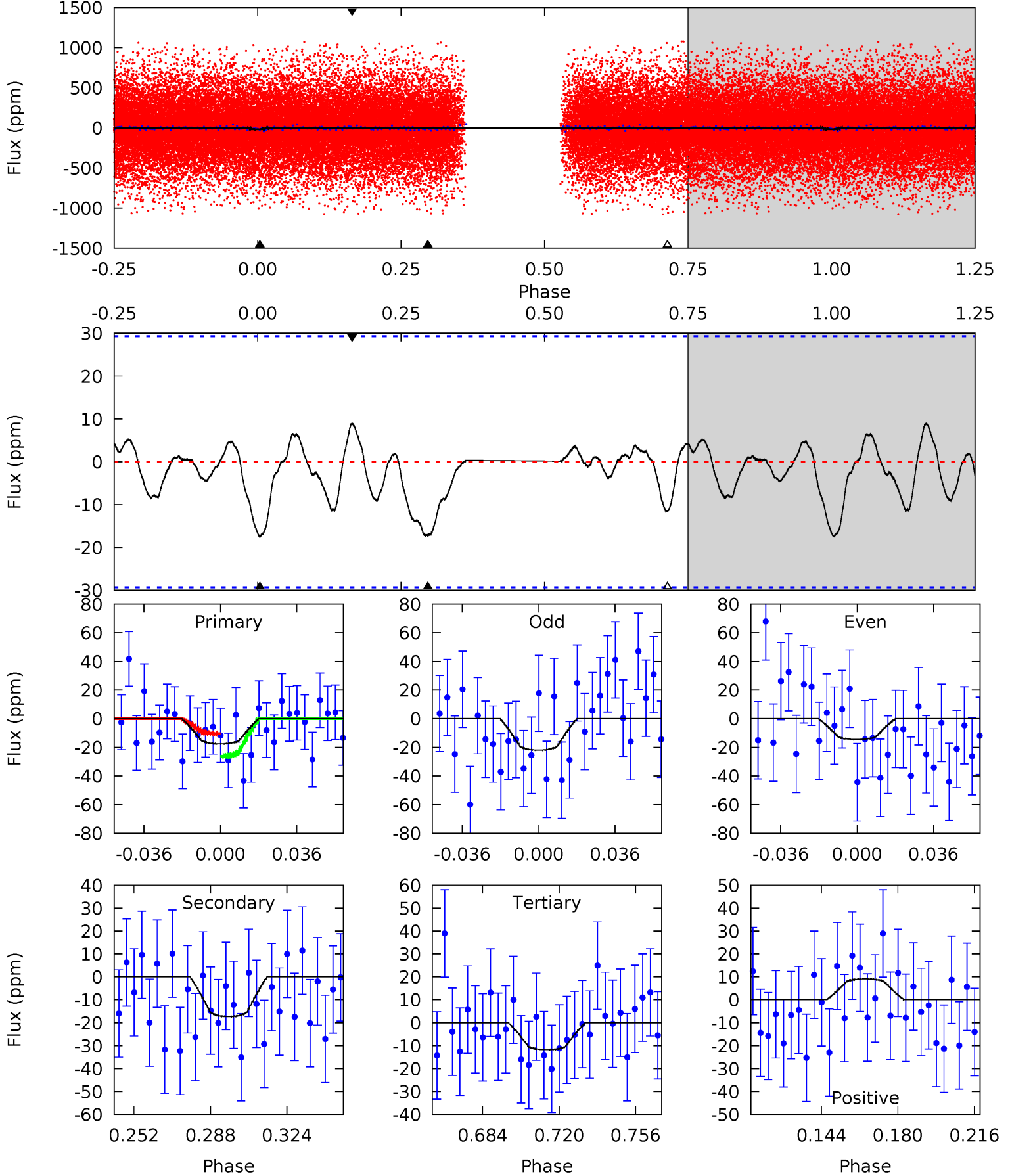
TCE 007617709-02 P= 2.121278 Days $T_0=132.504791$ (BKJD)



DV Model-Shift Uniqueness Test

007617709-02, P = 2.121265 Days, E = 130.379065 Days

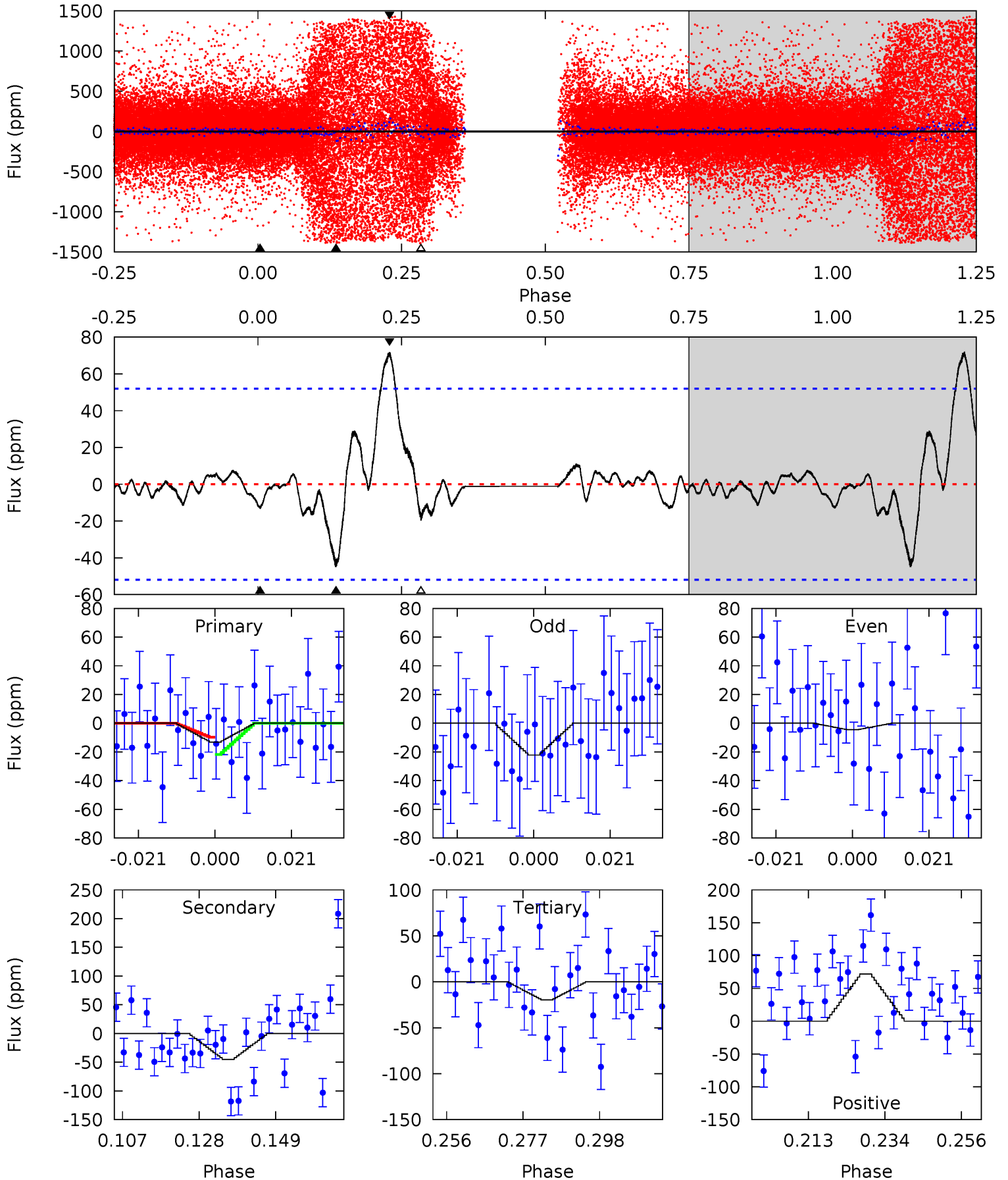
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.85	2.83	1.92	1.48	4.77	2.10	0.74	0.93	1.37	0.91	1.35	0.61	1.21	0.34	1.30



Alt Model-Shift Uniqueness Test

007617709-02, P = 2.121278 Days, E = 130.383513 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.23	4.23	1.86	6.75	4.88	2.30	1.30	-0.62	-5.52	2.37	-2.52	0.84	6.66	0.61	0.38



Stellar Parameters For KIC 007617709

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7046^{+171}_{-245}	$3.456^{+0.336}_{-0.063}$	$0.070^{+0.250}_{-0.250}$	$4.534^{+0.202}_{-1.720}$	$2.142^{+0.174}_{-0.376}$	$0.032^{+0.082}_{-0.006}$
	+2%/-3%	+10%/-2%	+357%/-357%	+4%/-38%	+8%/-18%	+253%/-20%
Source	PHO1	FLK73	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 007617709-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 6	$3.06^{+2.98}_{-2.03}$	4450^{+203}_{-405}	5060^{+5309}_{-1943}	$1.514^{+13.813}_{-1.142}$
Alt.	-45 ± 11	$3.03^{+3.37}_{-2.19}$	4440^{+190}_{-348}	6930^{+11599}_{-2319}	$4.557^{+52.250}_{-3.546}$

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 $A_{obs} \gg 1.0$

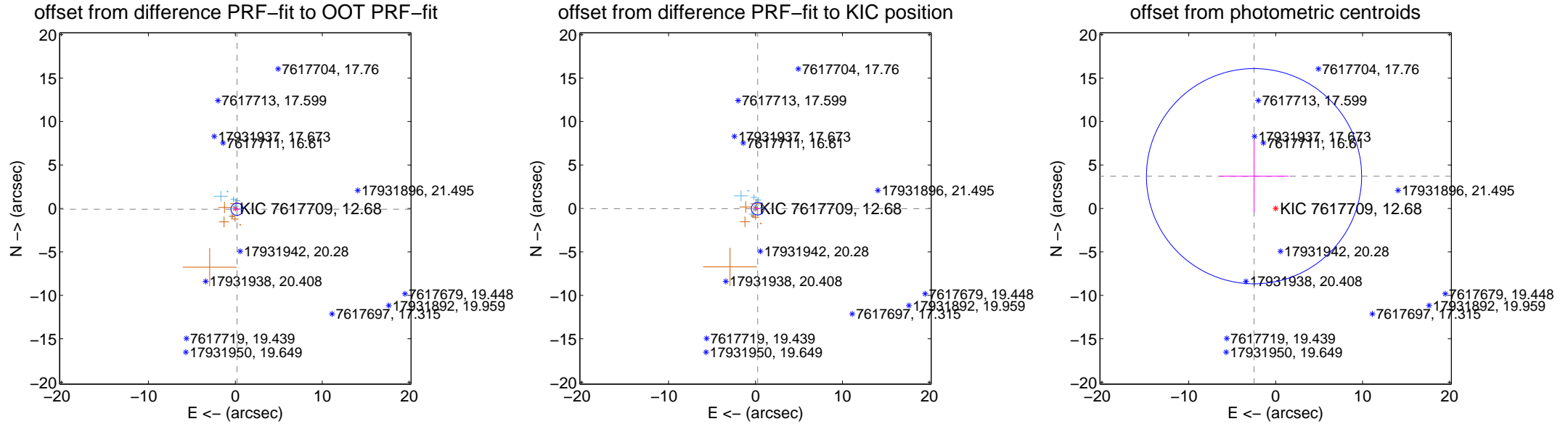
DV Centroid Data

Supplemental centroid analysis for 007617709-02. Kepler magnitude: 12.68. Transit SNR 1.15

There are 8 quarters with good PRF difference image offsets

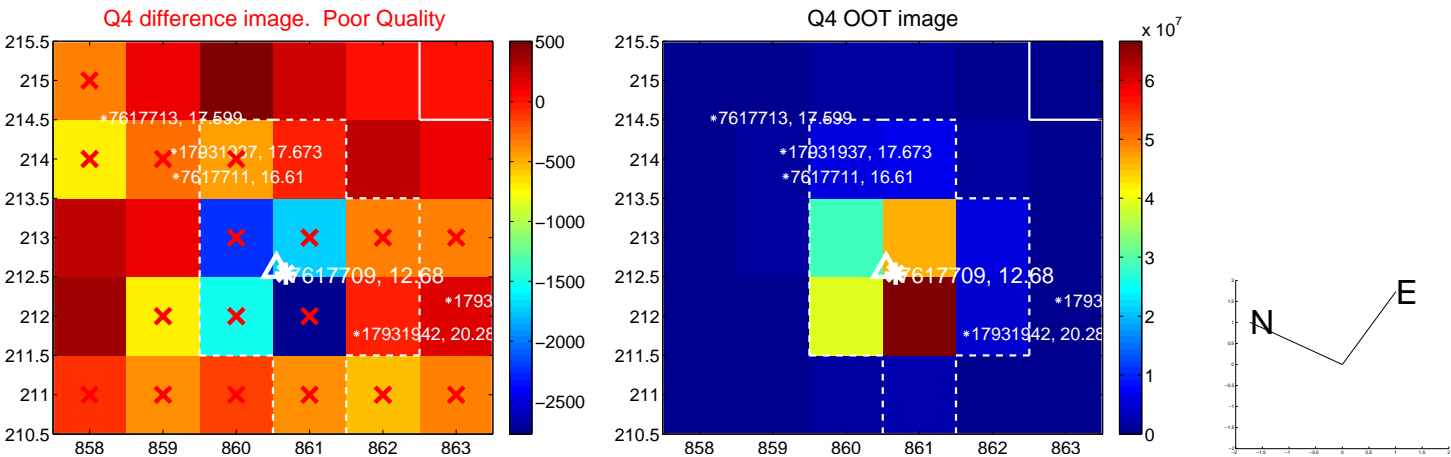
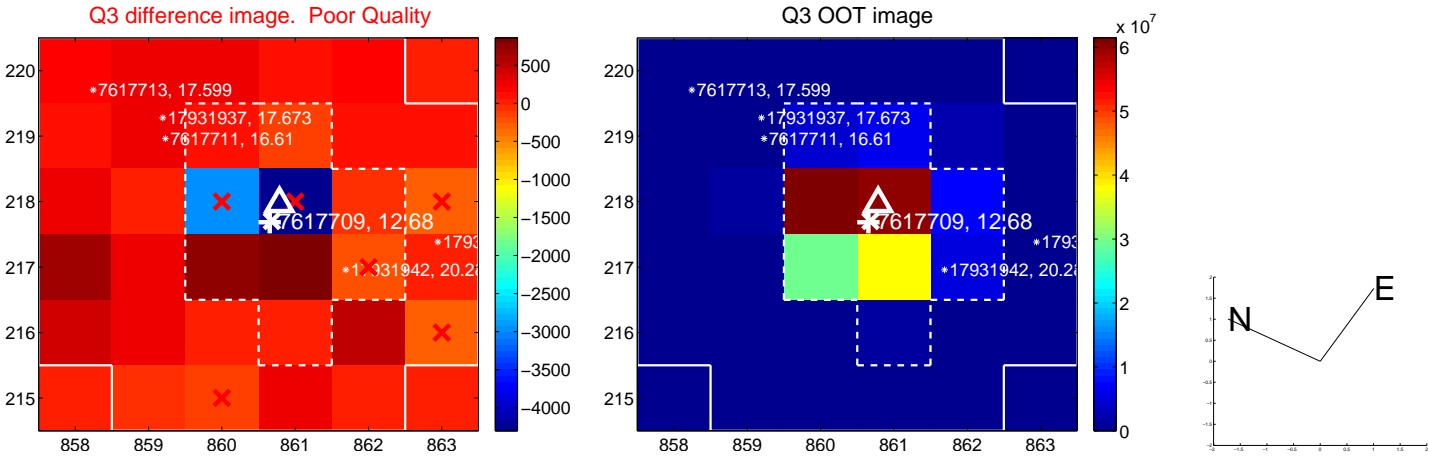
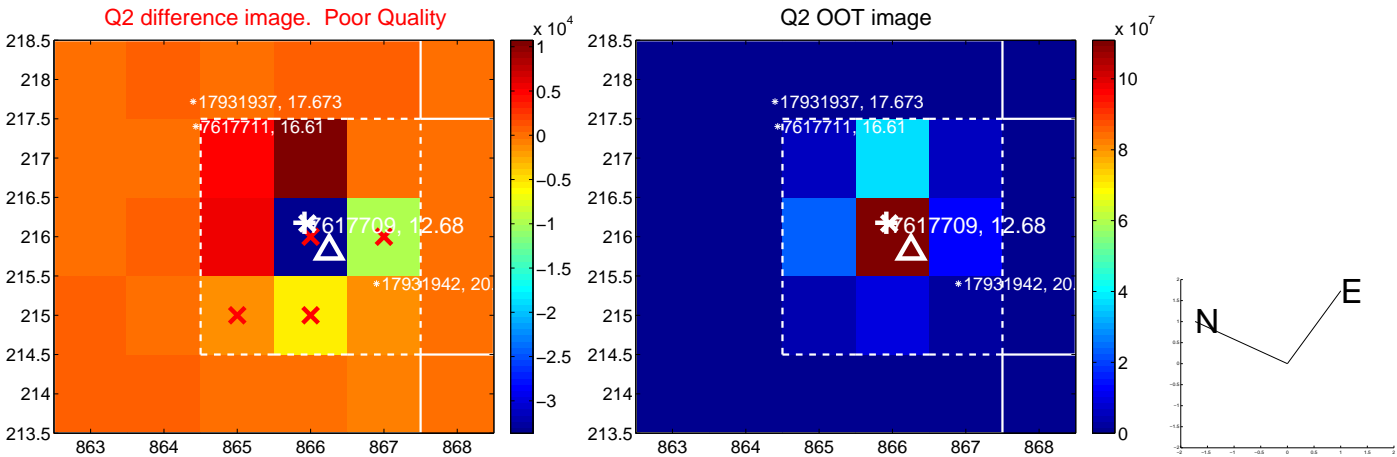
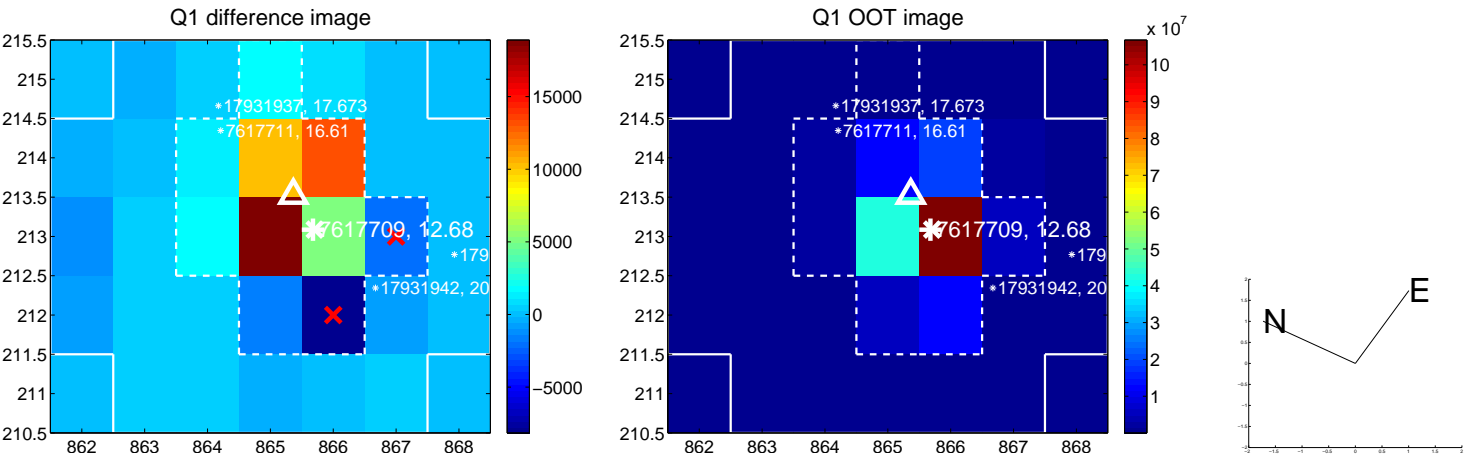
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.217 ± 0.234	0.93	-0.197 ± 0.243	-0.093 ± 0.188
PRF-fit source offset from KIC position	0.255 ± 0.242	1.05	-0.254 ± 0.243	-0.023 ± 0.188
photometric centroid source offset	4.47 ± 4.13	1.08	2.49 ± 4.00	3.71 ± 4.18

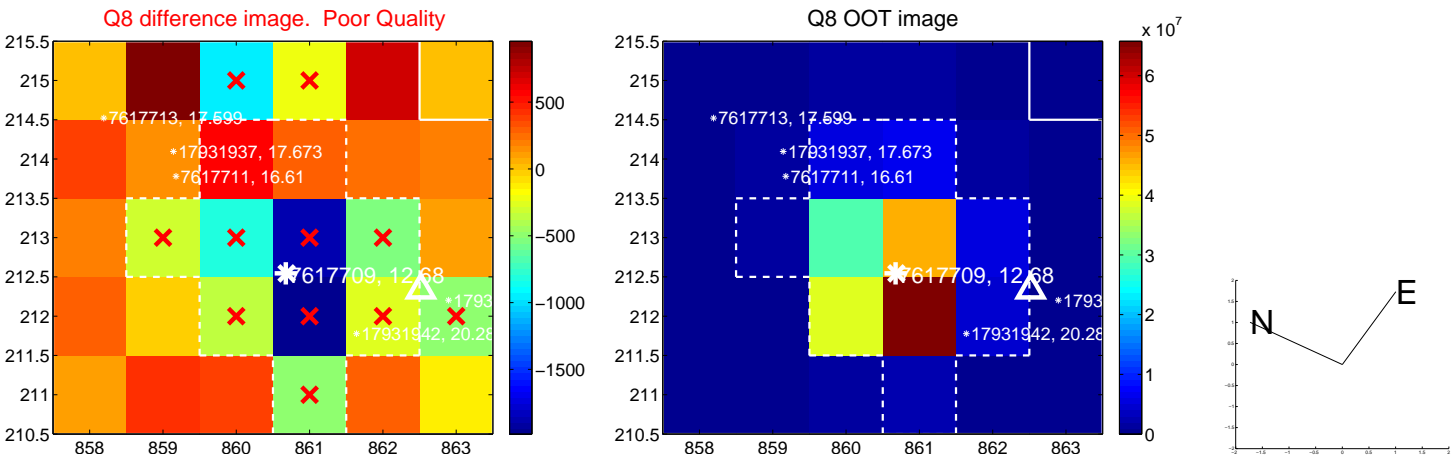
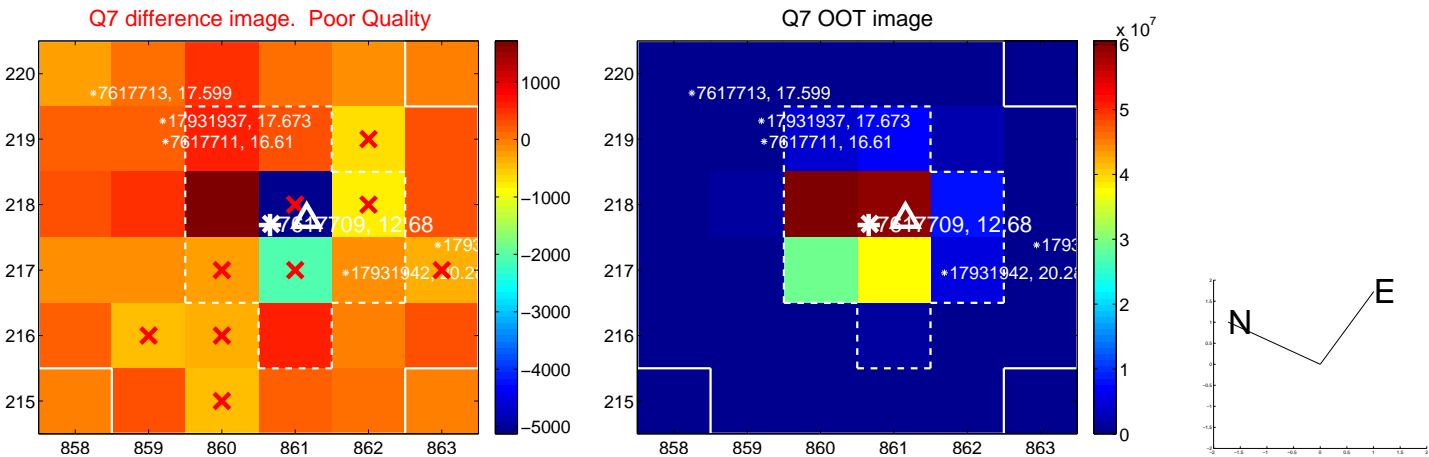
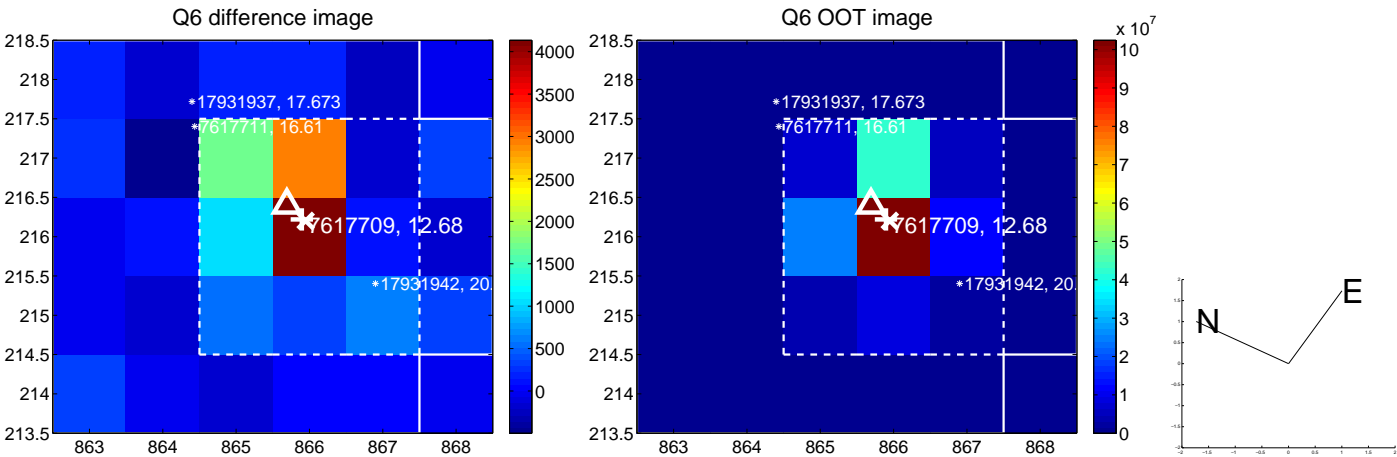
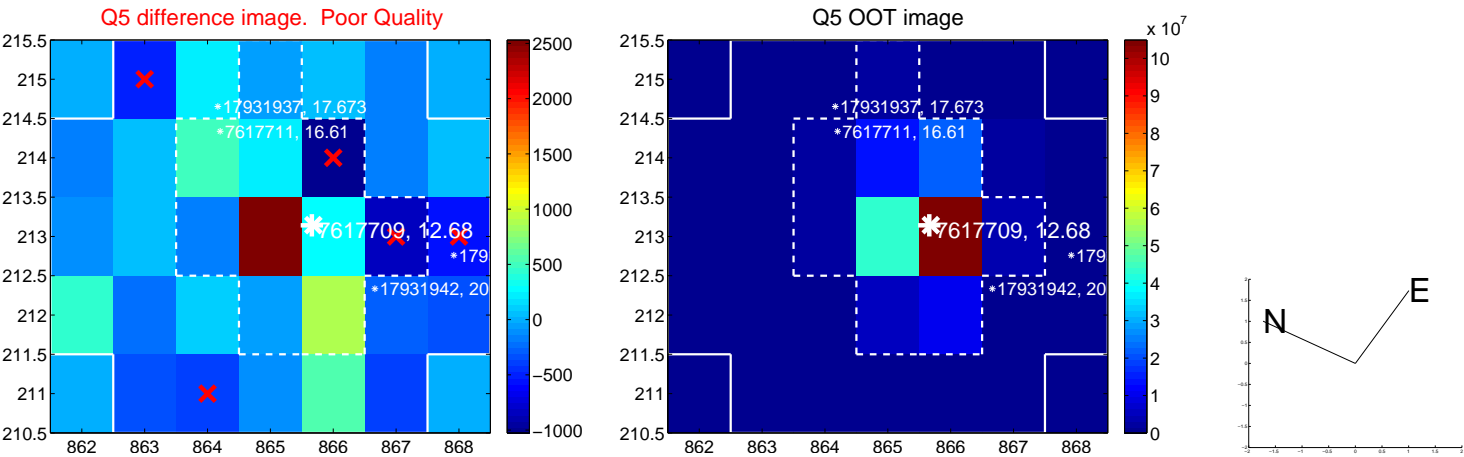


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

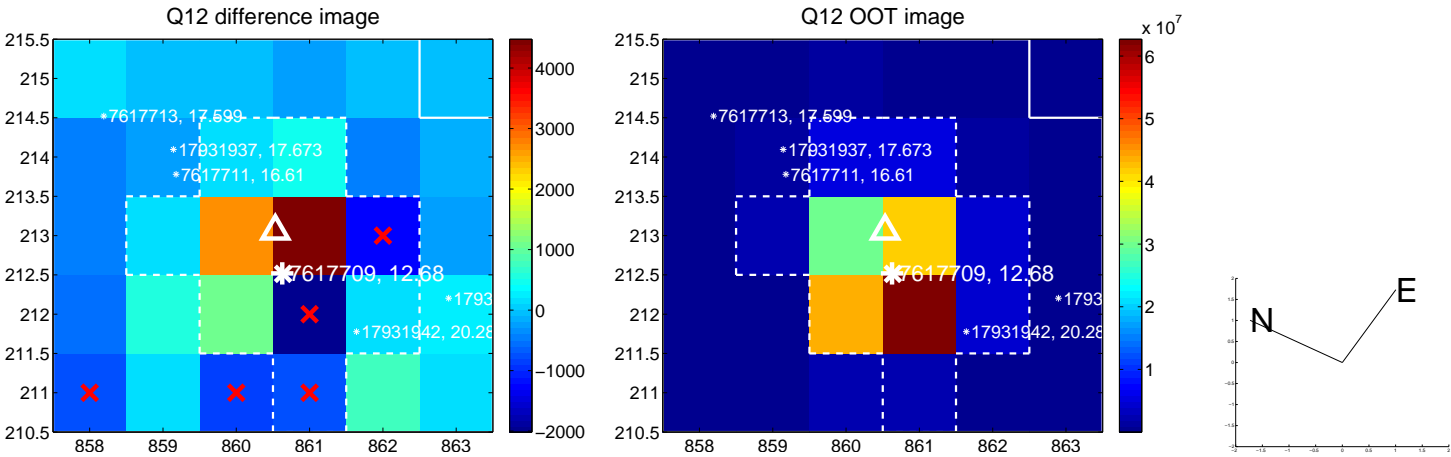
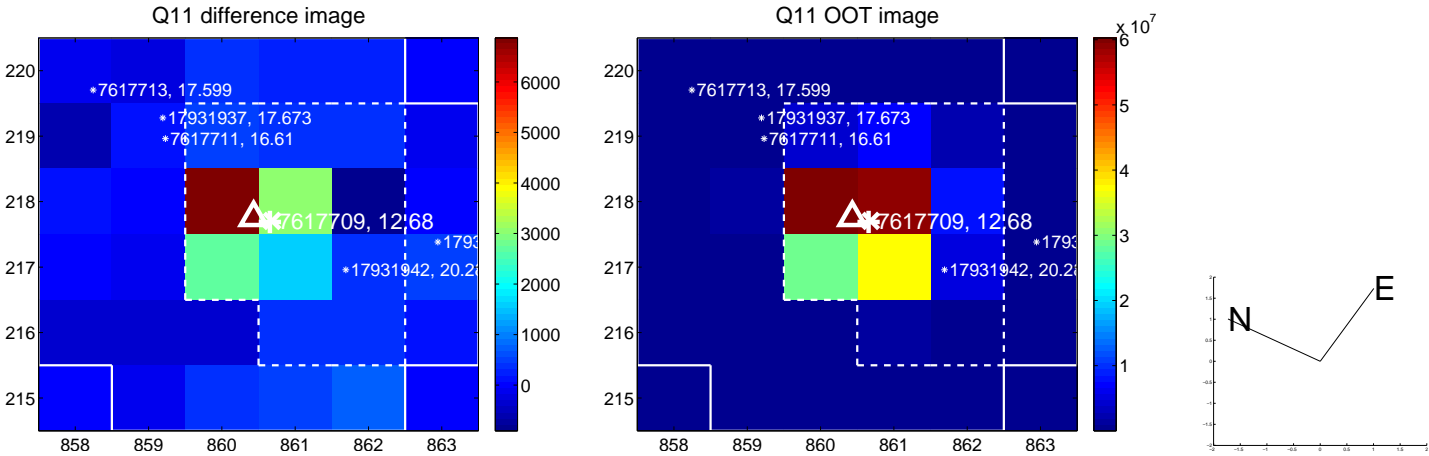
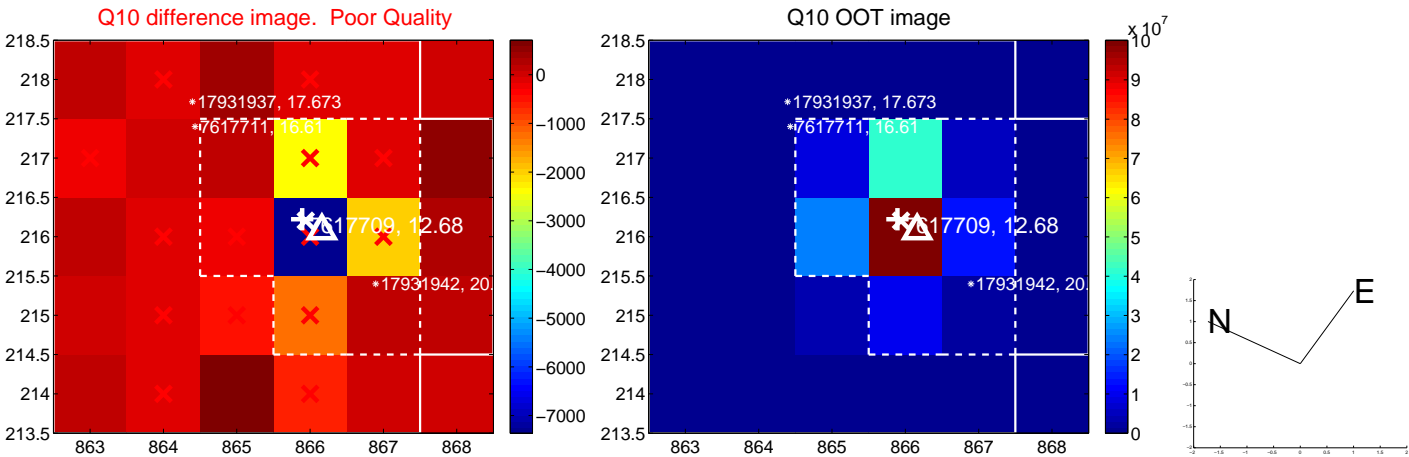
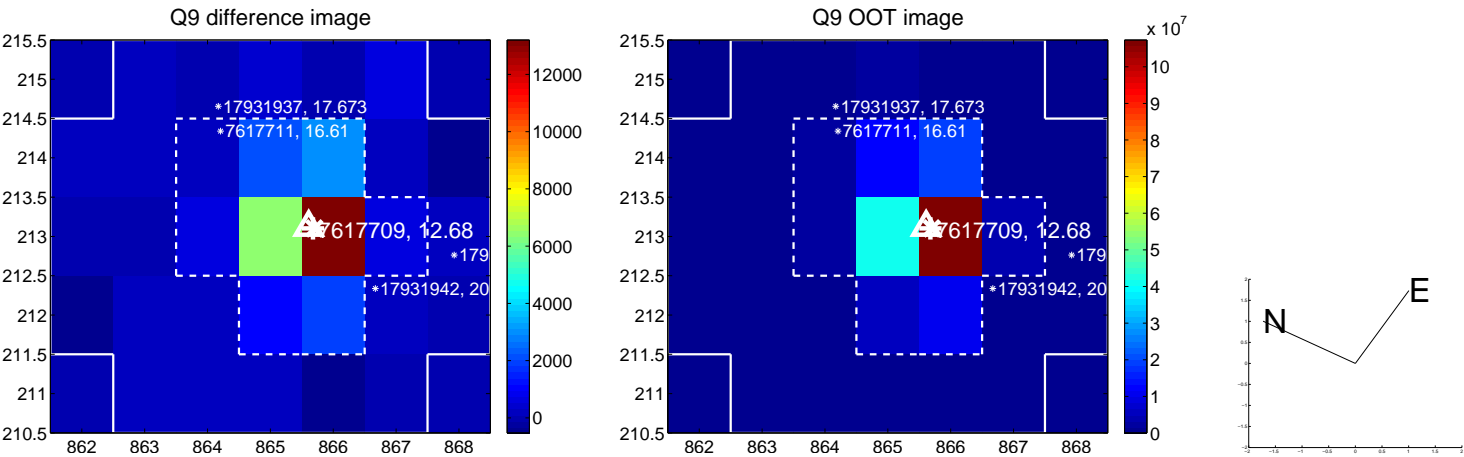
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



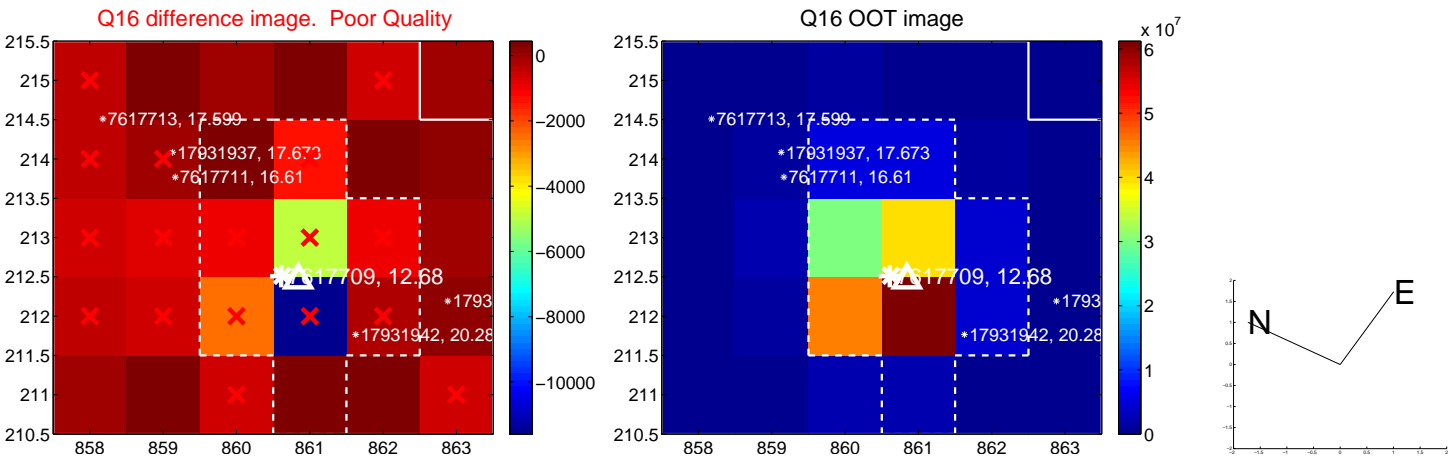
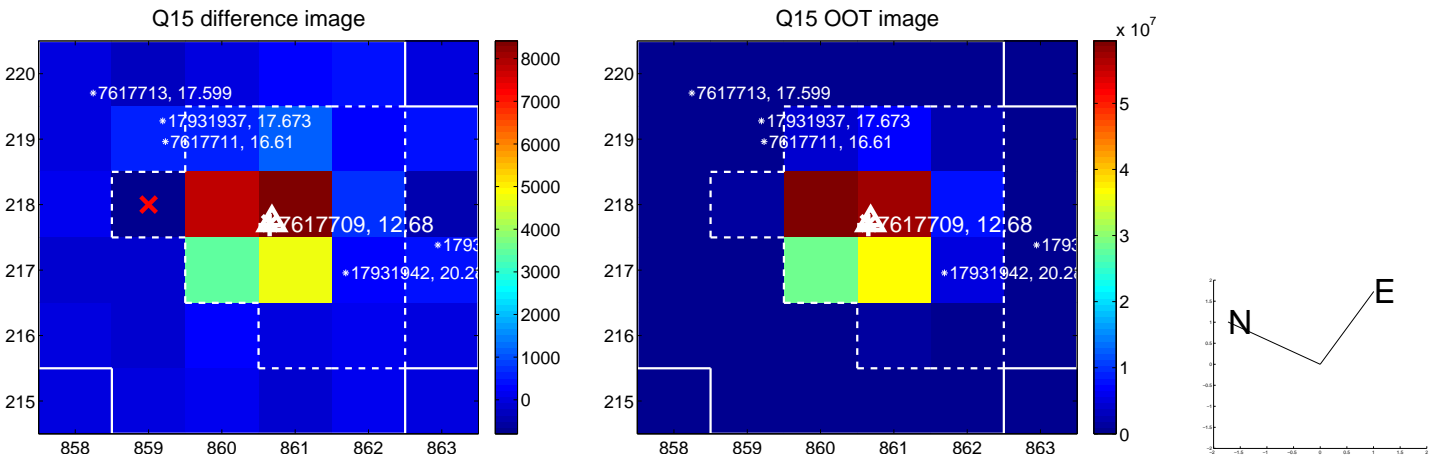
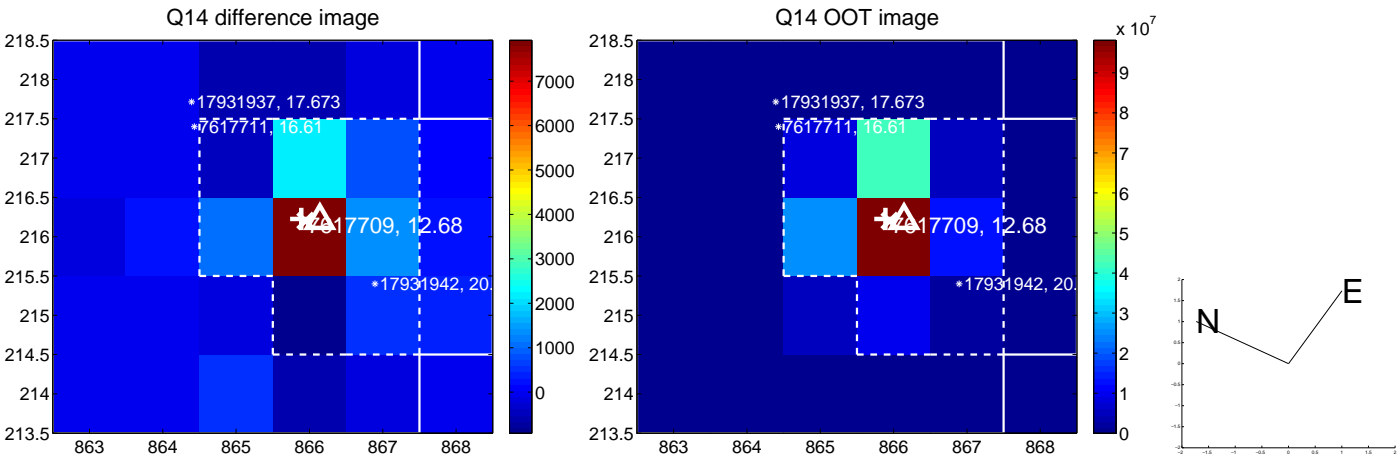
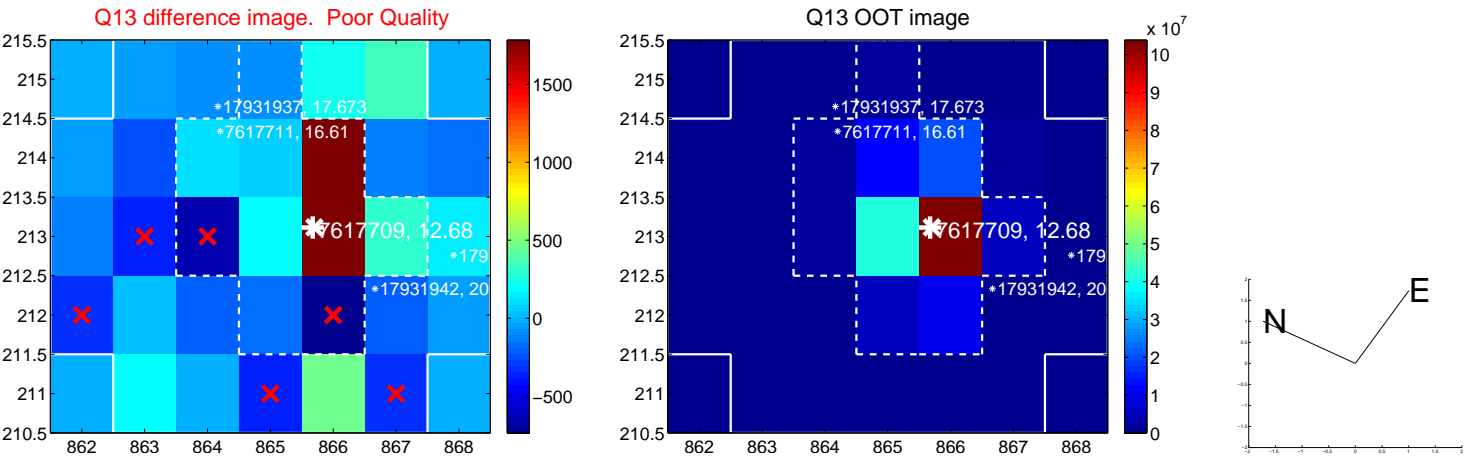
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



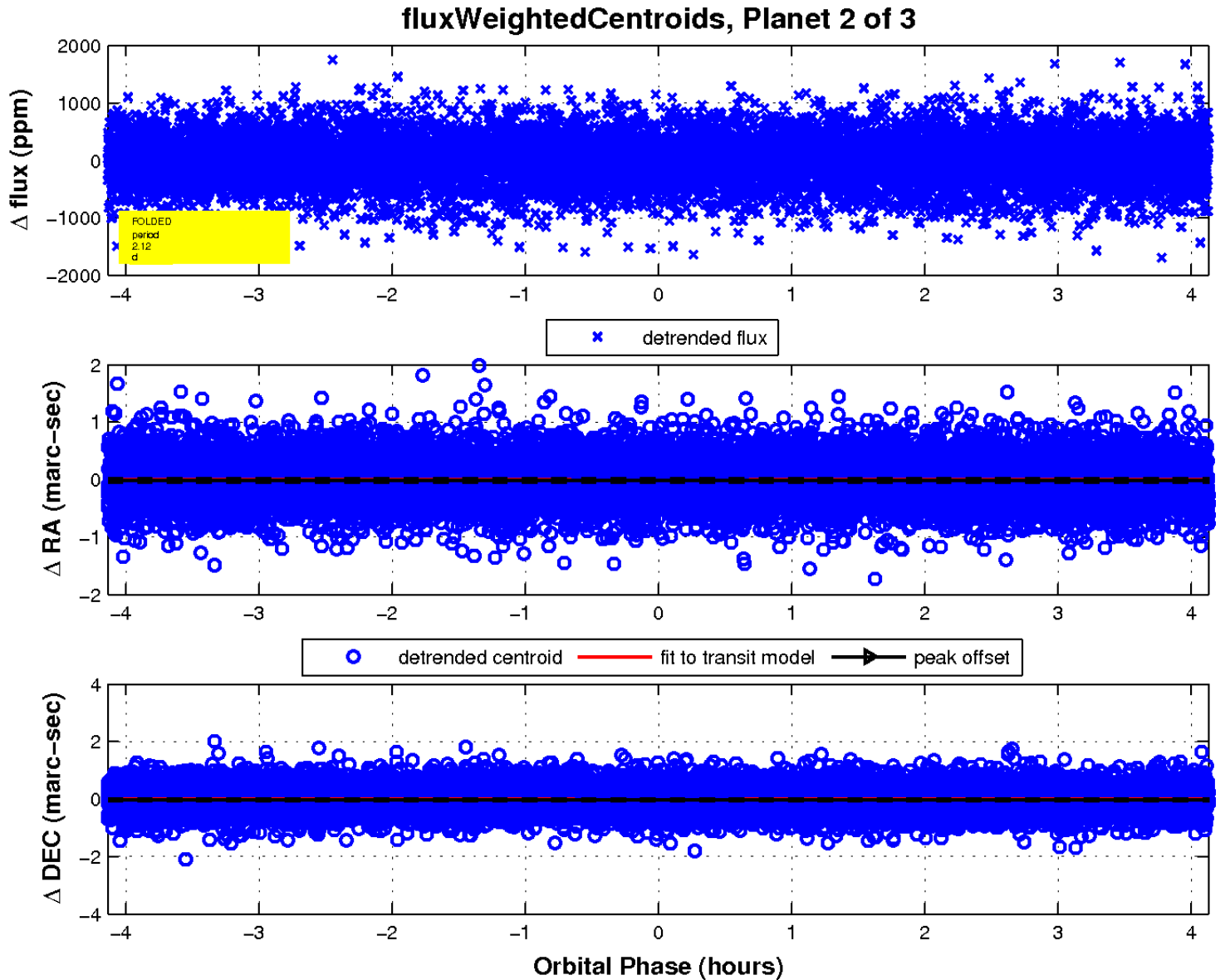
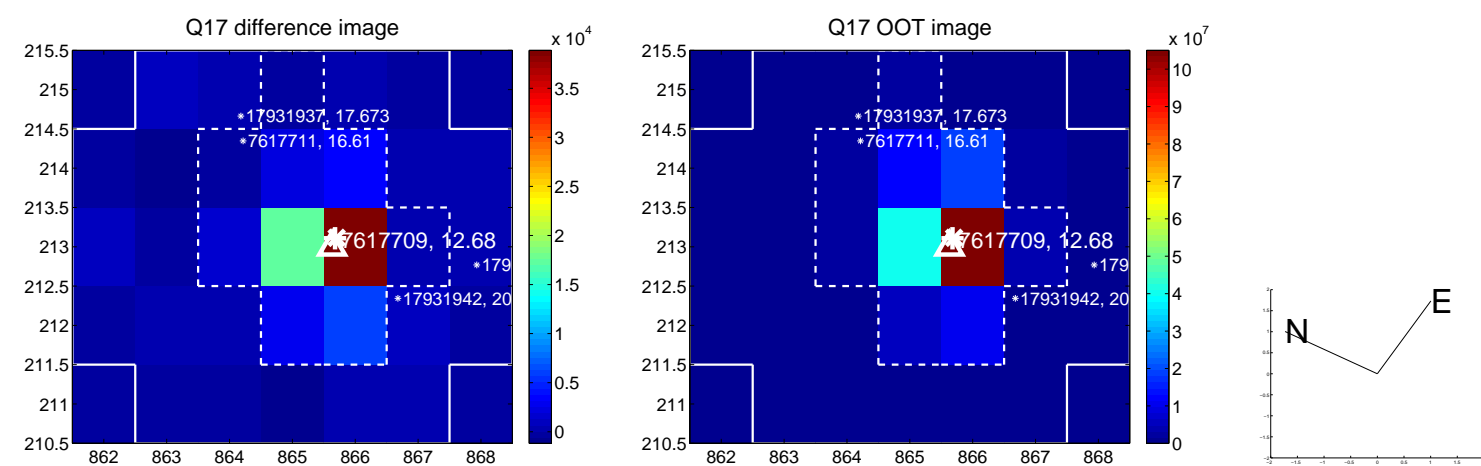
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

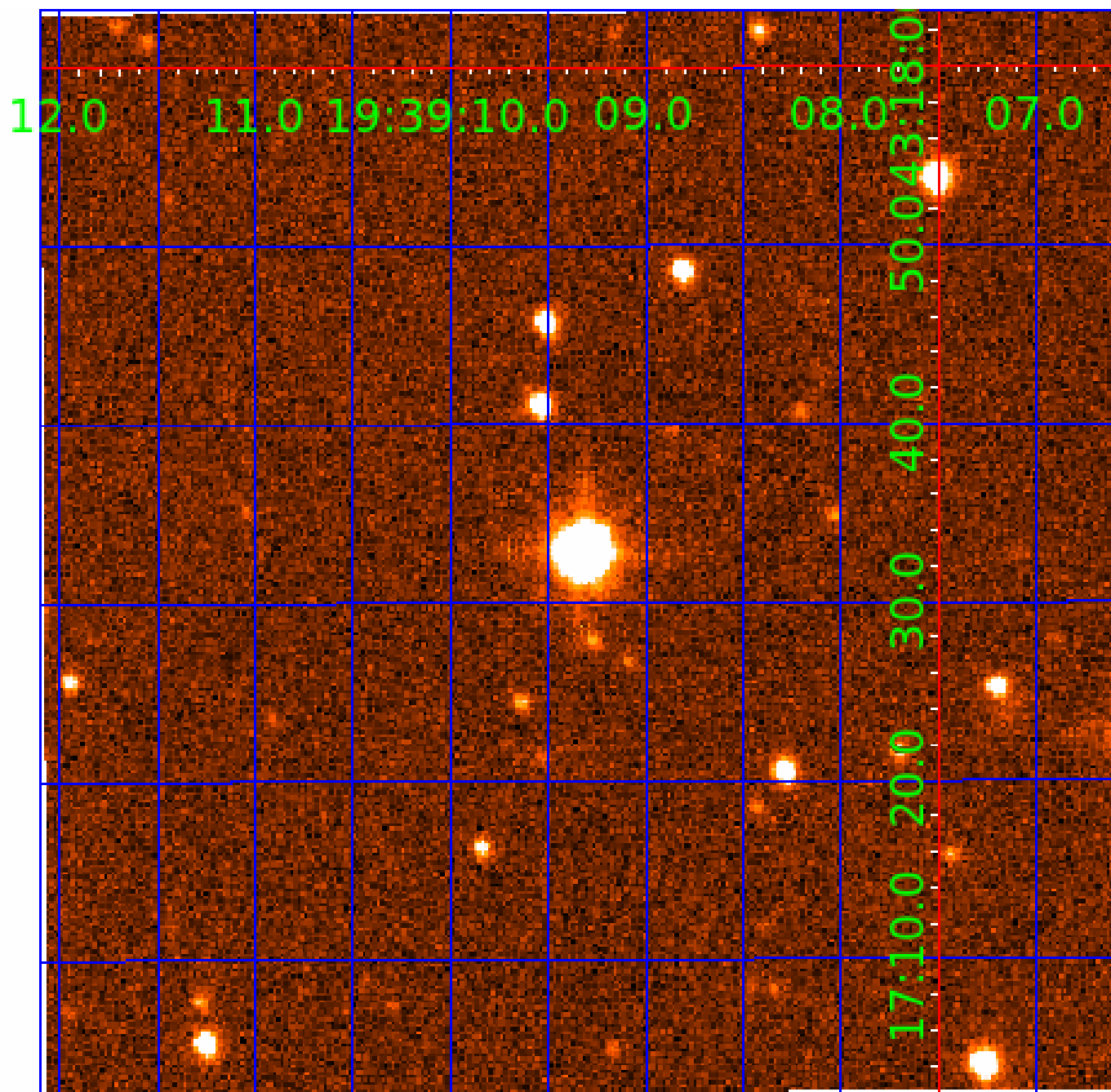


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007617709

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})
007617709-01	OBS	No	2.121147	133.485079	25.4	3.233	10.2	3.6	4.53	7046	2.75	26155.20
007617709-02	OBS	No	2.121265	132.500330	7.5	1.378	9.1	1.1	4.53	7046	1.26	26153.28
007617709-03	OBS	No	2.120895	132.907673	36.8	2.663	8.3	5.0	4.53	7046	3.20	26159.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007617709-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
007617709-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
007617709-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—HALO_GHOST

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 007617709-03

No Significant Match Found

KIC: 7617709 Candidate: 3 of 3 Period: 2.121 d



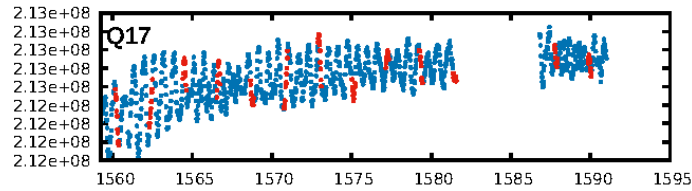
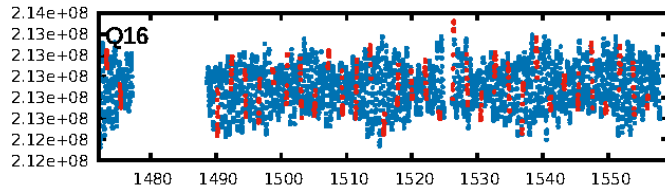
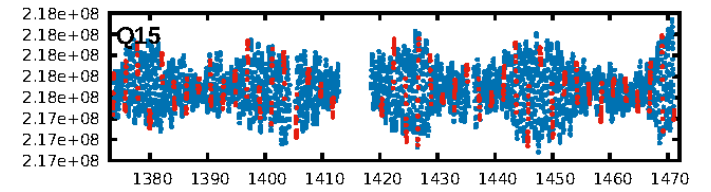
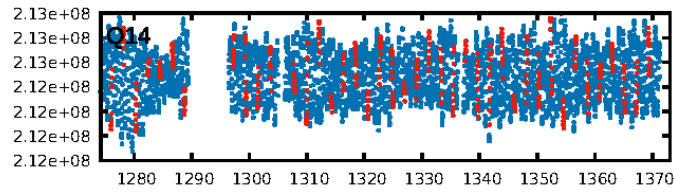
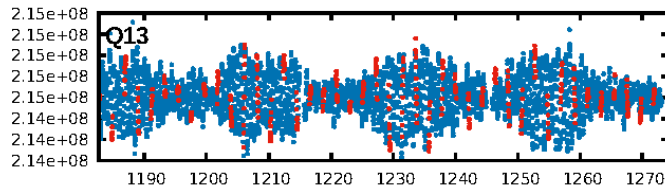
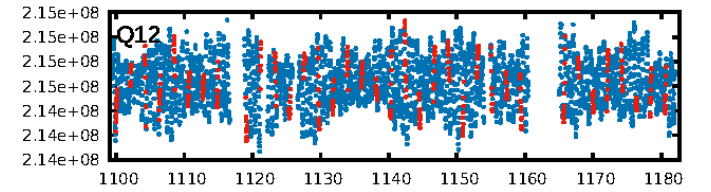
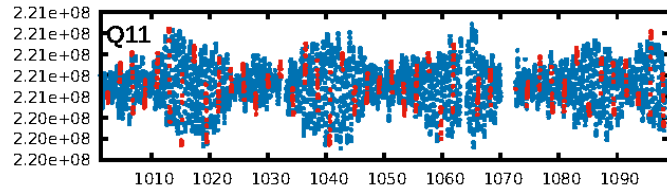
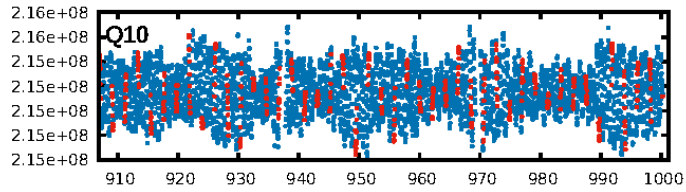
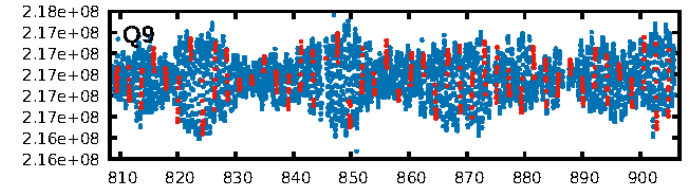
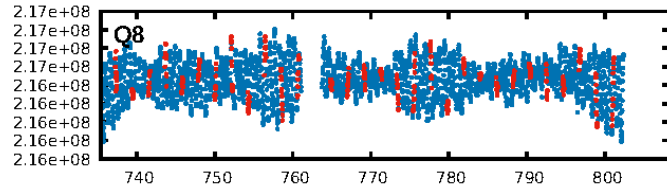
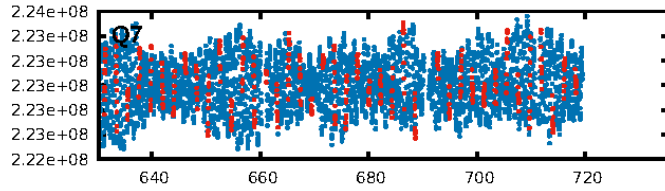
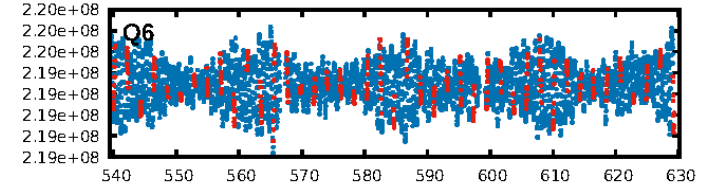
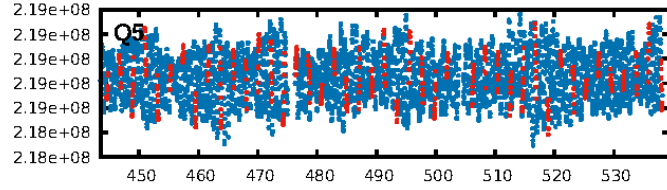
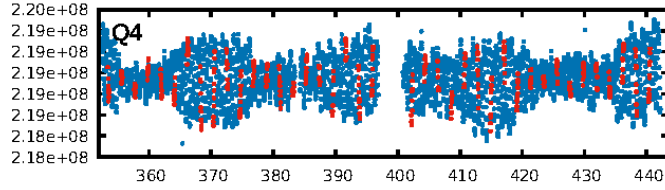
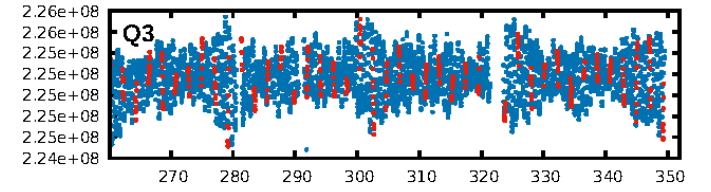
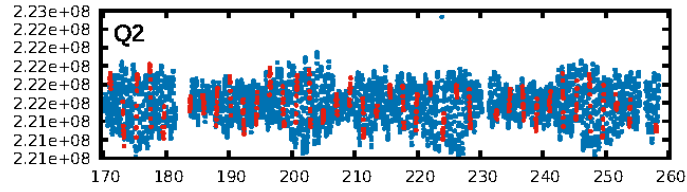
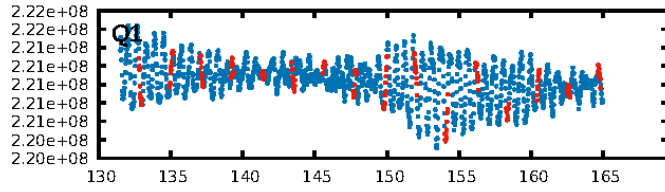
Period = 2.12090 [0.00002] d
 Epoch = 132.9077 [0.0029] BKJD
 Rp/R* = 0.0065 [0.0018]
 a/R* = 2.90 [3.92]
 b = 0.90 [0.33]
 Seff = 26159.35 [15461.34]
 Teq = 3243 [479] K
 Rp = 3.20 [1.49] Re
 a = 0.0417 [0.0150] AU
 Ag = 0.97 [2.52] [-0.01σ]
 Teffp = 4971 [3173] K [0.54σ]

DV Diagnostic Results:

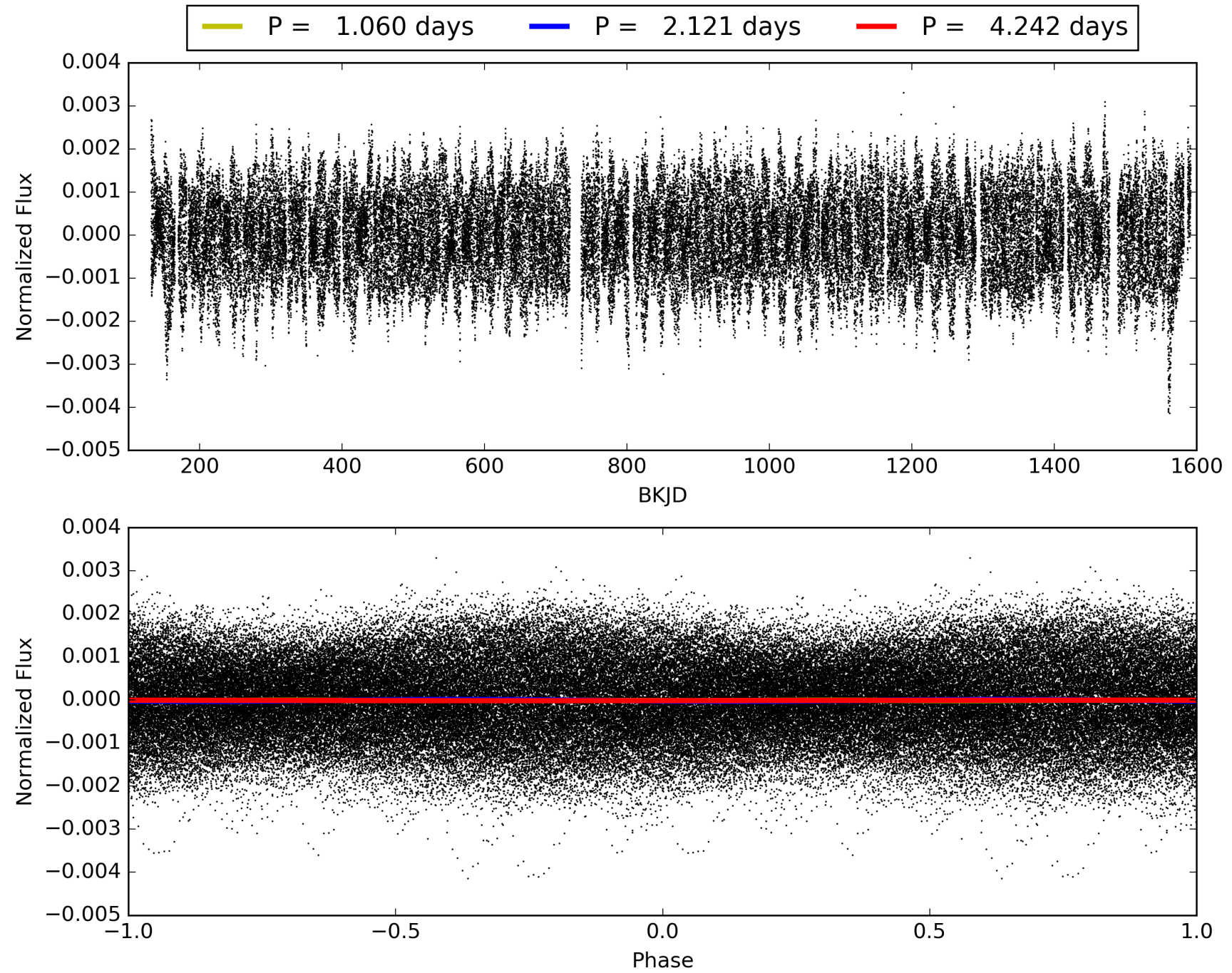
ShortPeriod-sig: N/A
 LongPeriod-sig: 0.1% [0.00σ]
 ModelChiSquare2-sig: N/A
 ModelChiSquareGof-sig: N/A
 Bootstrap-pfa: 3.95e-22
 RollingBand-fgt: 0.89 [540/606]
 GhostDiagnostic-chr: -0.1095

Centroid-sig: 4.2%
 Centroid-so: 1.011 arcsec [1.64σ]
 OotOffset-rm: 0.217 arcsec [0.31σ]
 KicOffset-rm: 0.150 arcsec [0.26σ]
 OotOffset-st: 4/4/4/5 [17]
 KicOffset-st: 4/4/4/5 [17]
 DiffImageQuality-fgm: 0.53 [9/17]
 DiffImageOverlap-fno: 0.35 [6/17]

TCE 007617709-03, PDC Light Curves

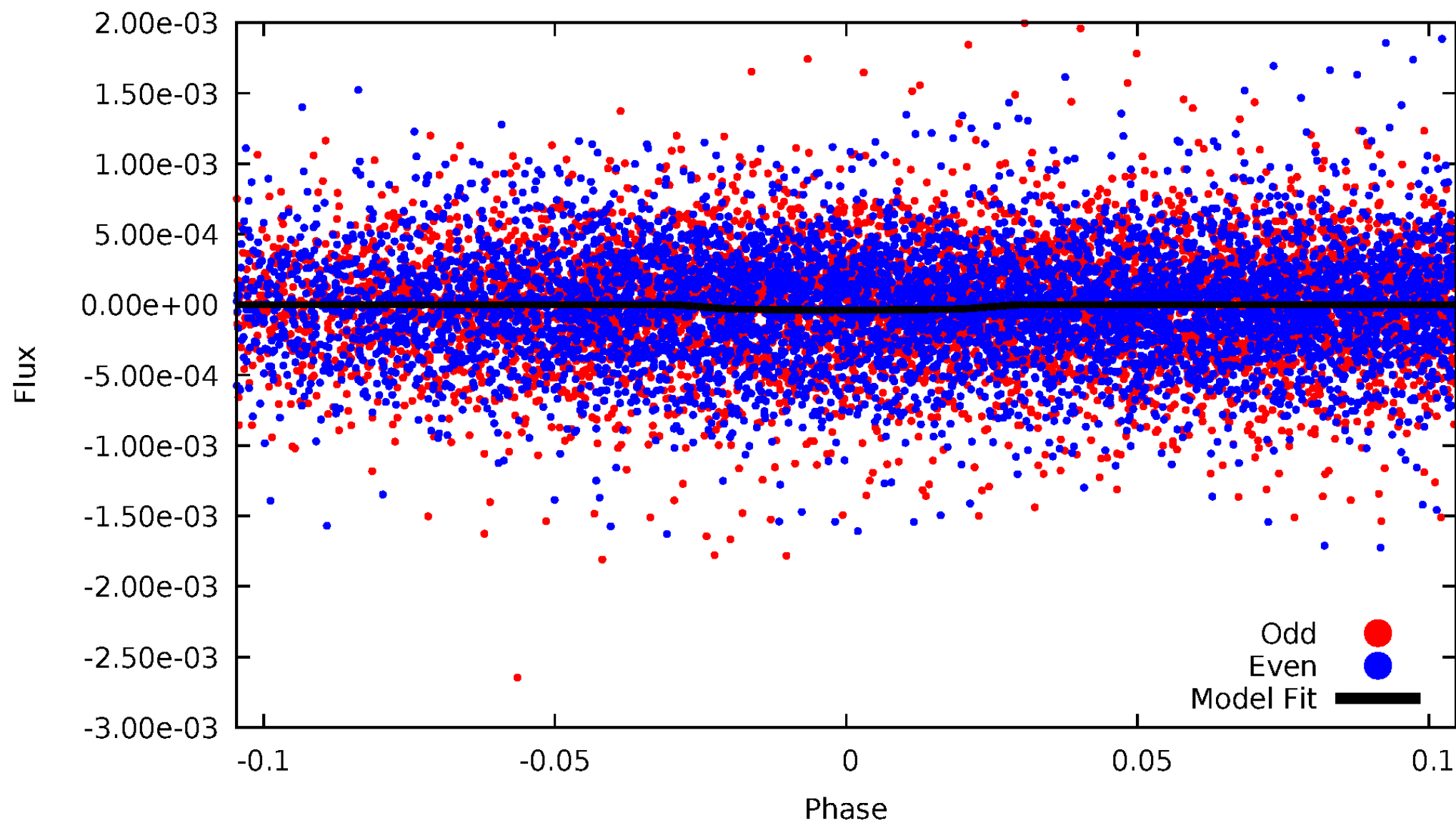


TCE 007617709-03



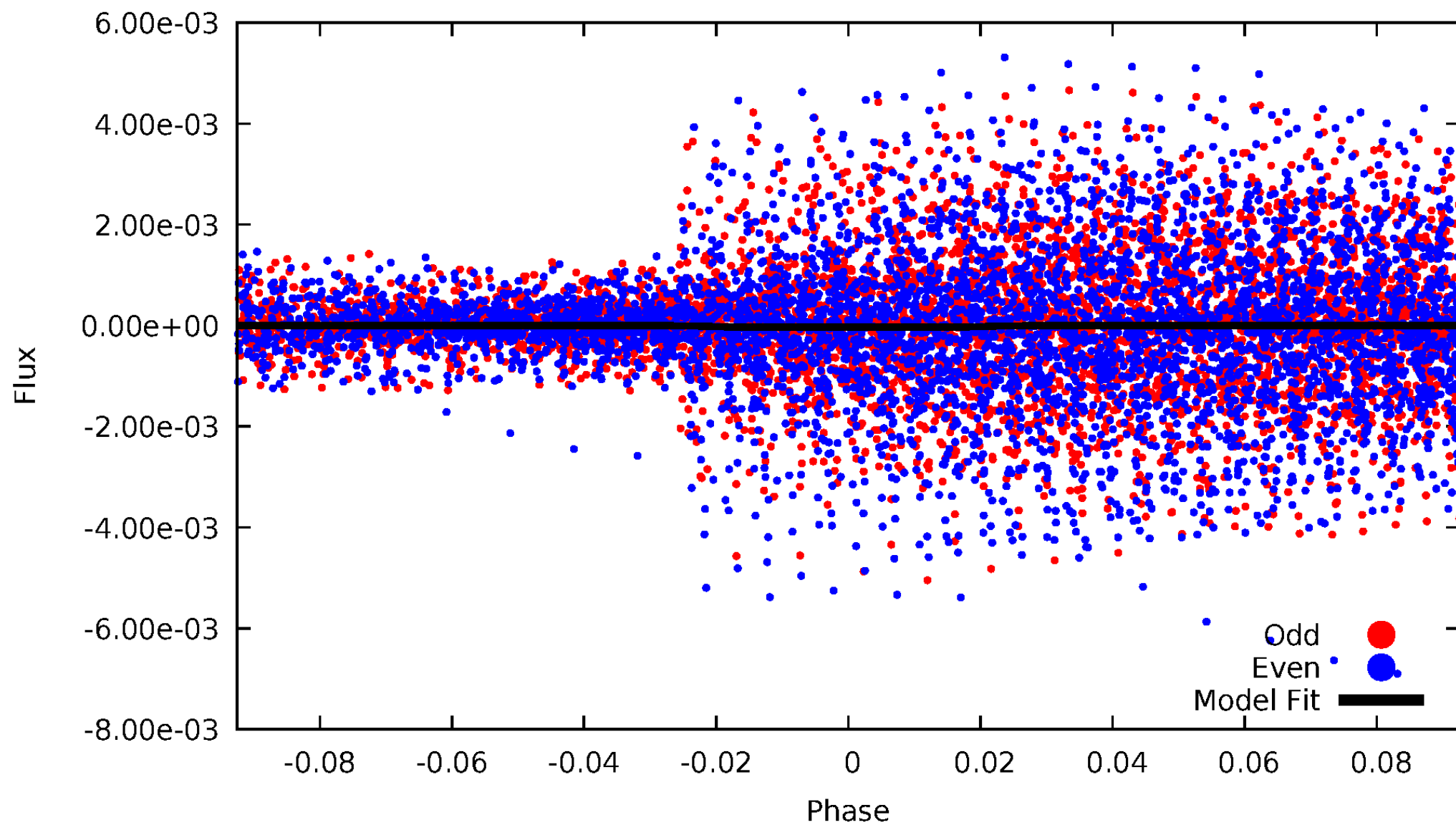
DV Odd/Even

TCE 007617709-03



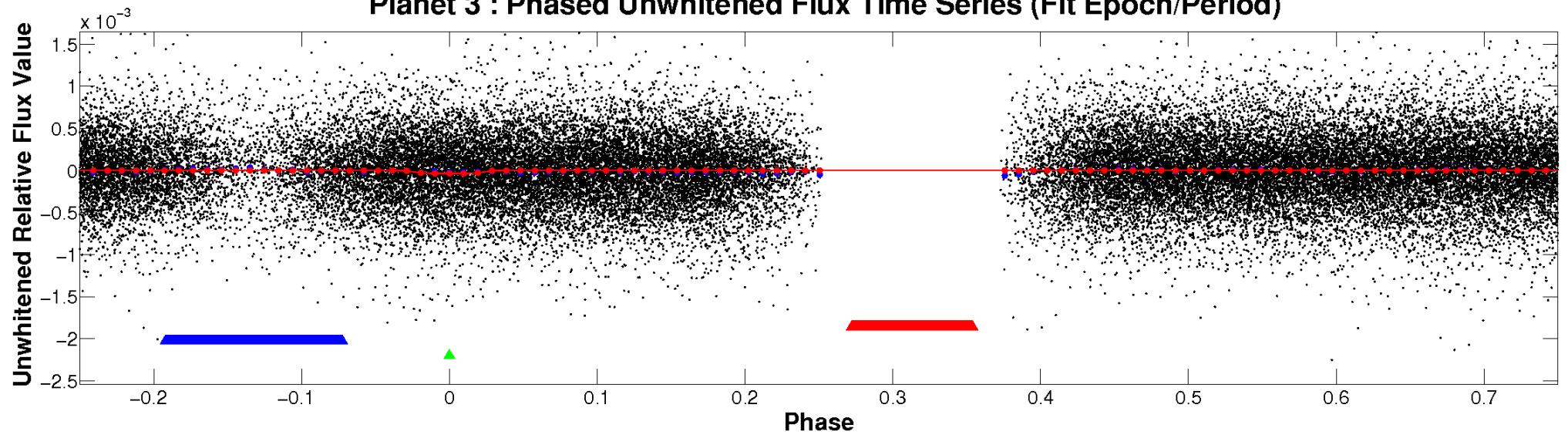
ALT Odd/Even

TCE 007617709-03

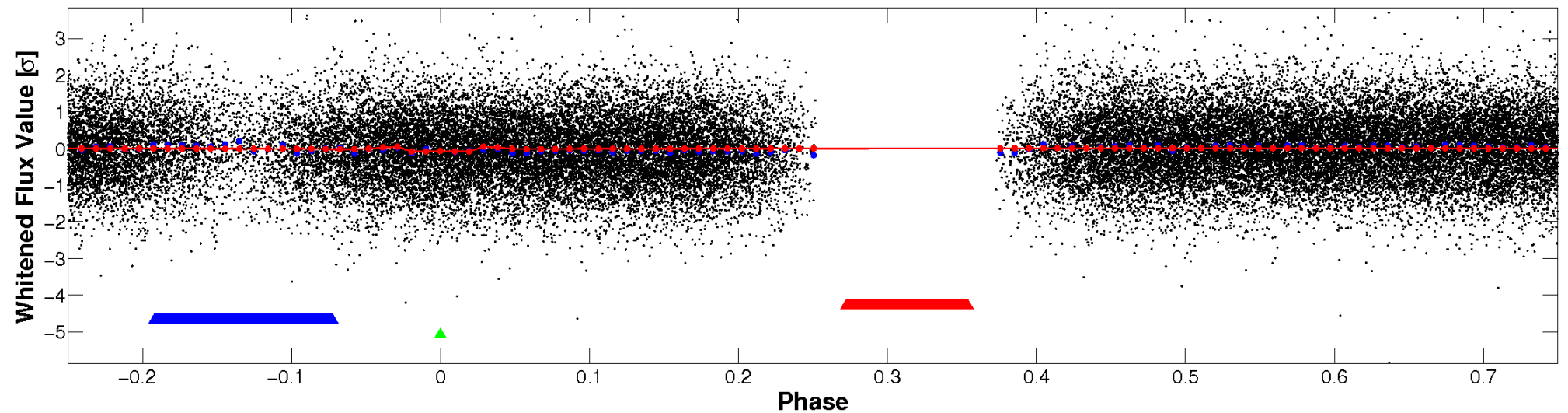


Non-Whitened Vs. Whitened Light Curve

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

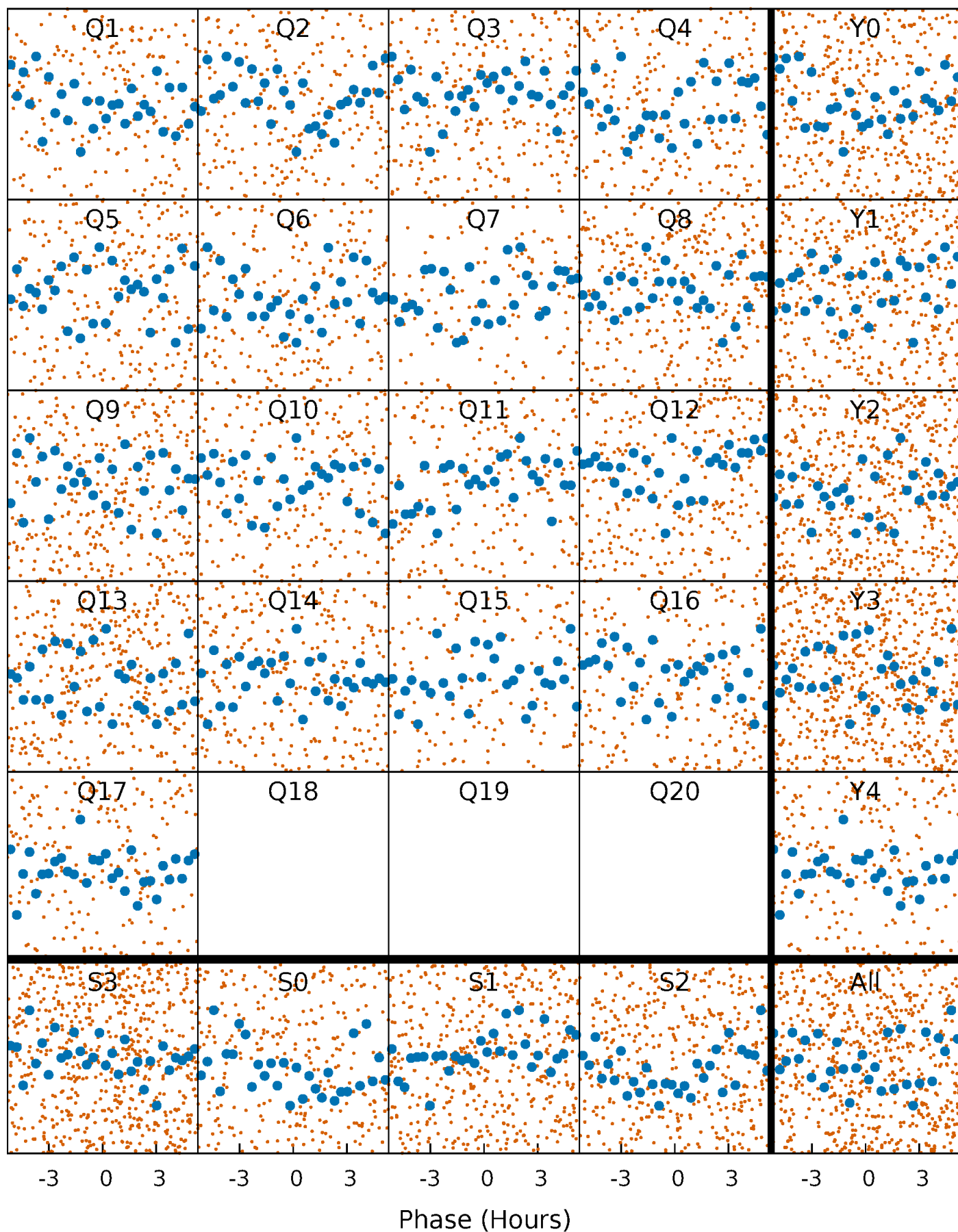


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



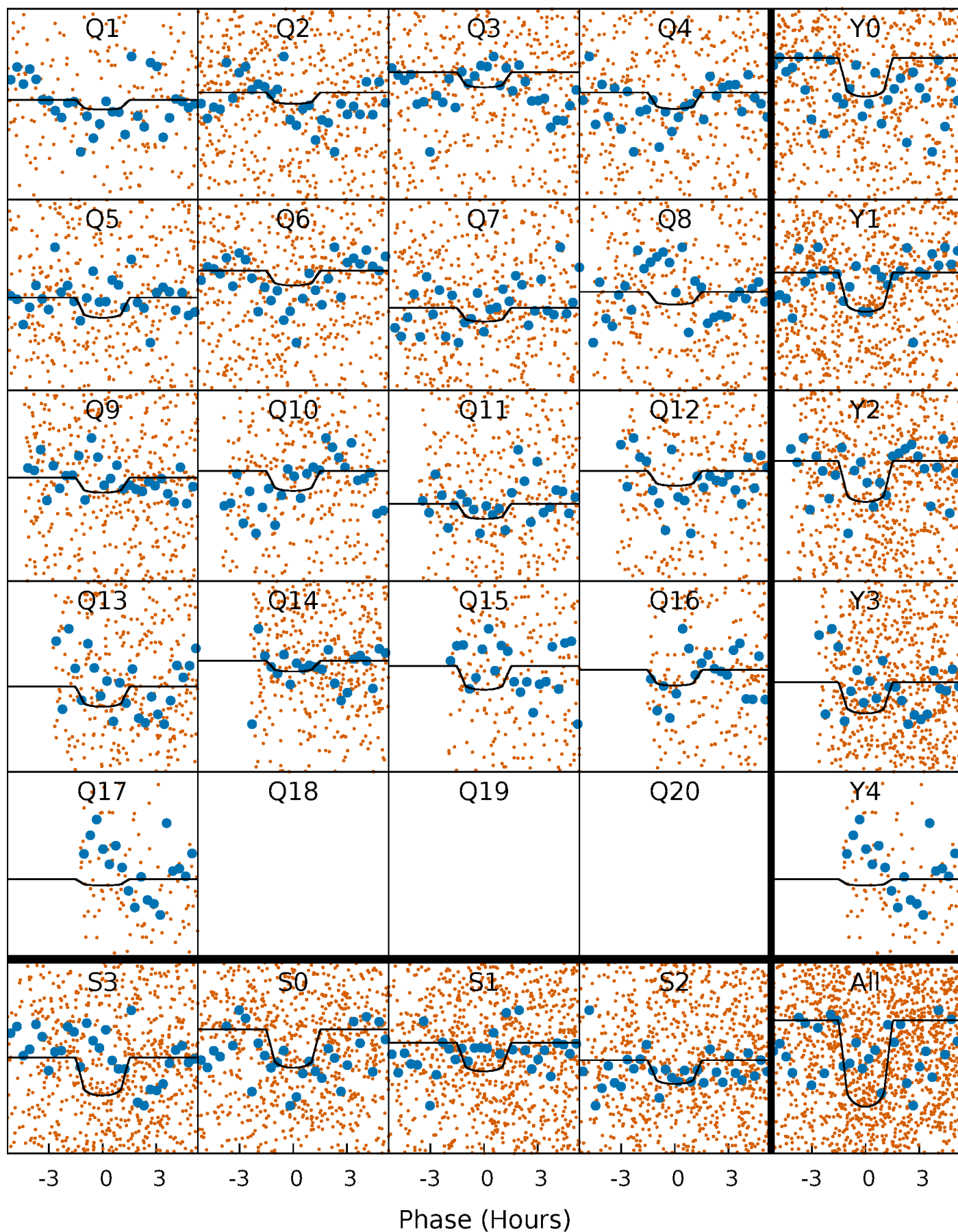
PDC Quarter-Phased Transit Curves

TCE 007617709-03 P= 2.120895 Days $T_0=132.907673$ (BKJD)



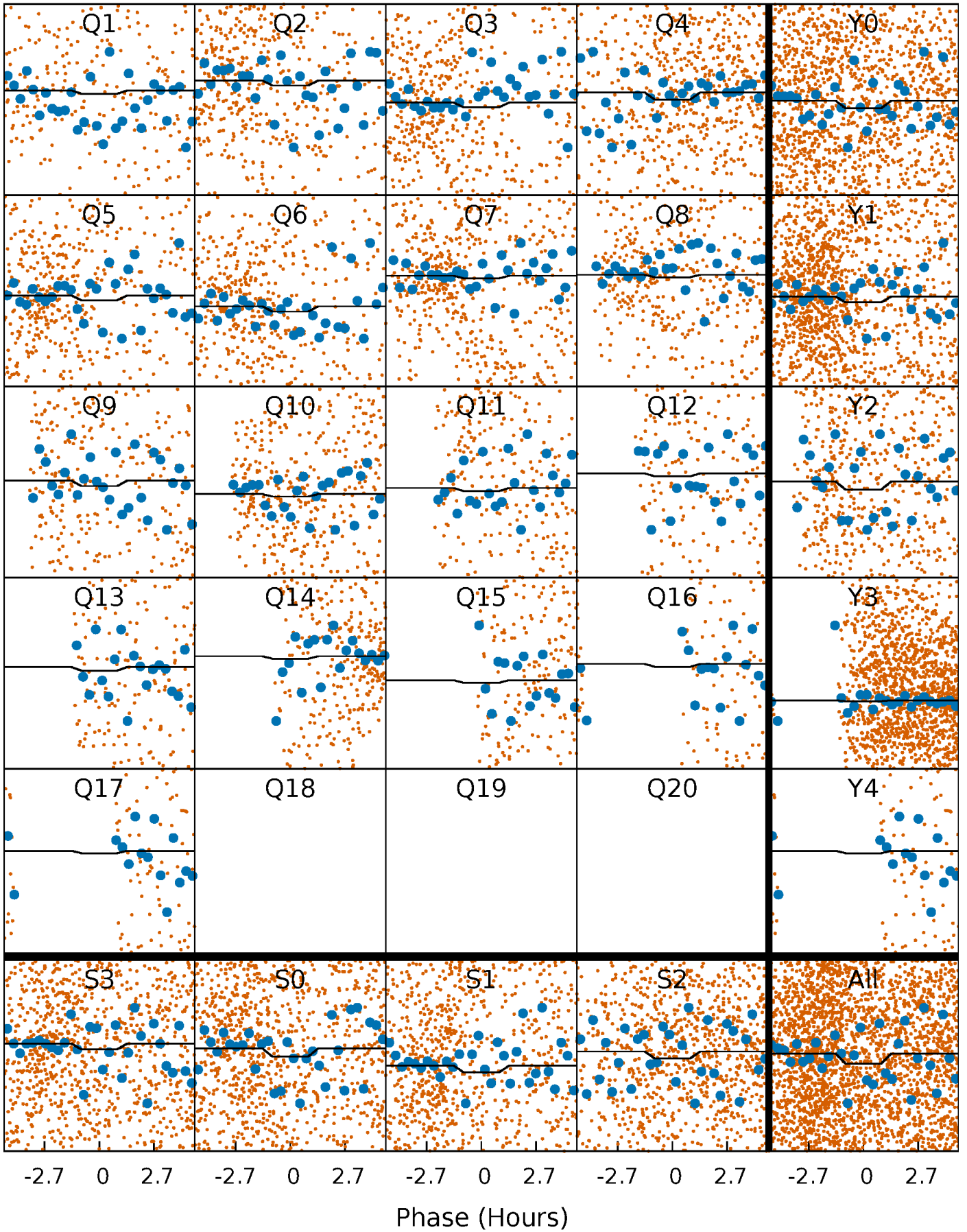
DV Quarter-Phased Transit Curves

TCE 007617709-03 P= 2.120895 Days $T_0=132.907673$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

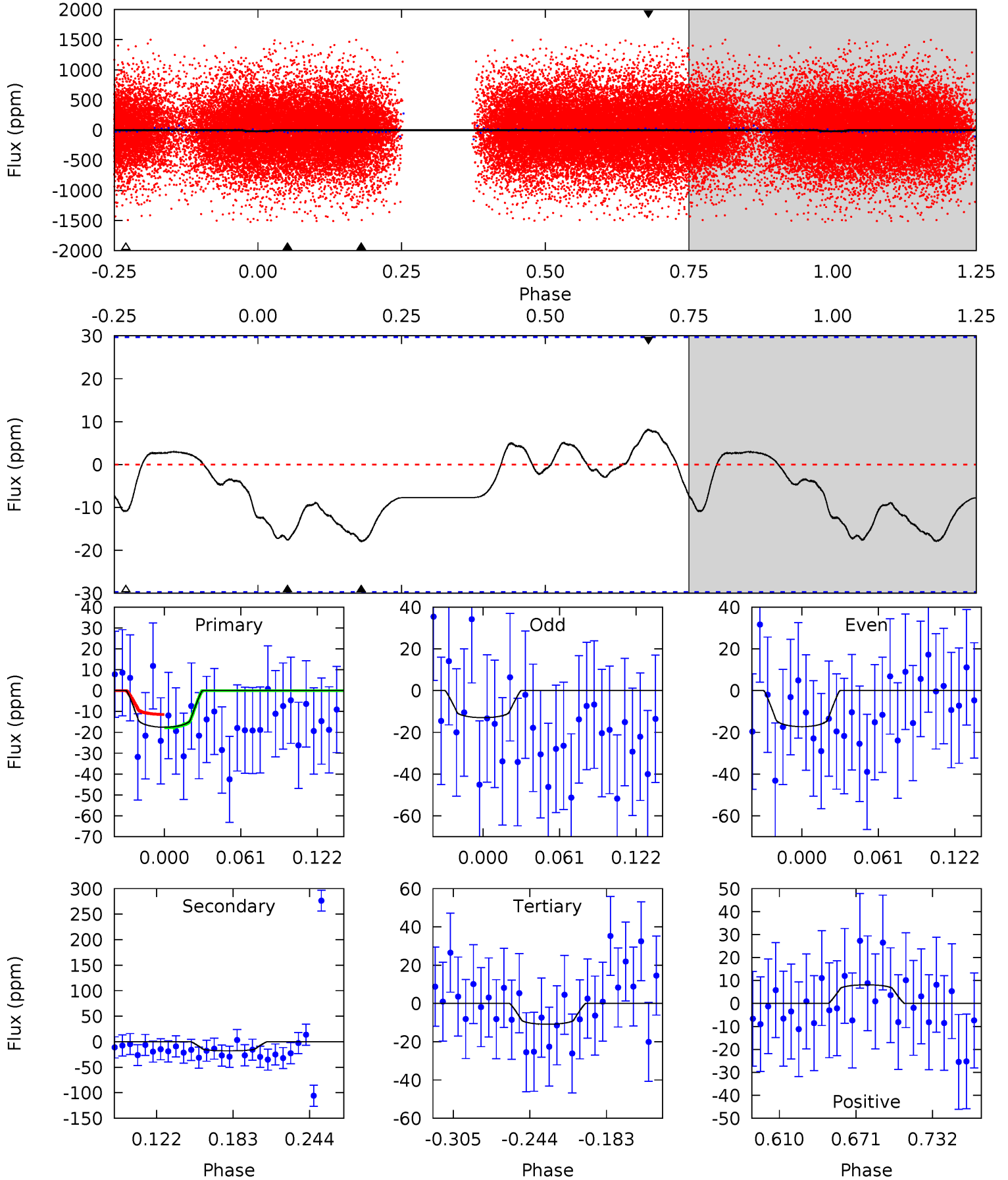
TCE 007617709-03 P= 2.120763 Days $T_0=132.911360$ (BKJD)



DV Model-Shift Uniqueness Test

007617709-03, P = 2.120895 Days, E = 130.786778 Days

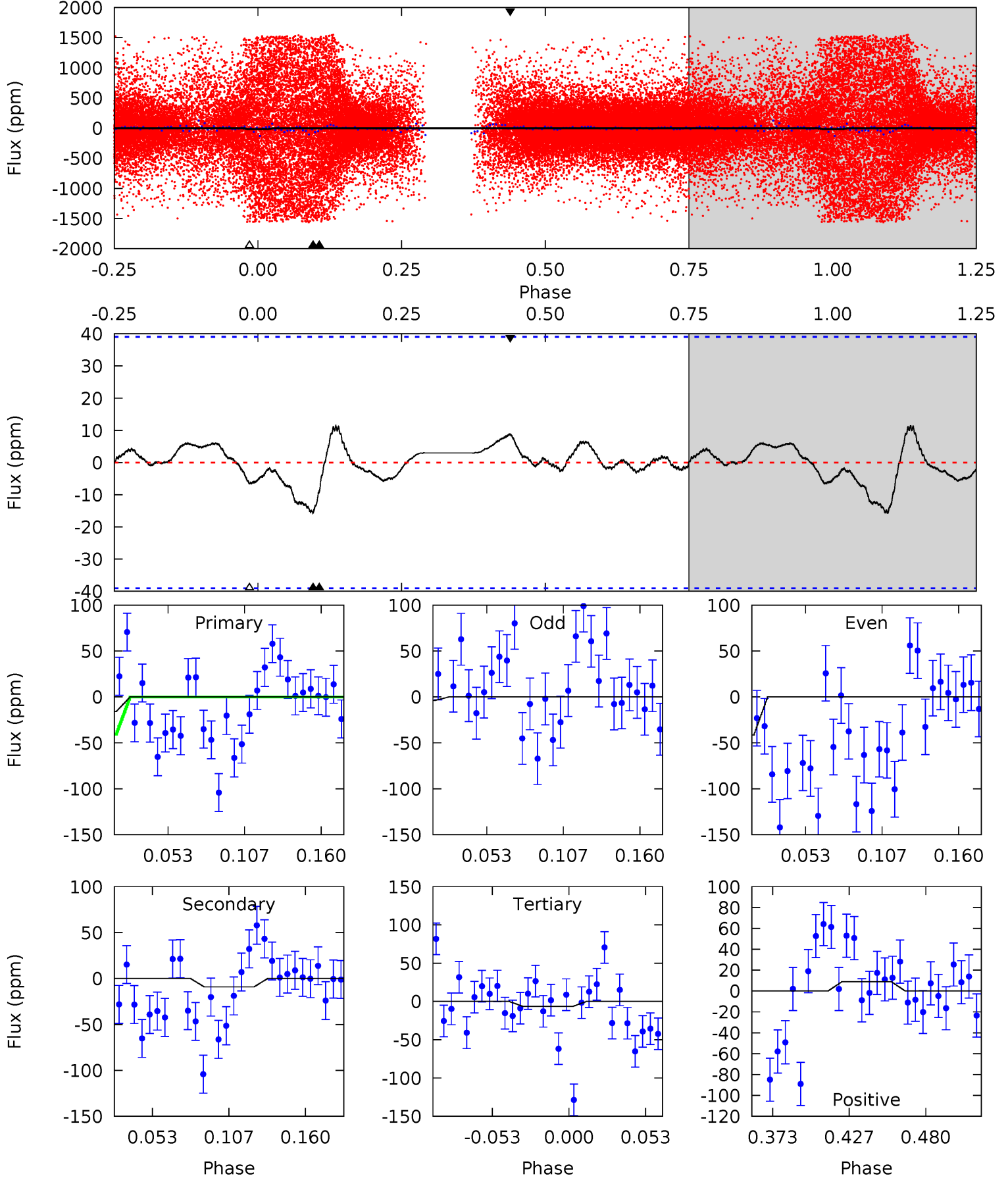
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.76	2.81	1.71	1.27	4.67	1.87	0.73	1.05	1.48	1.10	1.53	0.34	6.46	0.31	0.50



Alt Model-Shift Uniqueness Test

007617709-03, P = 2.120763 Days, E = 130.790597 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.90	1.10	0.79	1.06	4.69	1.93	0.38	1.11	0.84	0.32	0.04	2.24	0.59	0.42	0.84



Stellar Parameters For KIC 007617709

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7046^{+171}_{-245}	$3.456^{+0.336}_{-0.063}$	$0.070^{+0.250}_{-0.250}$	$4.534^{+0.202}_{-1.720}$	$2.142^{+0.174}_{-0.376}$	$0.032^{+0.082}_{-0.006}$
	+2%/-3%	+10%/-2%	+357%/-357%	+4%/-38%	+8%/-18%	+253%/-20%
Source	PHO1	FLK73	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 007617709-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 6	$2.97^{+0.99}_{-0.89}$	4433^{+209}_{-364}	5416^{+1159}_{-845}	$1.925^{+2.286}_{-0.958}$
Alt.	-9 ± 8	$2.56^{+0.92}_{-0.98}$	4452^{+196}_{-372}	4885^{+1740}_{-8592}	$1.273^{+2.684}_{-1.171}$

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 $A_{obs} \gg 1.0$

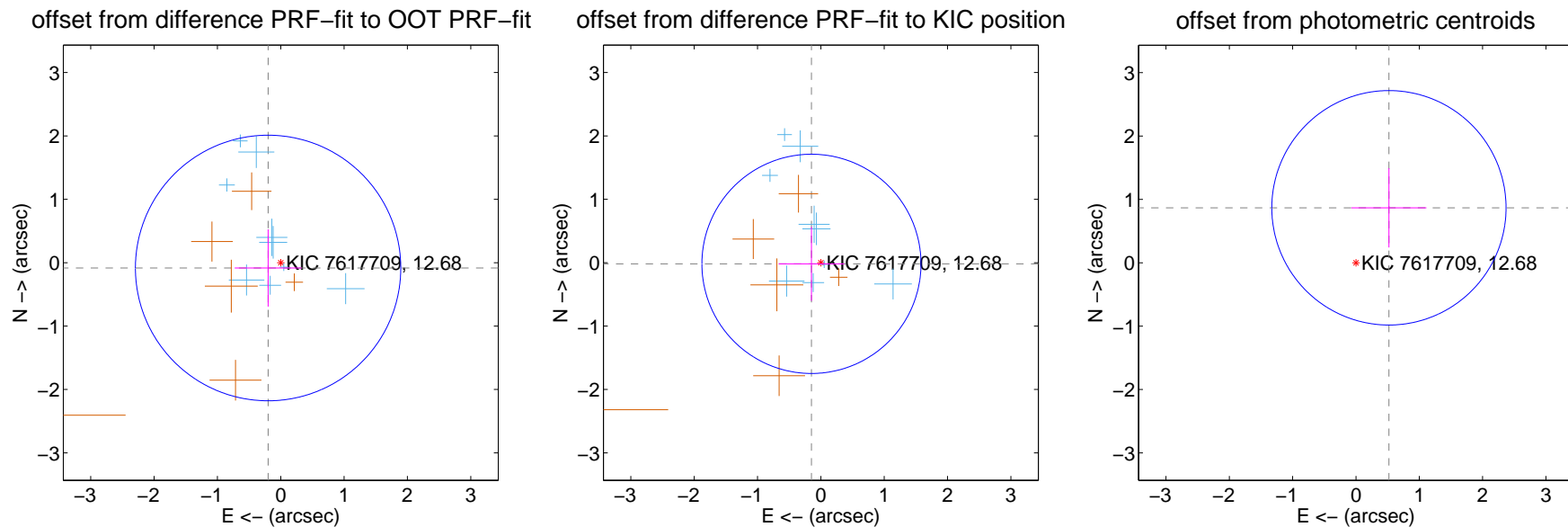
DV Centroid Data

Supplemental centroid analysis for 007617709-03. Kepler magnitude: 12.68. Transit SNR 4.98

There are 9 quarters with good PRF difference image offsets

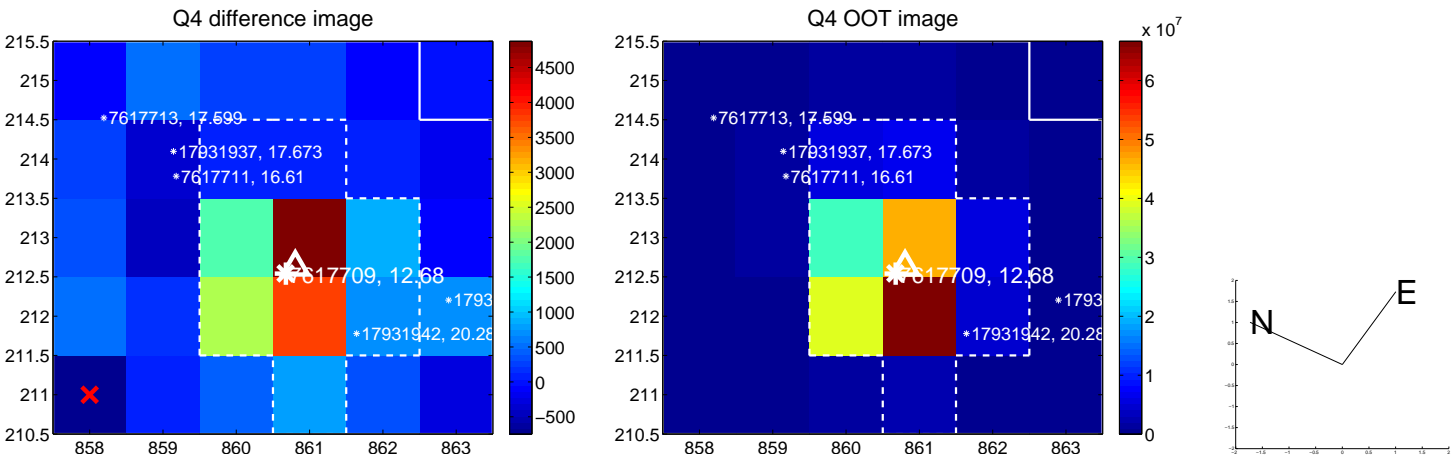
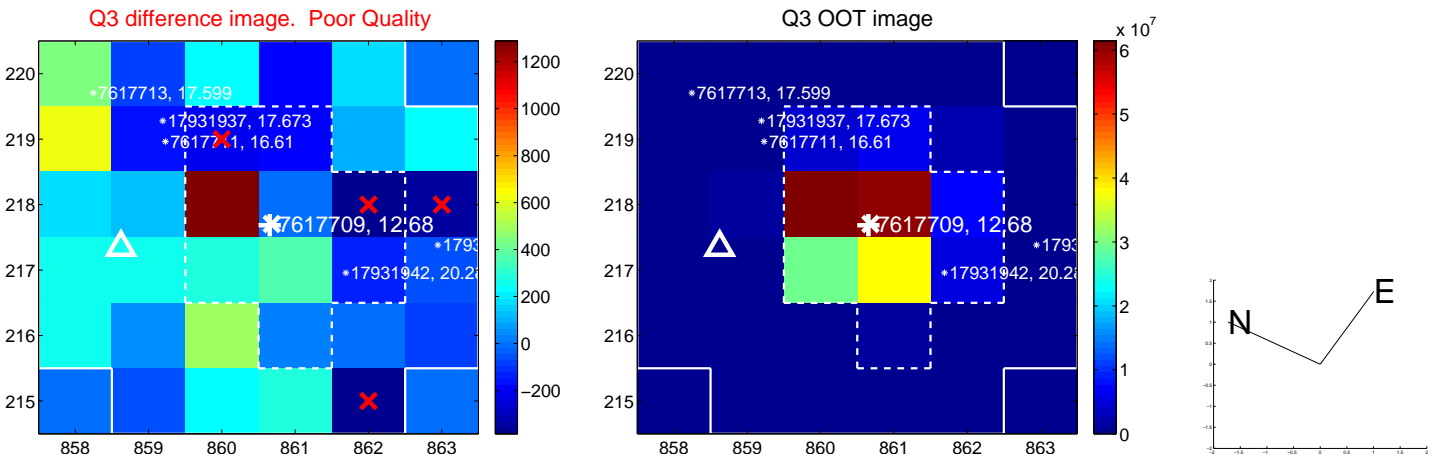
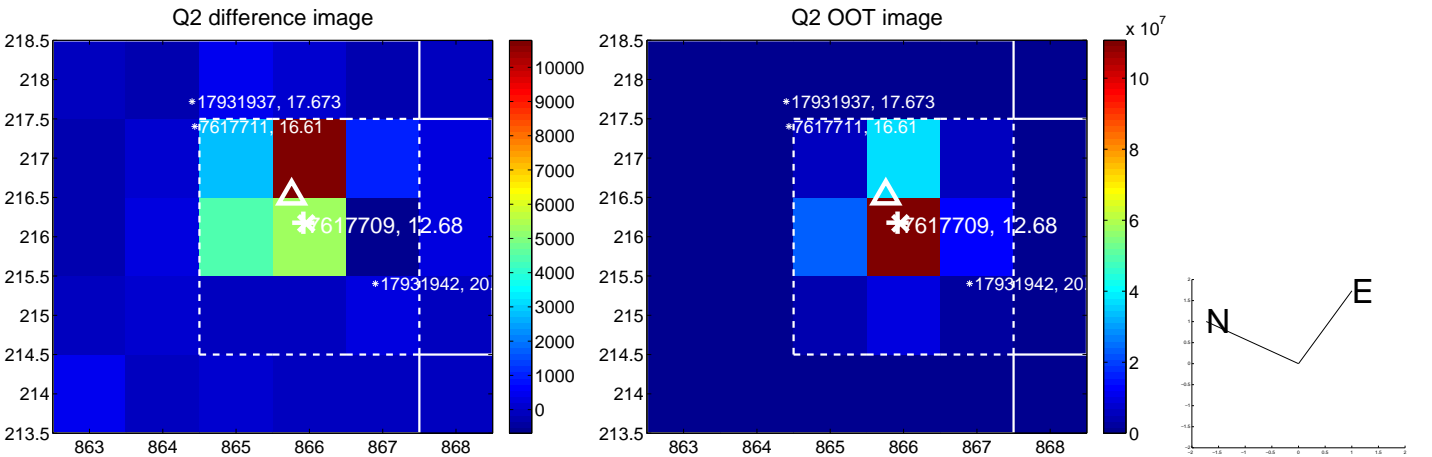
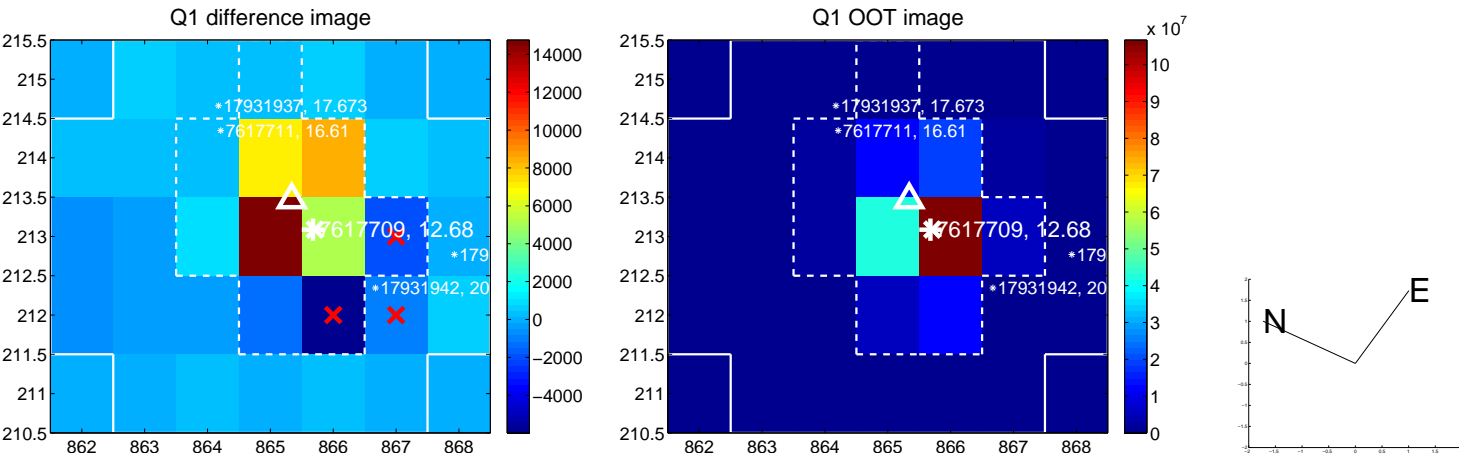
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.217 ± 0.698	0.31	0.200 ± 0.527	-0.084 ± 0.610
PRF-fit source offset from KIC position	0.150 ± 0.577	0.26	0.149 ± 0.519	-0.018 ± 0.583
photometric centroid source offset	1.01 ± 0.62	1.64	-0.52 ± 0.59	0.87 ± 0.63



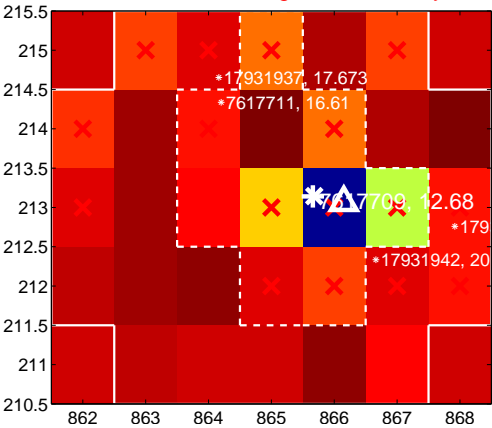
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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

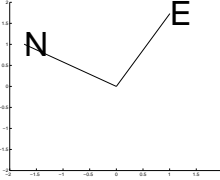
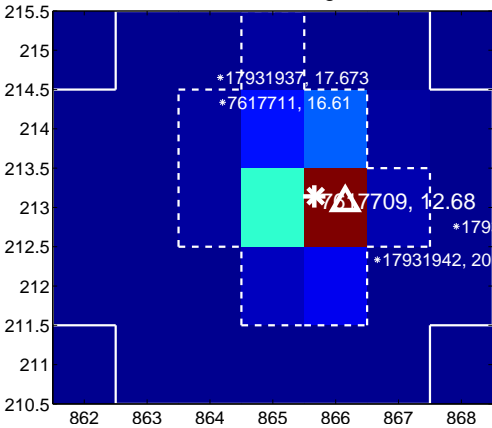


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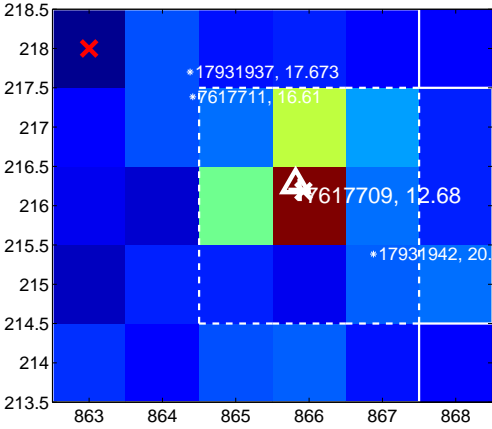
Q5 difference image. Poor Quality



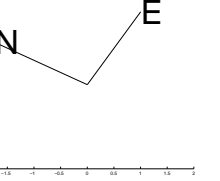
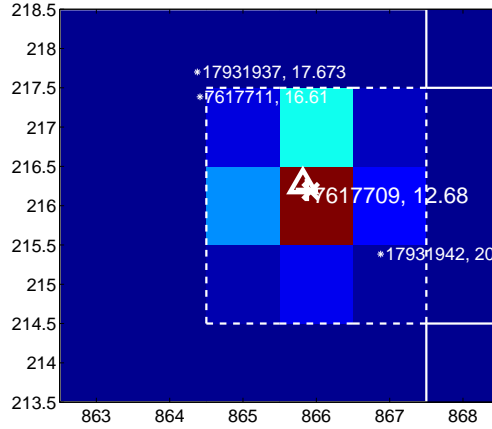
Q5 OOT image



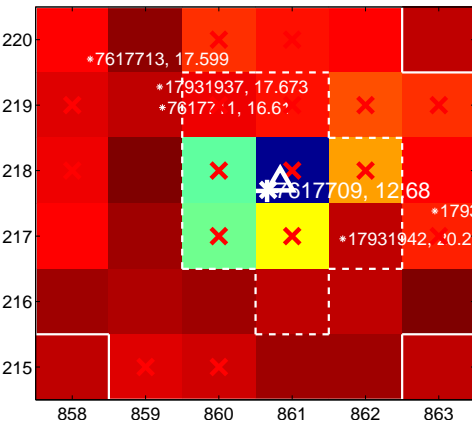
Q6 difference image



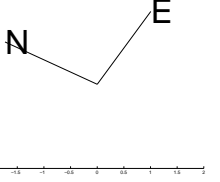
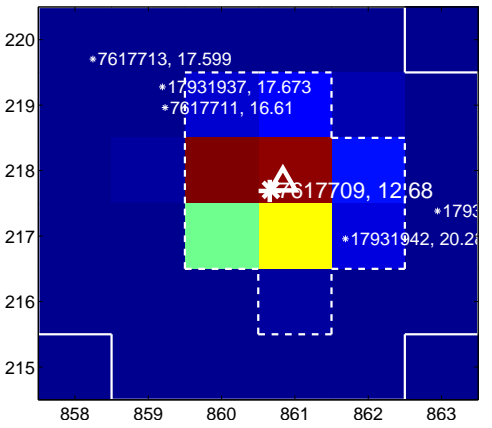
Q6 OOT image



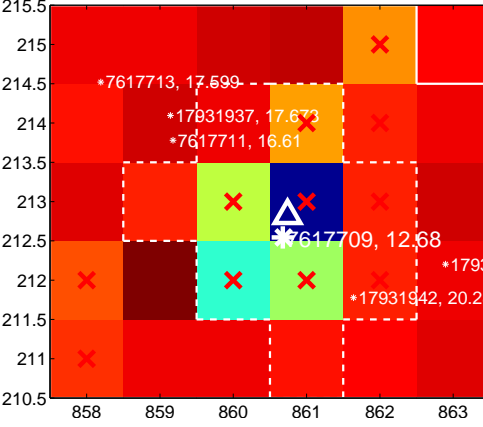
Q7 difference image. Poor Quality



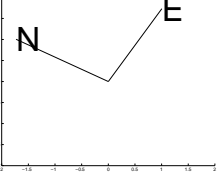
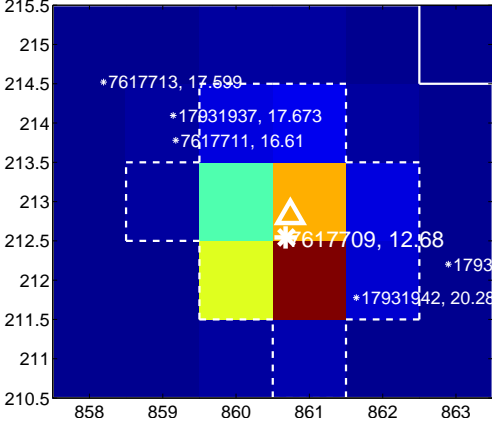
Q7 OOT image



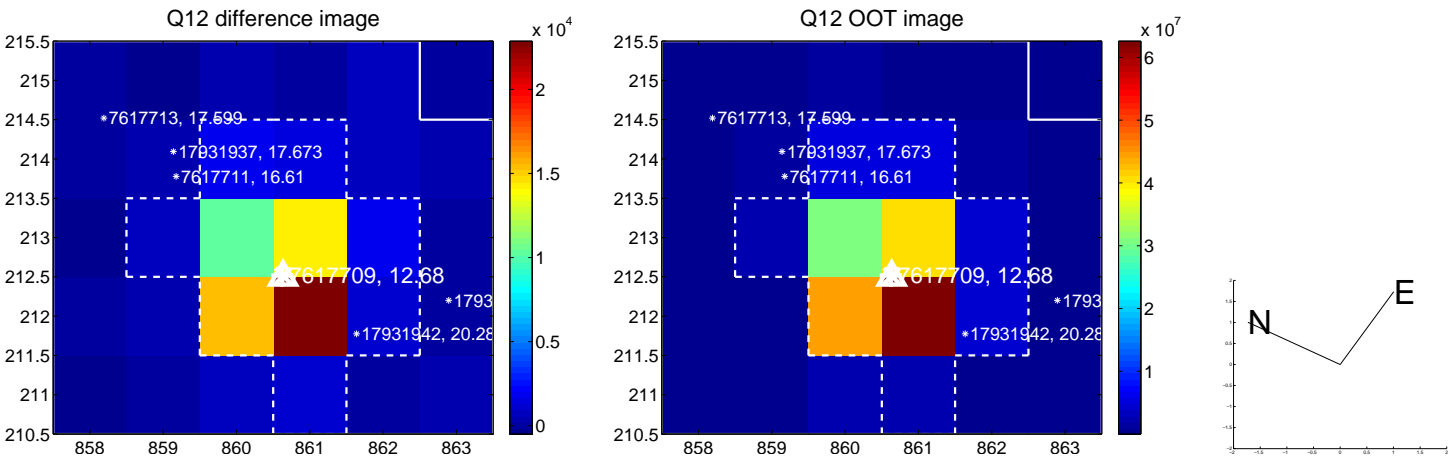
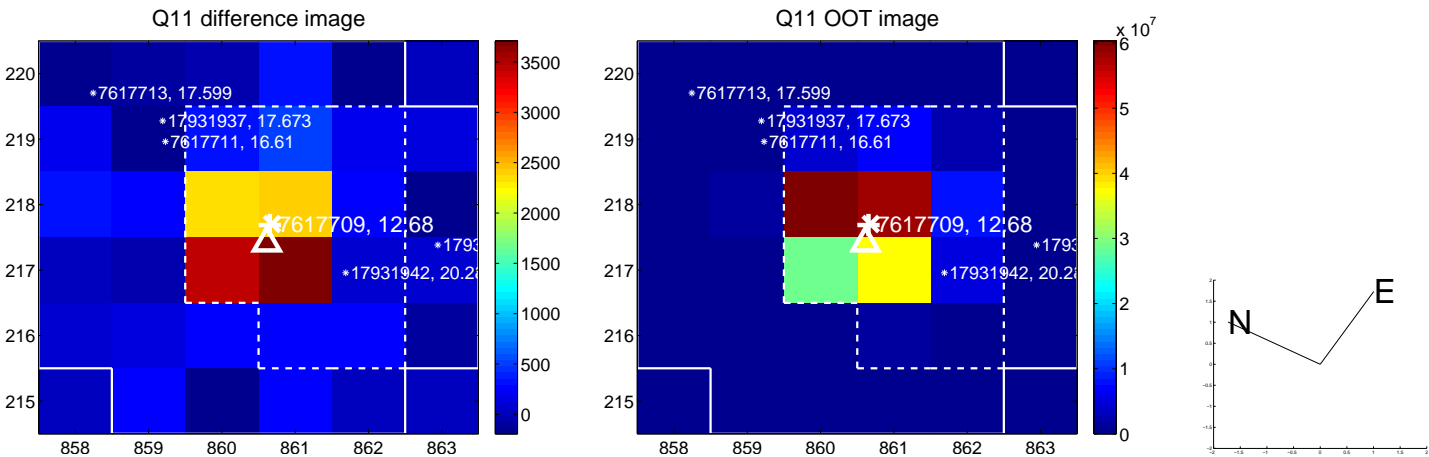
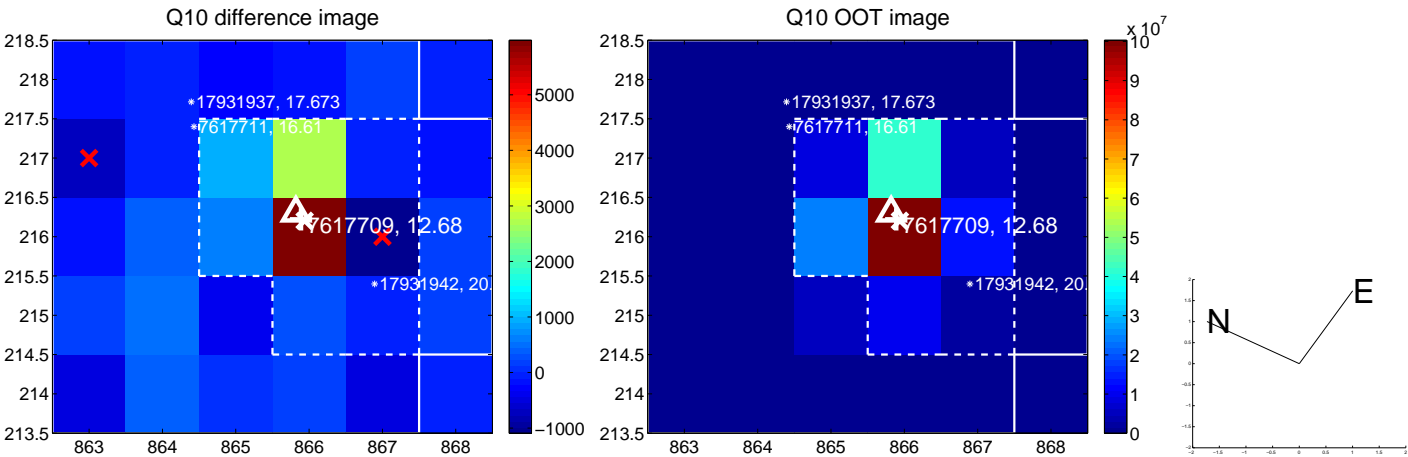
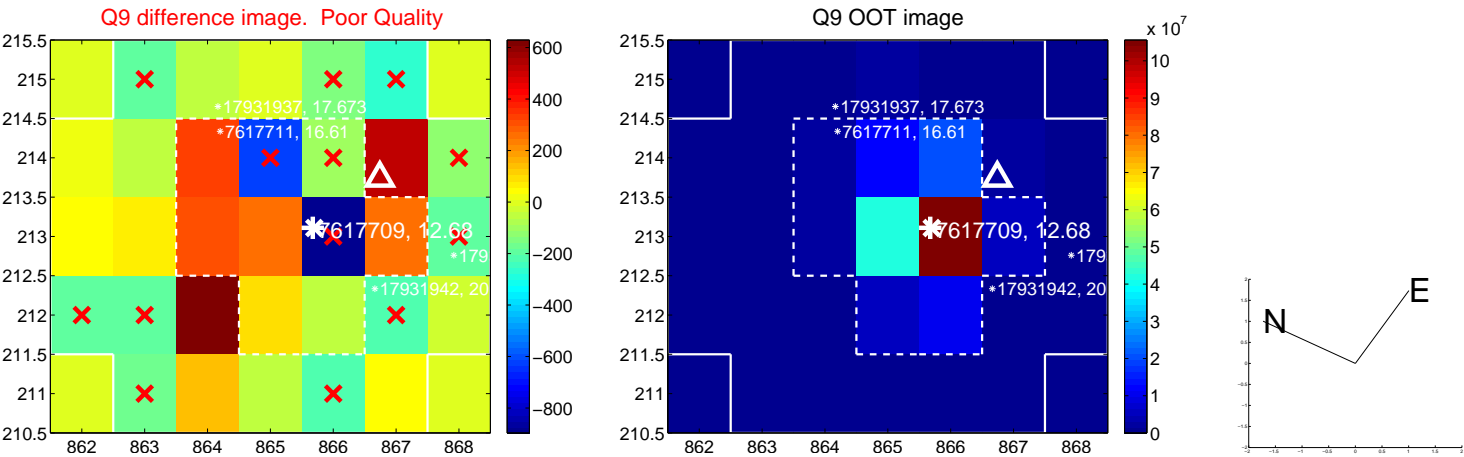
Q8 difference image. Poor Quality



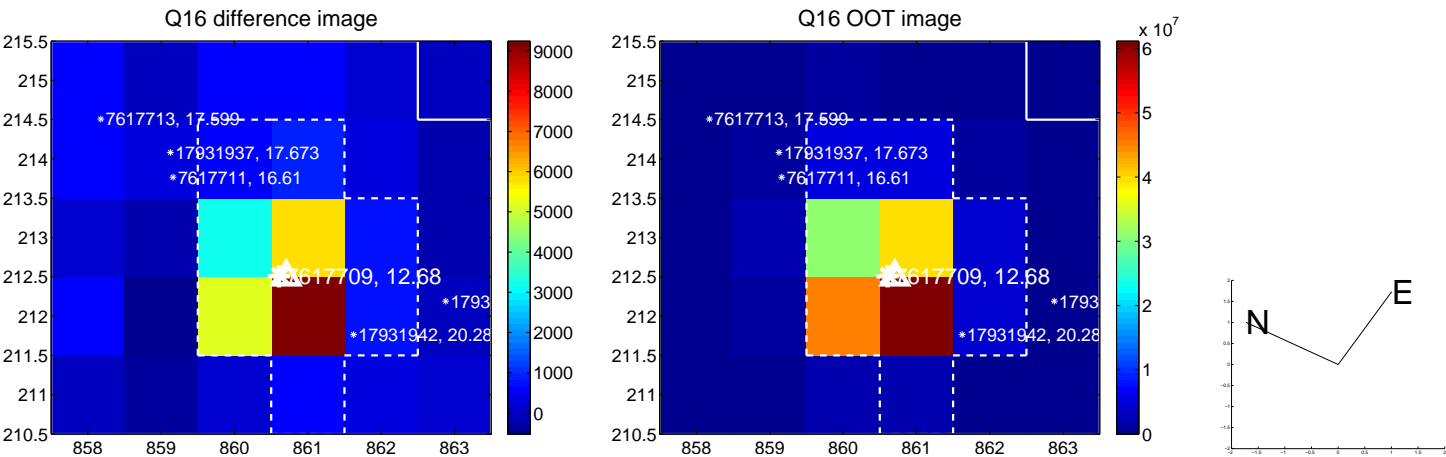
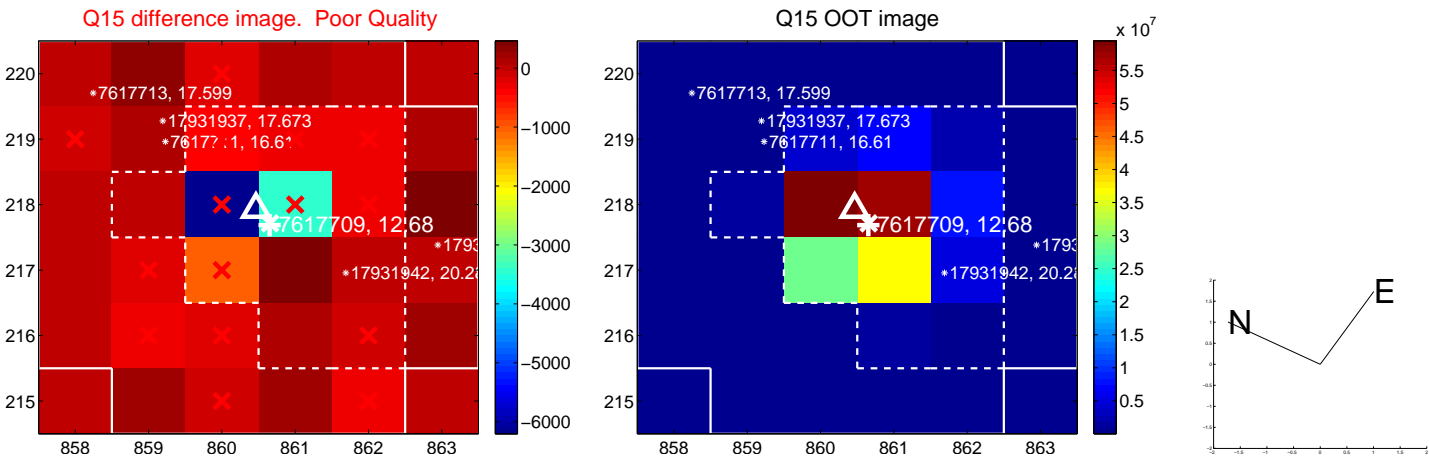
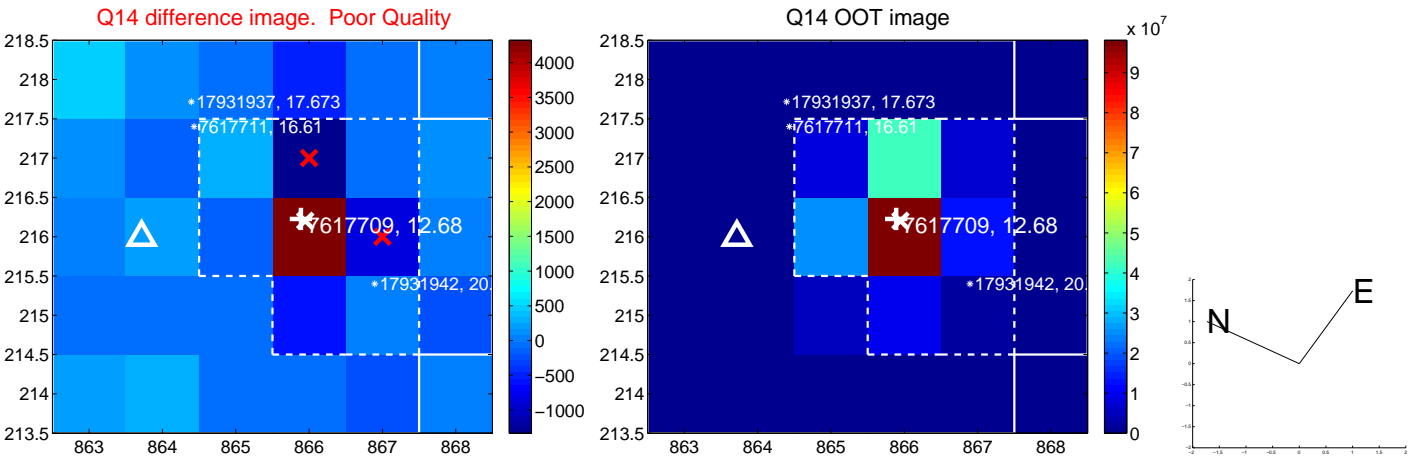
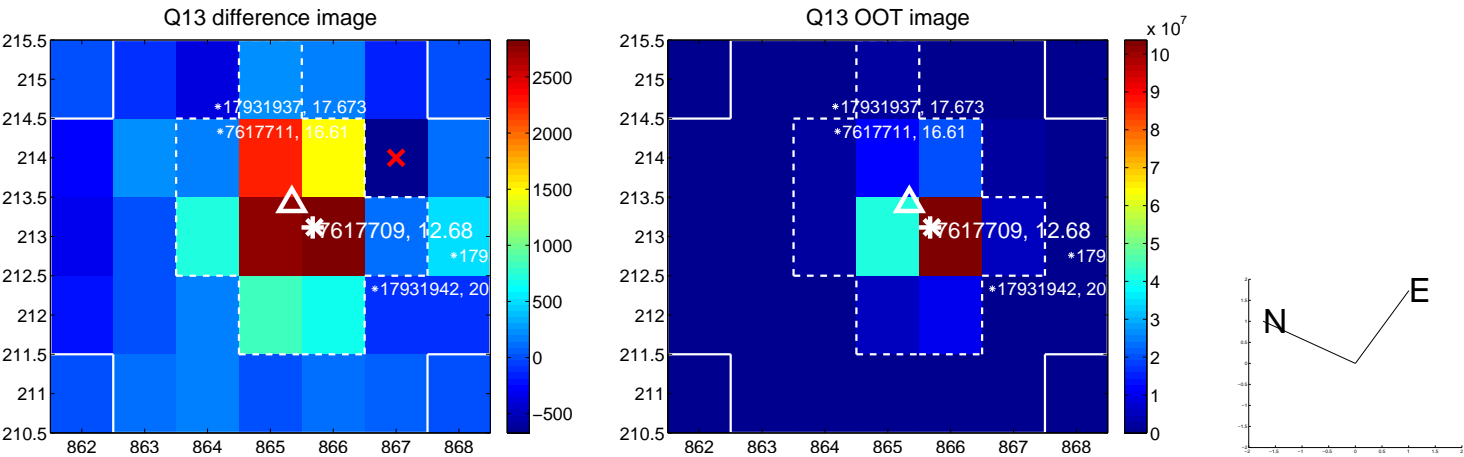
Q8 OOT image



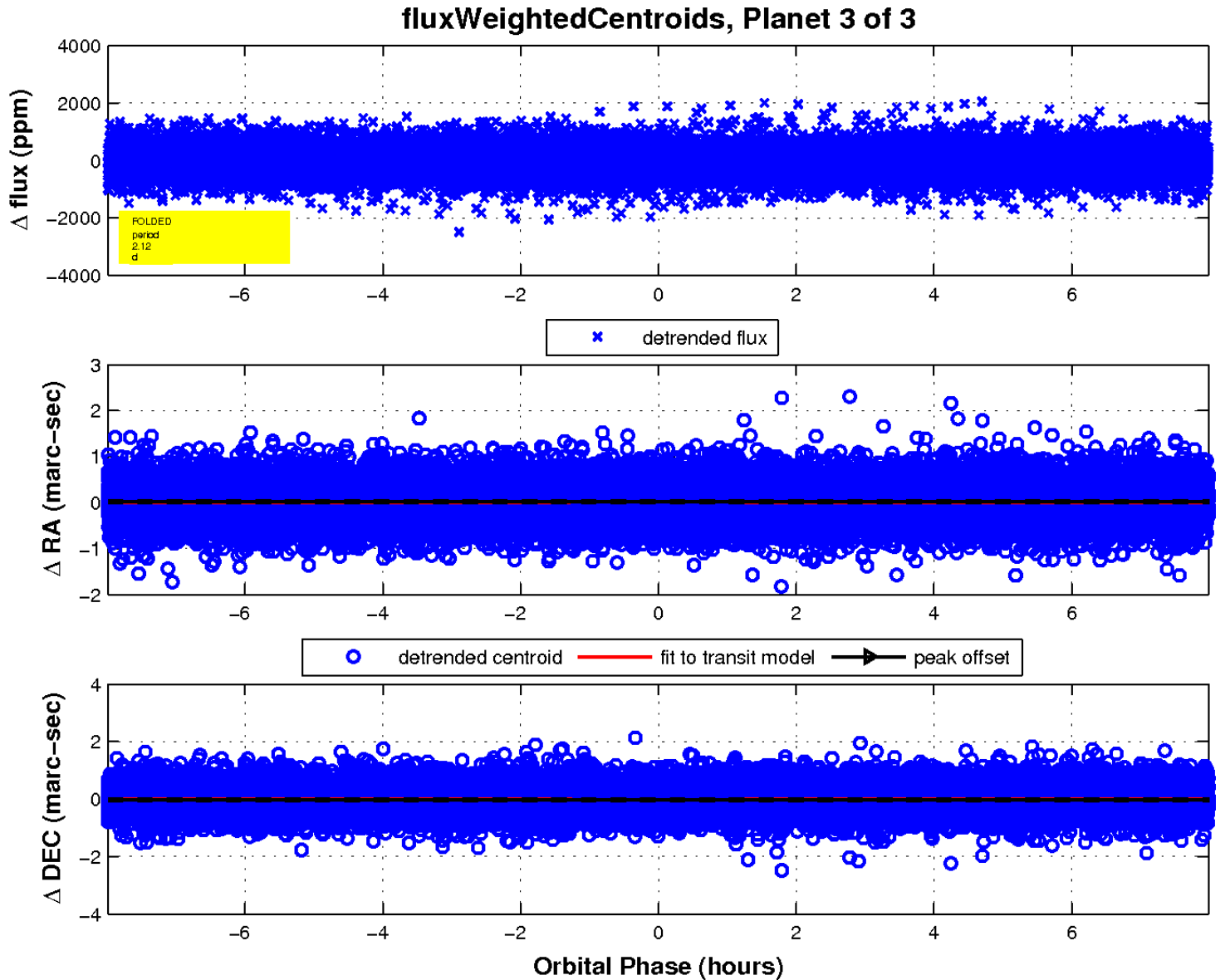
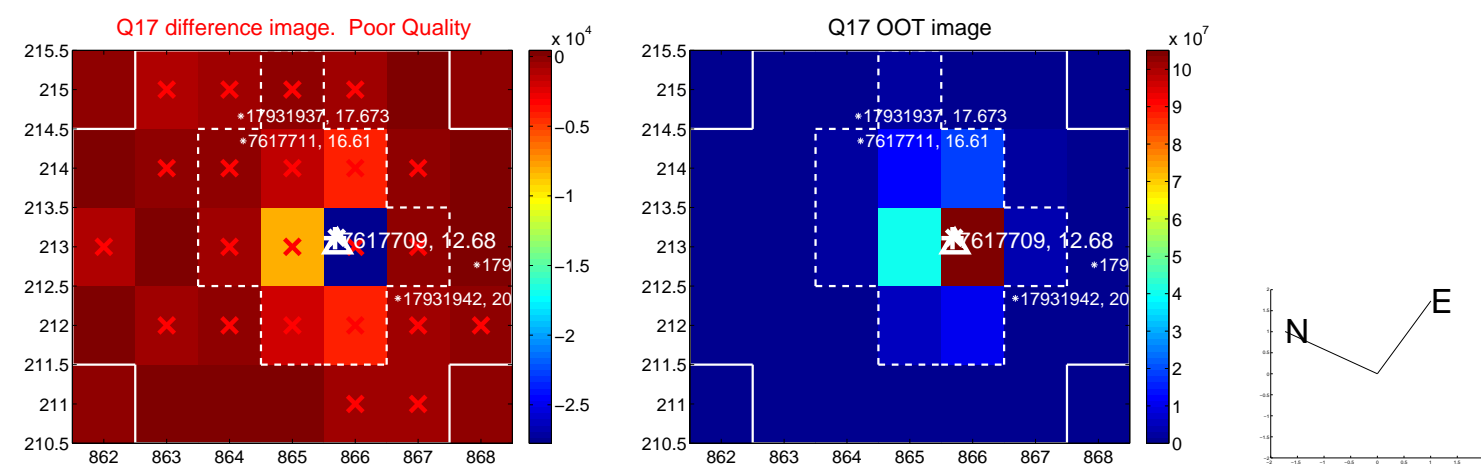
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UKIRT Image

Declination

