

KIC 009138695

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})
009138695-01	OBS	No	3.228332	131.999034	14.5	9.787	8.1	4.0	2.54	7272	1.08	5974.55
009138695-02	OBS	No	3.228697	133.021923	21.0	0.967	12.5	3.1	2.54	7272	1.21	5973.65
009138695-03	OBS	No	3.228589	133.248165	10.5	4.433	12.7	2.7	2.54	7272	0.99	5973.91
009138695-04	OBS	No	3.228444	132.708602	64.1	6.947	13.8	17.9	2.54	7272	2.10	5974.27
009138695-05	OBS	No	322.871851	266.826265	296.3	6.804	9.7	7.2	2.54	7272	4.84	12.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009138695-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT
009138695-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
009138695-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD
009138695-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
009138695-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS

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

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

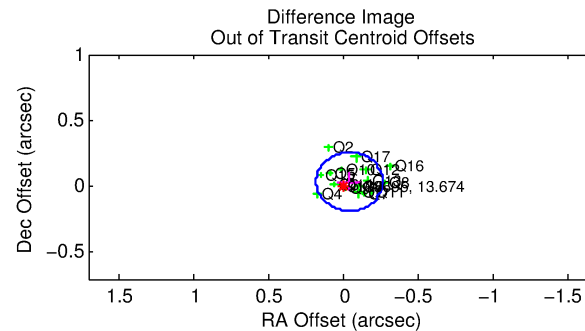
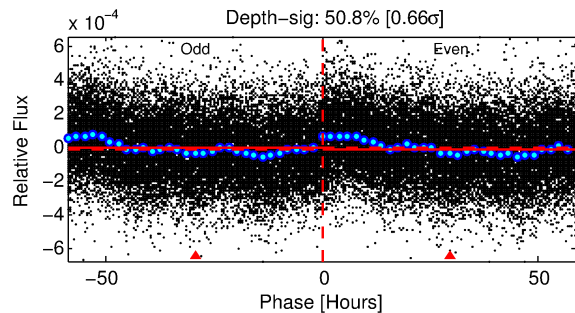
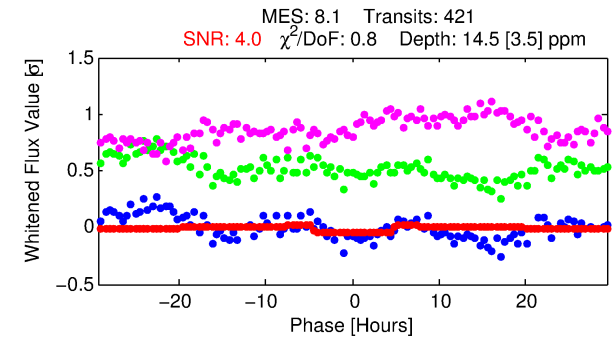
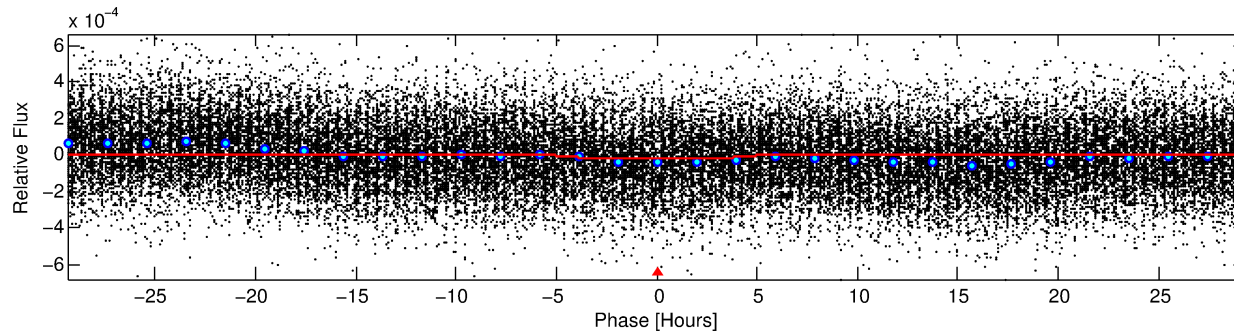
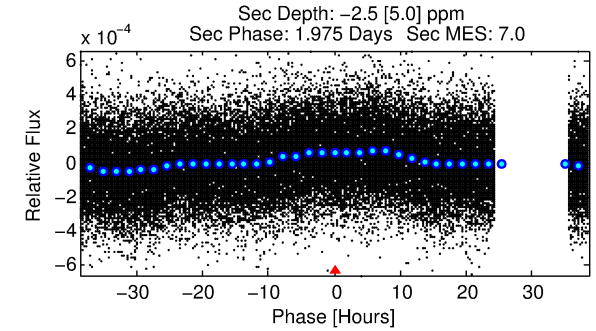
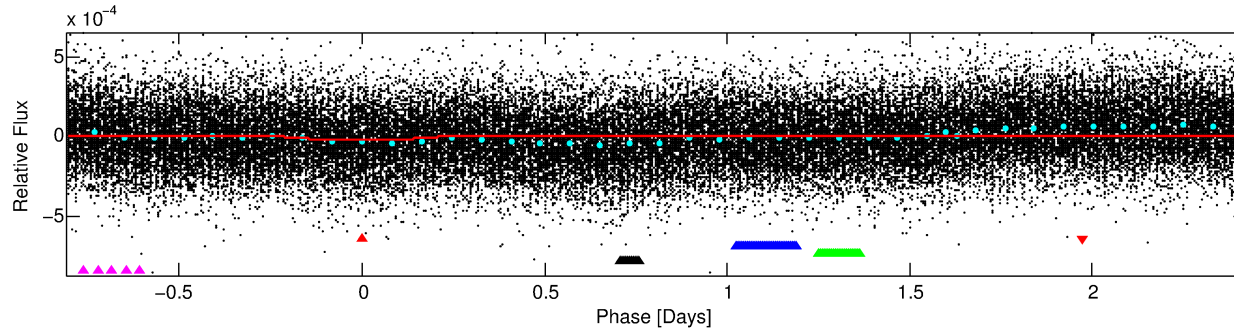
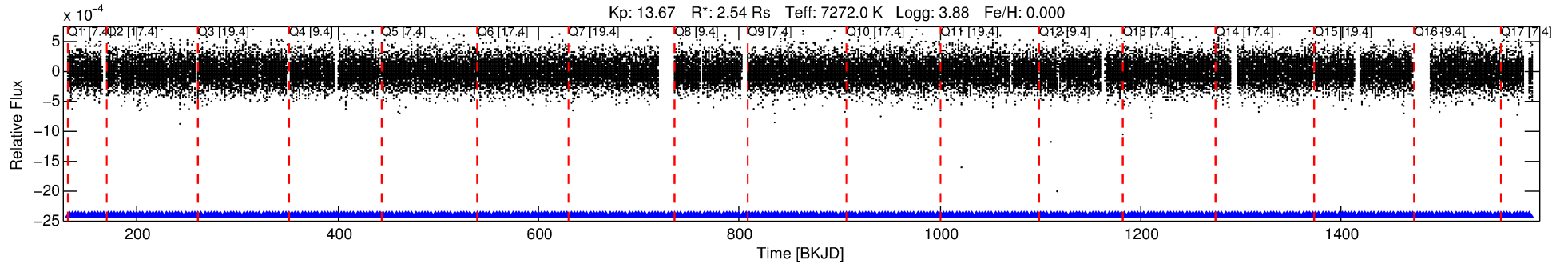
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009138695-01

No Significant Match Found

DV One-Page Summary

KIC: 9138695 Candidate: 1 of 5 Period: 3.228 d



DV Fit Results:

Period = 3.22833 [0.00007] d
Epoch = 131.9990 [0.0139] BKJD
Rp/R* = 0.0039 [0.0012]
a/R* = 1.67 [1.98]
b = 0.83 [0.68]
Seff = 5974.55 [3220.30]
Teq = 2242 [302] K
Rp = 1.08 [0.51] Re
a = 0.0519 [0.0169] AU
Ag = N/A
Teffp = N/A

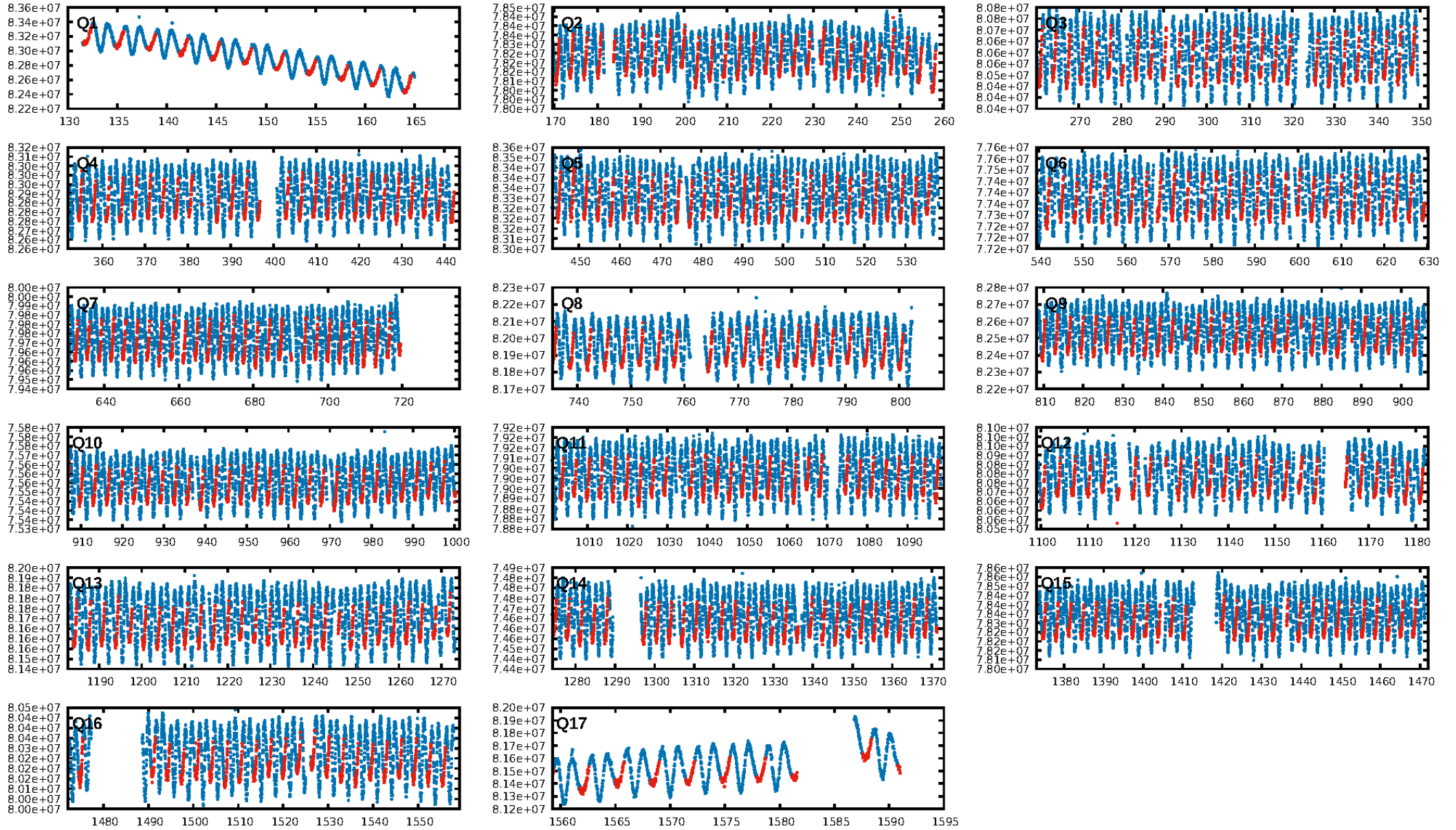
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.25e-30
RollingBand-fgt: 1.00 [401/401]
GhostDiagnostic-chr: 1.399
Centroid-sig: 0.0%
Centroid-so: 6.578 arcsec [3.78σ]
OotOffset-rm: 0.058 arcsec [0.78σ]
KicOffset-rm: 0.145 arcsec [1.88σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

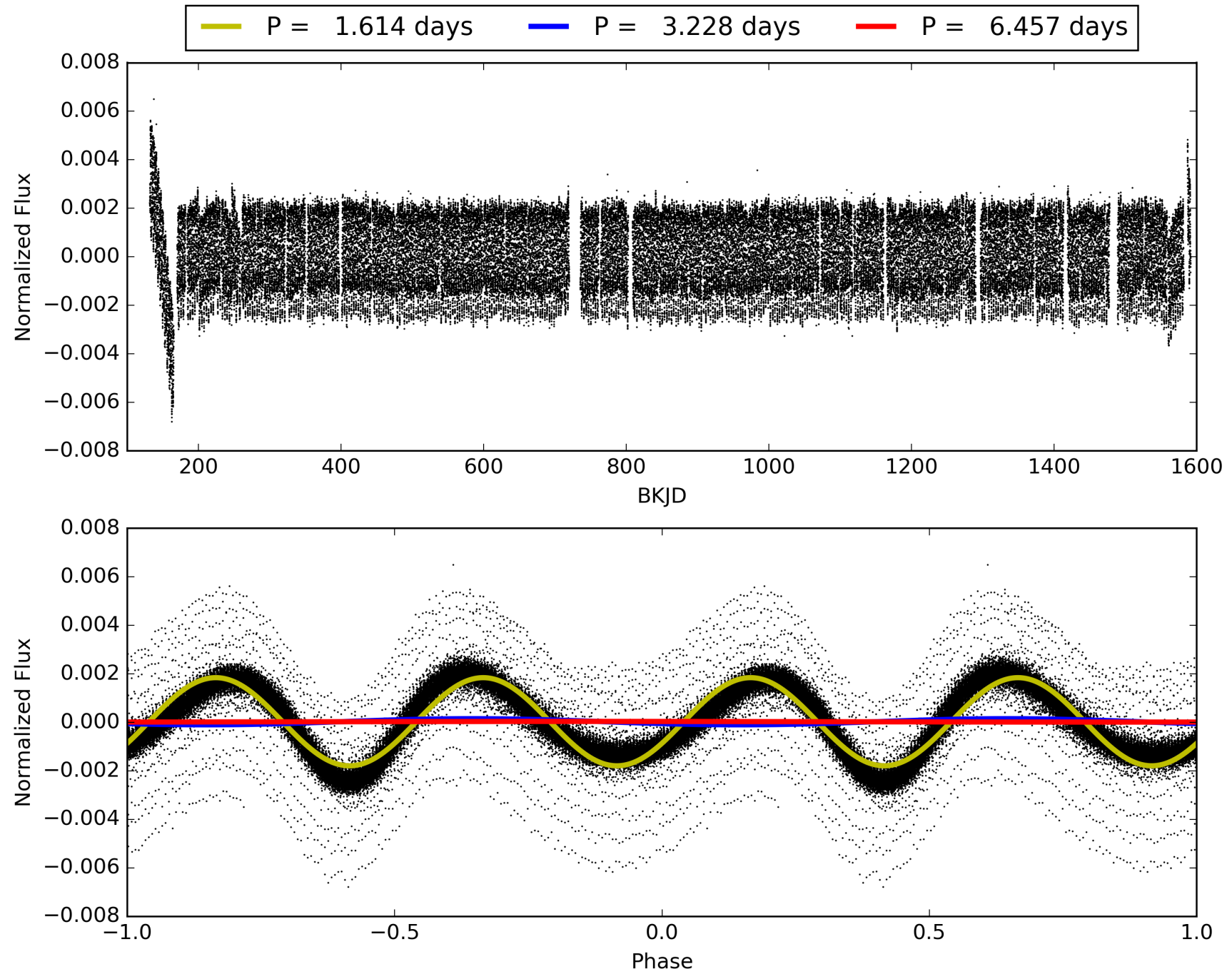
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:18:58 Z

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

TCE 009138695-01, PDC Light Curves

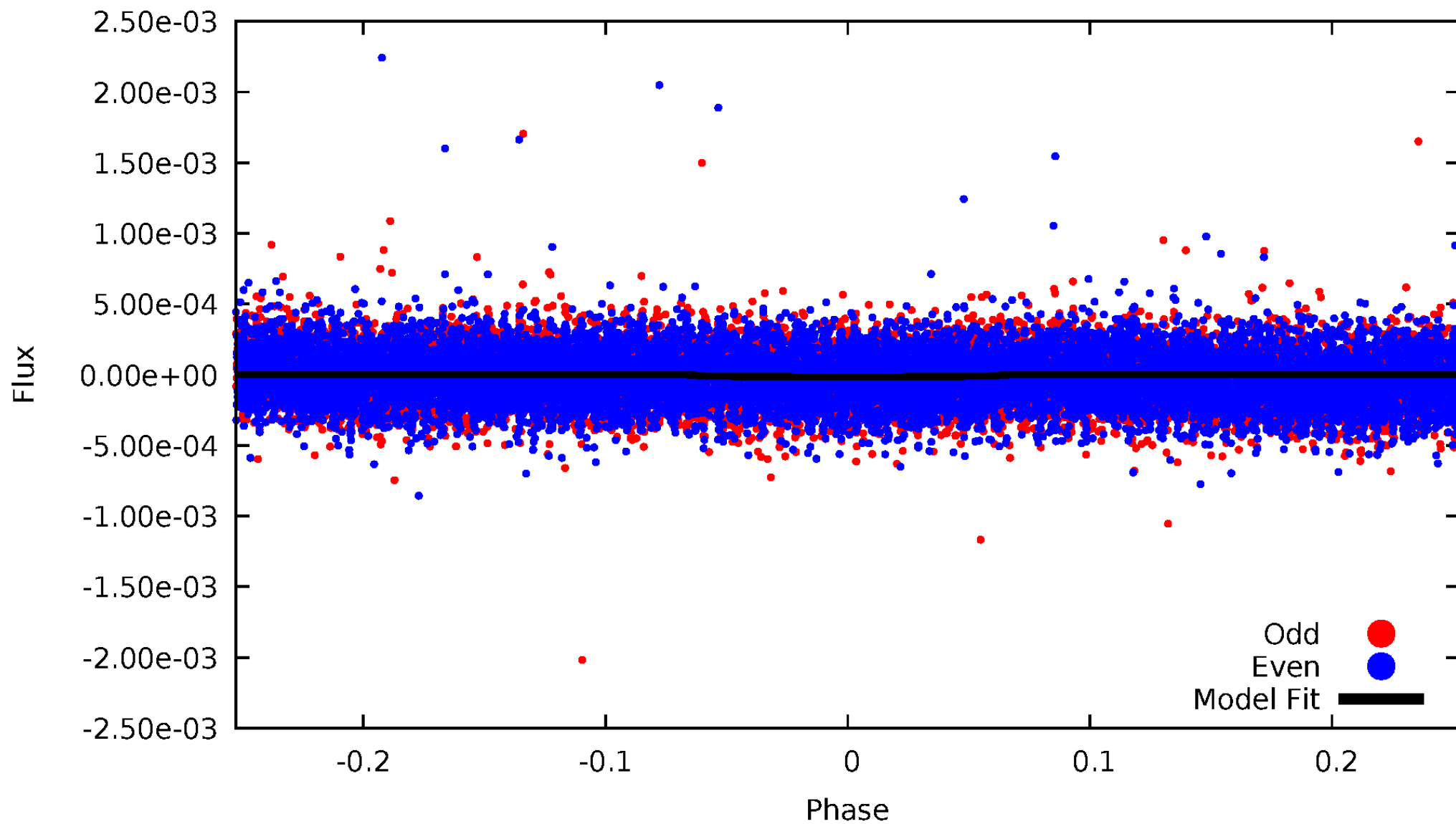


TCE 009138695-01



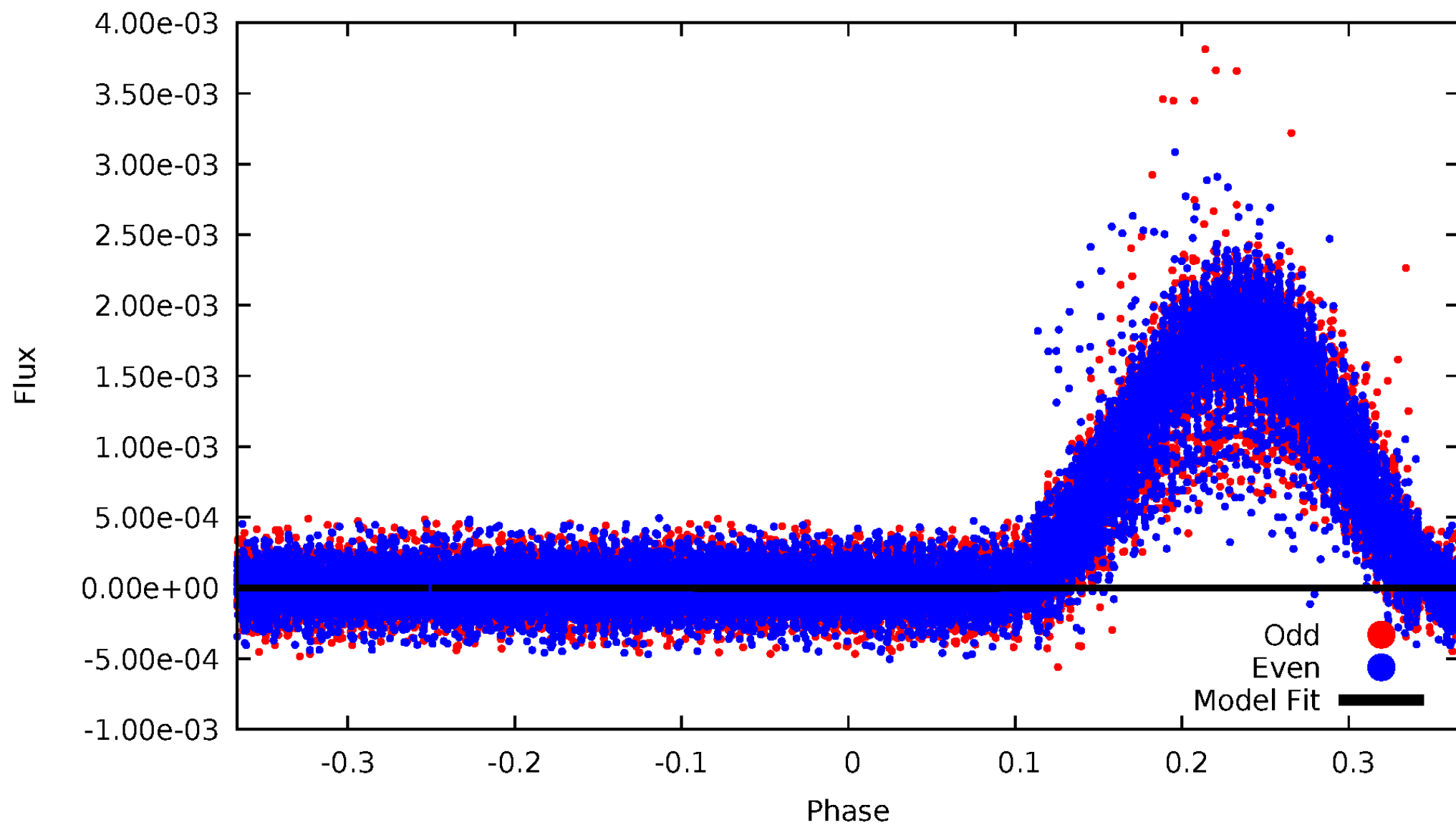
DV Odd/Even

TCE 009138695-01

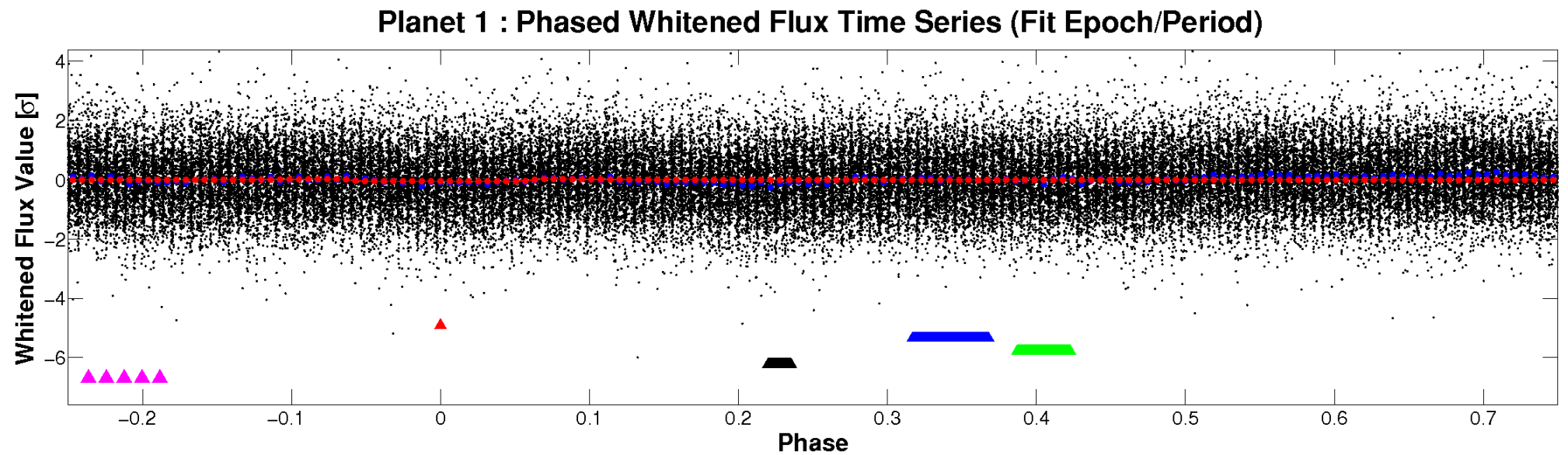
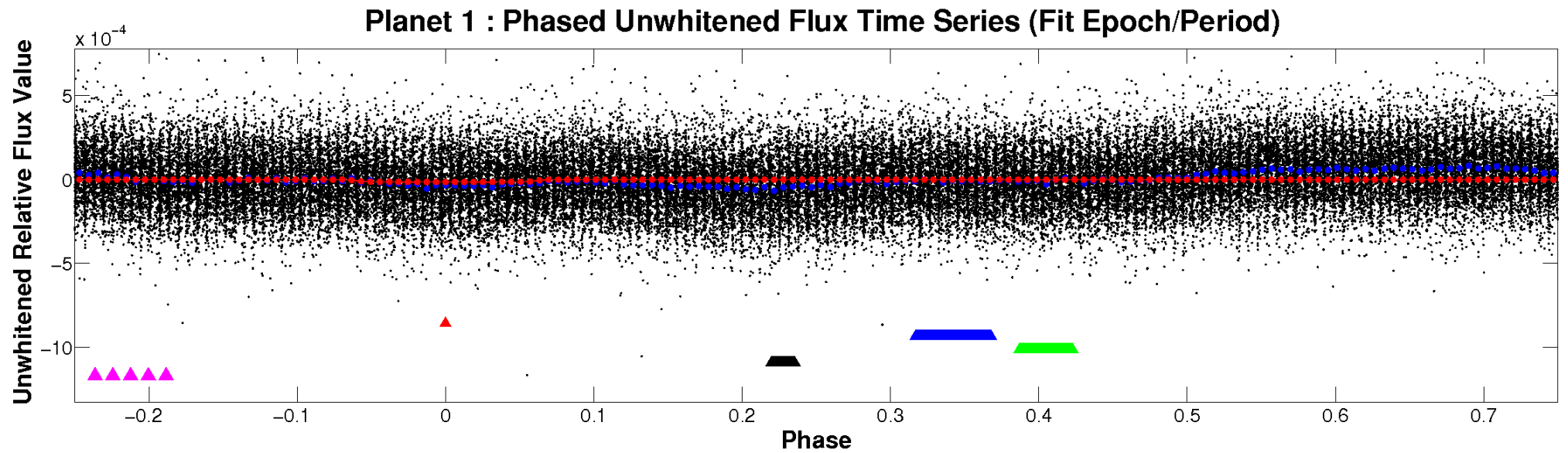


ALT Odd/Even

TCE 009138695-01

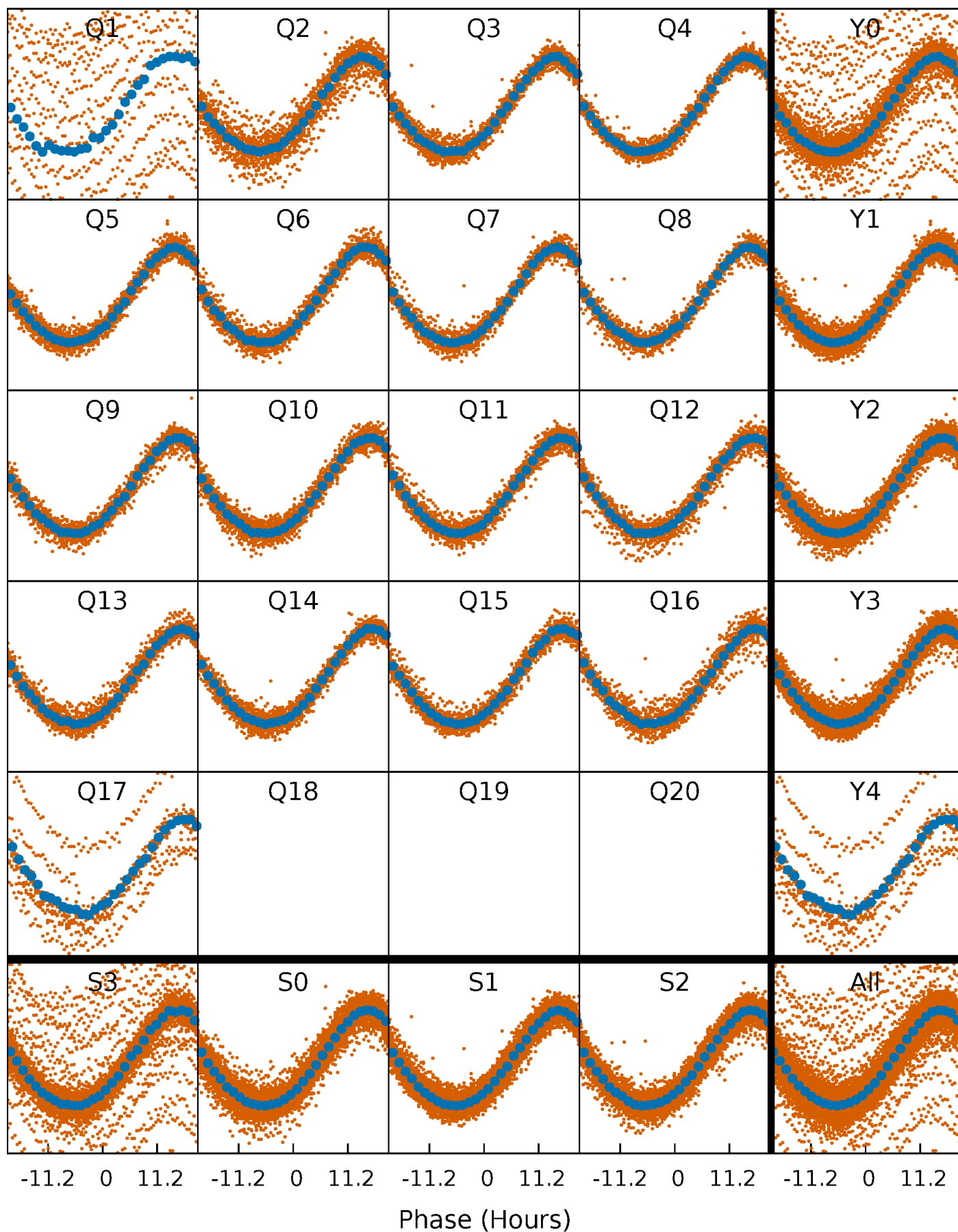


Non-Whitened Vs. Whitened Light Curve



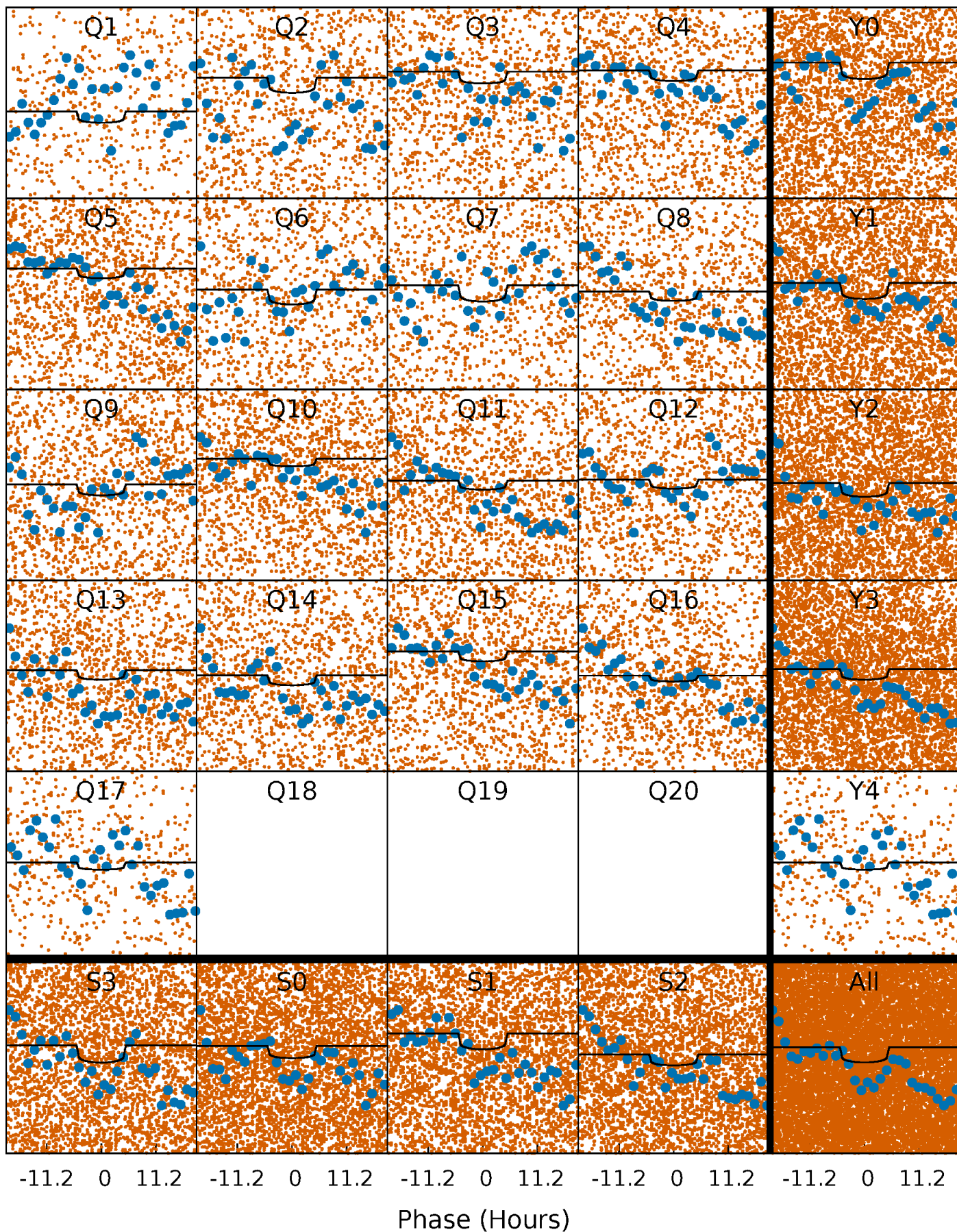
PDC Quarter-Phased Transit Curves

TCE 009138695-01 P= 3.228332 Days $T_0=131.999034$ (BKJD)



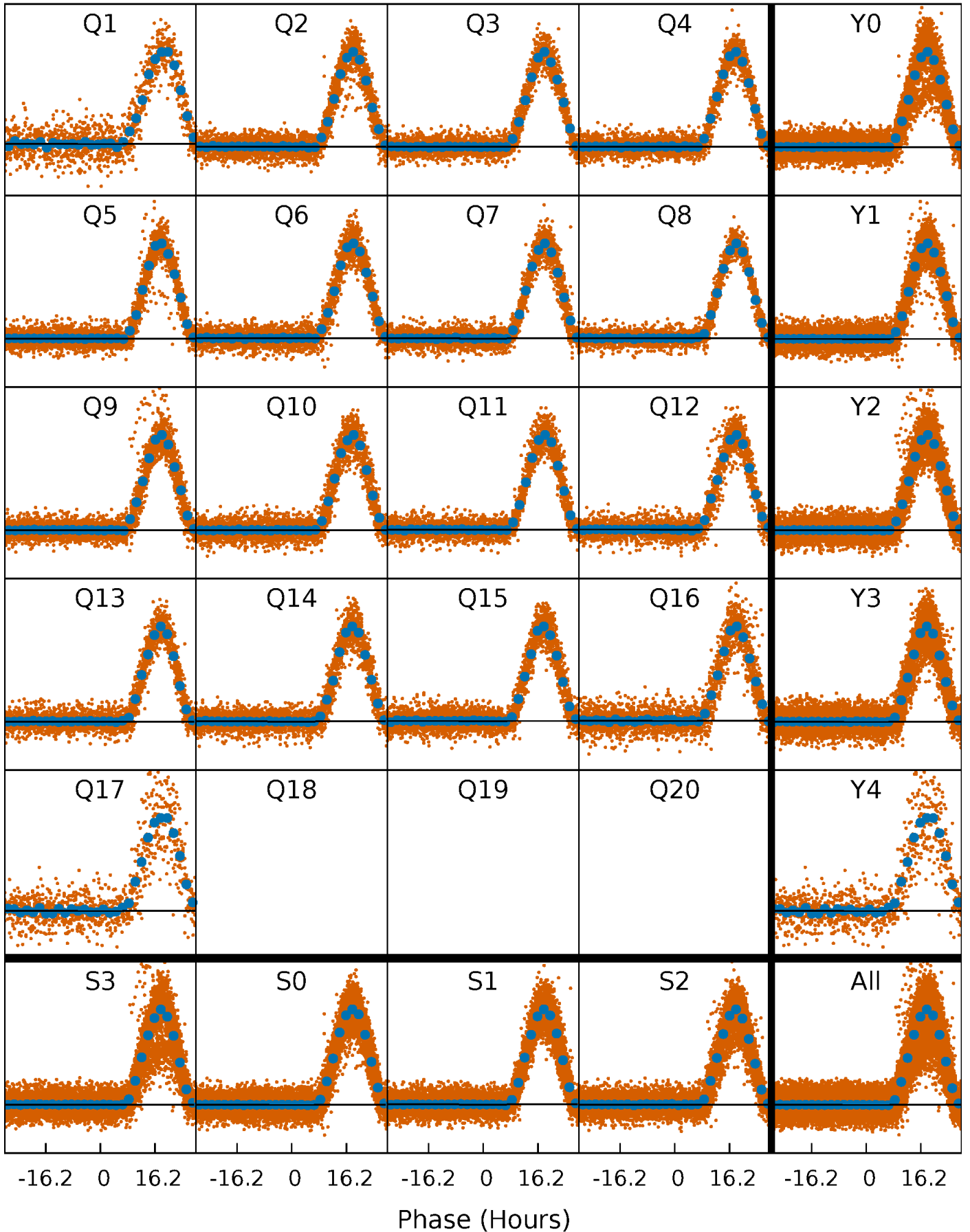
DV Quarter-Phased Transit Curves

TCE 009138695-01 P= 3.228332 Days $T_0=131.999034$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

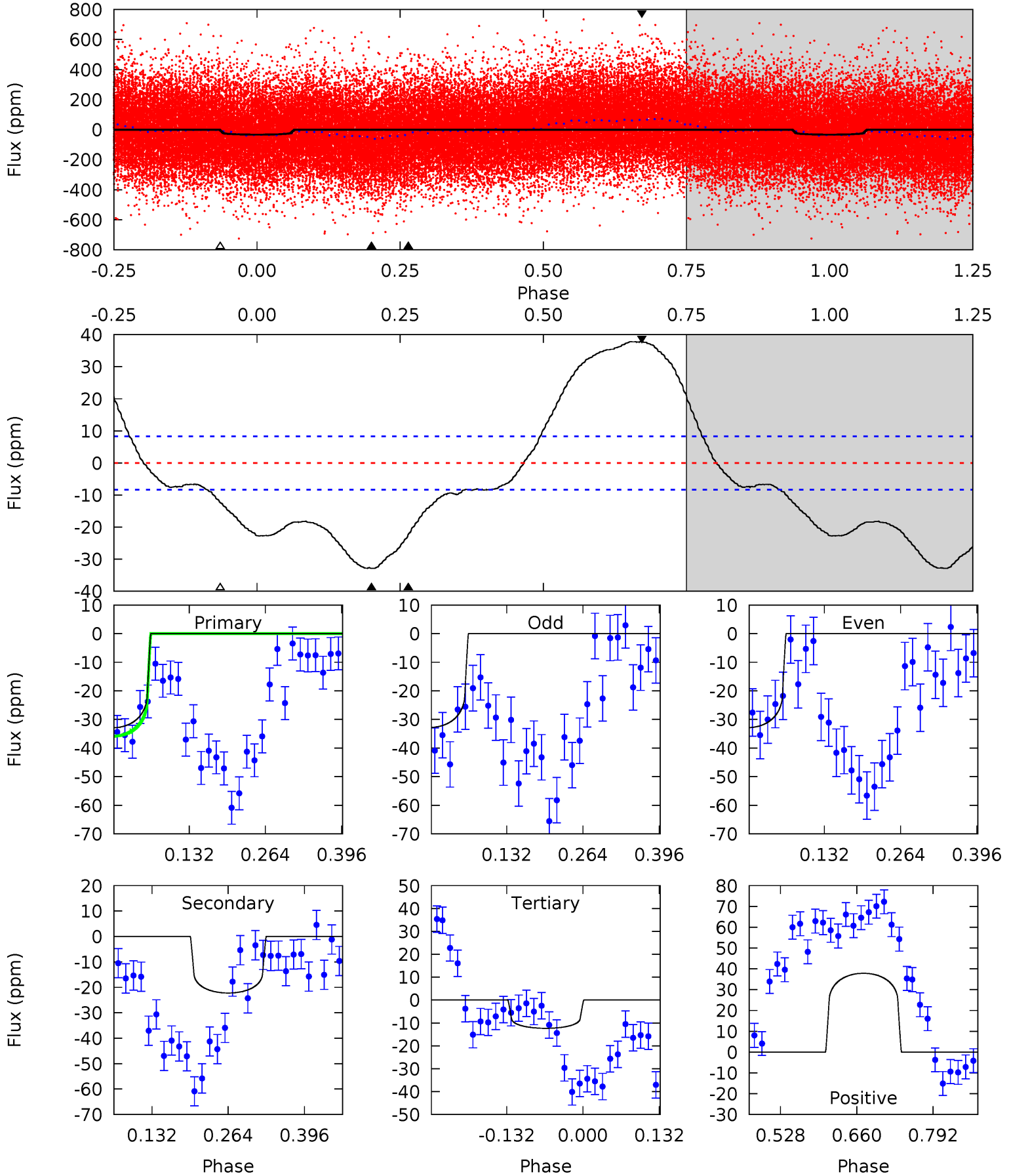
TCE 009138695-01 P= 3.228480 Days $T_0=131.867919$ (BKJD)



DV Model-Shift Uniqueness Test

009138695-01, P = 3.228332 Days, E = 128.770702 Days

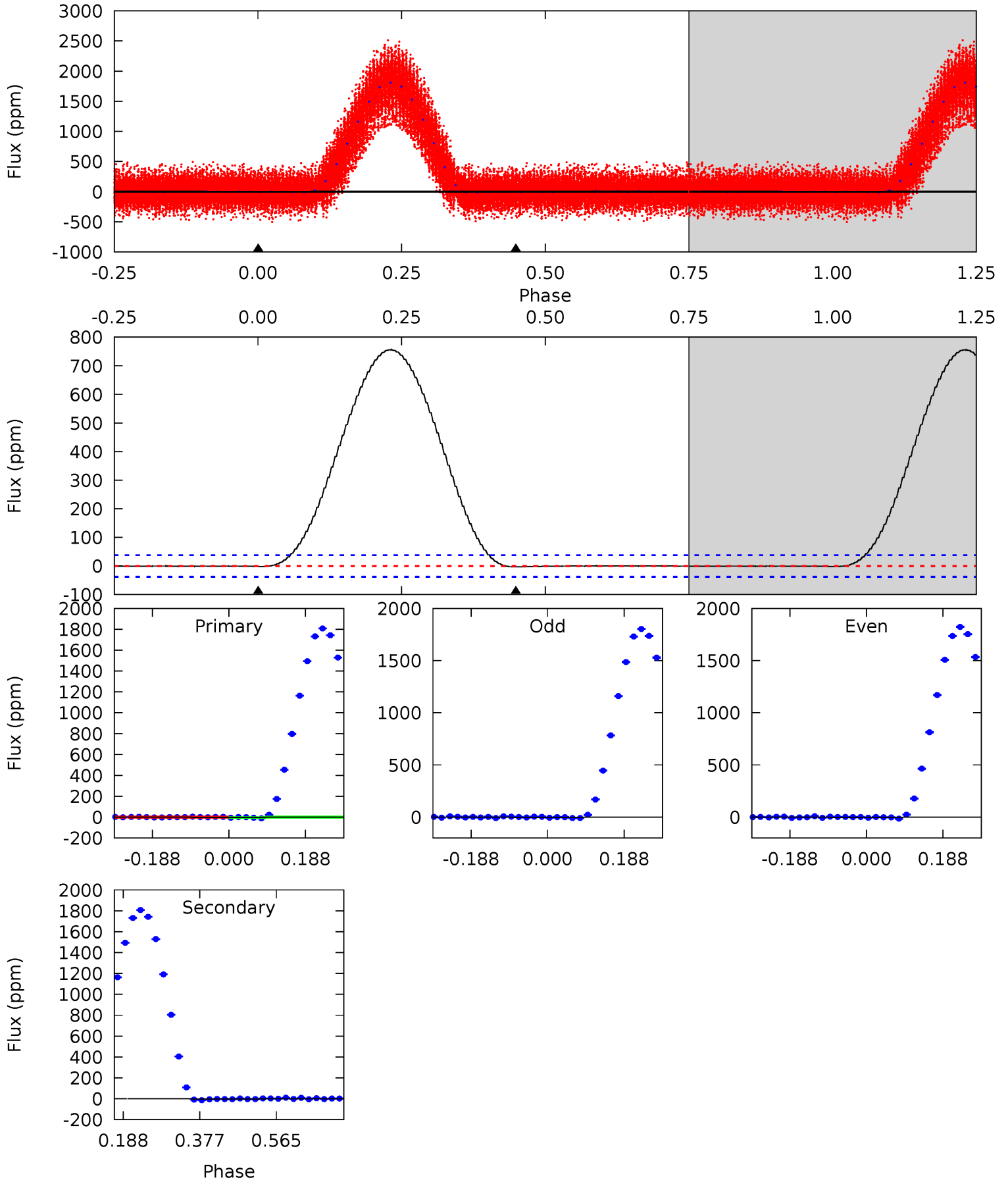
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	12.0	6.68	20.5	4.51	1.51	11.2	11.1	-2.69	5.35	-8.46	0.02	0.88	0.54	1.67



Alt Model-Shift Uniqueness Test

009138695-01, P = 3.228480 Days, E = 128.639439 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.22	0.40	0	0	4.43	1.32	38.9	0.22	0.22	0.40	0.40	0.01	1.14	1.00	0.76



Stellar Parameters For KIC 009138695

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7272^{+226}_{-327}	$3.883^{+0.294}_{-0.126}$	$0.000^{+0.200}_{-0.350}$	$2.536^{+0.518}_{-0.888}$	$1.790^{+0.196}_{-0.392}$	$0.155^{+0.329}_{-0.060}$
	+3%/-4%	+8%/-3%	+inf%/-inf%	+20%/-35%	+11%/-22%	+213%/-39%
Source	PHO1	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 009138695-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22 ± 2	$1.01^{+0.38}_{-0.34}$	3078^{+225}_{-282}	8086^{+2534}_{-1350}	31^{+44}_{-15}
Alt.	-3 ± 8	$0.48^{+0.35}_{-0.27}$	3083^{+219}_{-273}	6476^{+7380}_{-14360}	15^{+116}_{-43}

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

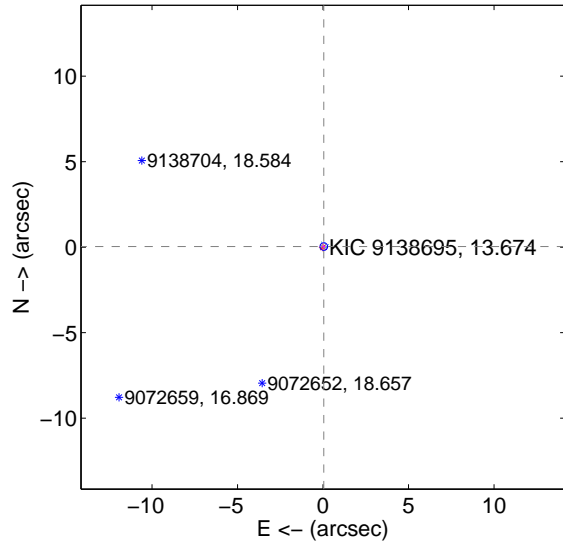
Supplemental centroid analysis for 009138695-01. Kepler magnitude: 13.67. Transit SNR 4.03

There are 17 quarters with good PRF difference image offsets

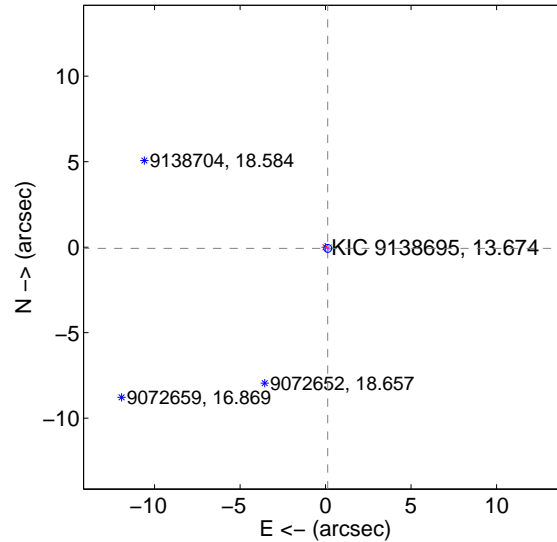
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.058 ± 0.074	0.78	-0.045 ± 0.076	0.037 ± 0.070
PRF-fit source offset from KIC position	0.145 ± 0.077	1.88	-0.126 ± 0.078	-0.071 ± 0.072
photometric centroid source offset	6.58 ± 1.74	3.78	-4.59 ± 1.81	4.71 ± 1.66

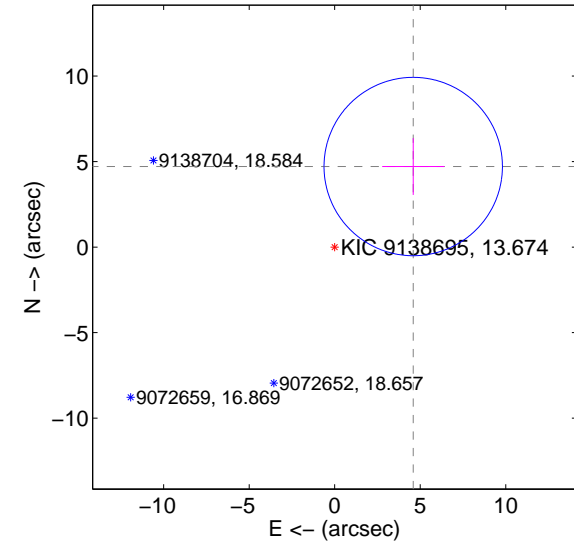
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

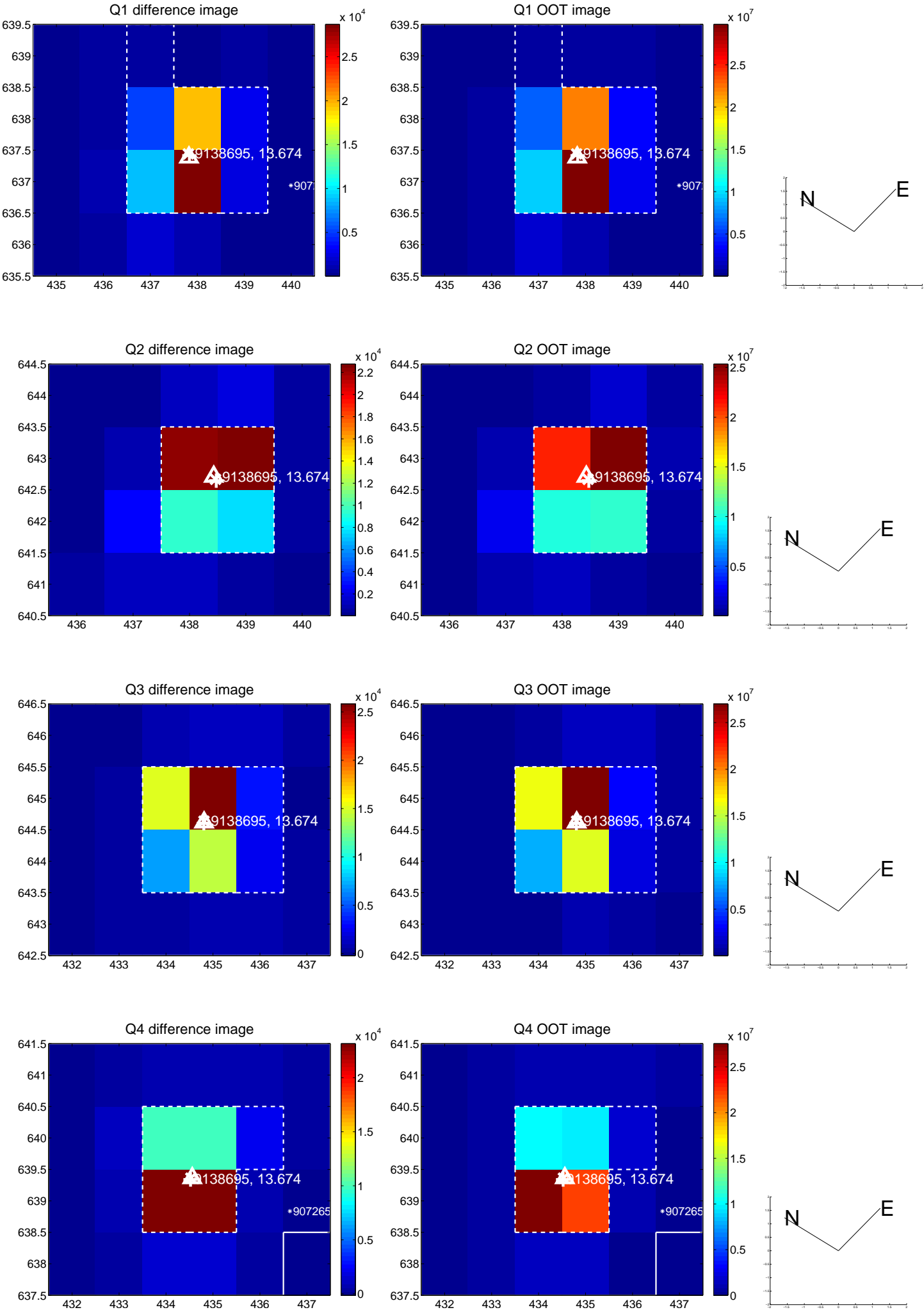


offset from photometric centroids

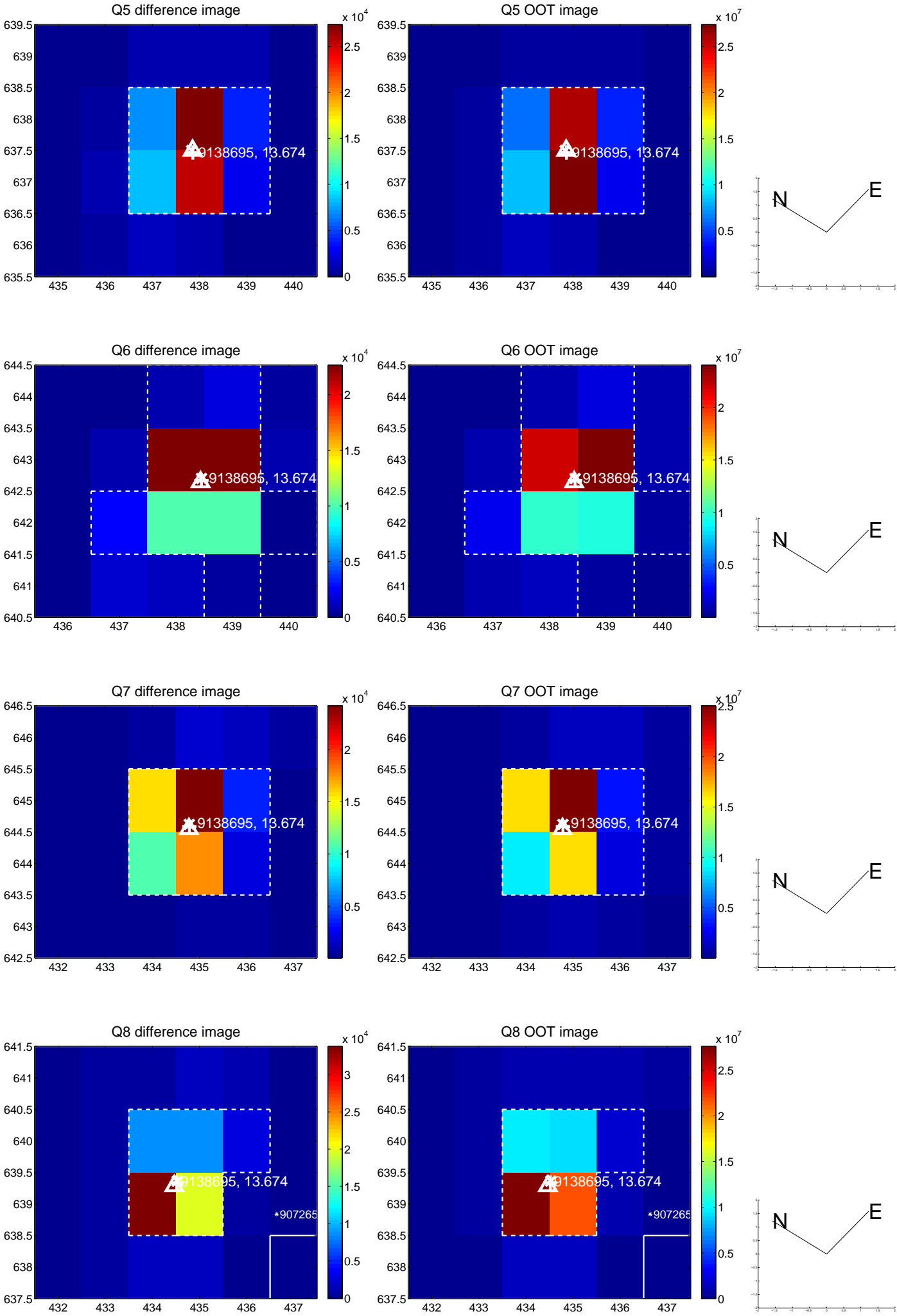


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

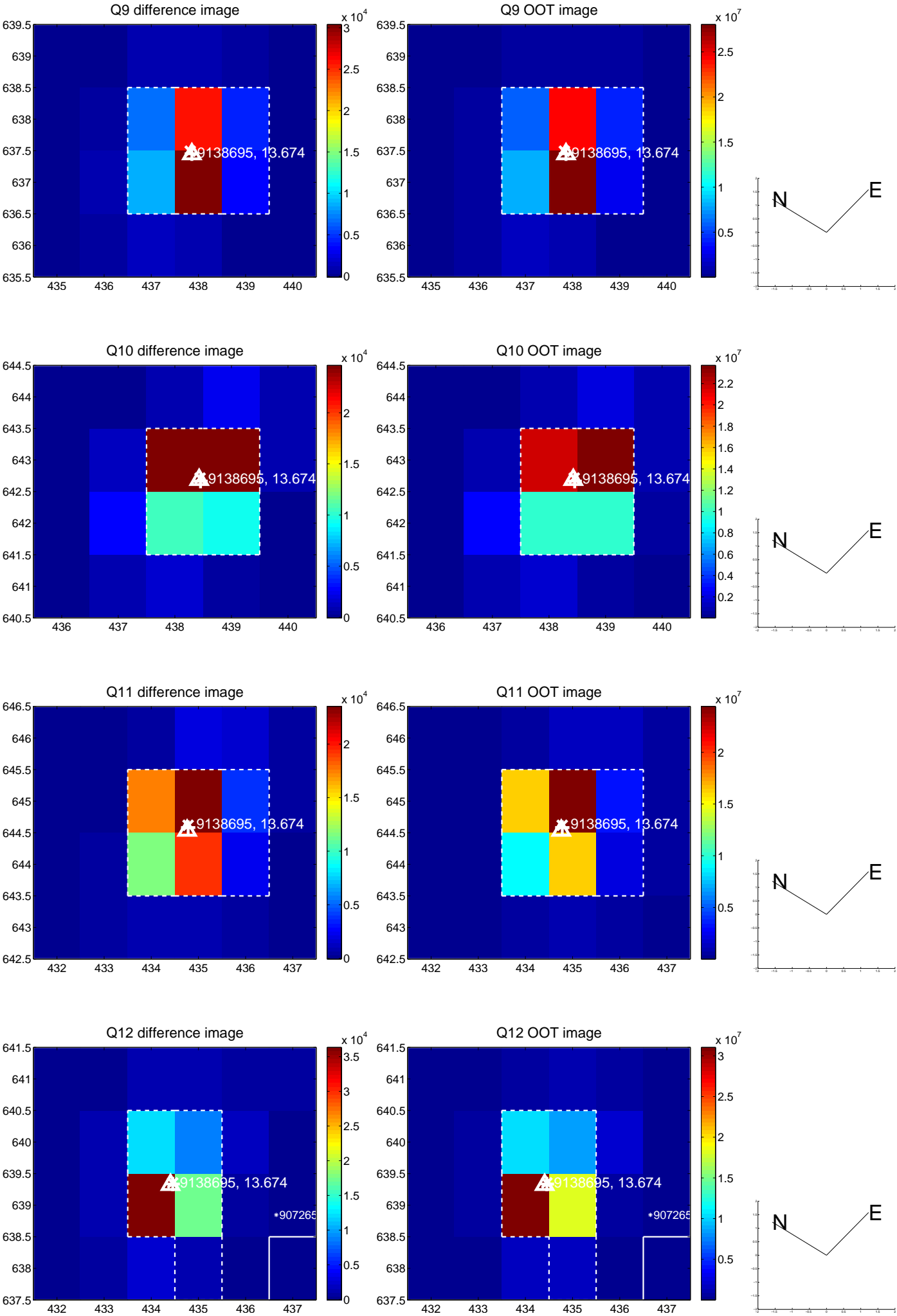
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



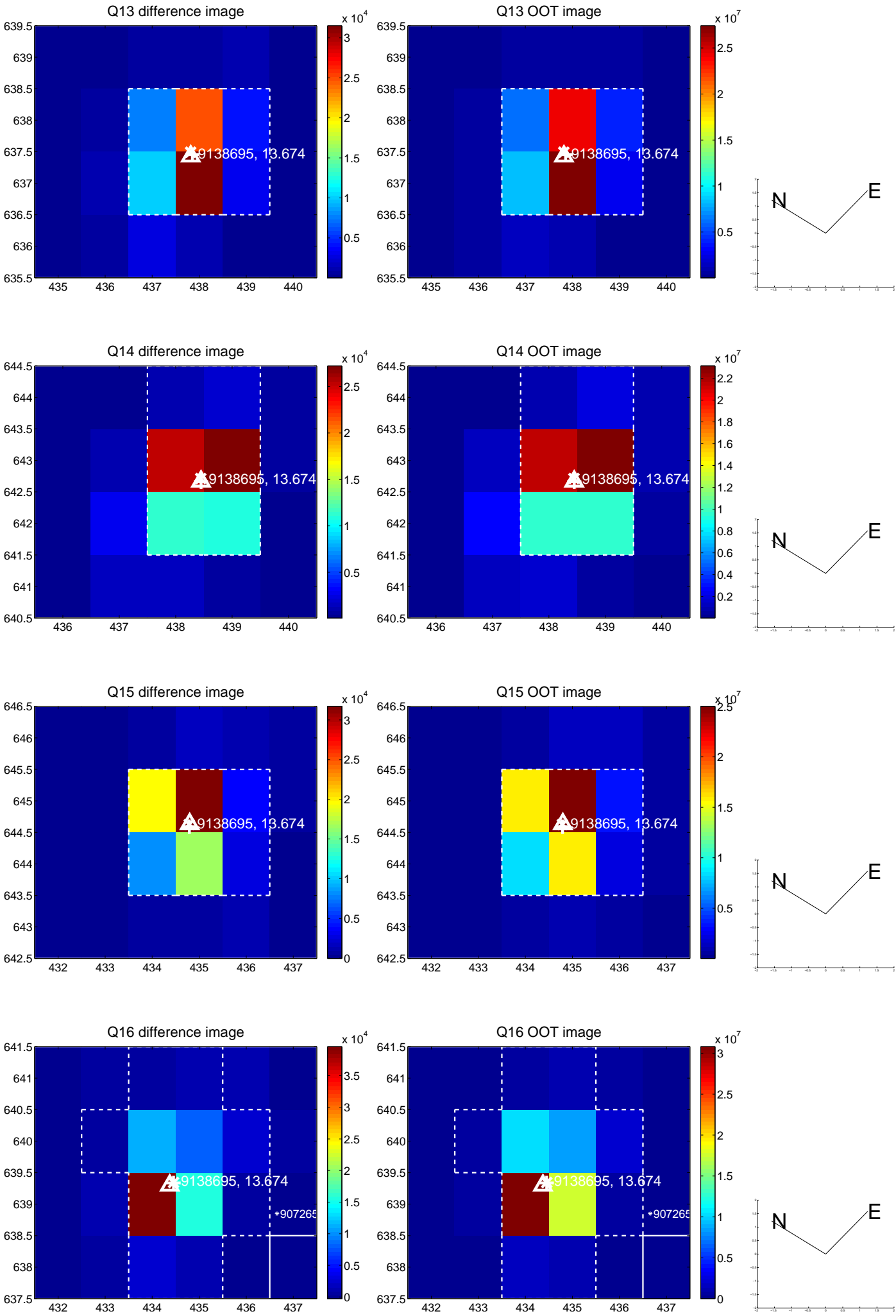
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



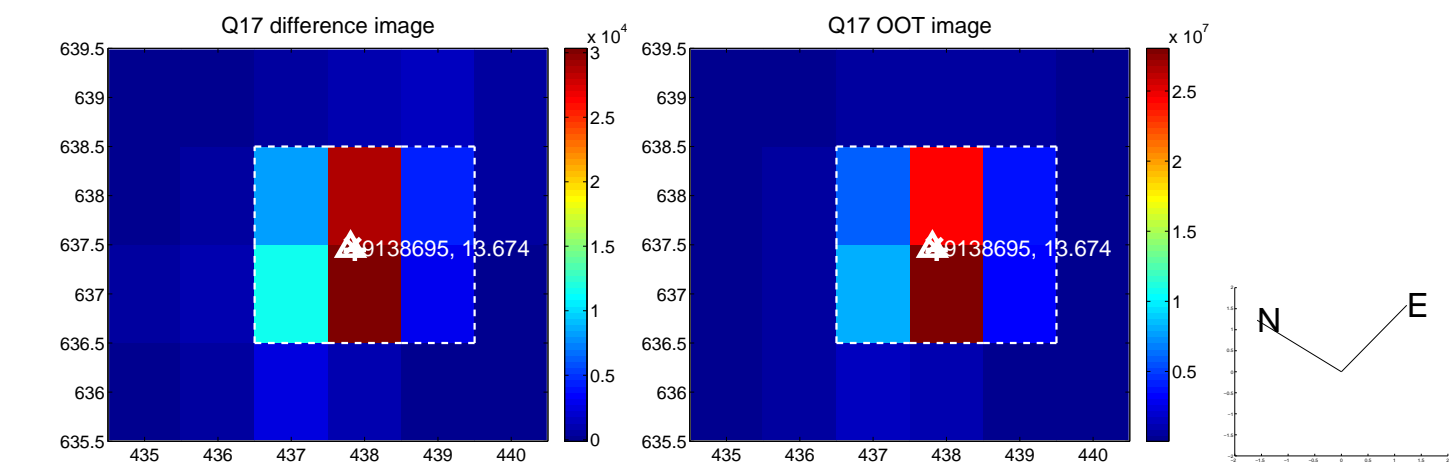
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



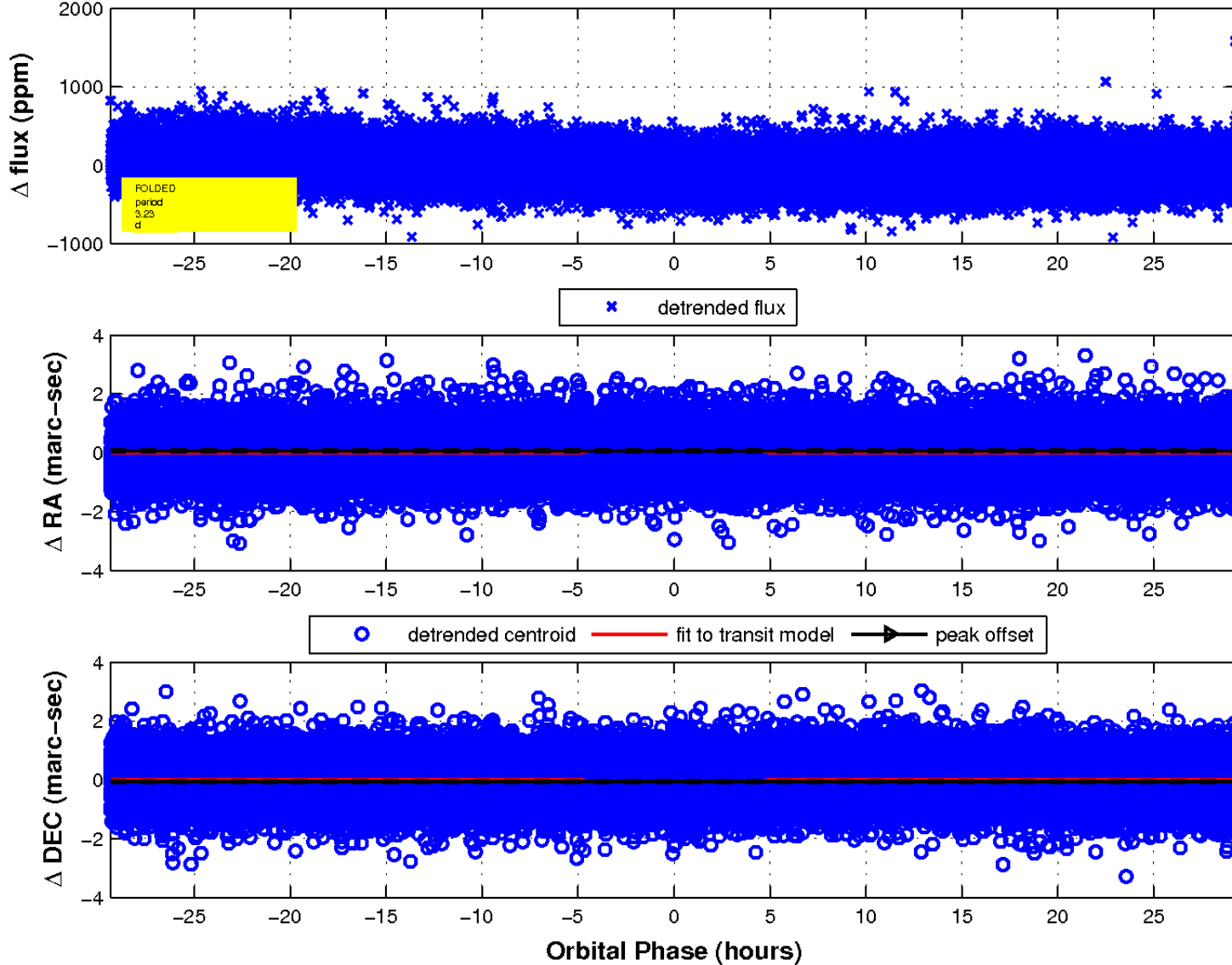
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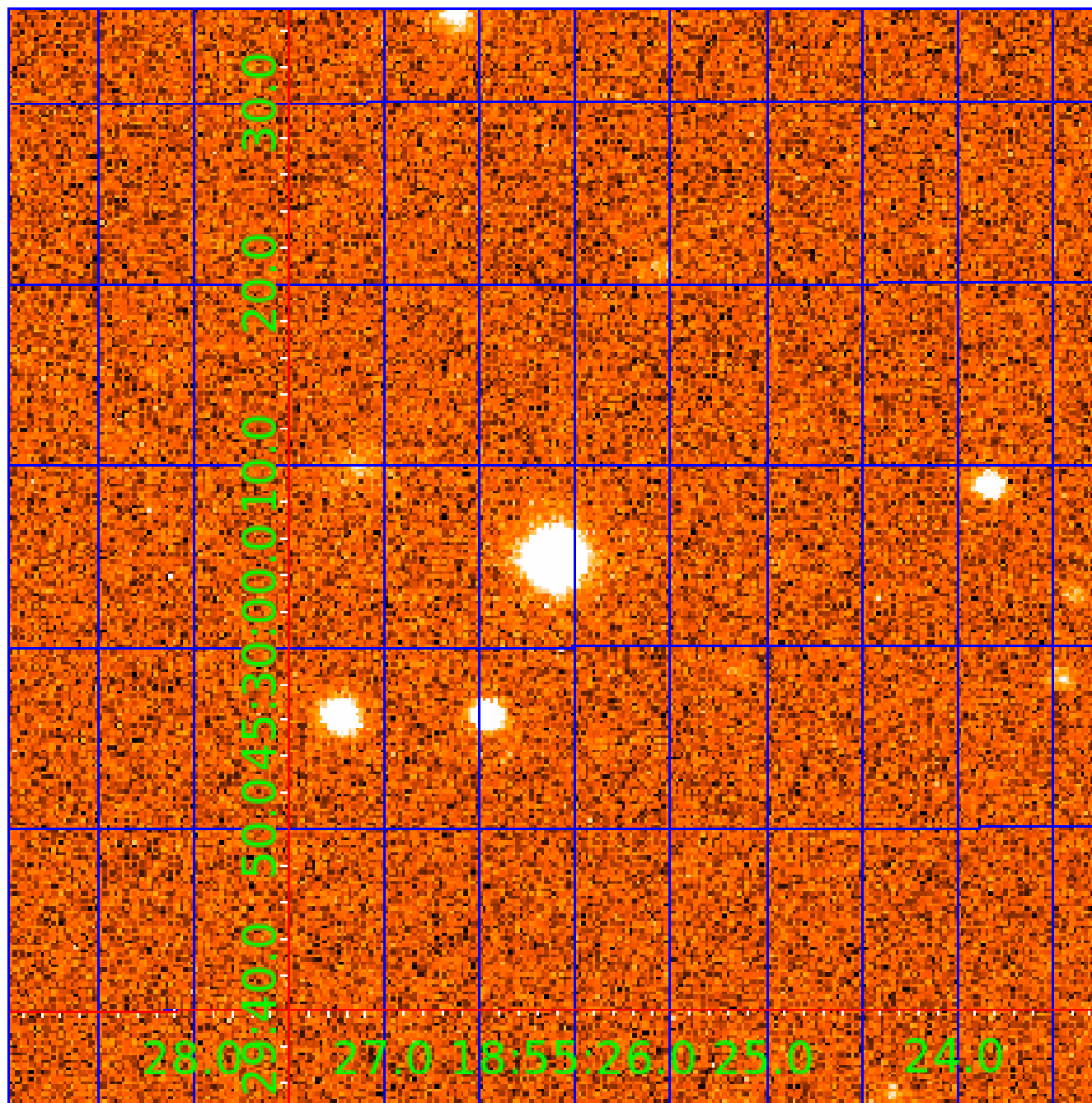


fluxWeightedCentroids, Planet 1 of 5



UKIRT Image

Declination



KIC 009138695

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

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009138695-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
009138695-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD
009138695-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
009138695-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS

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

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

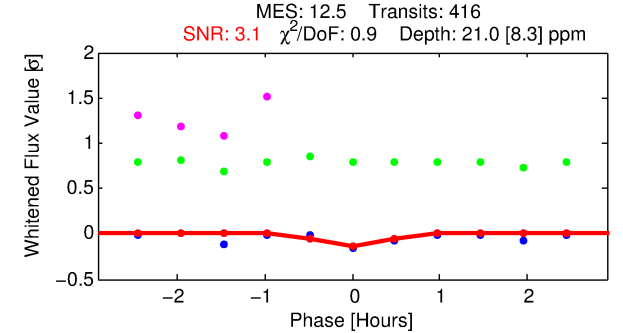
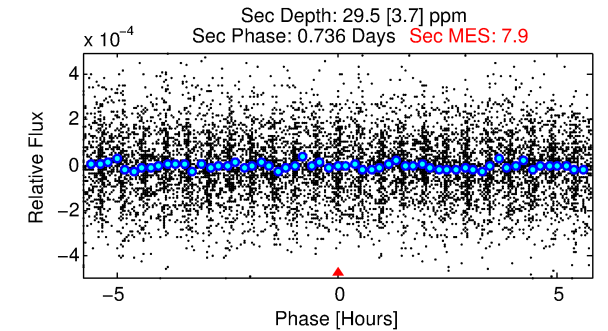
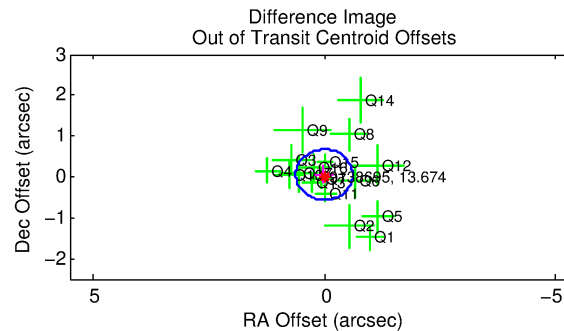
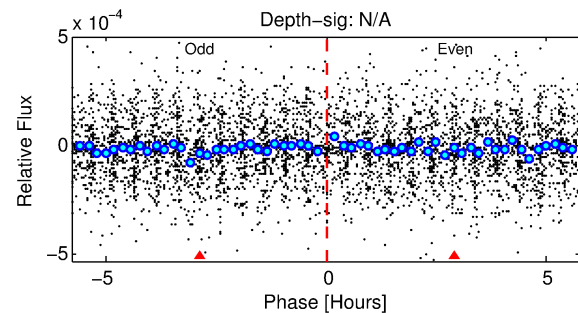
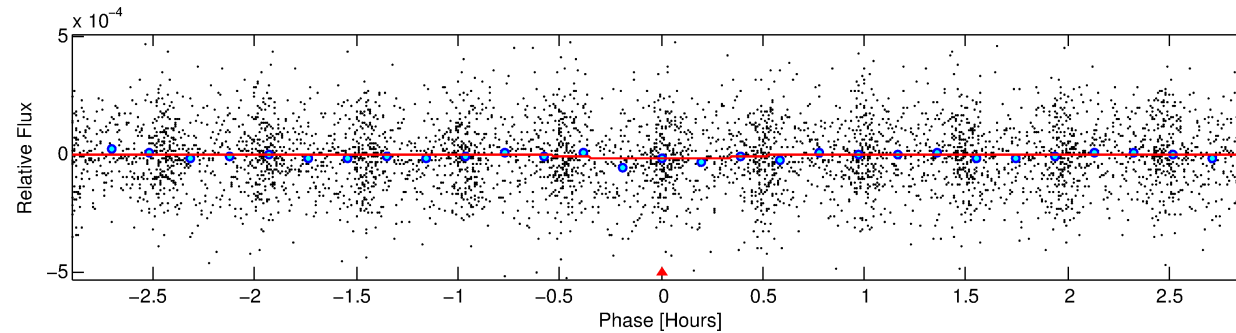
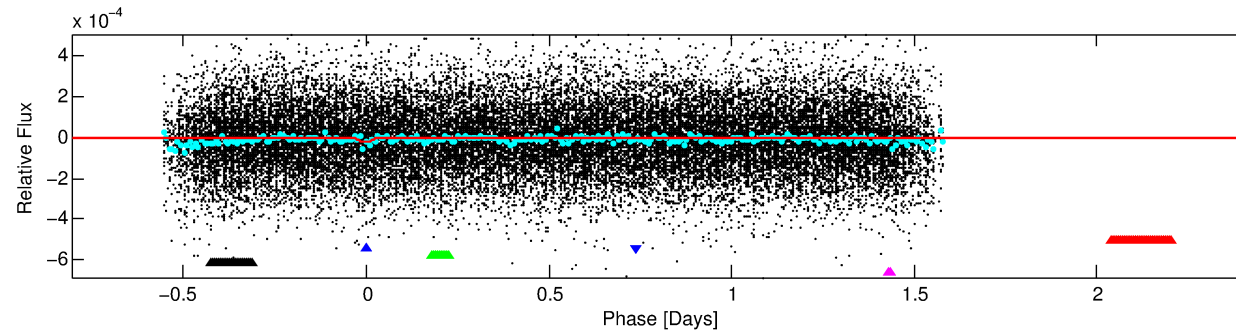
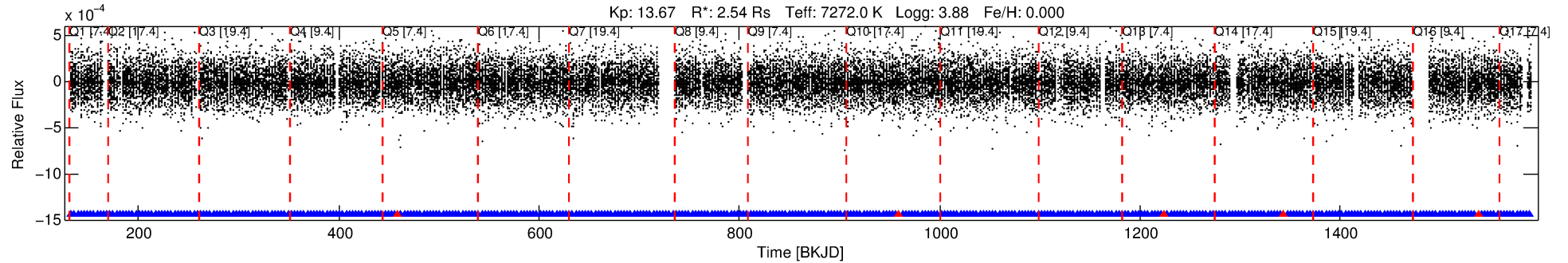
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009138695-02

No Significant Match Found

DV One-Page Summary

KIC: 9138695 Candidate: 2 of 5 Period: 3.229 d



DV Fit Results:

Period = 3.22870 [0.00004] d
Epoch = 133.0219 [0.0062] BKJD
Rp/R* = 0.0044 [0.0037]
a/R* = 22.53 [111.36]
b = 0.48 [8.00]
Seff = 5973.65 [3219.81]
Teq = 2242 [302] K
Rp = 1.21 [1.11] Re
a = 0.0519 [0.0169] AU
Ag = 29.72 [52.68] [0.55σ]
Teffp = 8093 [3454] K [1.69σ]

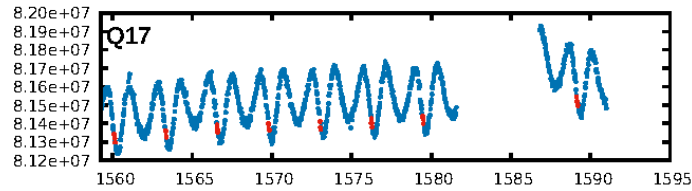
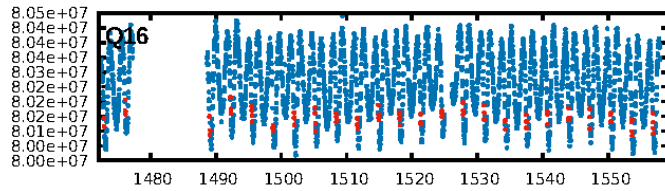
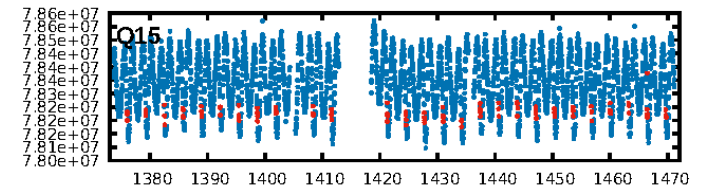
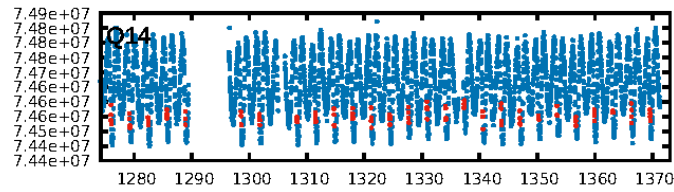
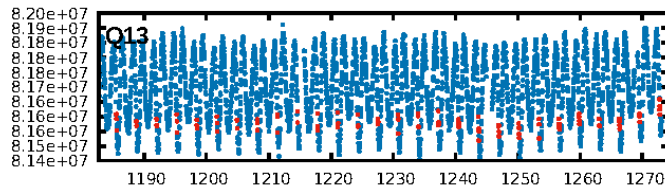
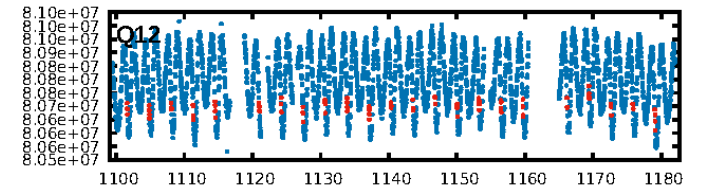
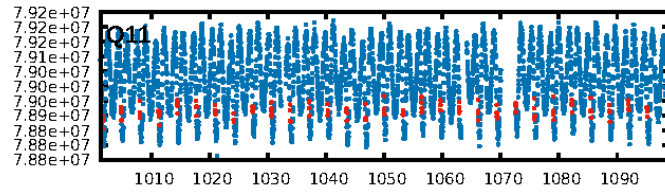
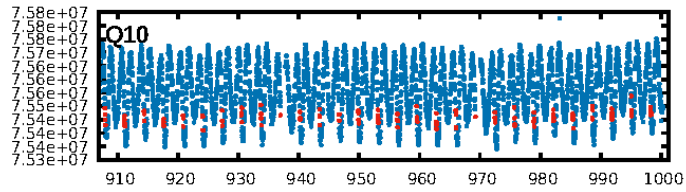
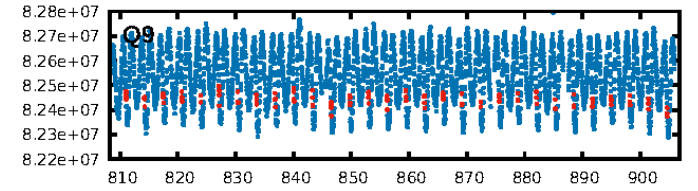
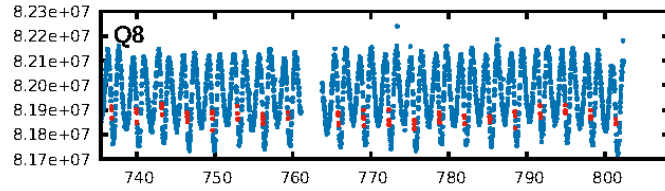
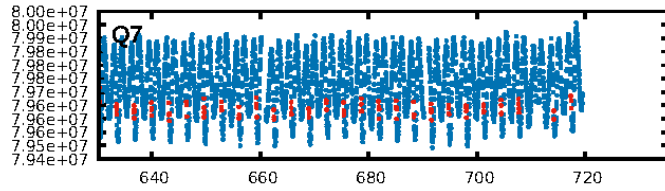
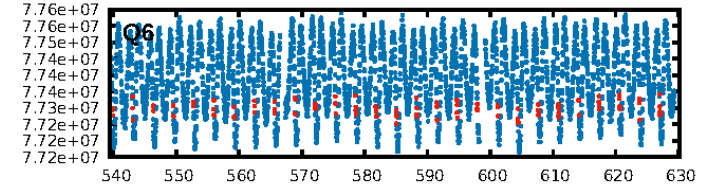
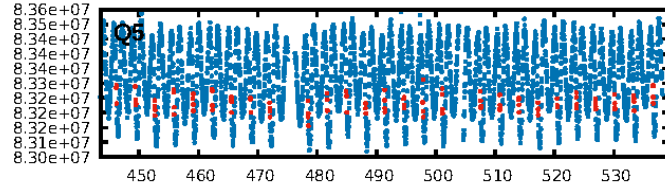
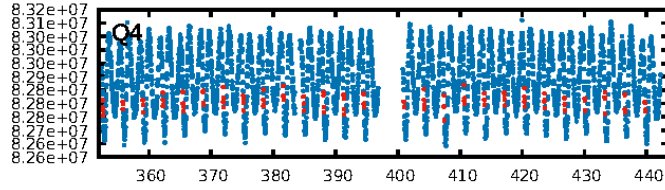
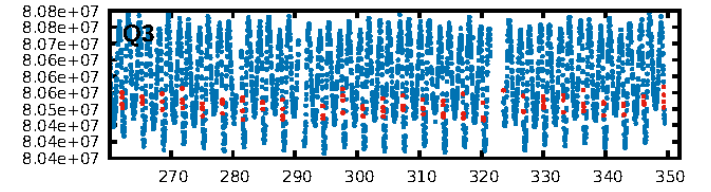
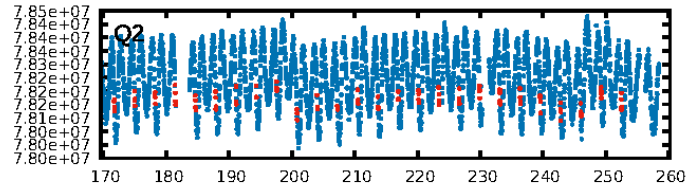
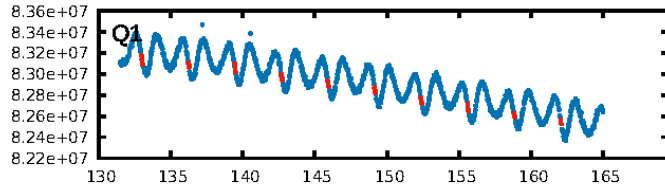
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [1116.25σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.13e-38
RollingBand-fgt: 0.99 [393/398]
GhostDiagnostic-chr: 0.704
Centroid-sig: 11.0%
Centroid-so: 5.348 arcsec [1.45σ]
OotOffset-rm: 0.054 arcsec [0.26σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.109 arcsec [0.48σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

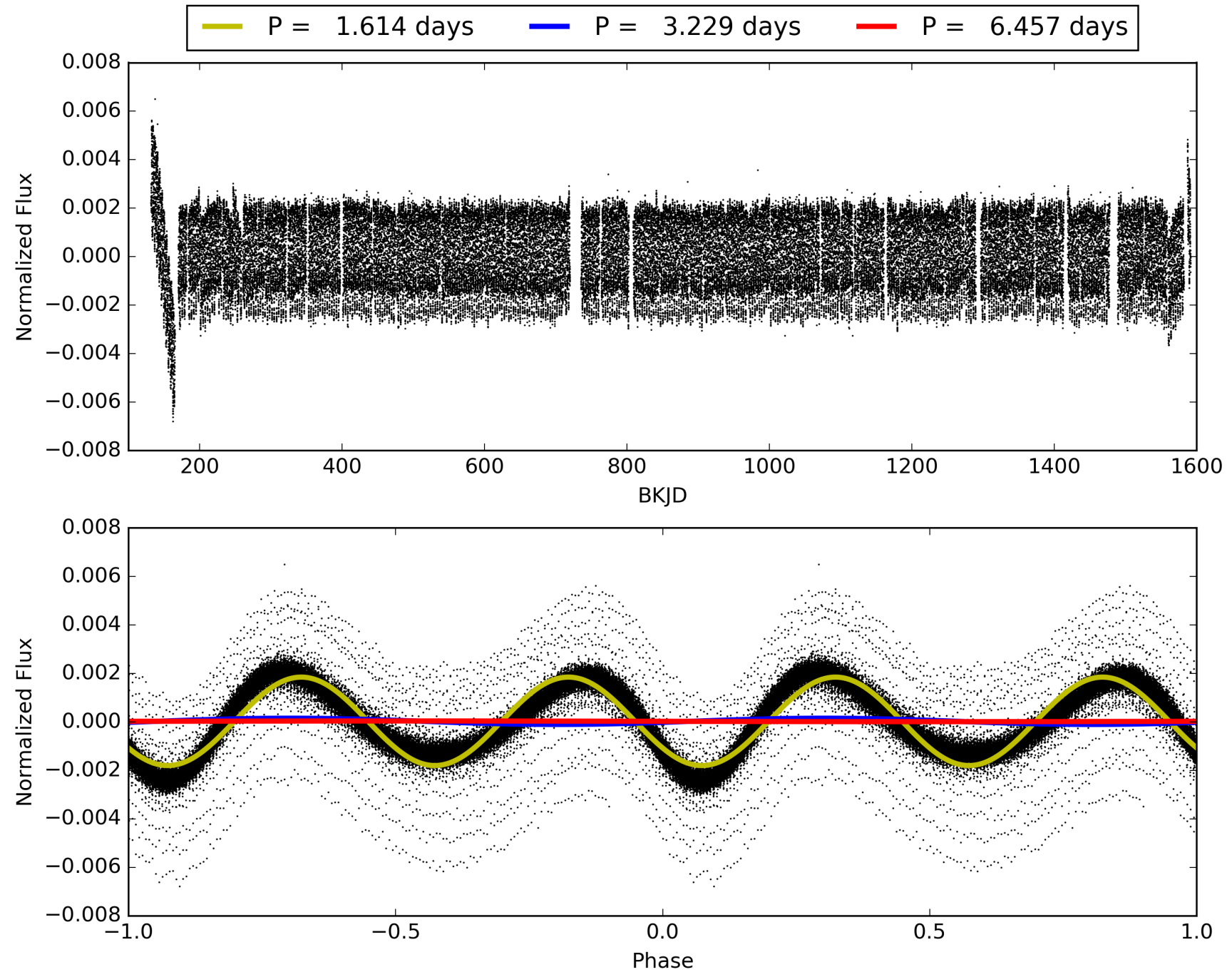
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:19:07 Z

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

TCE 009138695-02, PDC Light Curves

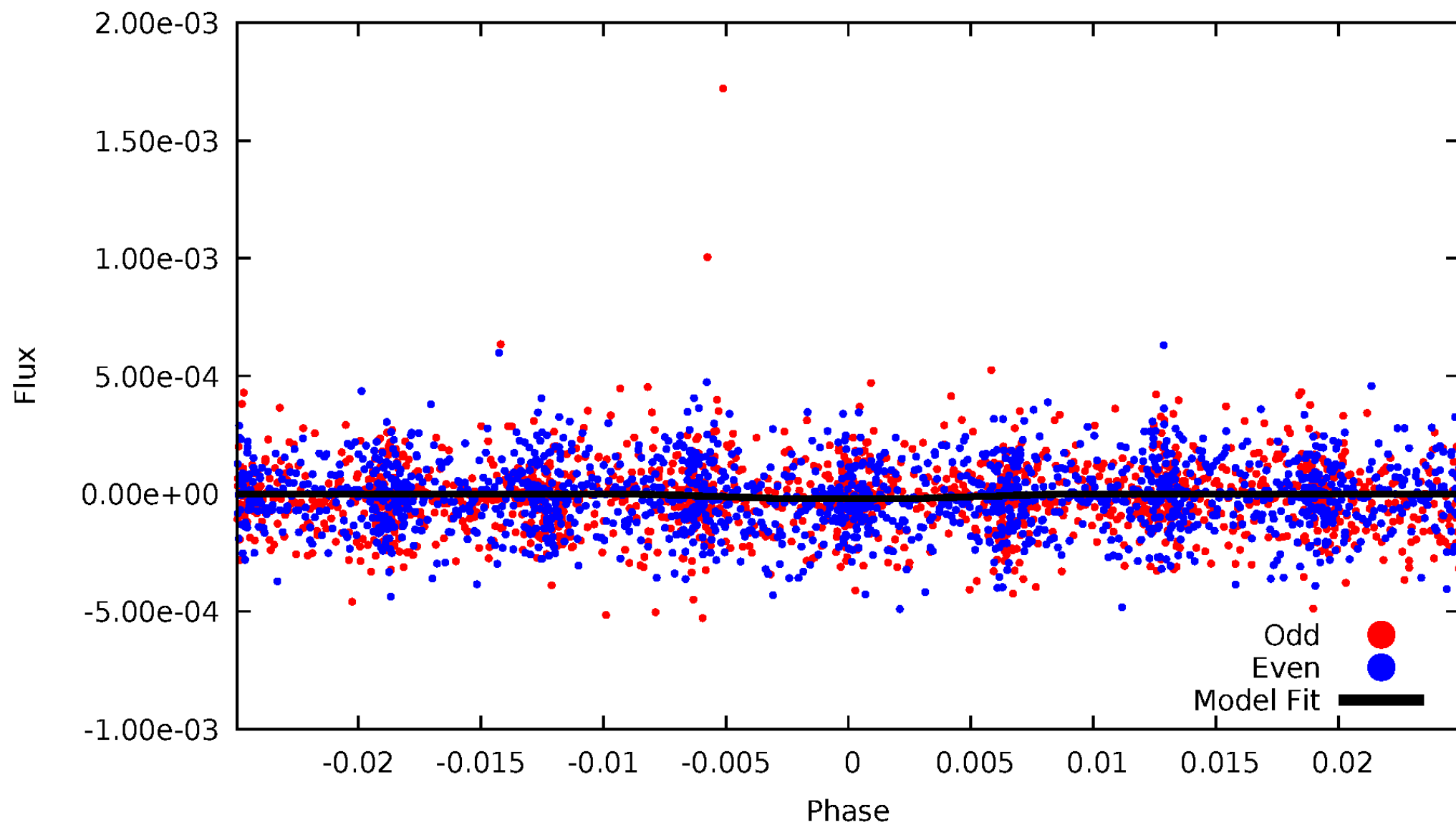


TCE 009138695-02



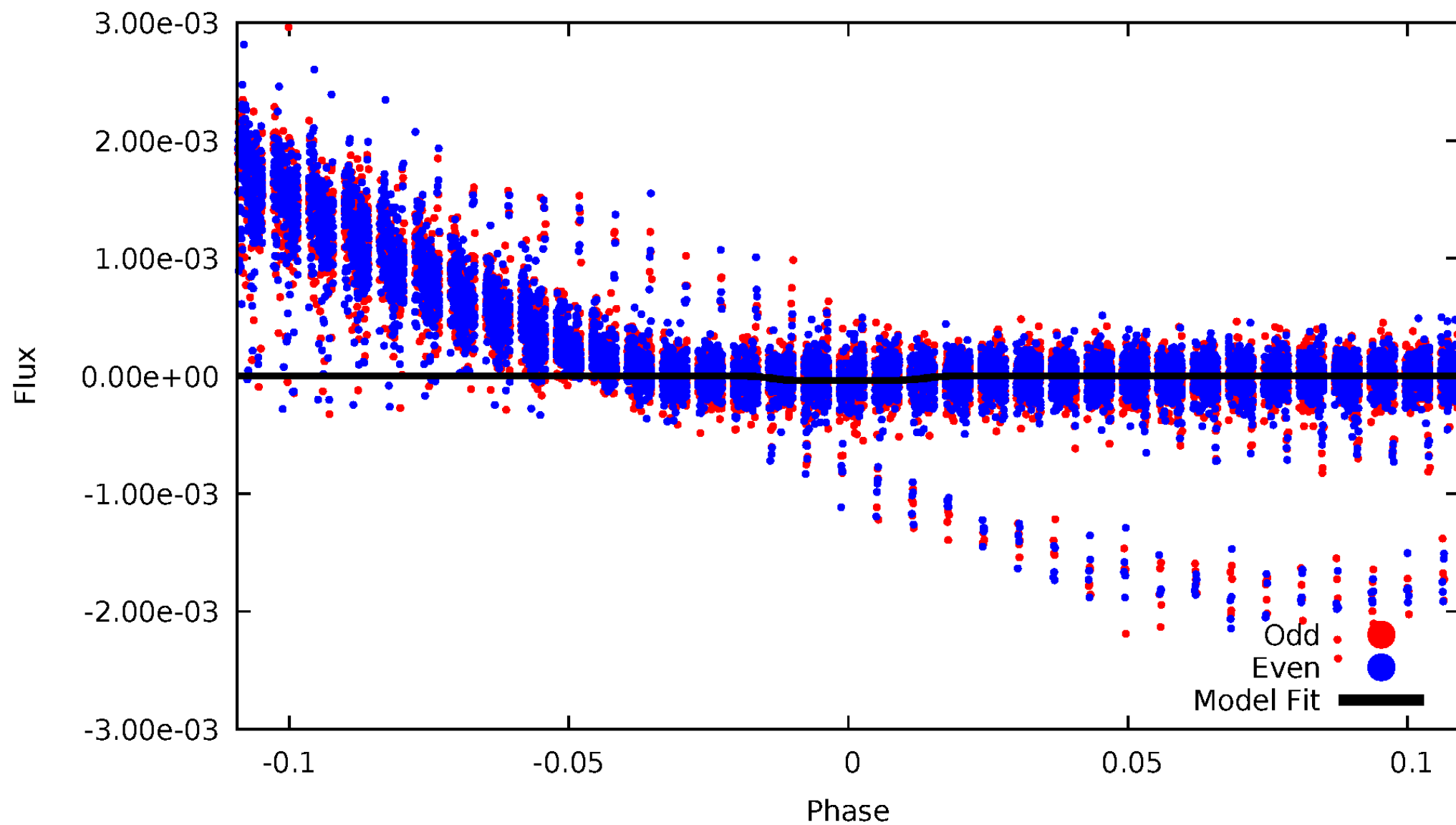
DV Odd/Even

TCE 009138695-02



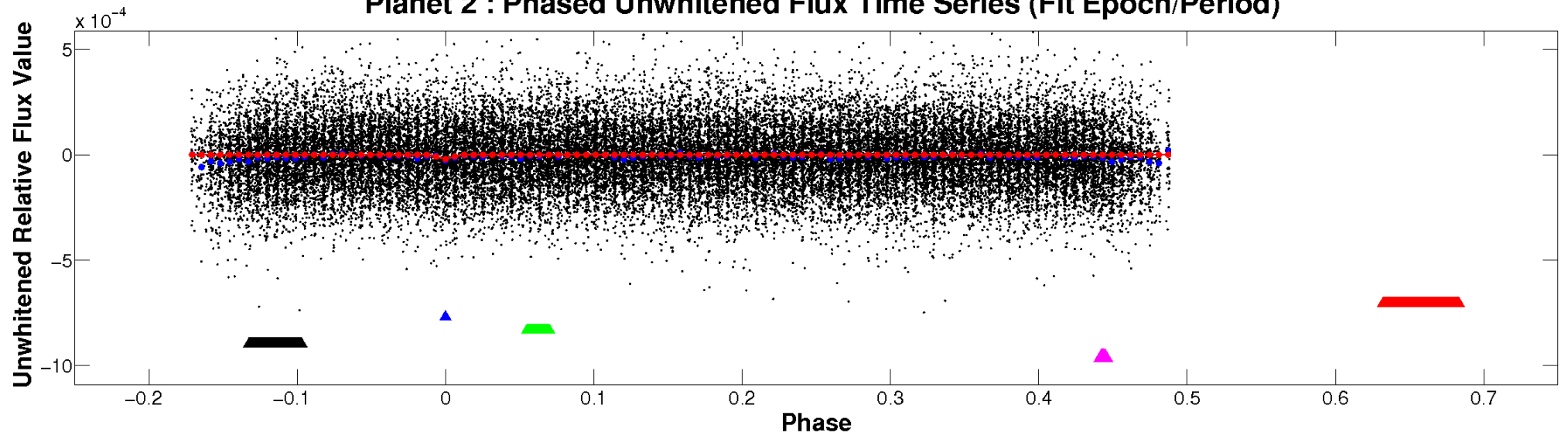
ALT Odd/Even

TCE 009138695-02

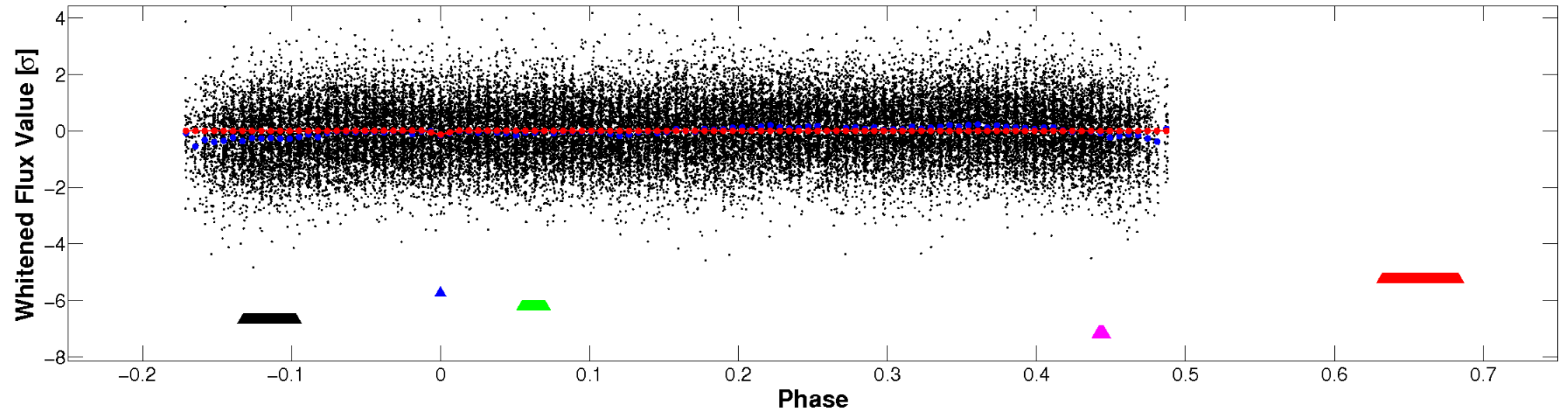


Non-Whitened Vs. Whitened Light Curve

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

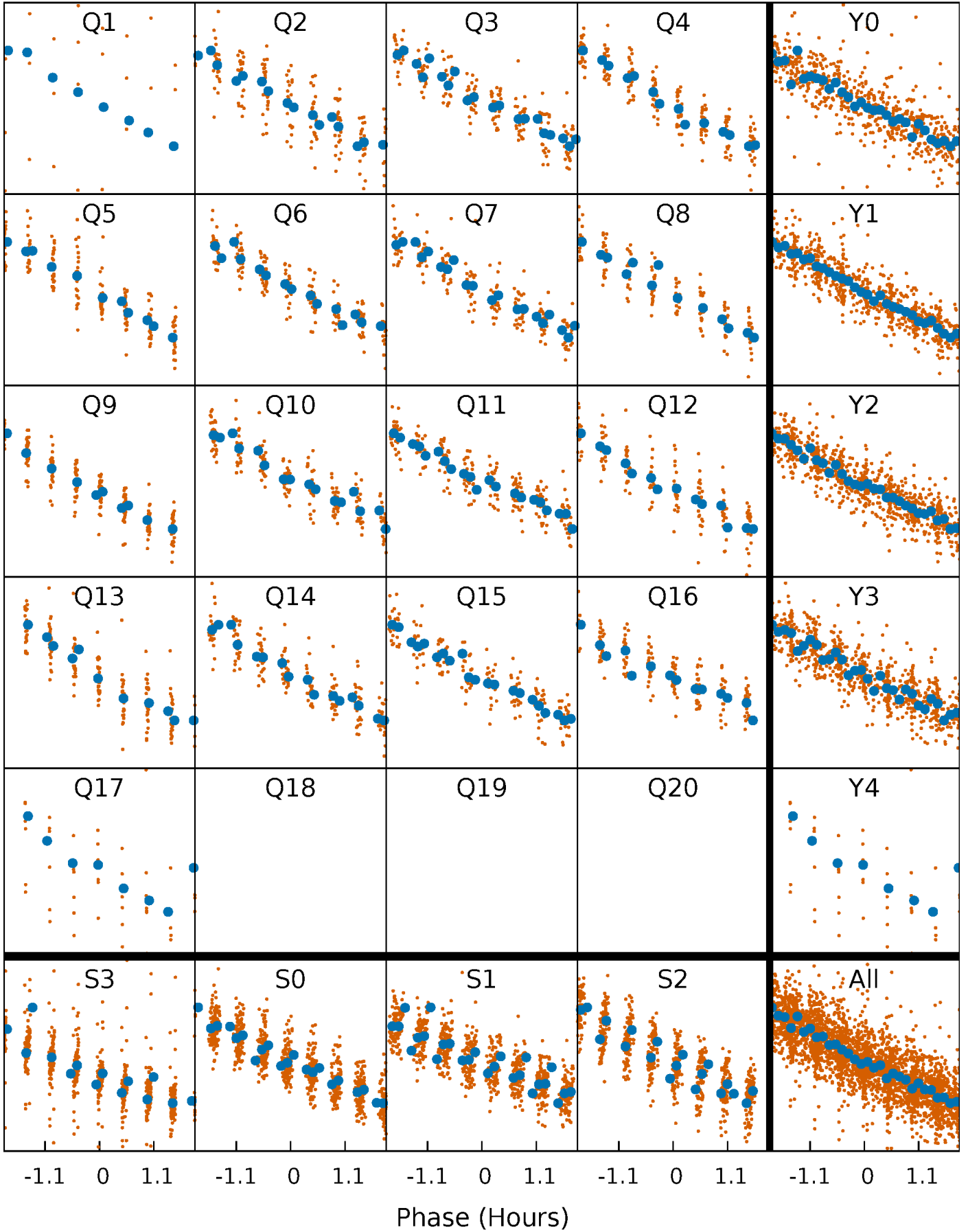


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



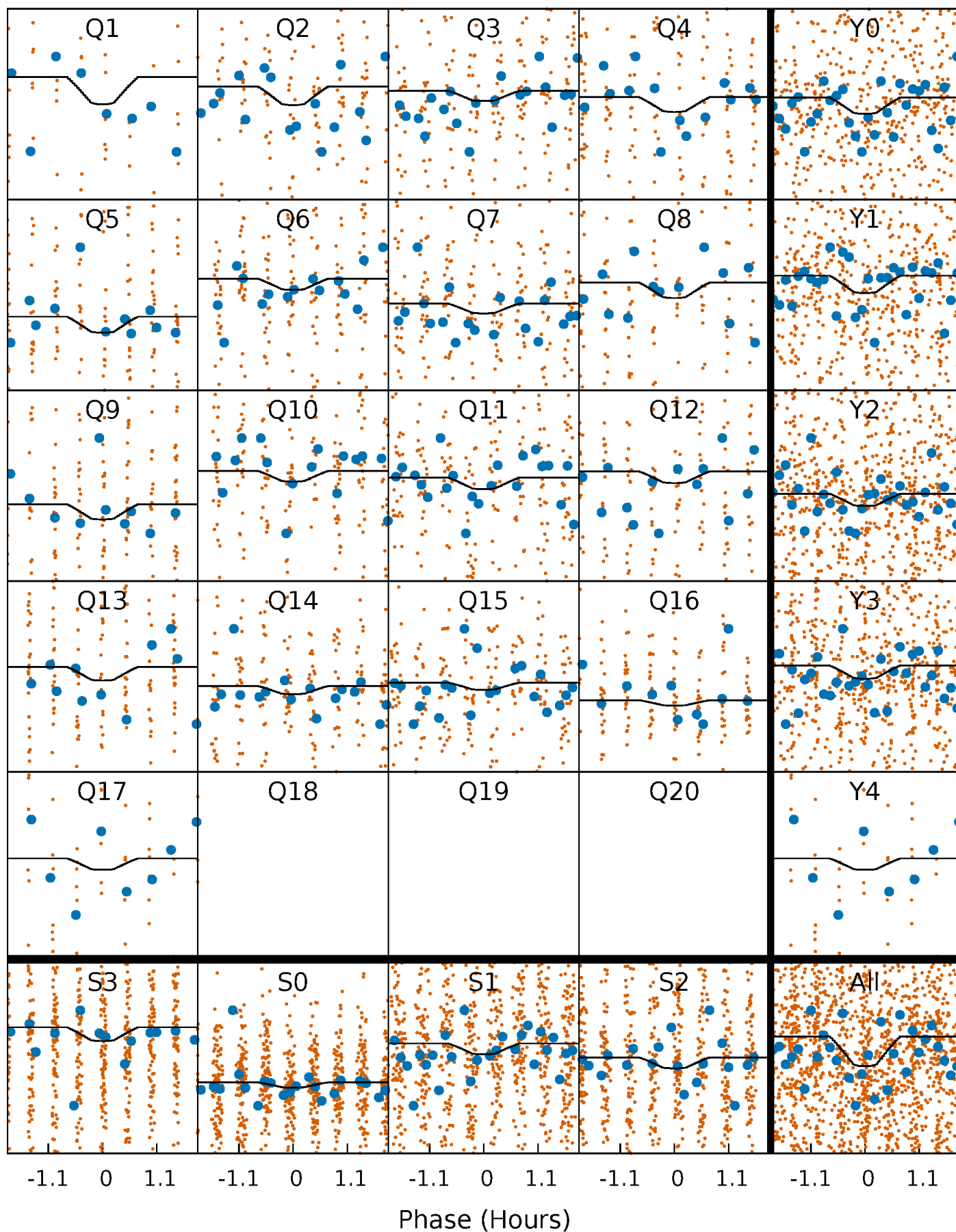
PDC Quarter-Phased Transit Curves

TCE 009138695-02 P= 3.228697 Days $T_0=133.021922$ (BKJD)



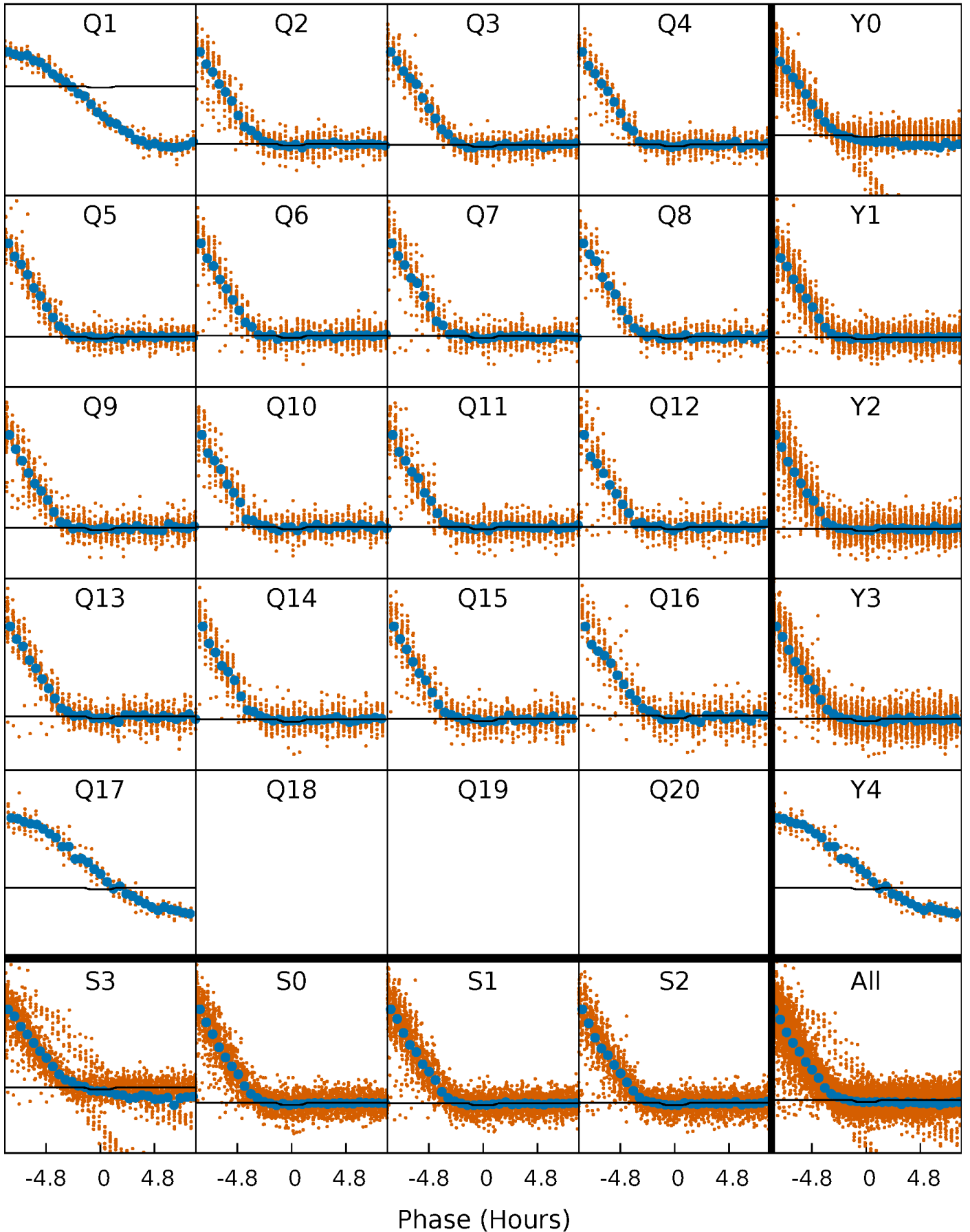
DV Quarter-Phased Transit Curves

TCE 009138695-02 P= 3.228697 Days $T_0=133.021922$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

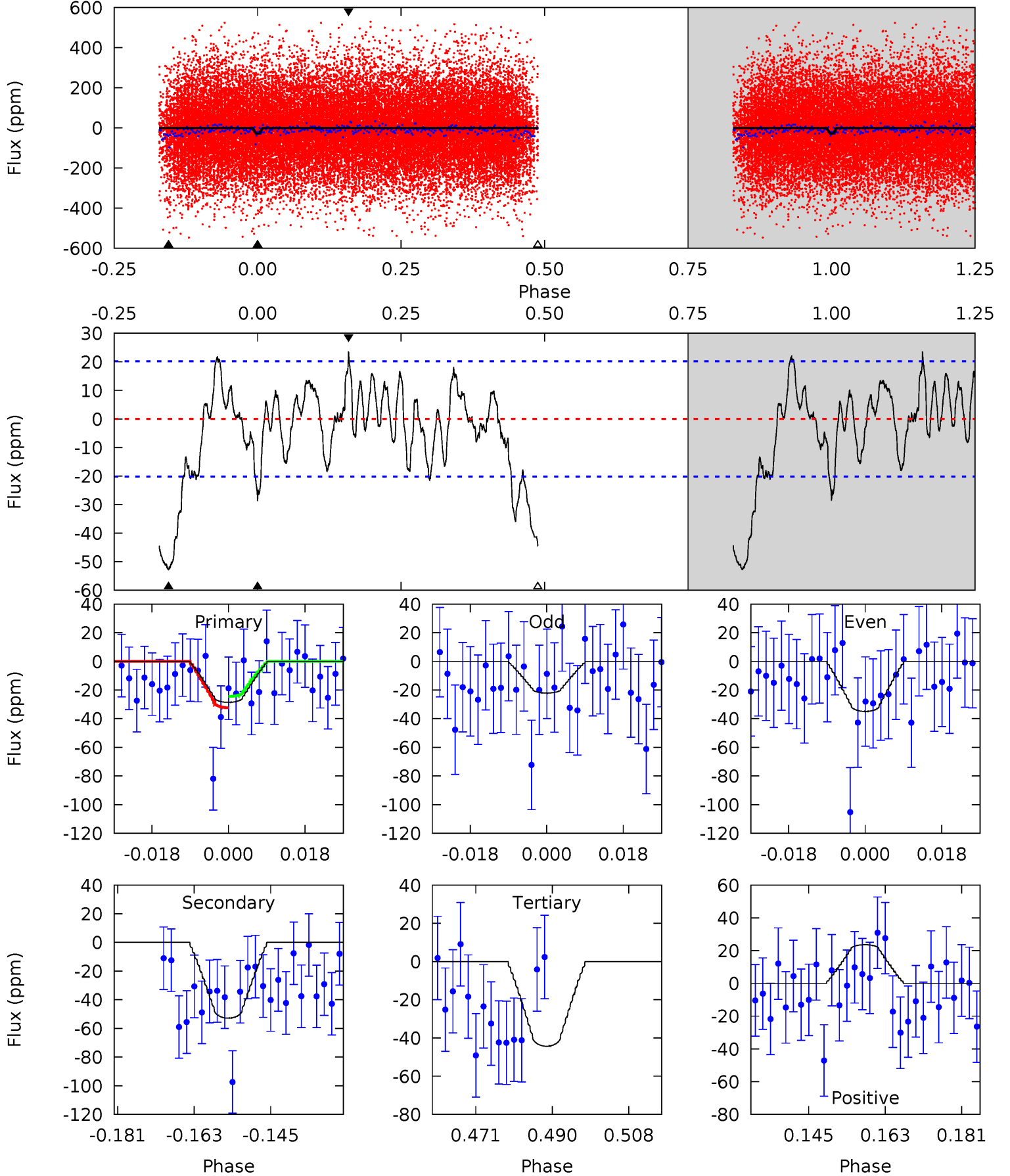
TCE 009138695-02 $P = 3.228477$ Days $T_0 = 133.049512$ (BKJD)



DV Model-Shift Uniqueness Test

009138695-02, P = 3.228697 Days, E = 129.793225 Days

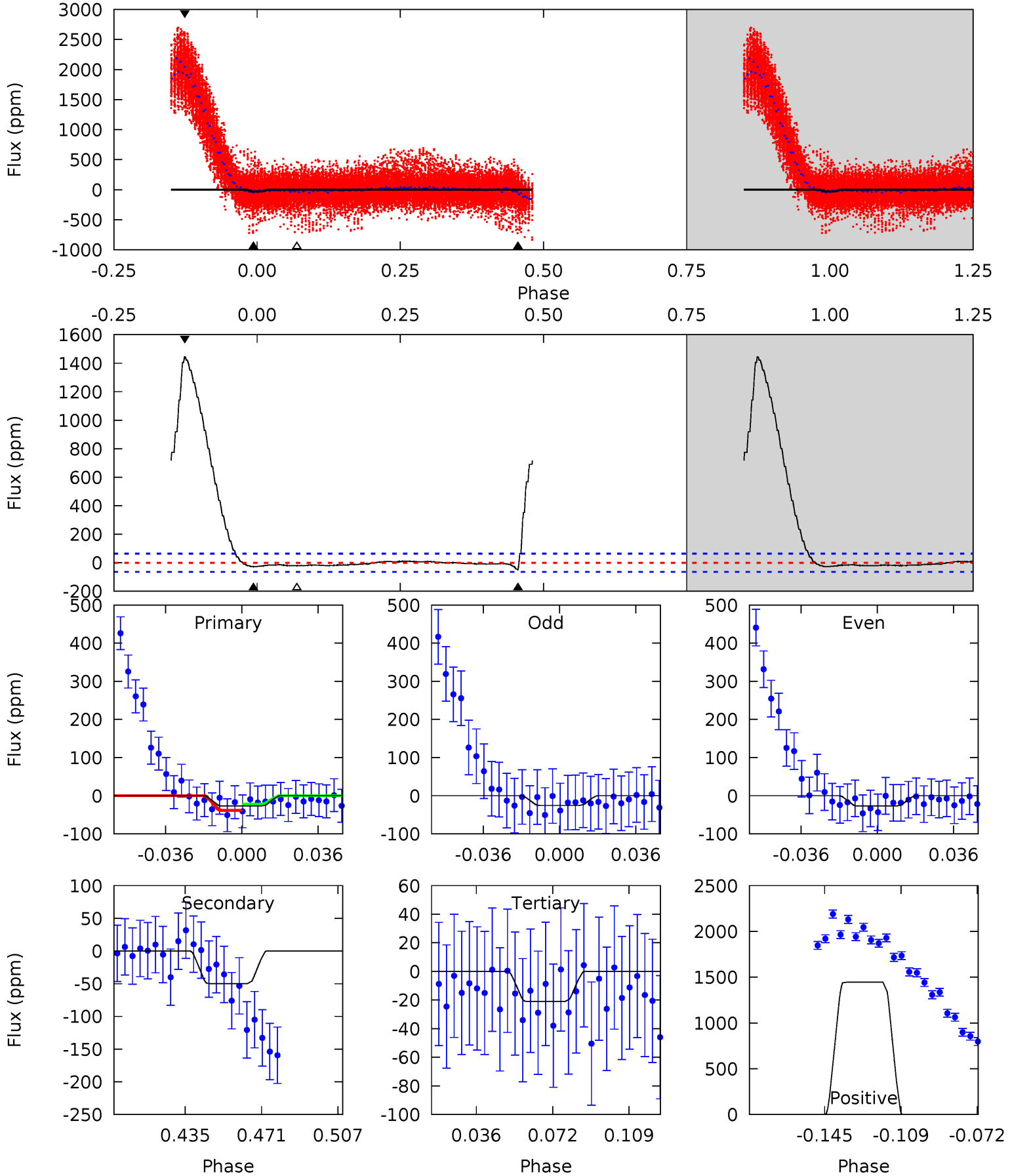
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.95	12.9	10.8	5.74	4.91	2.36	2.85	-3.83	1.21	2.07	7.11	1.57	0.89	0.31	0.96



Alt Model-Shift Uniqueness Test

009138695-02, P = 3.228477 Days, E = 129.821035 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.00	3.69	1.55	107.1	4.77	2.09	28.7	0.44	-105.2	2.14	-103.5	0.05	1.68	0.97	2.46



Stellar Parameters For KIC 009138695

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7272^{+226}_{-327}	$3.883^{+0.294}_{-0.126}$	$0.000^{+0.200}_{-0.350}$	$2.536^{+0.518}_{-0.888}$	$1.790^{+0.196}_{-0.392}$	$0.155^{+0.329}_{-0.060}$
	+3%/-4%	+8%/-3%	+inf%/-inf%	+20%/-35%	+11%/-22%	+213%/-39%
Source	PHO1	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 009138695-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-53 ± 4	$1.28^{+0.86}_{-0.76}$	3063^{+226}_{-272}	9316^{+9856}_{-2556}	48^{+223}_{-32}
Alt.	-50 ± 13	$1.64^{+1.05}_{-0.84}$	3086^{+203}_{-284}	7568^{+5514}_{-1751}	26^{+91}_{-16}

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

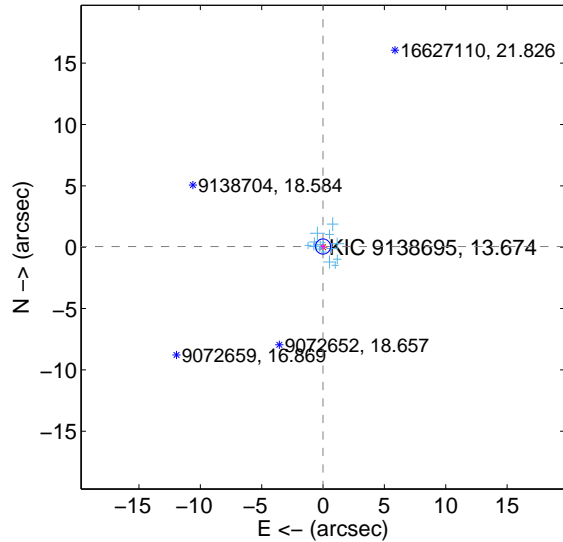
Supplemental centroid analysis for 009138695-02. Kepler magnitude: 13.67. Transit SNR 3.11

There are 17 quarters with good PRF difference image offsets

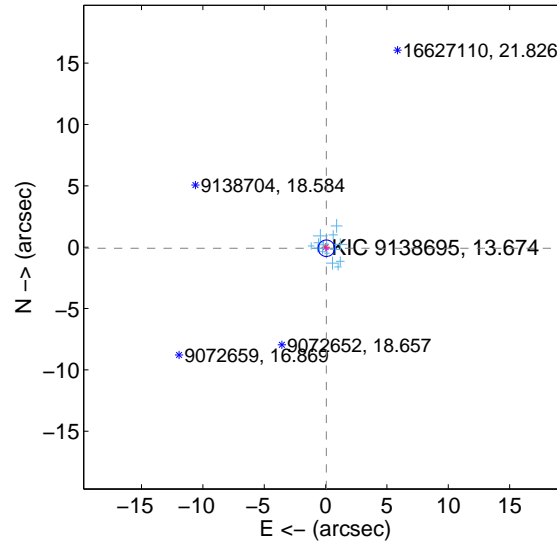
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.054 ± 0.205	0.26	0.002 ± 0.178	0.054 ± 0.204
PRF-fit source offset from KIC position	0.109 ± 0.224	0.48	-0.065 ± 0.183	-0.087 ± 0.221
photometric centroid source offset	5.35 ± 3.69	1.45	-5.04 ± 3.72	1.78 ± 3.45

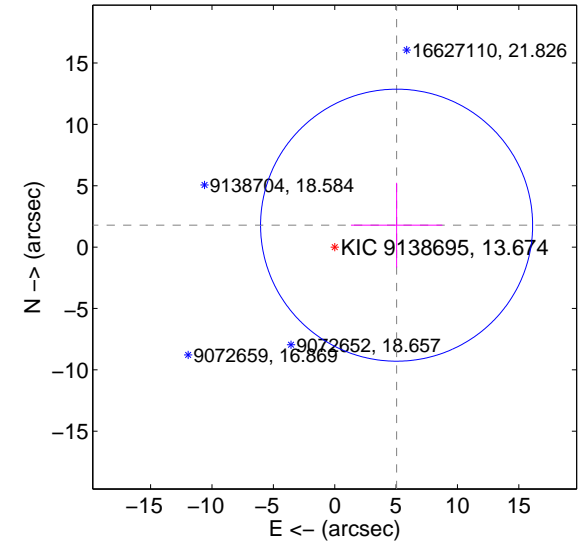
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

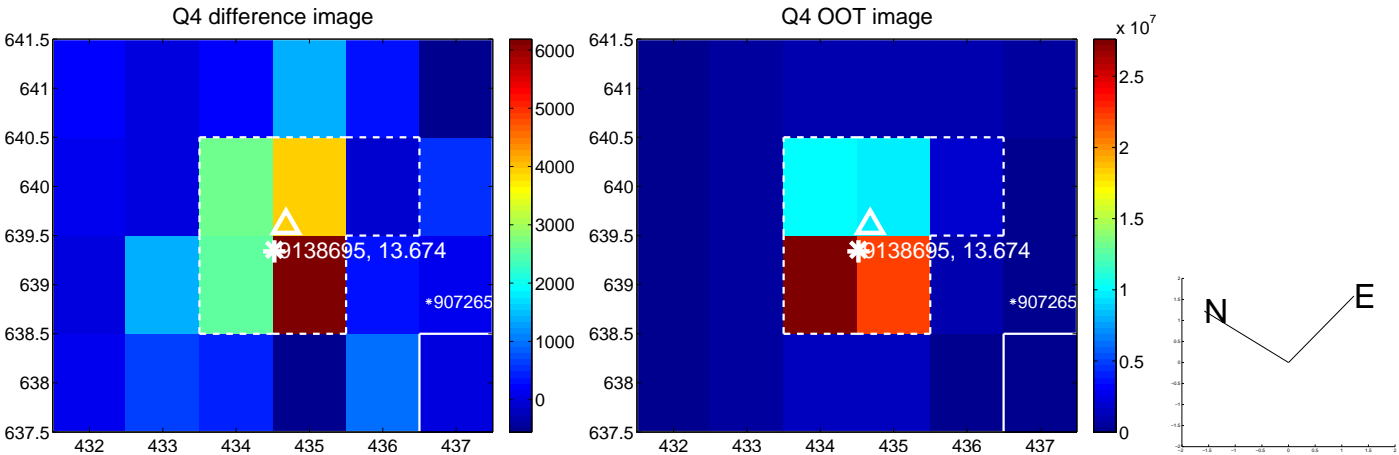
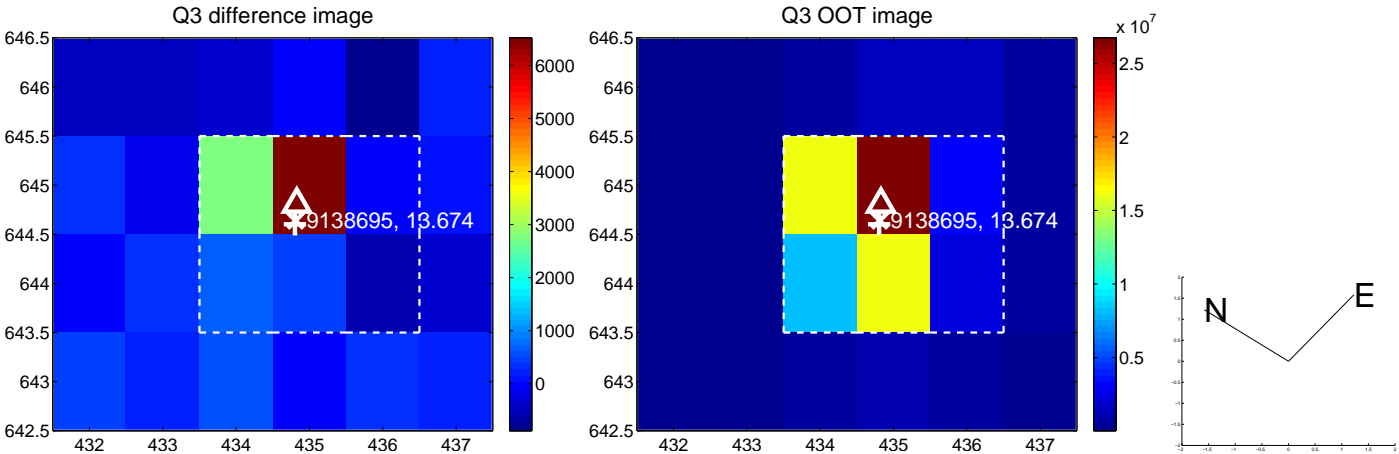
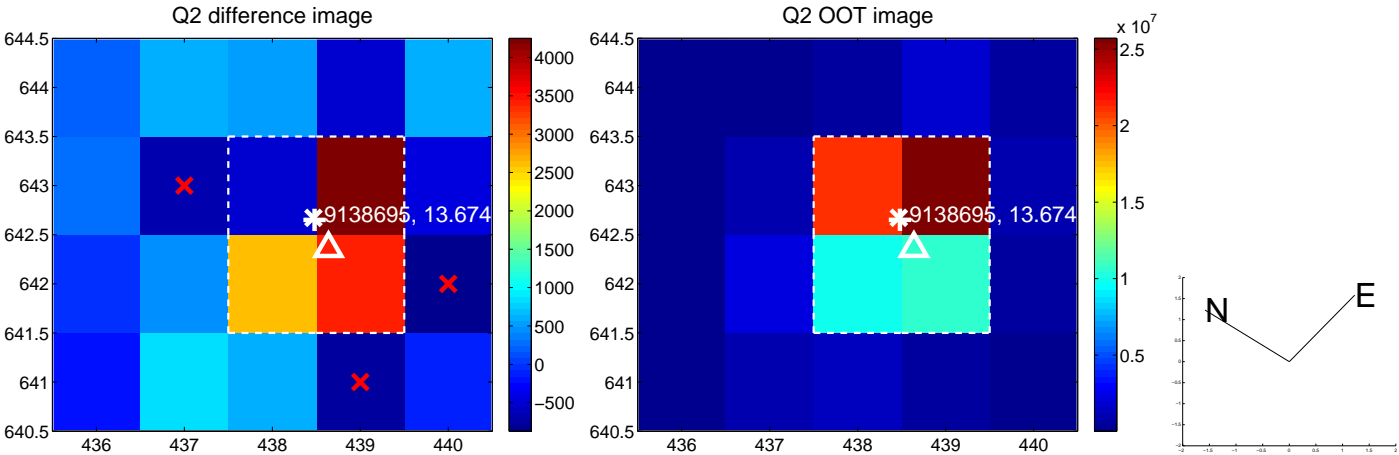
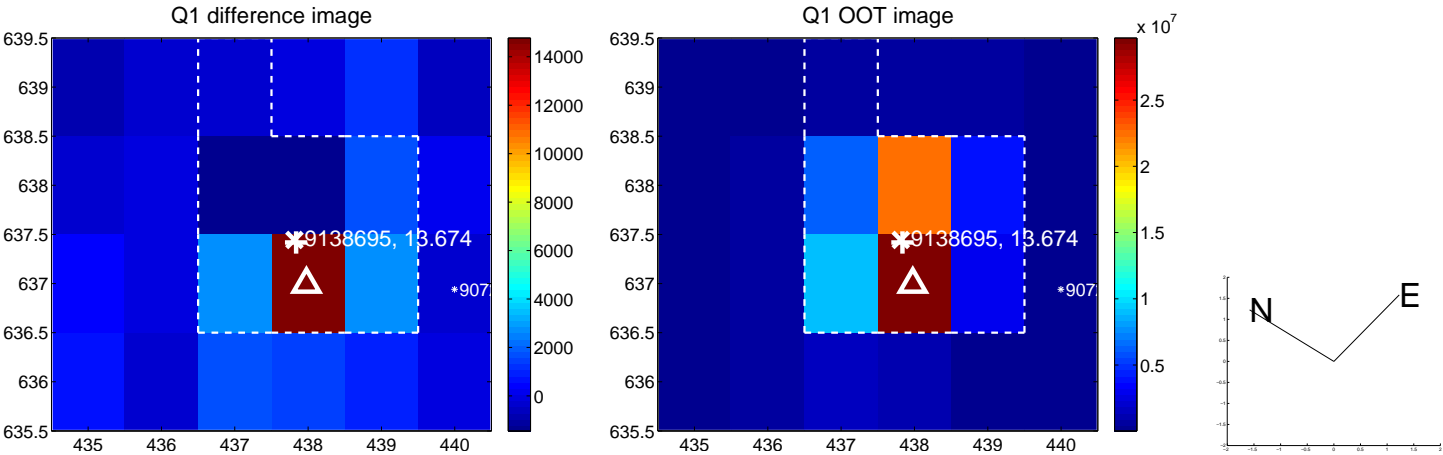


offset from photometric centroids

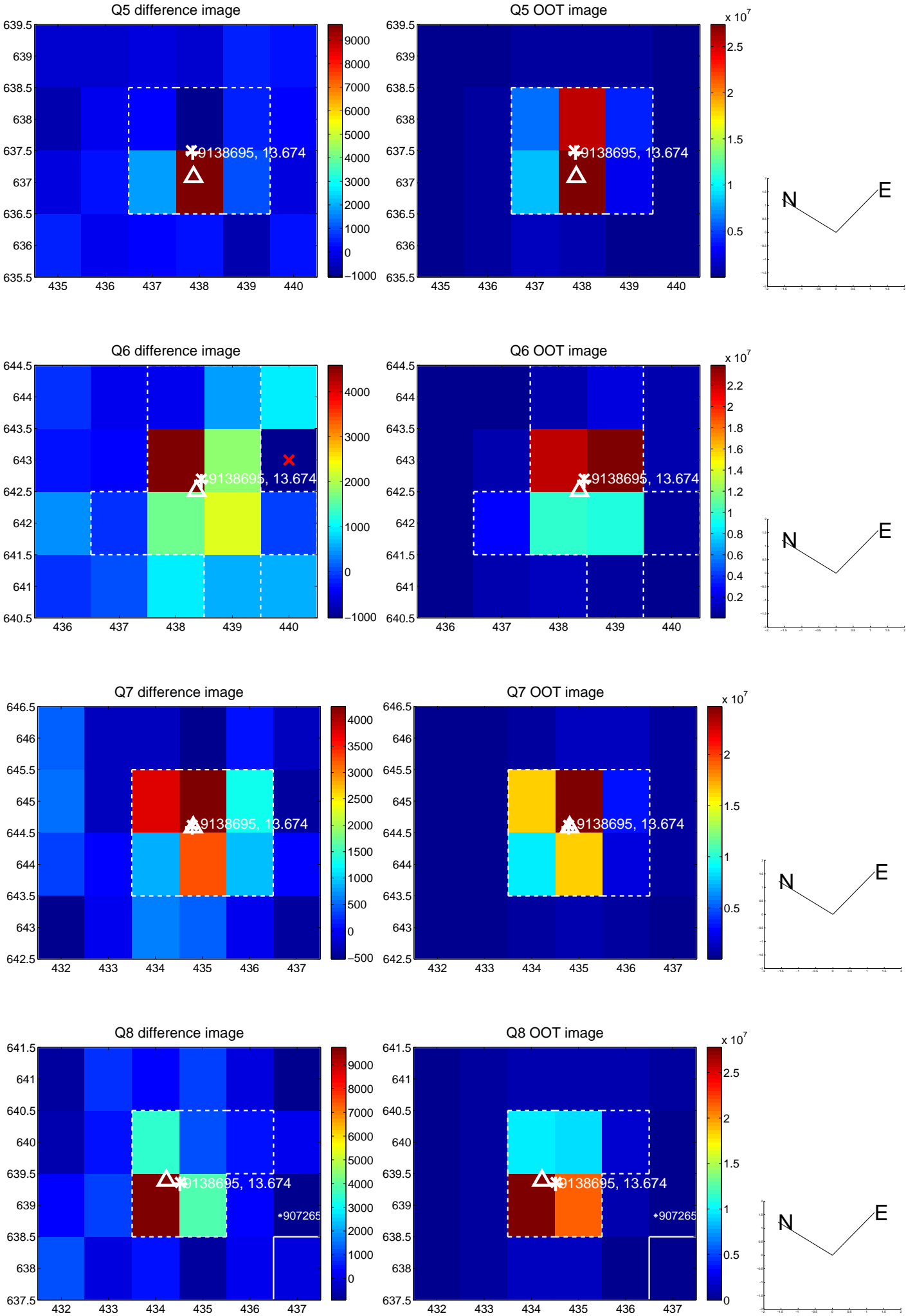


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

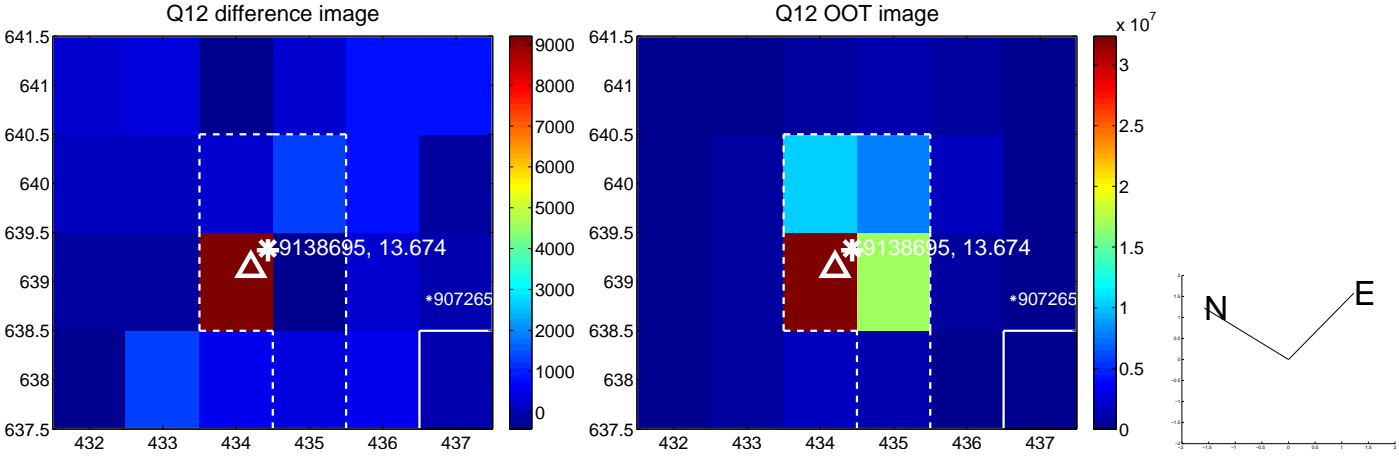
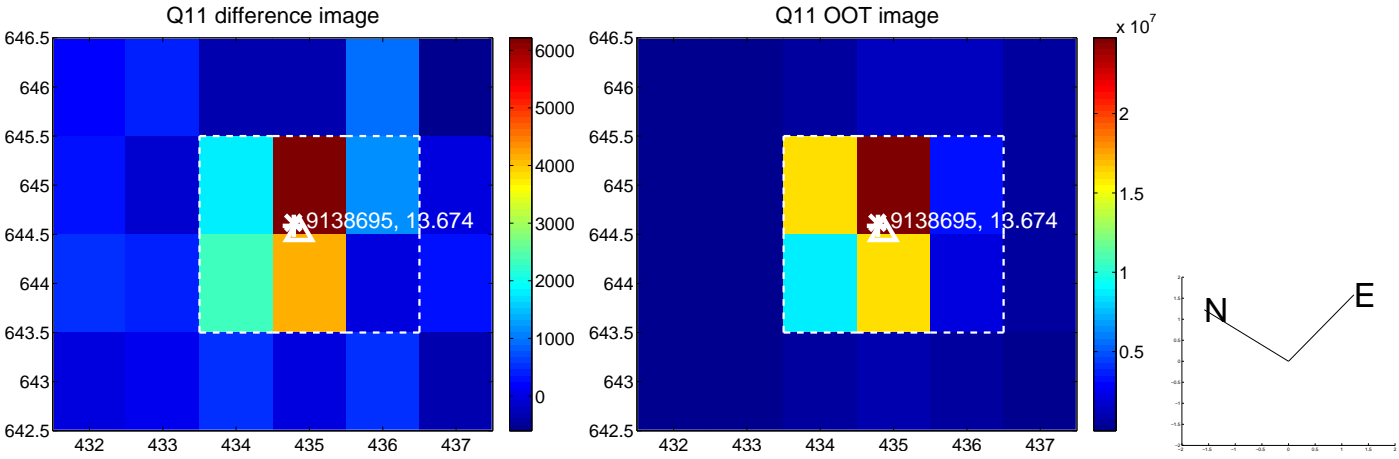
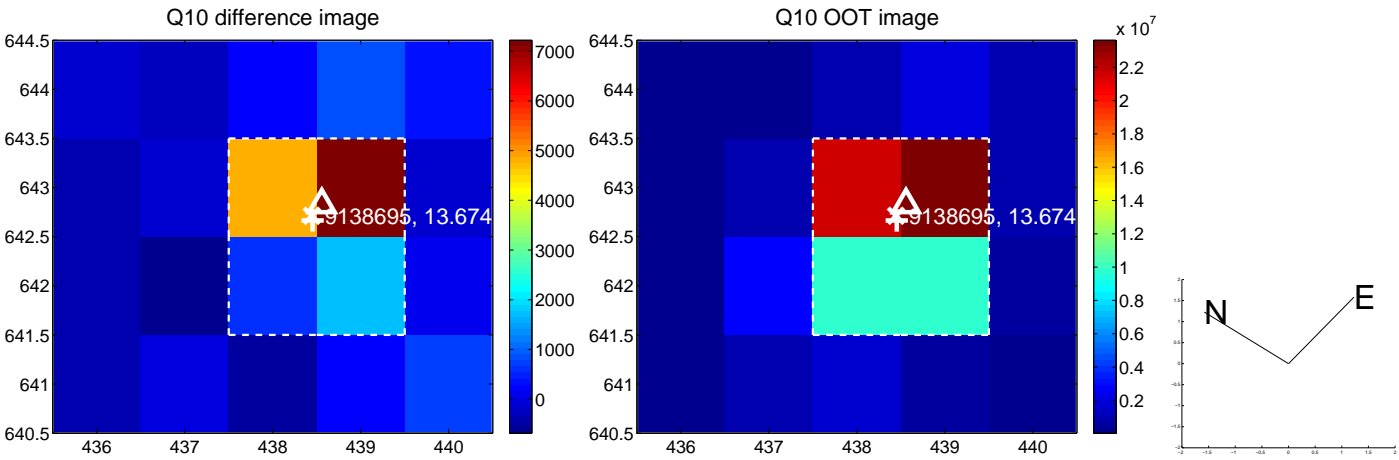
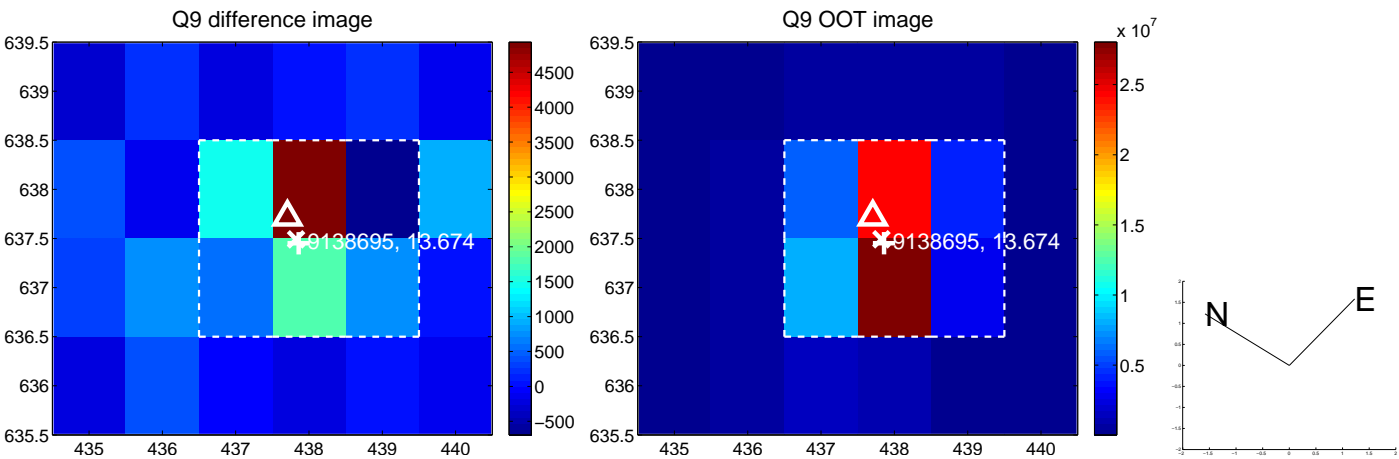
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



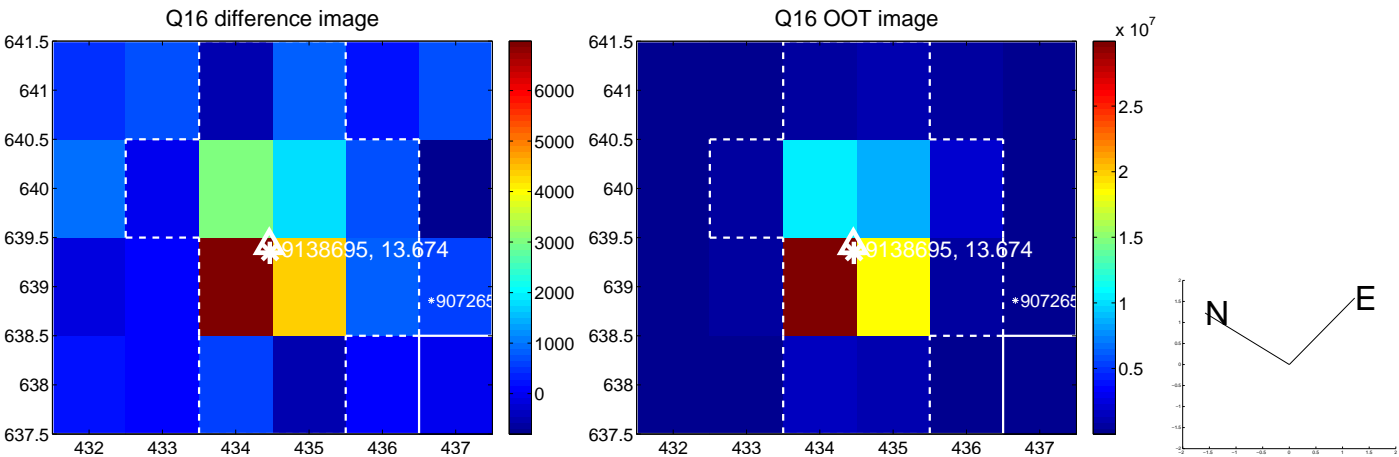
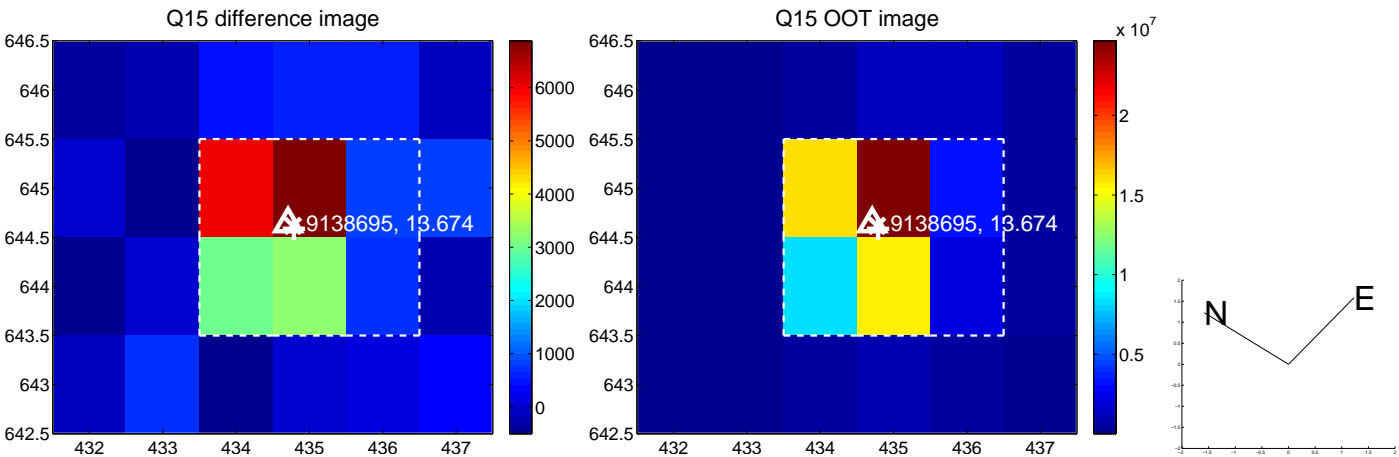
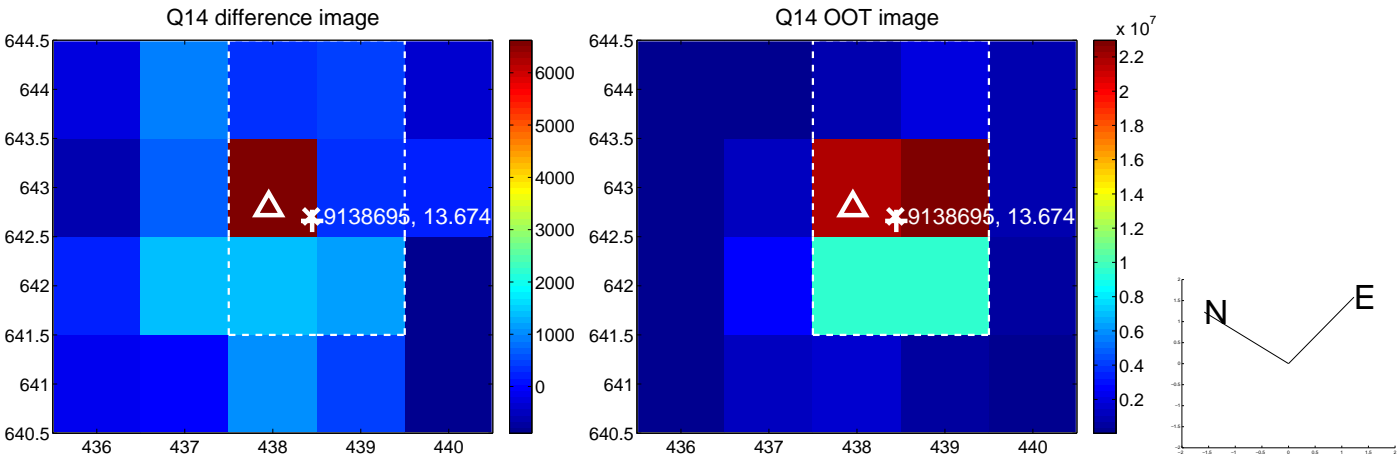
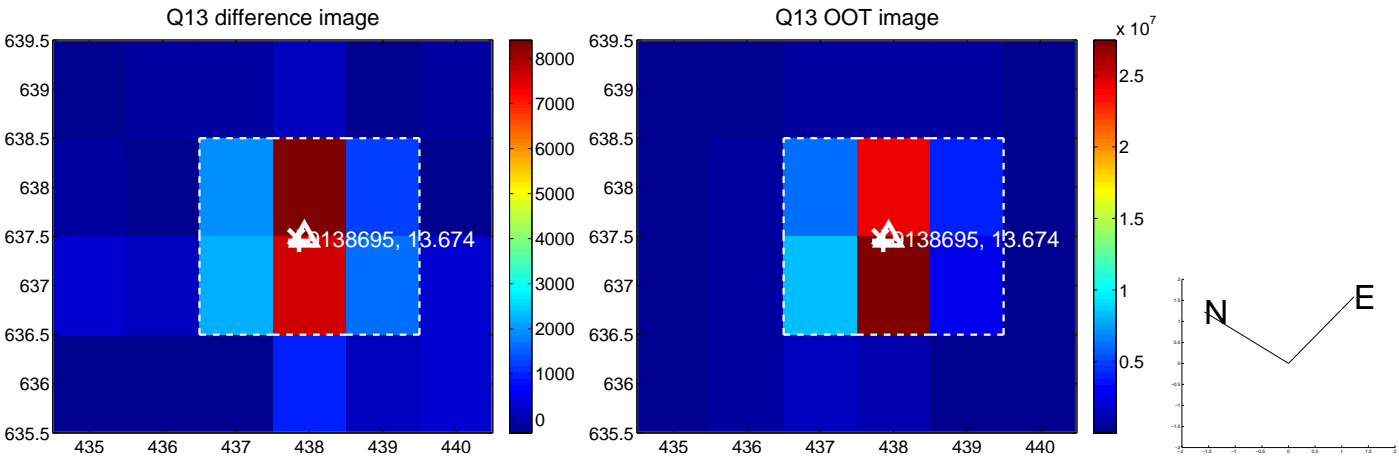
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



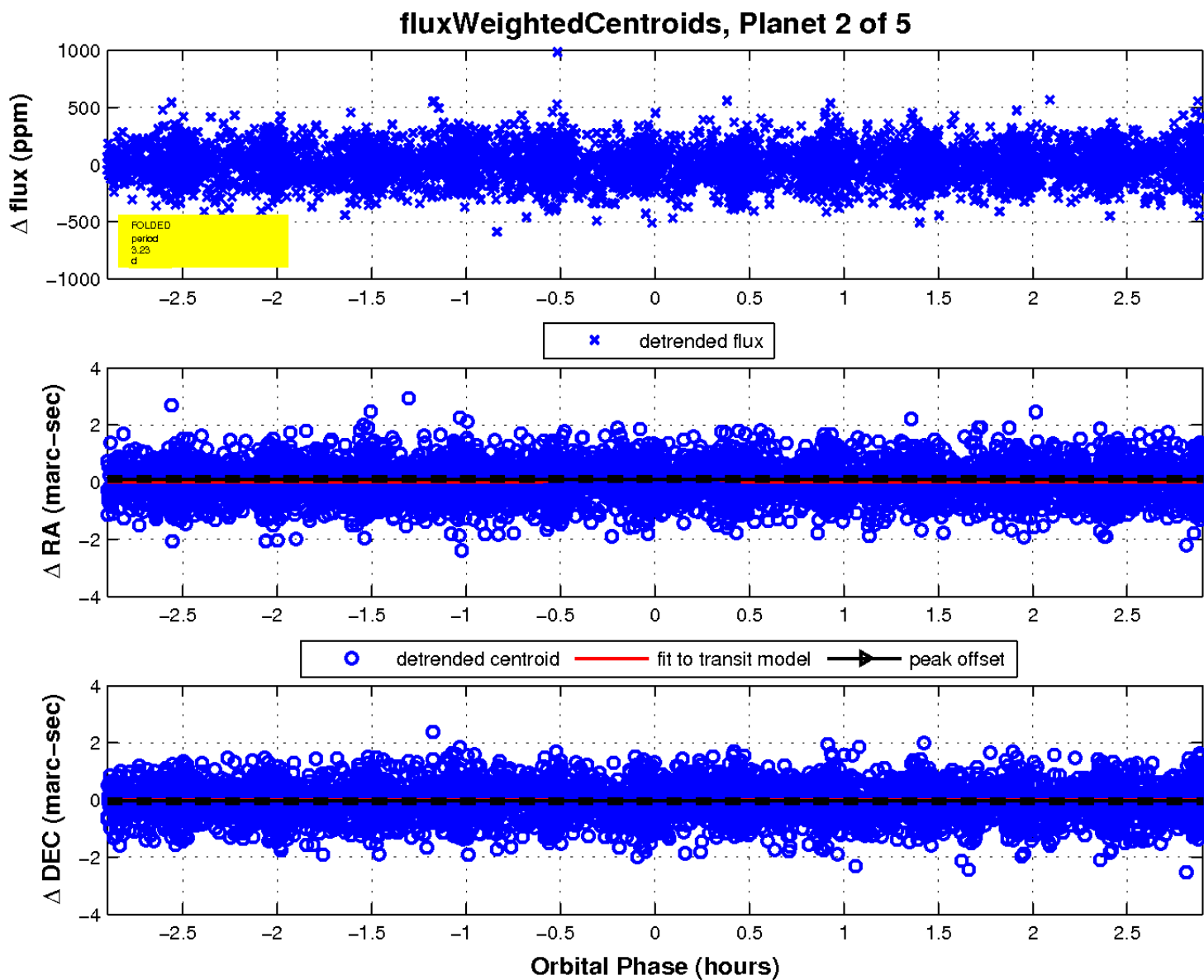
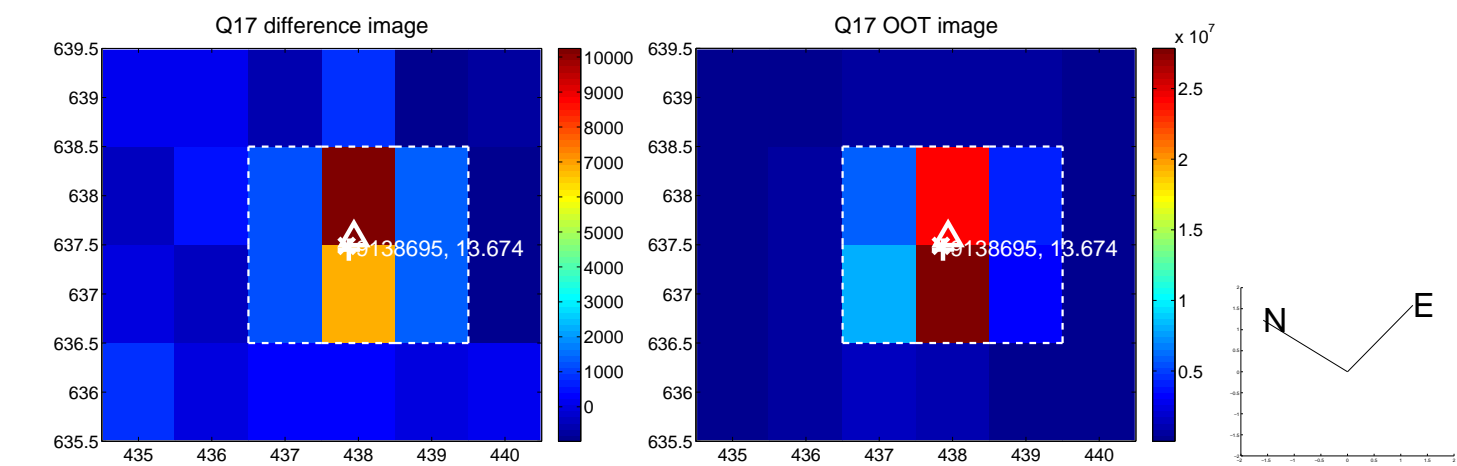
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



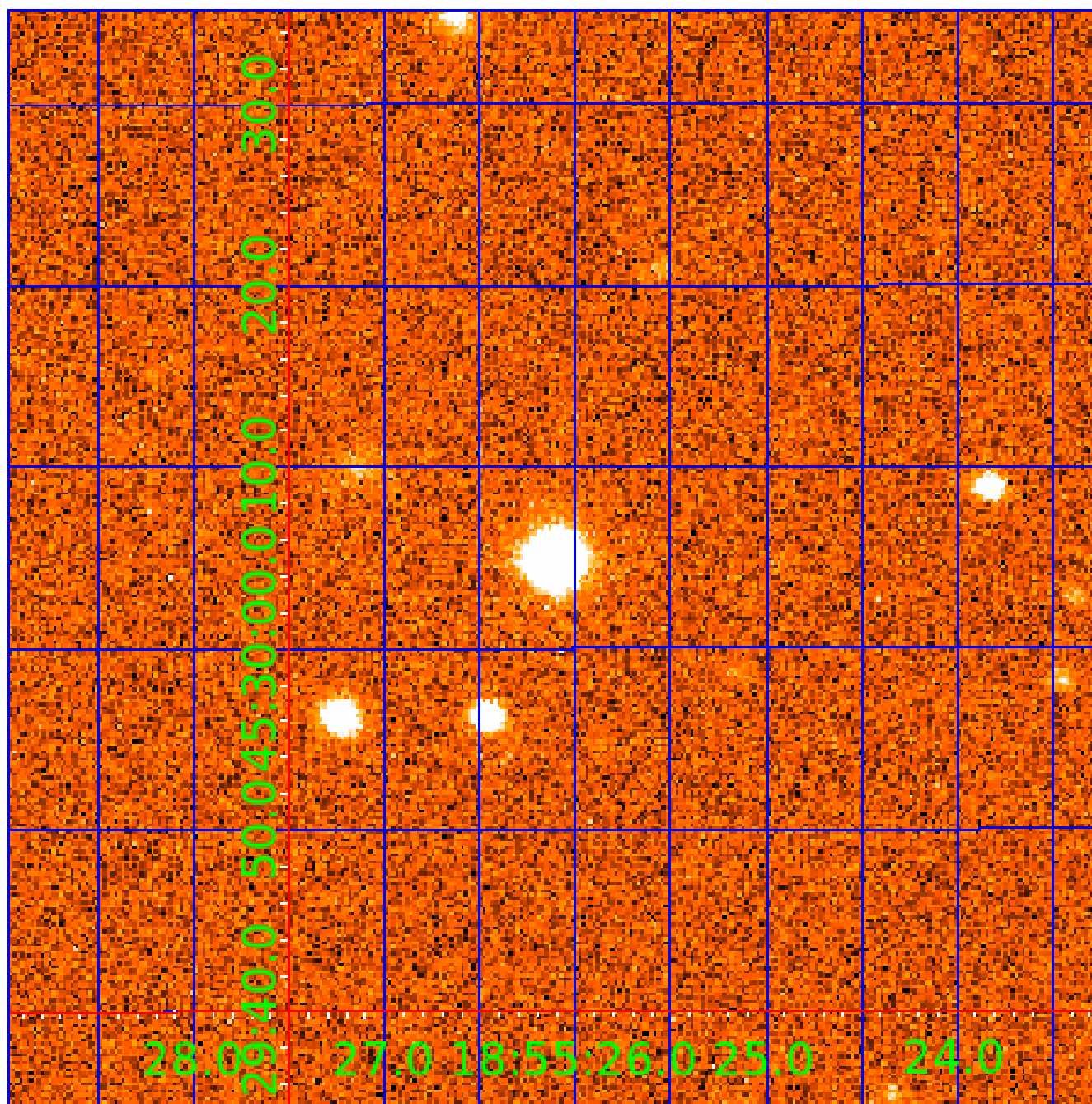
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 009138695

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})
009138695-01	OBS	No	3.228332	131.999034	14.5	9.787	8.1	4.0	2.54	7272	1.08	5974.55
009138695-02	OBS	No	3.228697	133.021923	21.0	0.967	12.5	3.1	2.54	7272	1.21	5973.65
009138695-03	OBS	No	3.228589	133.248165	10.5	4.433	12.7	2.7	2.54	7272	0.99	5973.91
009138695-04	OBS	No	3.228444	132.708602	64.1	6.947	13.8	17.9	2.54	7272	2.10	5974.27
009138695-05	OBS	No	322.871851	266.826265	296.3	6.804	9.7	7.2	2.54	7272	4.84	12.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009138695-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT
009138695-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
009138695-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD
009138695-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
009138695-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS

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

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

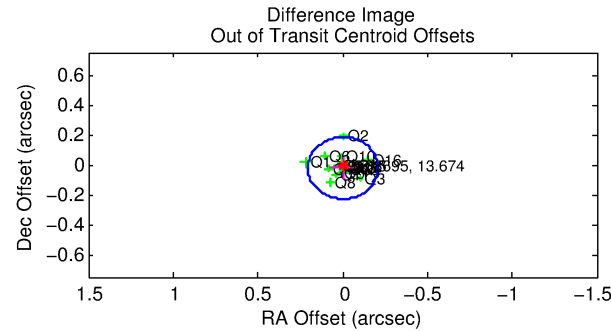
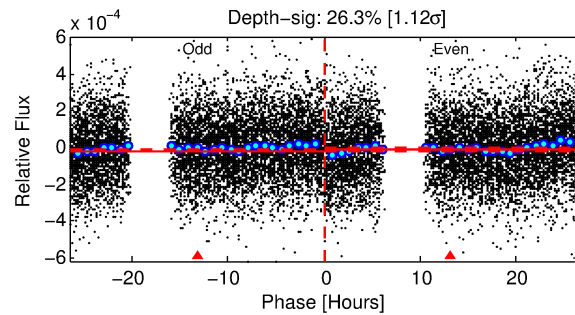
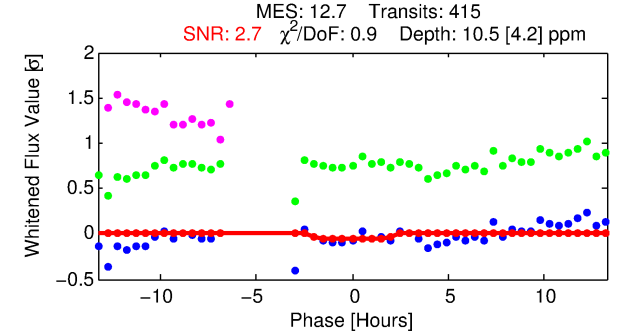
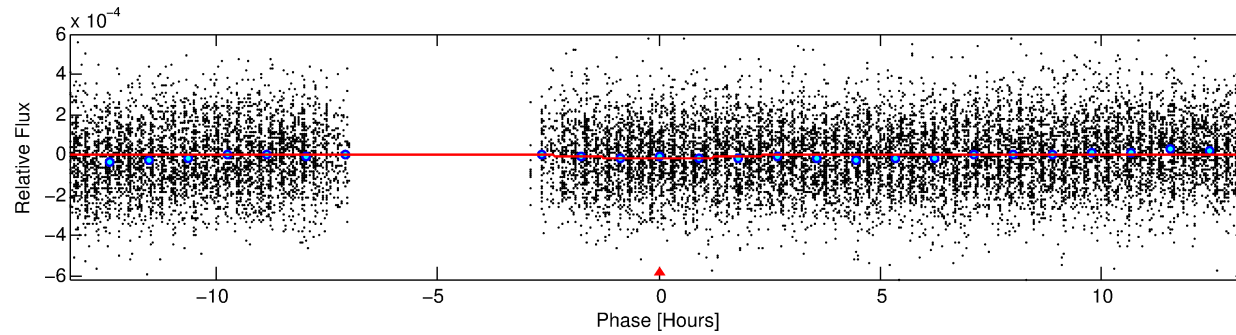
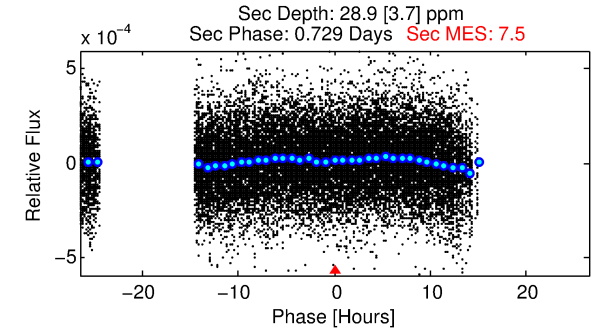
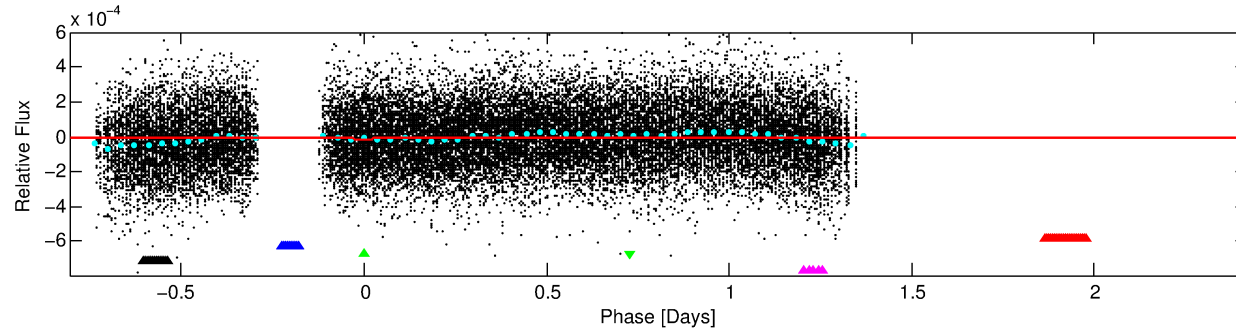
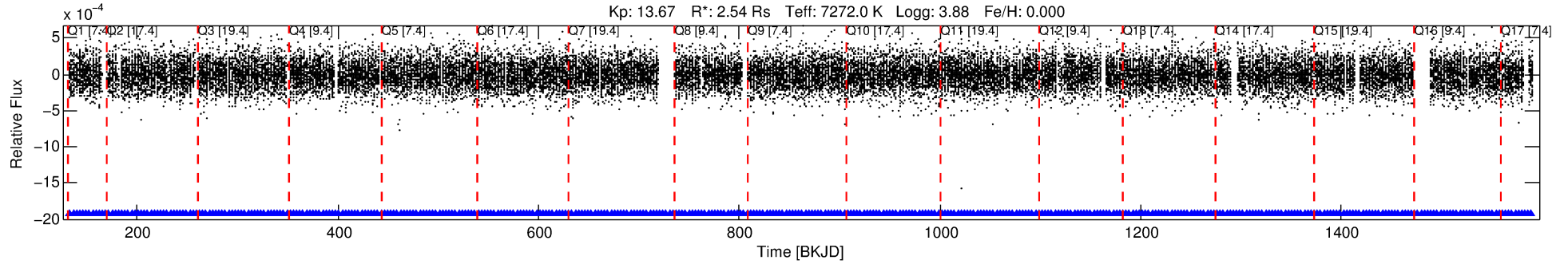
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009138695-03

No Significant Match Found

DV One-Page Summary

KIC: 9138695 Candidate: 3 of 5 Period: 3.229 d



DV Fit Results:

Period = 3.22859 [0.00009] d
Epoch = 133.2482 [0.0182] BKJD
Rp/R* = 0.0036 [0.0033]
a/R* = 2.12 [9.94]
b = 0.94 [0.70]
Seff = 5973.91 [3219.96]
Teq = 2242 [302] K
Rp = 0.99 [0.97] Re
a = 0.0519 [0.0169] AU
Ag = 43.45 [82.42] [0.52σ]
Teffp = 8899 [4085] K [1.63σ]

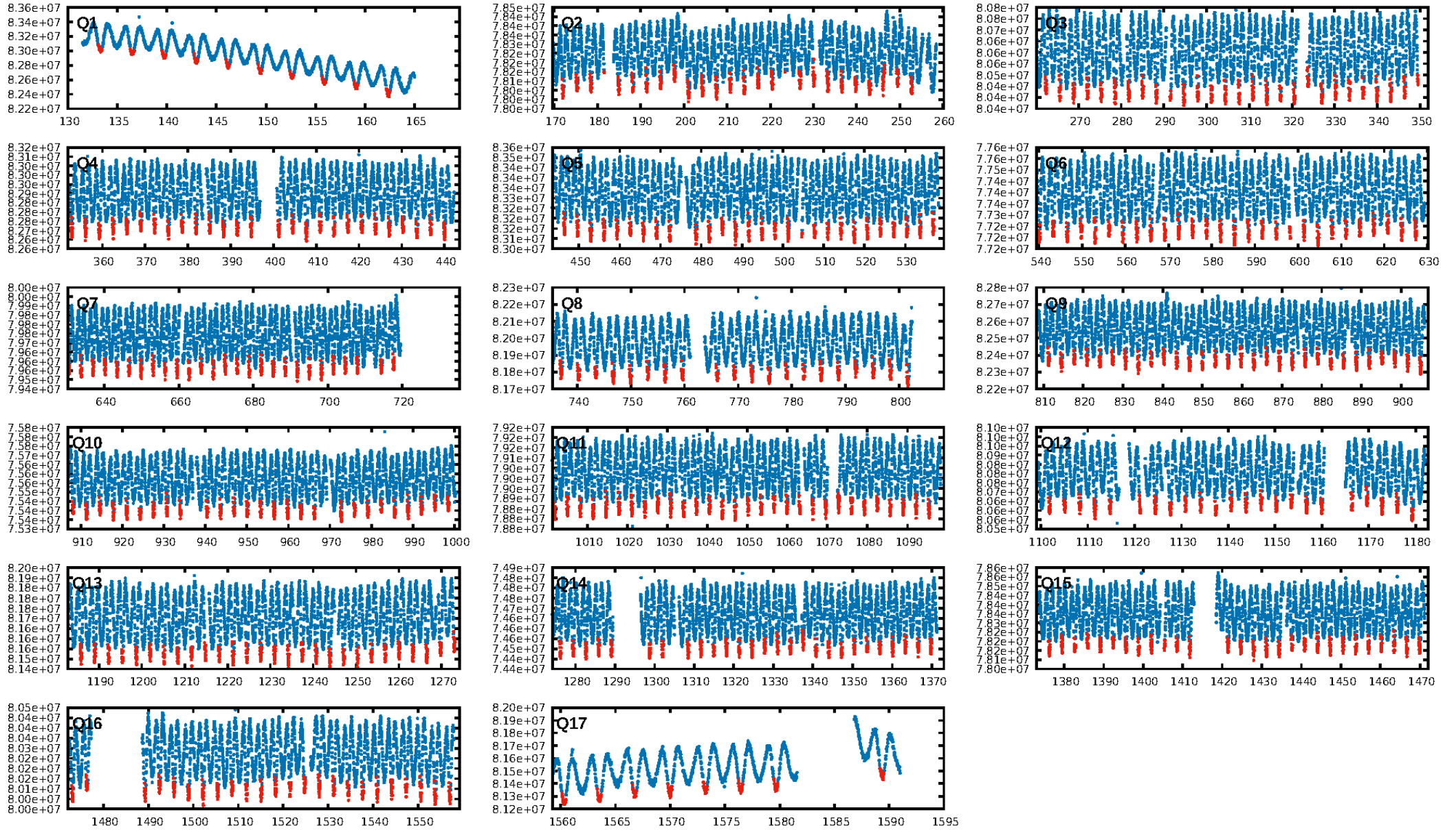
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 5.00e-39
RollingBand-fgt: 1.00 [397/397]
GhostDiagnostic-chr: 0.5313
Centroid-sig: 0.0%
Centroid-so: 12.386 arcsec [3.71σ]
OotOffset-rm: 0.022 arcsec [0.31σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.147 arcsec [2.09σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

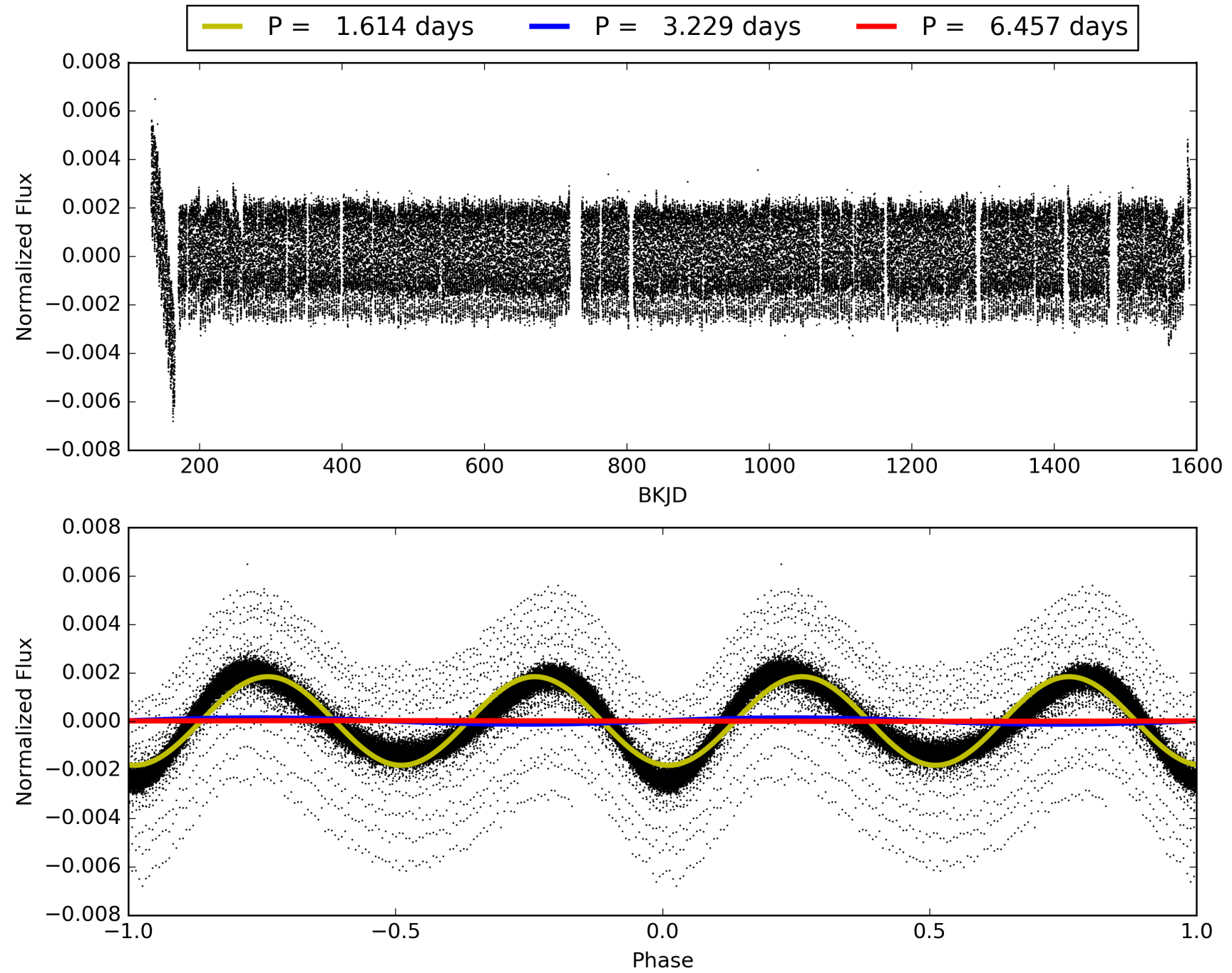
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:19:13 Z

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

TCE 009138695-03, PDC Light Curves

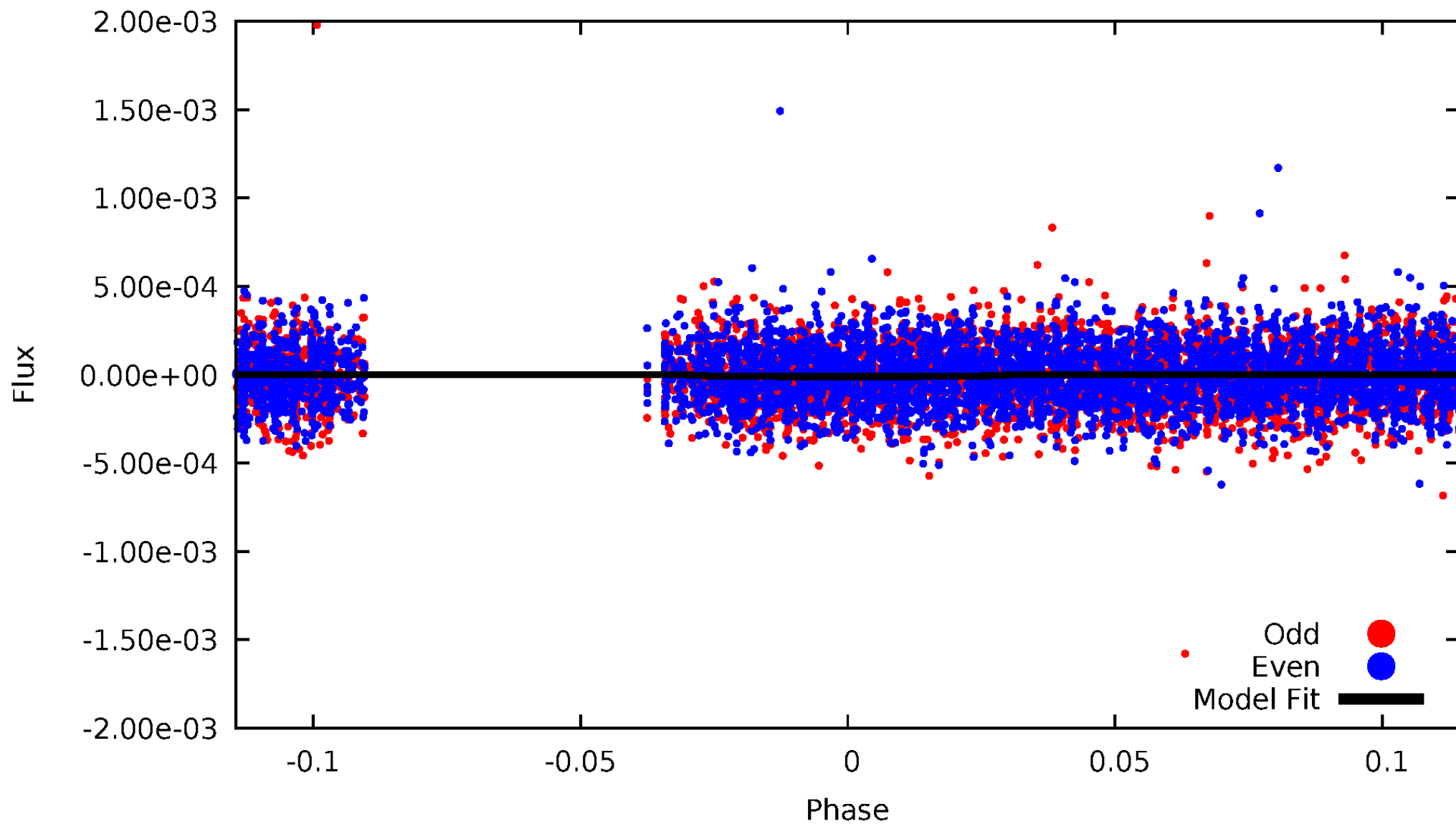


TCE 009138695-03



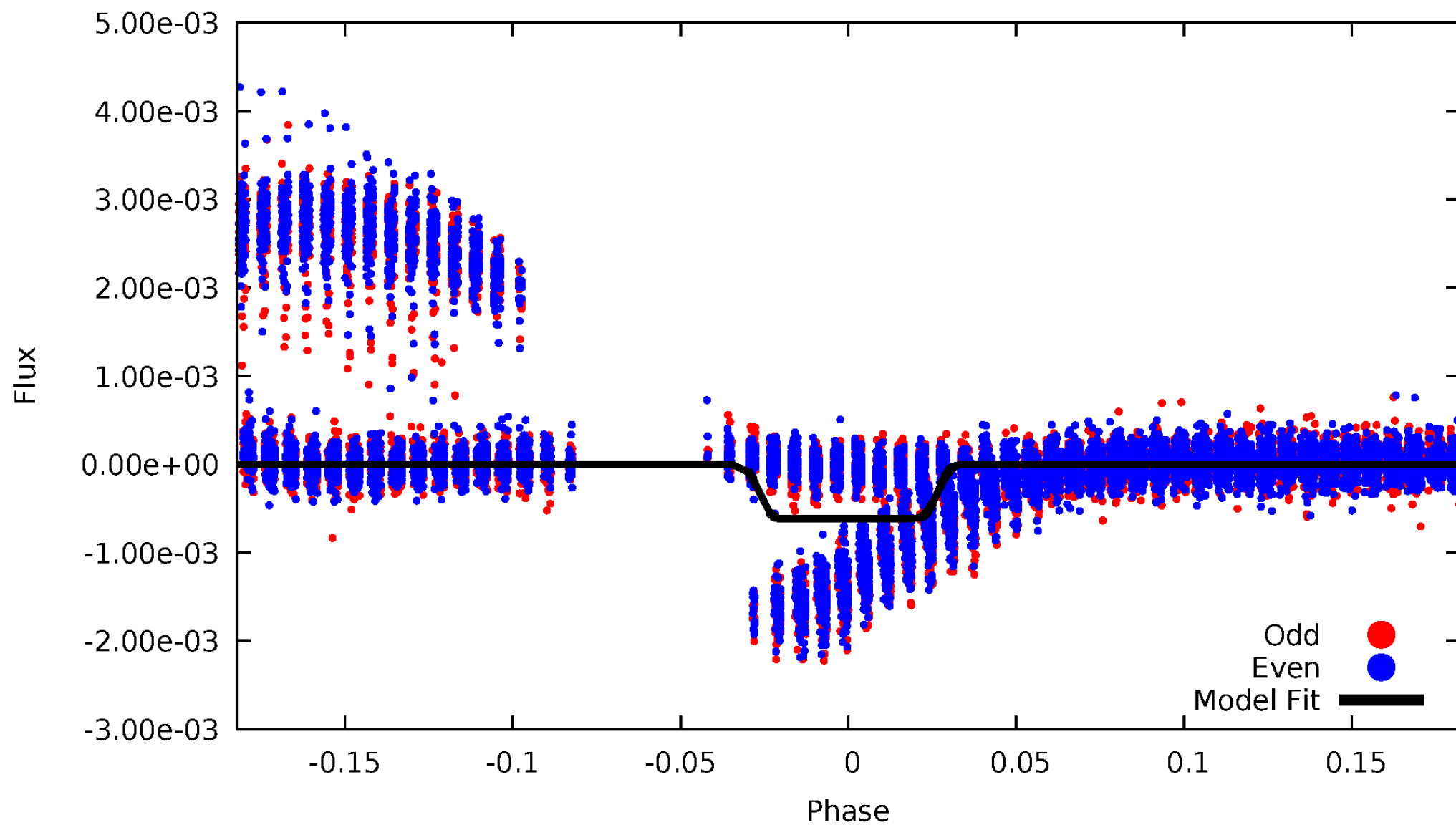
DV Odd/Even

TCE 009138695-03

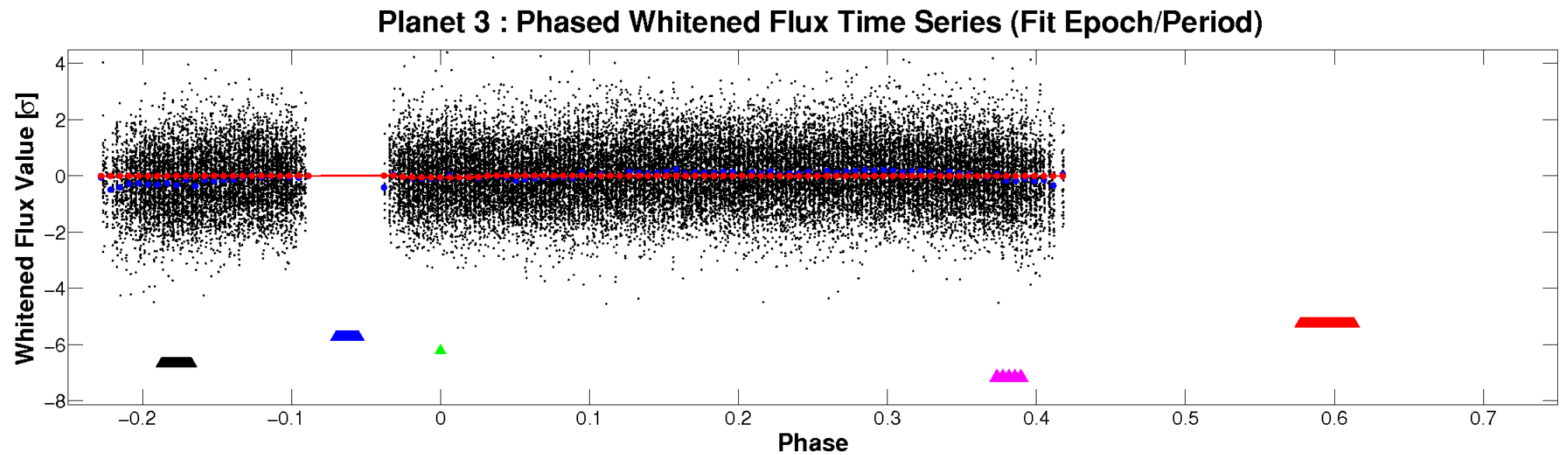
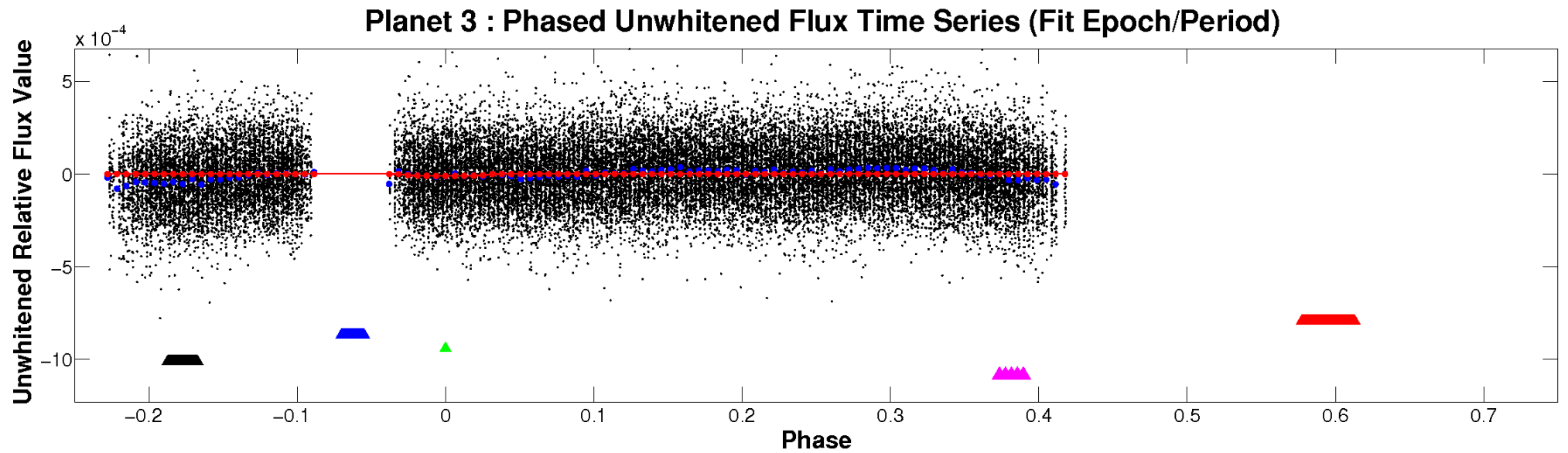


ALT Odd/Even

TCE 009138695-03

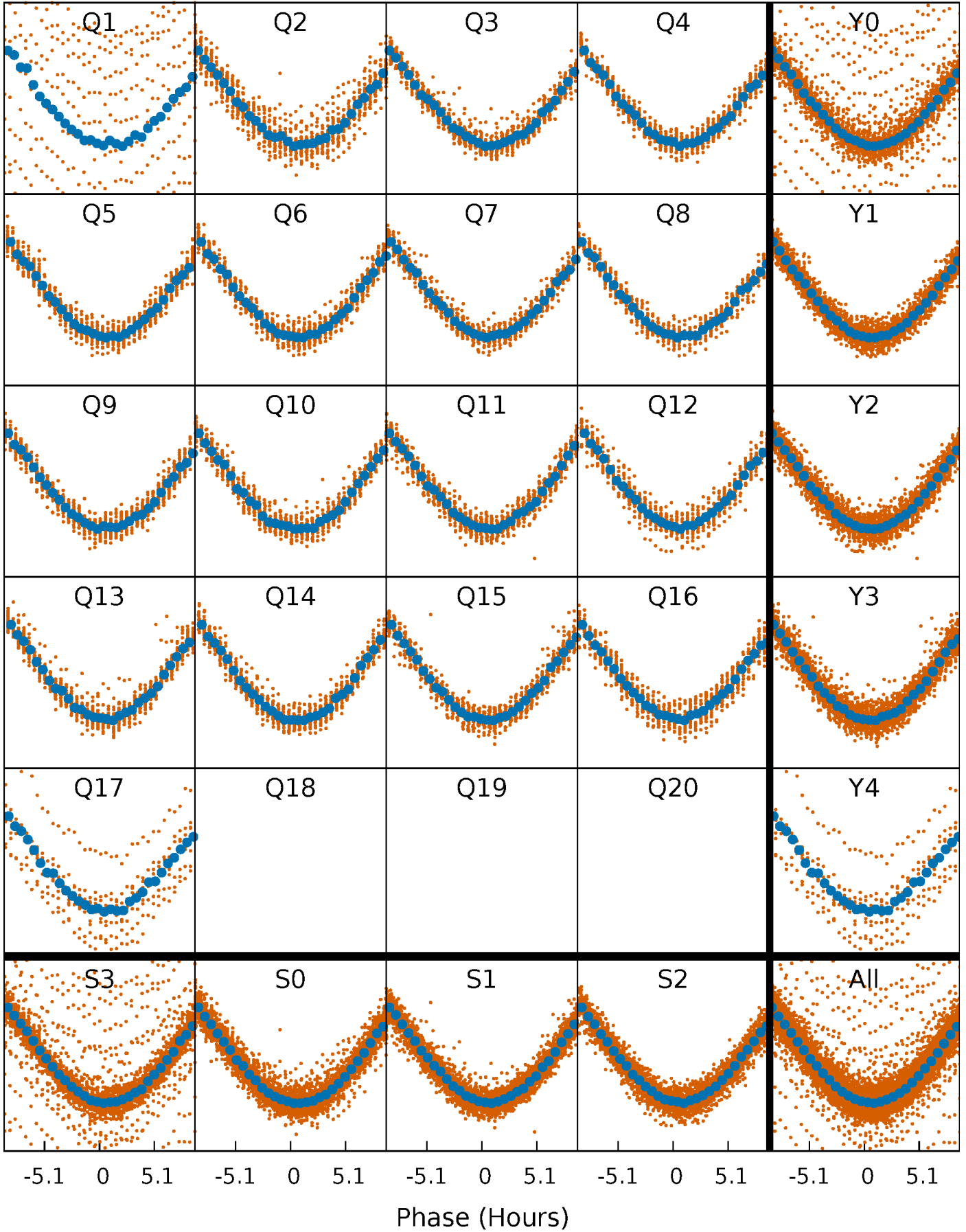


Non-Whitened Vs. Whitened Light Curve



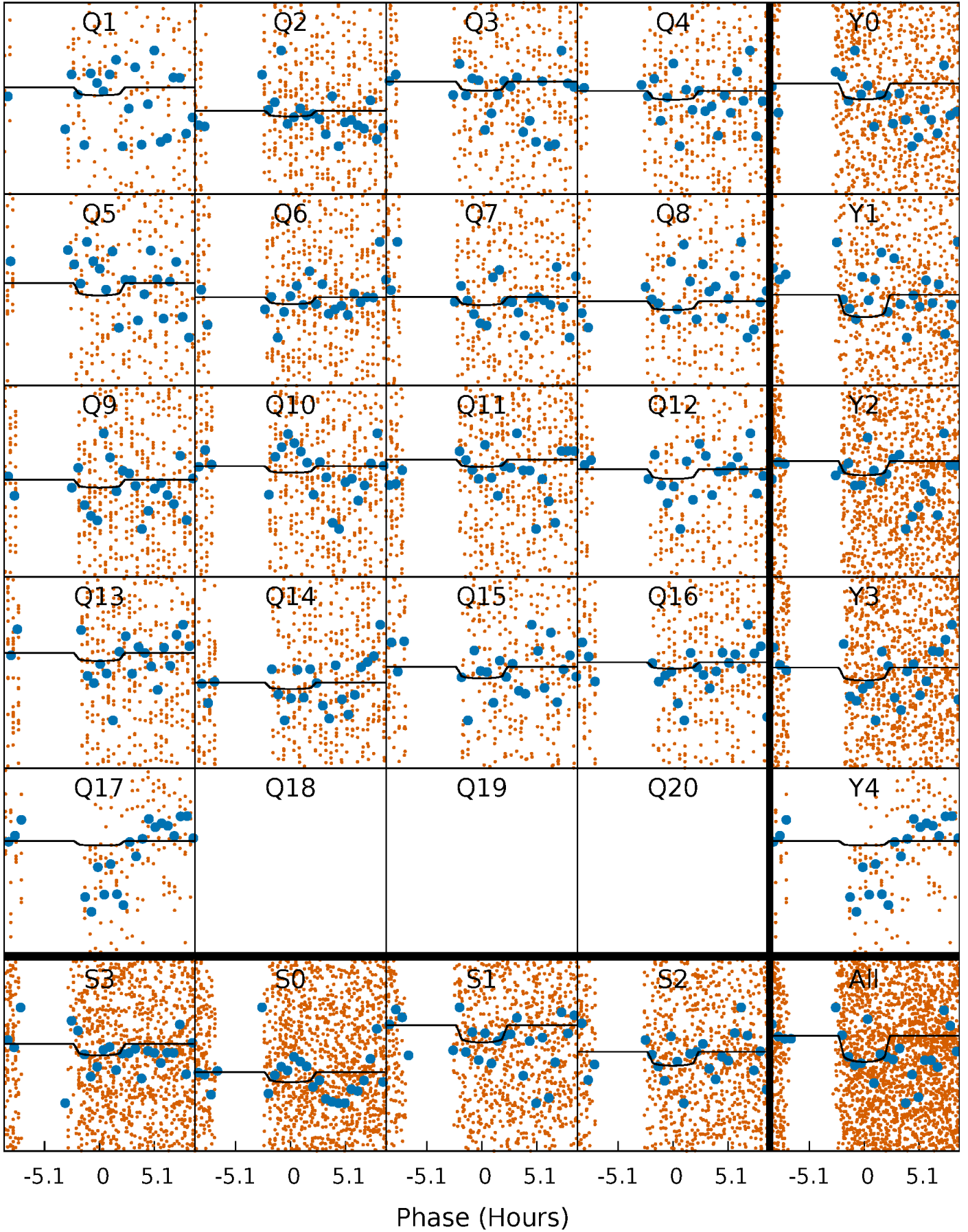
PDC Quarter-Phased Transit Curves

TCE 009138695-03 P= 3.228589 Days $T_0=133.248165$ (BKJD)



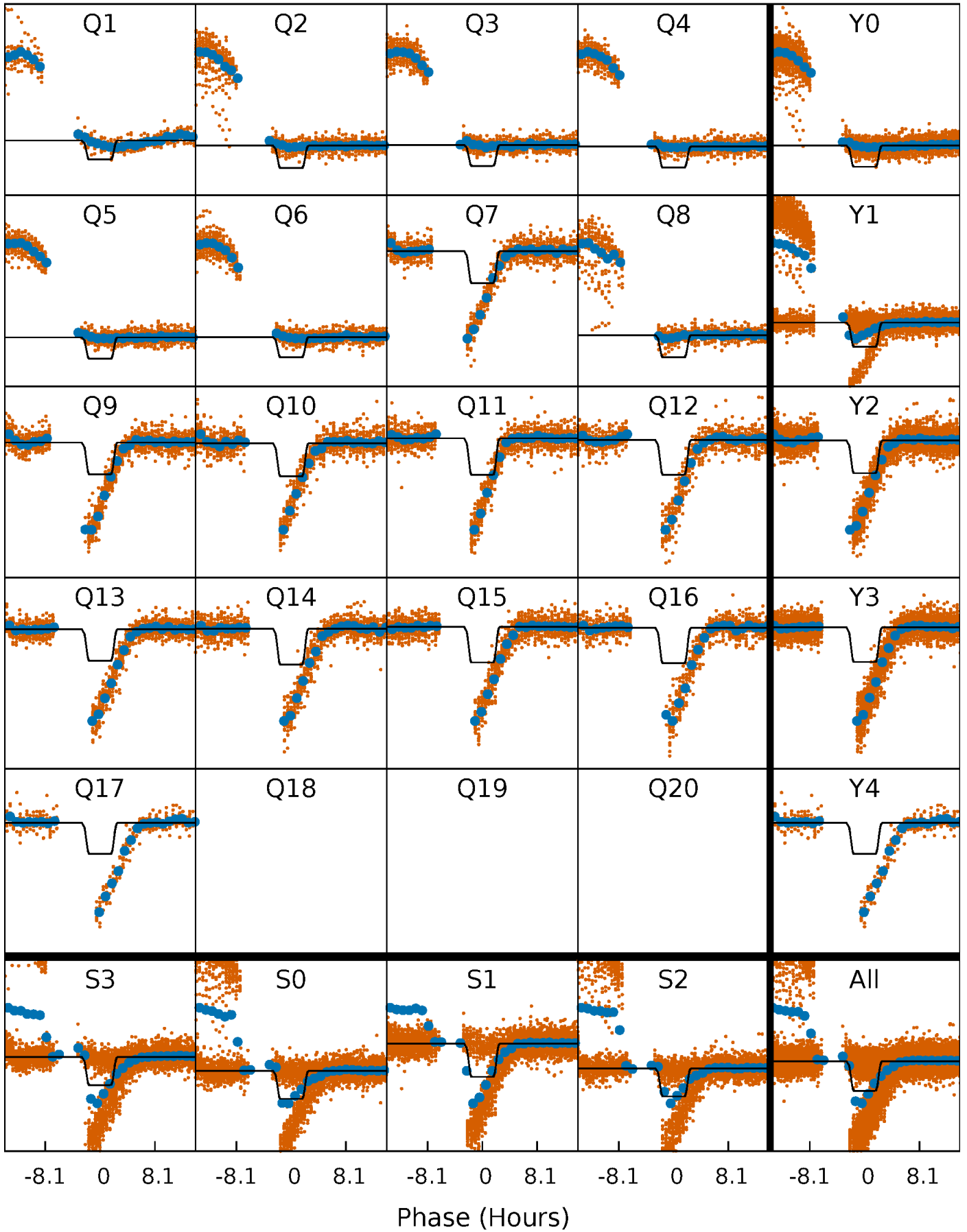
DV Quarter-Phased Transit Curves

TCE 009138695-03 P= 3.228589 Days $T_0=133.248165$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

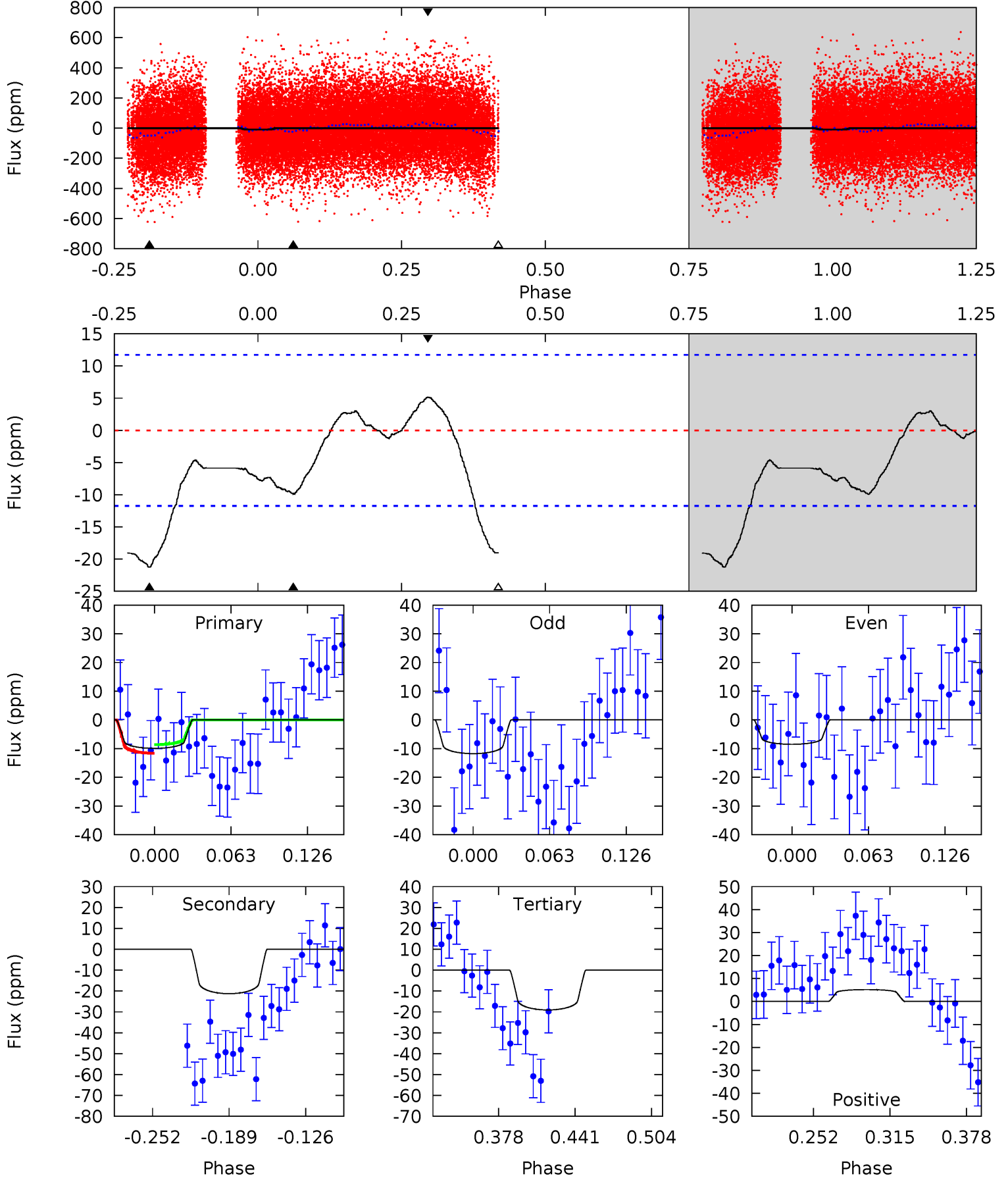
TCE 009138695-03 P= 3.228477 Days $T_0=133.262928$ (BKJD)



DV Model-Shift Uniqueness Test

009138695-03, P = 3.228589 Days, E = 130.019576 Days

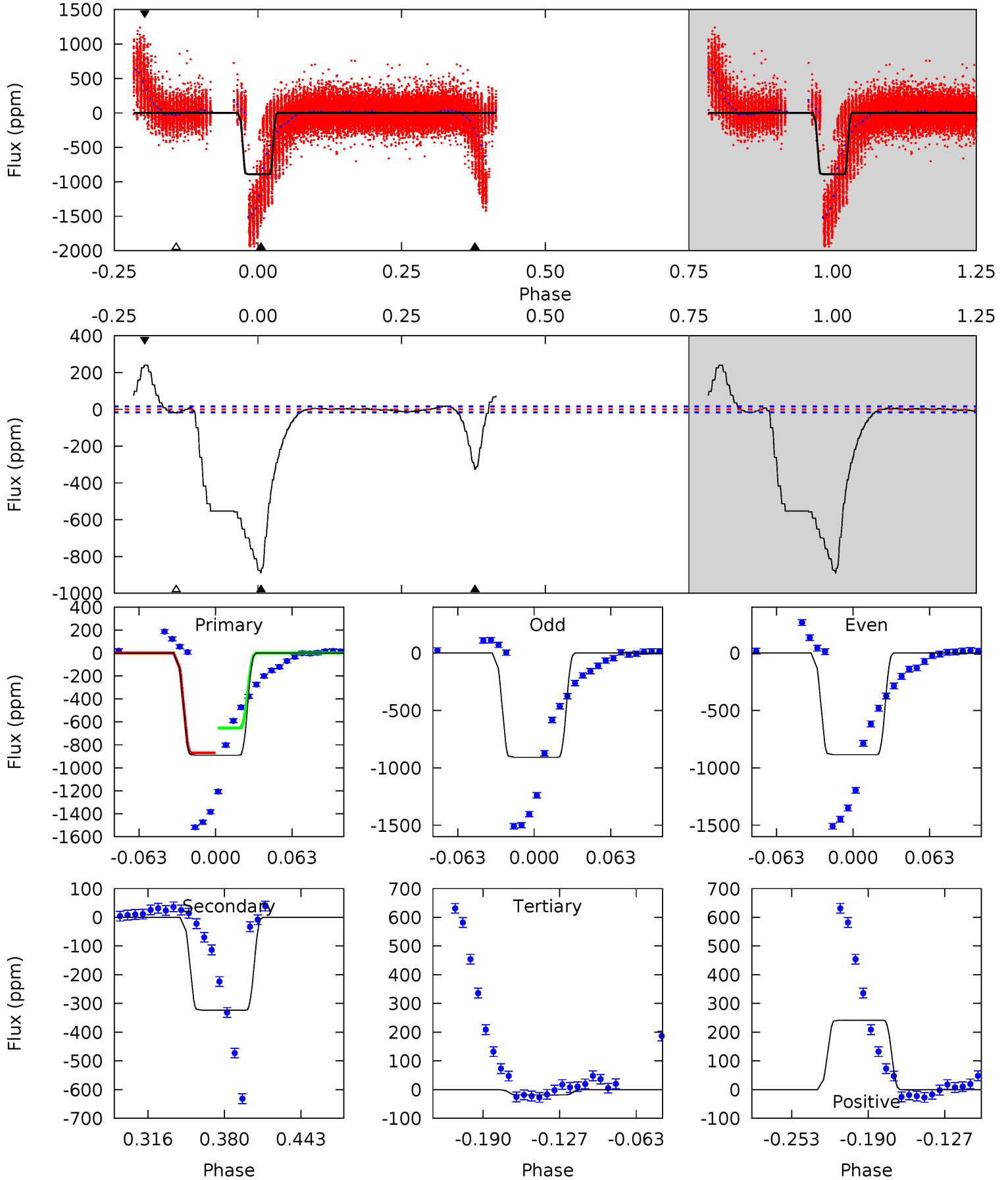
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.94	8.45	7.57	2.06	4.66	1.86	2.19	-3.63	1.88	0.88	6.39	0.65	1.30	0.20	0.60



Alt Model-Shift Uniqueness Test

009138695-03, P = 3.228477 Days, E = 130.034451 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
254.8	92.6	5.33	69.1	4.66	1.86	24.5	249.5	185.7	87.3	23.5	3.25	0.70	0.21	10.5



Stellar Parameters For KIC 009138695

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7272^{+226}_{-327}	$3.883^{+0.294}_{-0.126}$	$0.000^{+0.200}_{-0.350}$	$2.536^{+0.518}_{-0.888}$	$1.790^{+0.196}_{-0.392}$	$0.155^{+0.329}_{-0.060}$
	+3%/-4%	+8%/-3%	+inf%/-inf%	+20%/-35%	+11%/-22%	+213%/-39%
Source	PHO1	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 009138695-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-21 ± 3	$1.06^{+0.88}_{-0.65}$	3079^{+220}_{-268}	7738^{+8122}_{-2051}	28^{+159}_{-20}
Alt.	-324 ± 3	$6.55^{+1.37}_{-1.46}$	3078^{+226}_{-292}	6088^{+507}_{-452}	11^{+6}_{-4}

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

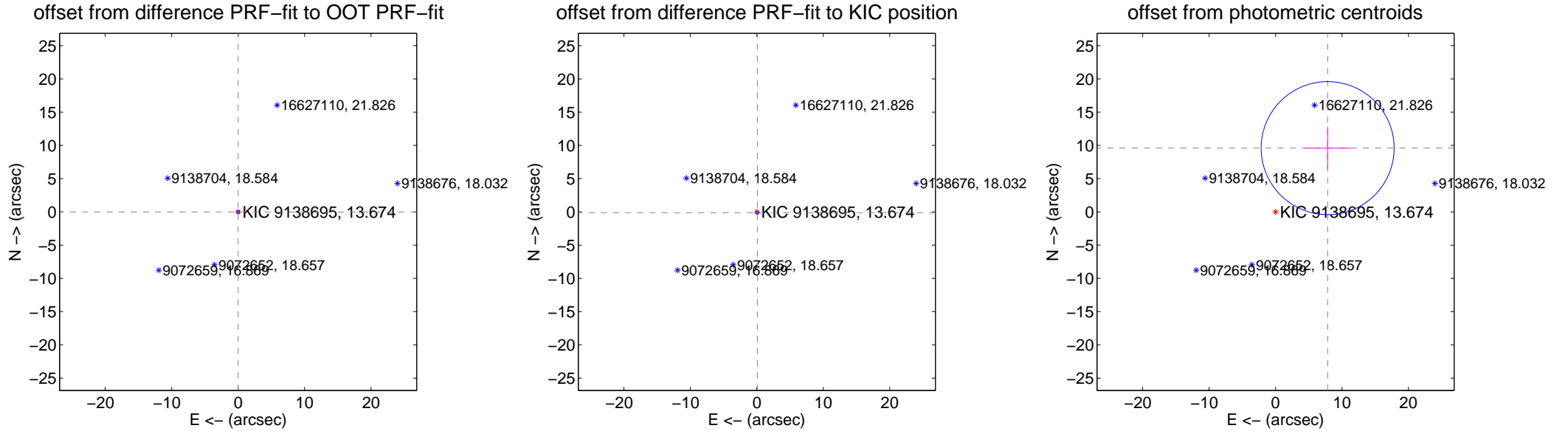
DV Centroid Data

Supplemental centroid analysis for 009138695-03. Kepler magnitude: 13.67. Transit SNR 2.71

There are 17 quarters with good PRF difference image offsets

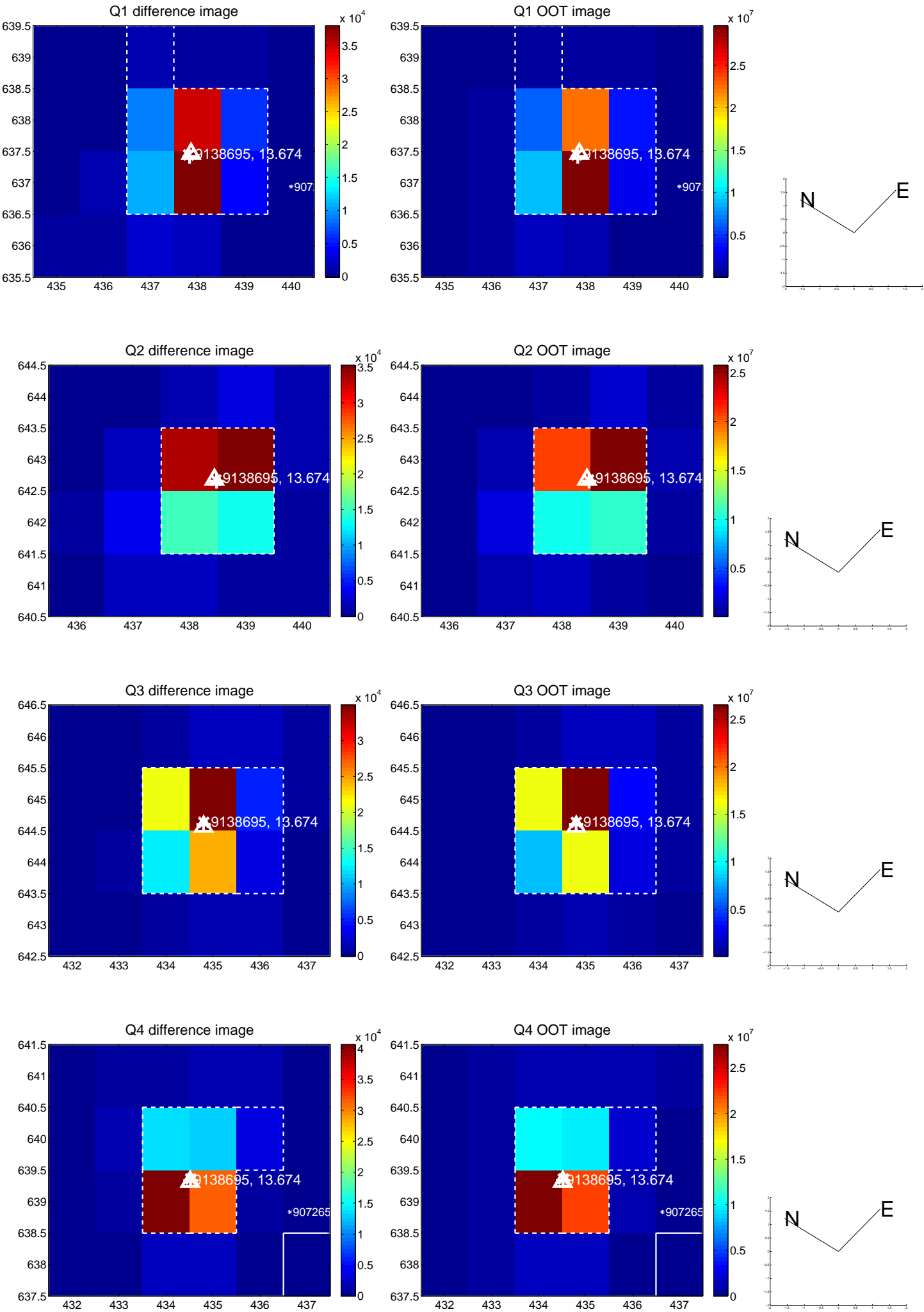
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.022 ± 0.069	0.31	-0.001 ± 0.070	-0.022 ± 0.069
PRF-fit source offset from KIC position	0.147 ± 0.070	2.09	-0.078 ± 0.070	-0.125 ± 0.070
photometric centroid source offset	12.39 ± 3.33	3.71	-7.84 ± 3.49	9.59 ± 3.23

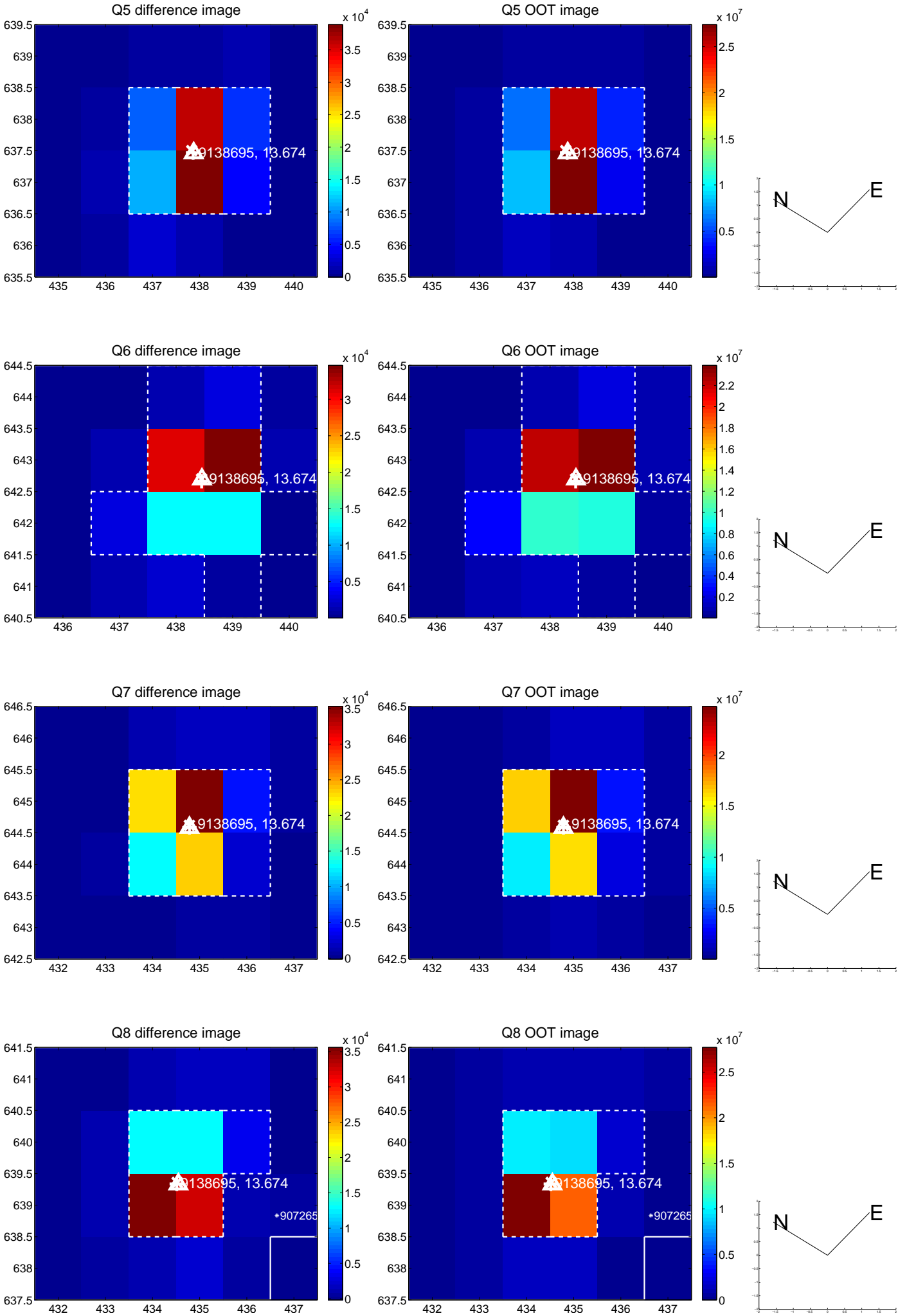


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

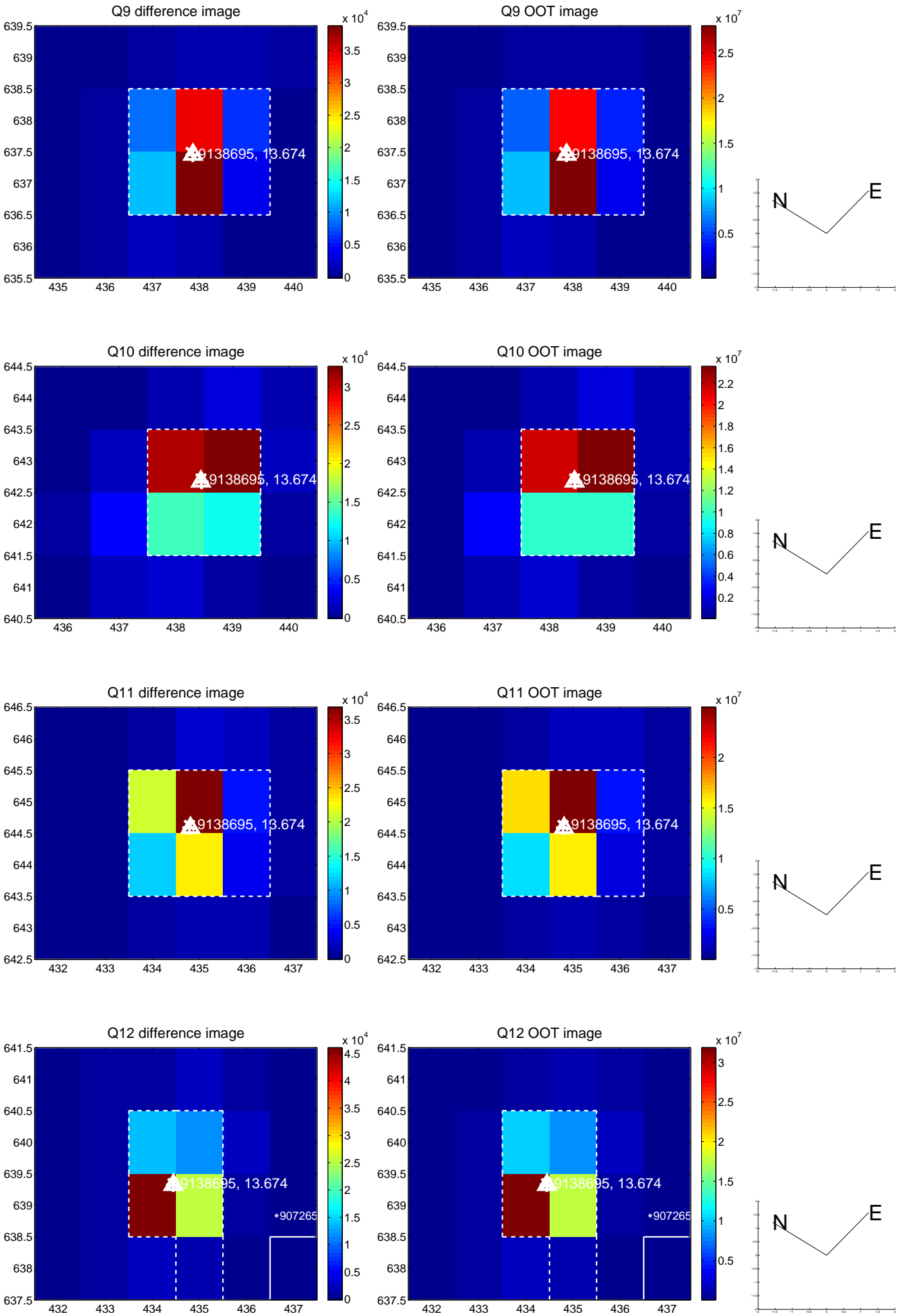
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



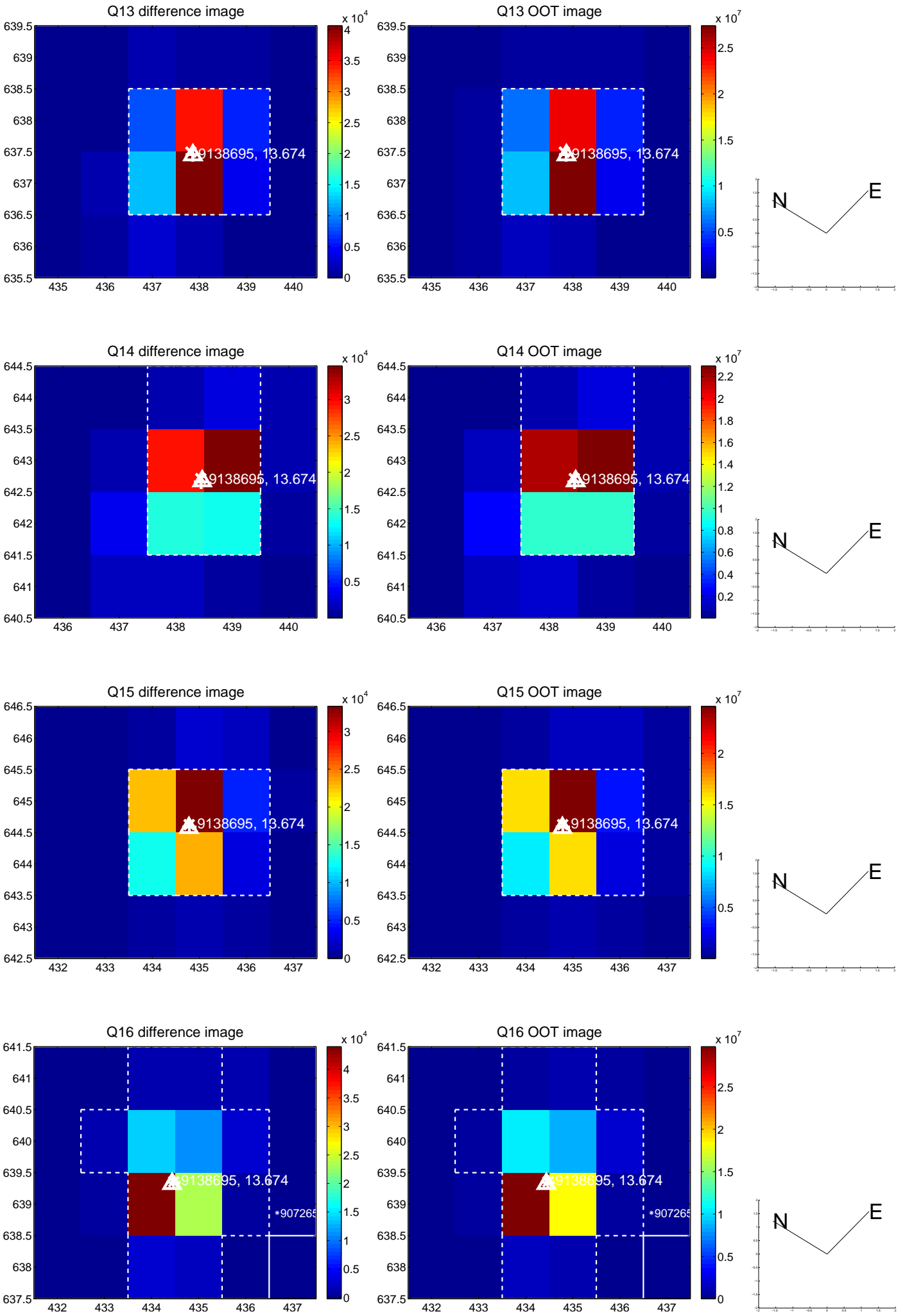
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

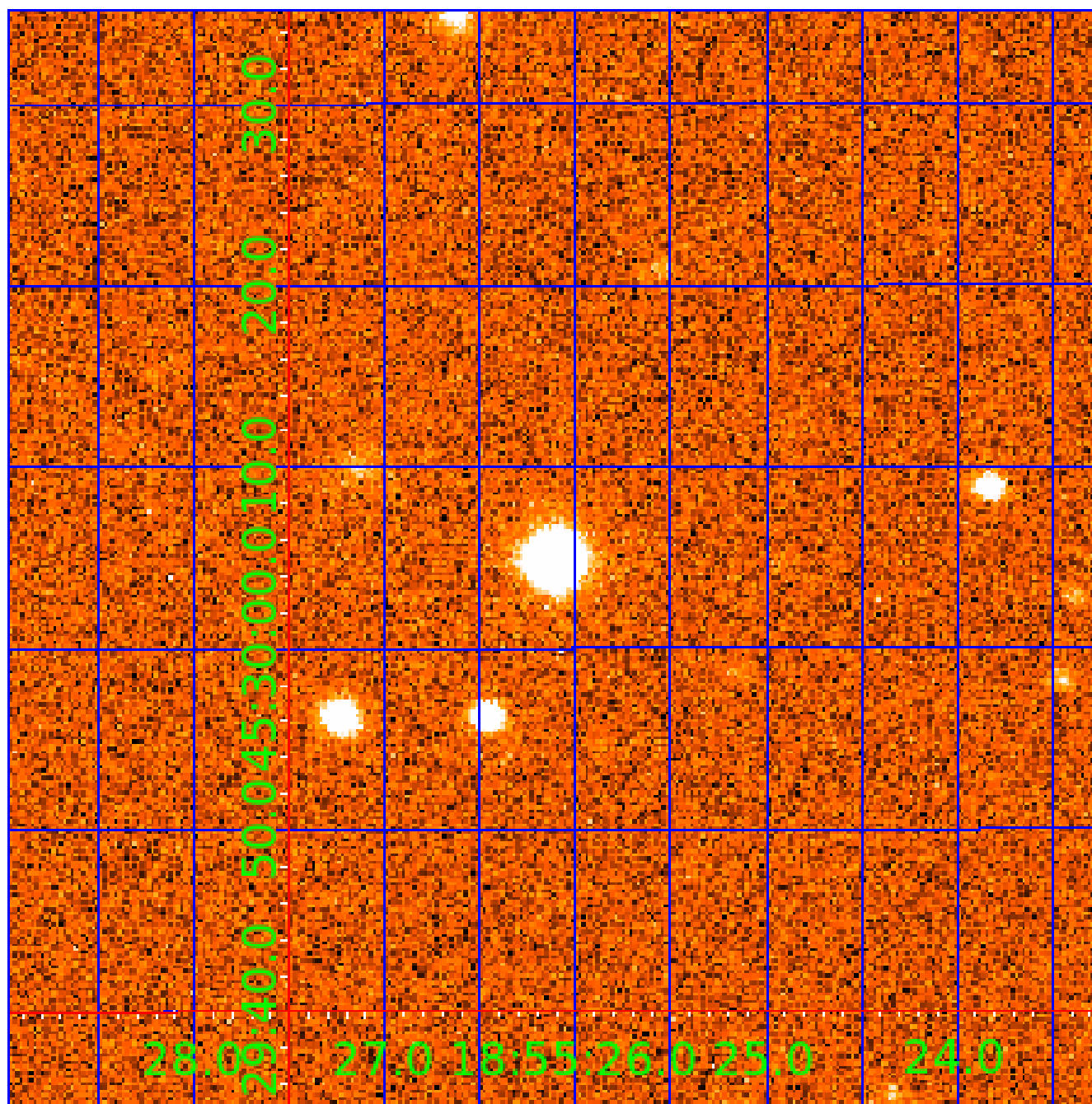


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009138695

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})
009138695-01	OBS	No	3.228332	131.999034	14.5	9.787	8.1	4.0	2.54	7272	1.08	5974.55
009138695-02	OBS	No	3.228697	133.021923	21.0	0.967	12.5	3.1	2.54	7272	1.21	5973.65
009138695-03	OBS	No	3.228589	133.248165	10.5	4.433	12.7	2.7	2.54	7272	0.99	5973.91
009138695-04	OBS	No	3.228444	132.708602	64.1	6.947	13.8	17.9	2.54	7272	2.10	5974.27
009138695-05	OBS	No	322.871851	266.826265	296.3	6.804	9.7	7.2	2.54	7272	4.84	12.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009138695-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT
009138695-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
009138695-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD
009138695-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
009138695-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS

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

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

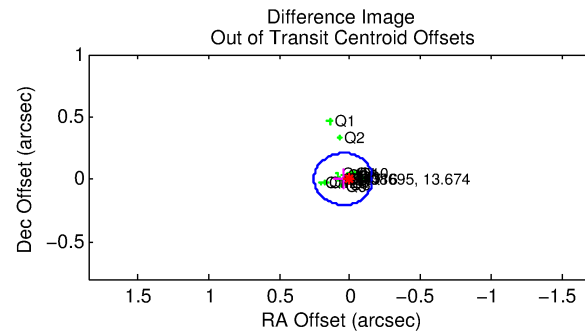
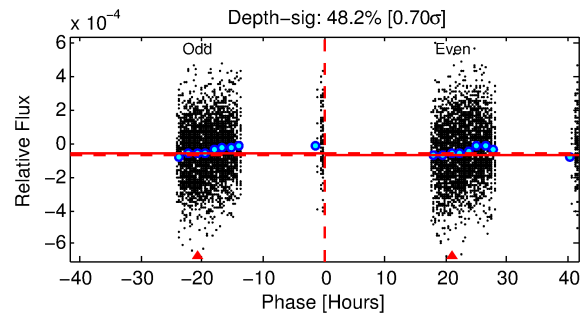
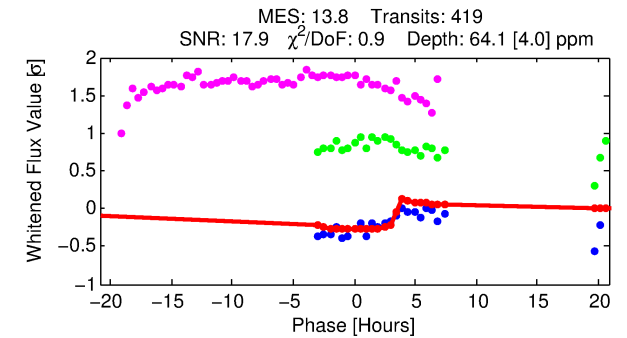
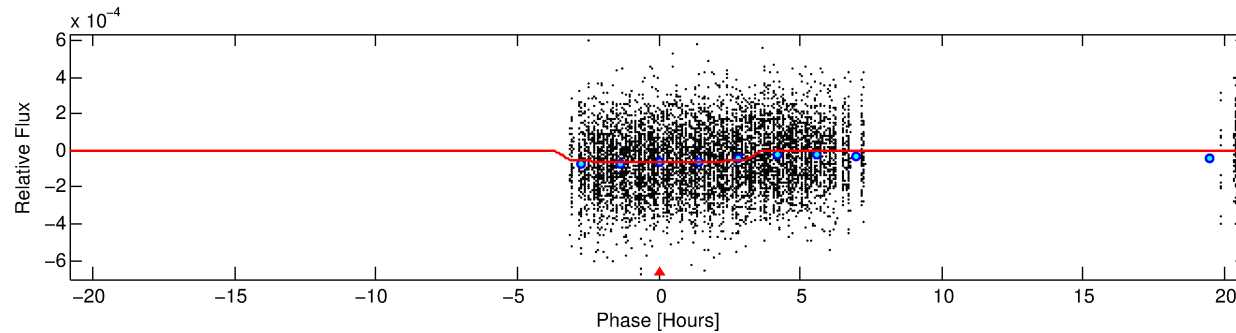
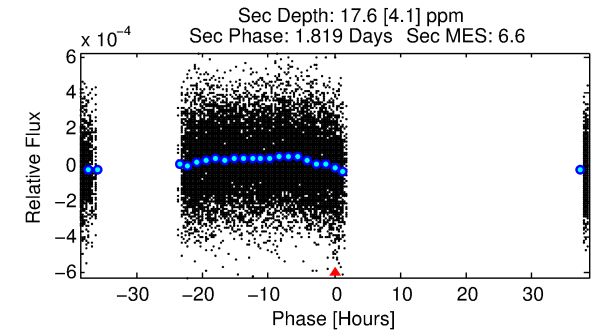
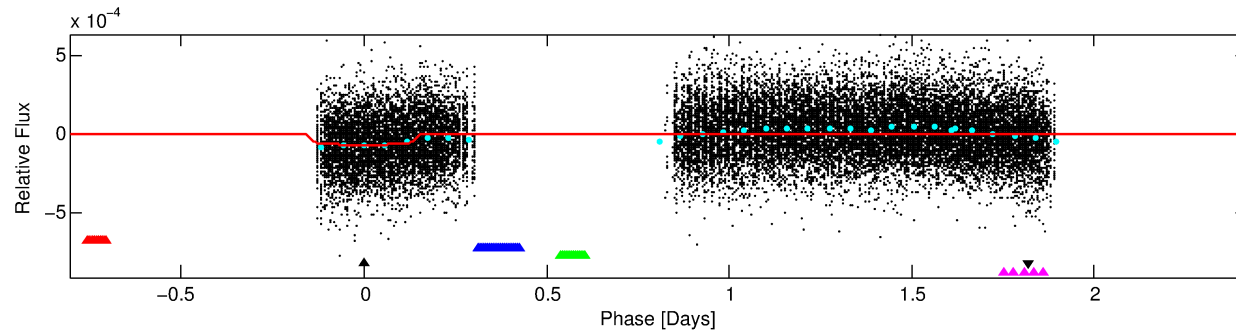
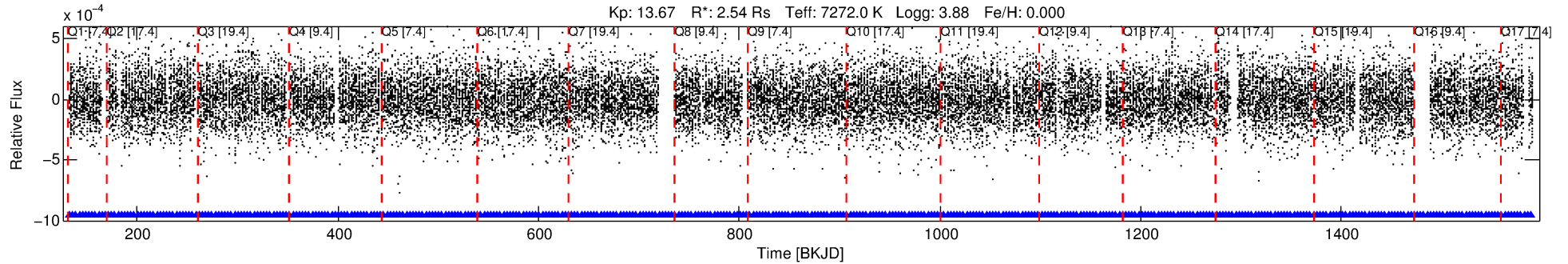
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009138695-04

No Significant Match Found

DV One-Page Summary

KIC: 9138695 Candidate: 4 of 5 Period: 3.228 d



DV Fit Results:

Period = 3.22844 [0.00002] d
Epoch = 132.7086 [0.0098] BKJD
Rp/R* = 0.0076 [0.0028]
a/R* = 3.25 [6.58]
b = 0.46 [3.80]
Seff = 5974.27 [3220.15]
Teq = 2242 [302] K
Rp = 2.10 [1.08] Re
a = 0.0519 [0.0169] AU
Ag = 5.92 [5.53] [0.89σ]
Teffp = 5406 [1088] K [2.80σ]

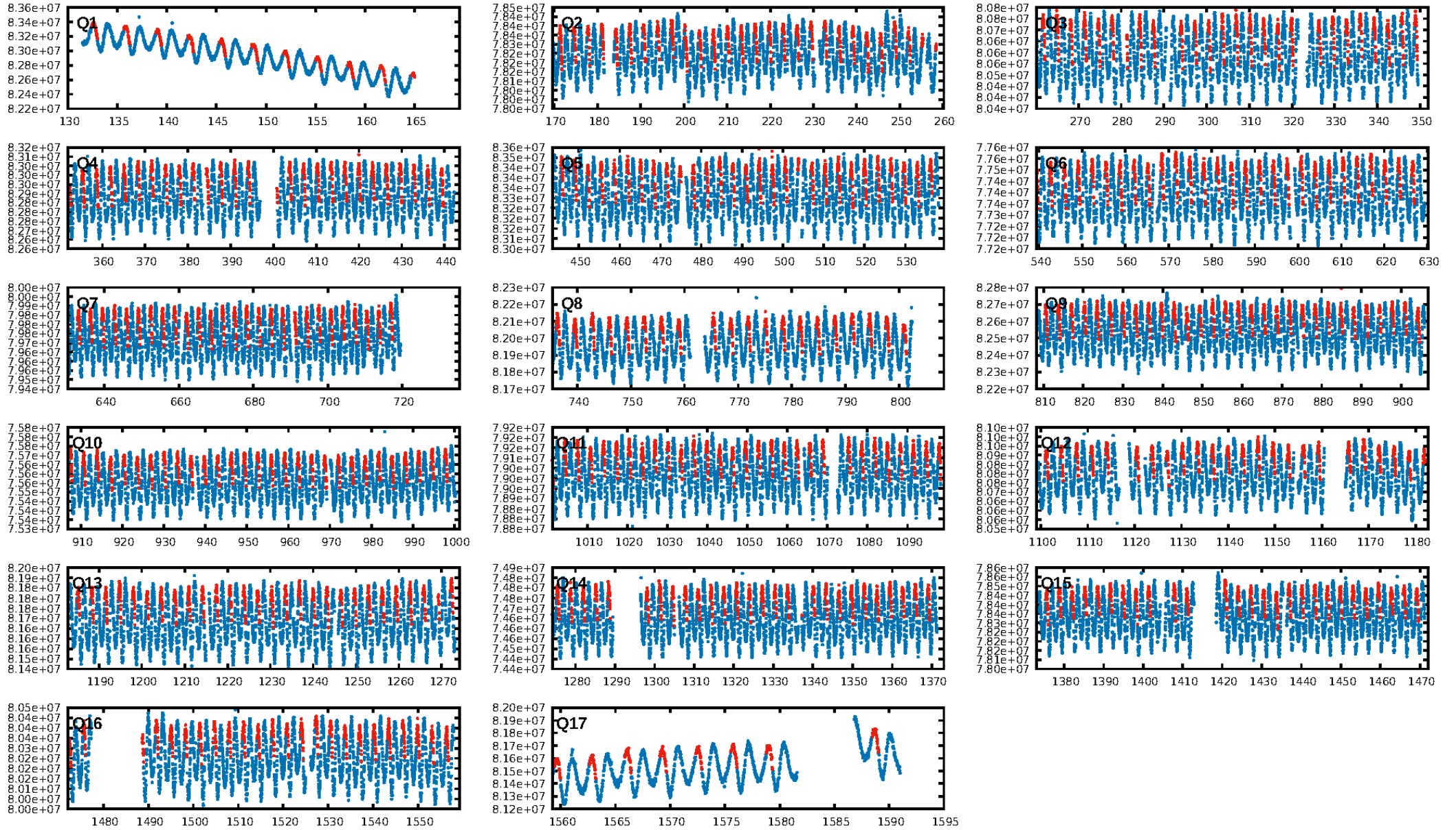
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.62e-44
RollingBand-fgt: 1.00 [400/400]
GhostDiagnostic-chr: 3.515
Centroid-sig: 1.1%
Centroid-so: 0.849 arcsec [1.93σ]
OotOffset-rm: 0.046 arcsec [0.67σ]
KicOffset-rm: 0.096 arcsec [1.26σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

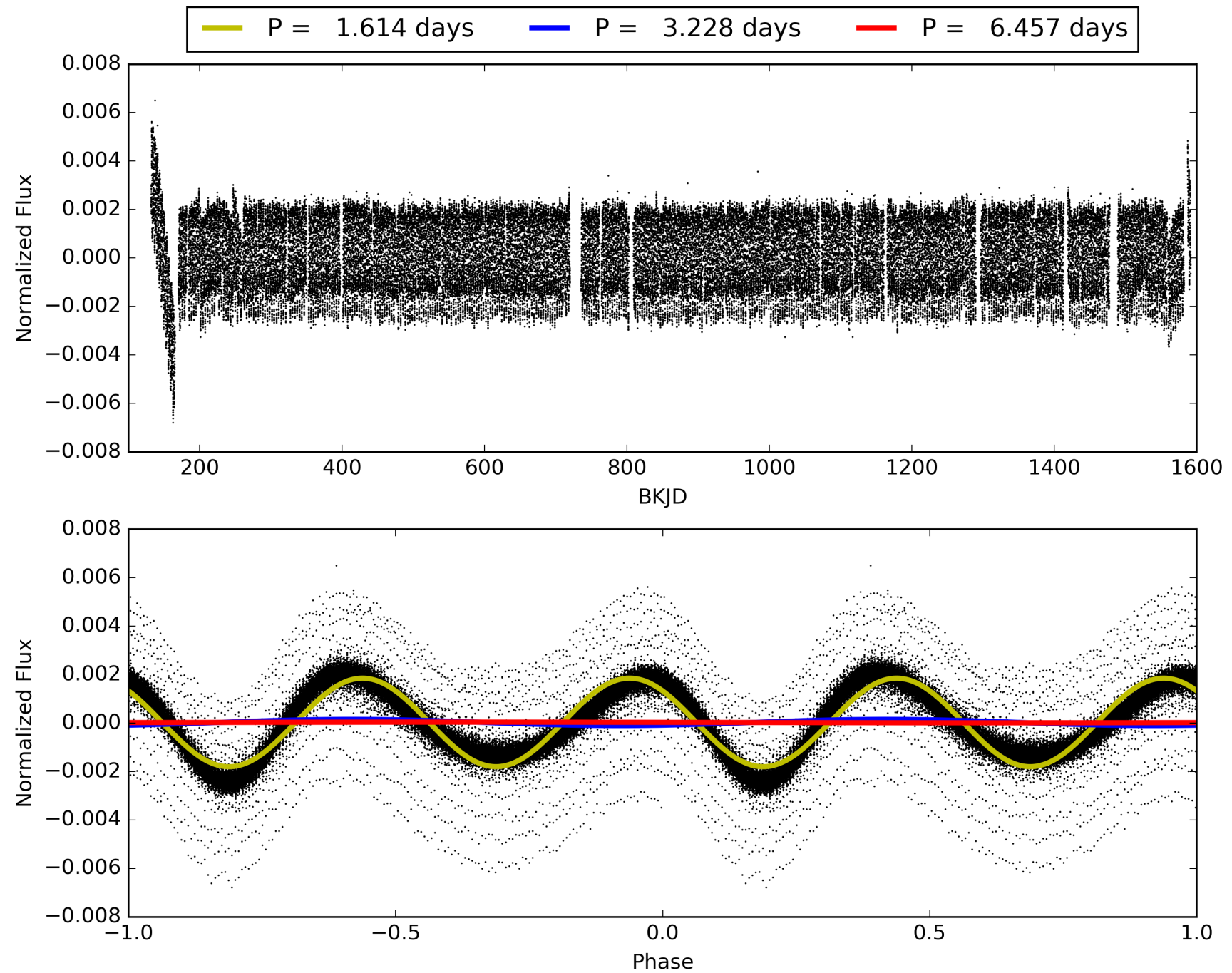
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:19:21 Z

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

TCE 009138695-04, PDC Light Curves

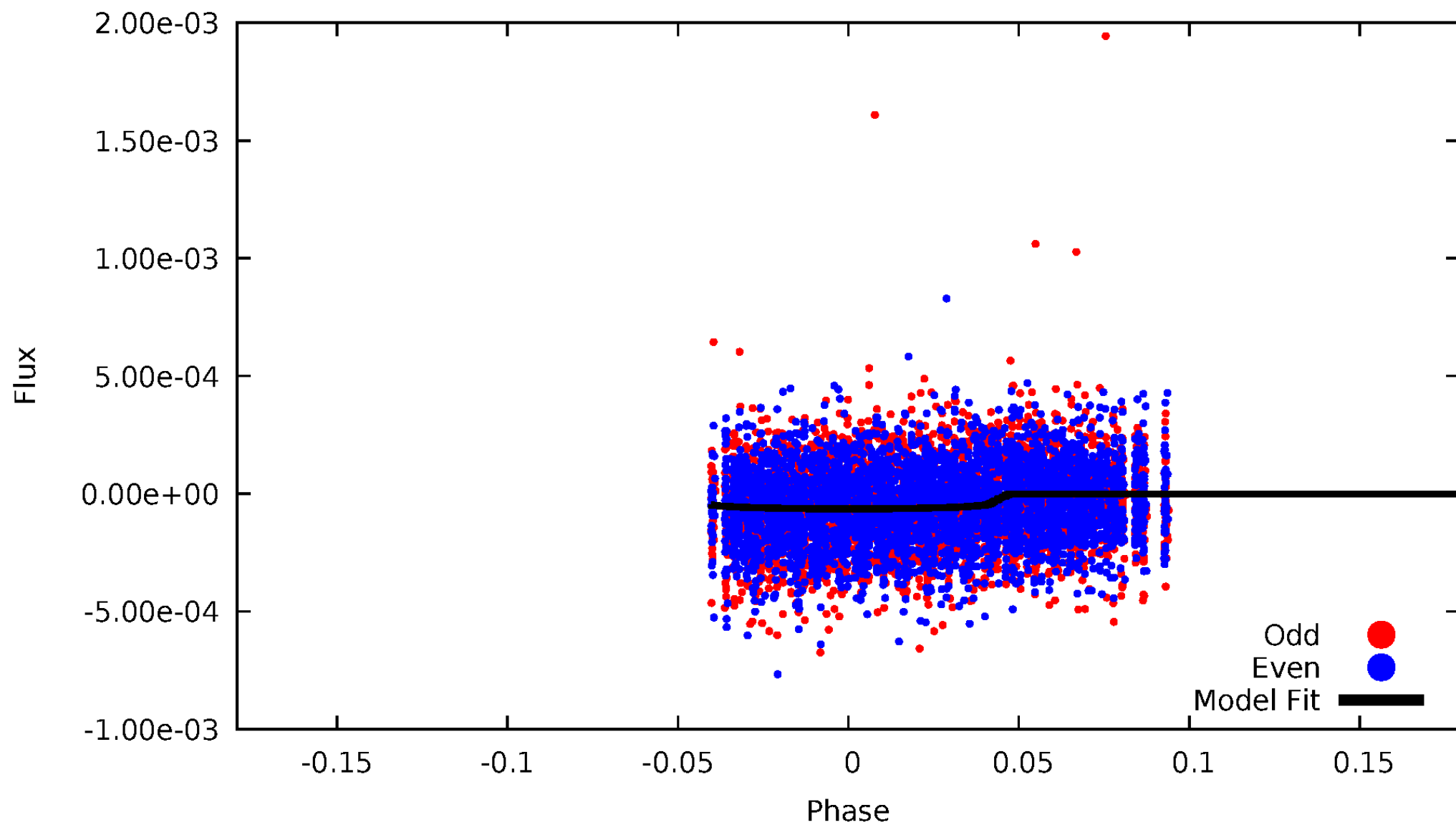


TCE 009138695-04



DV Odd/Even

TCE 009138695-04

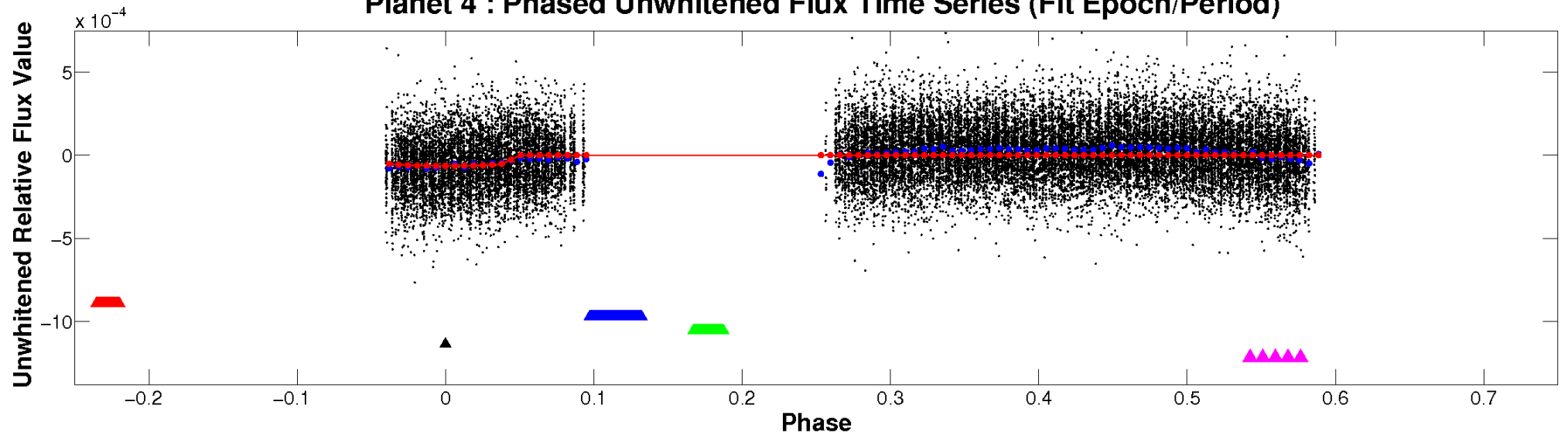


ALT Odd/Even

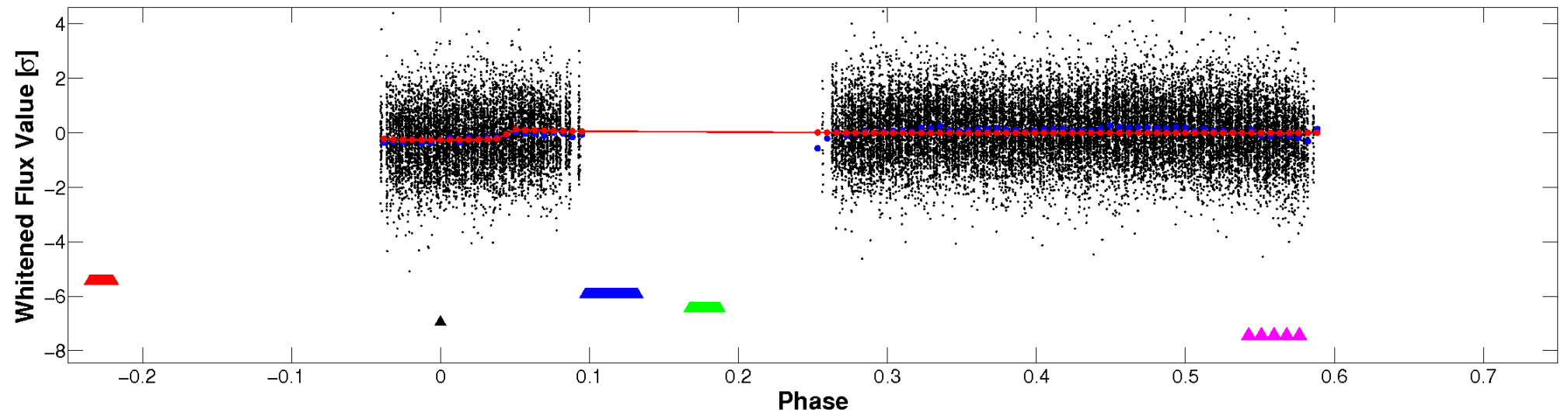
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

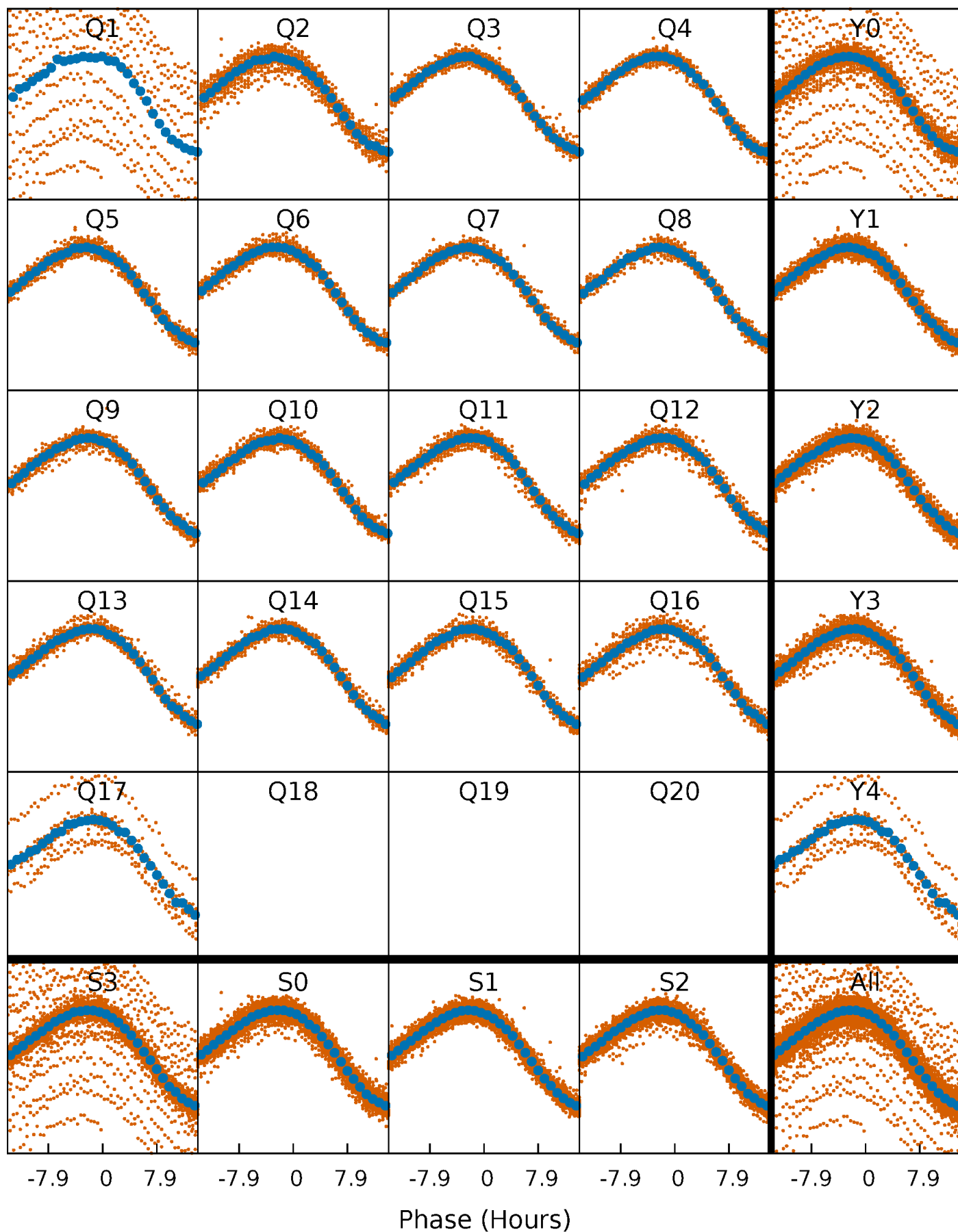


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



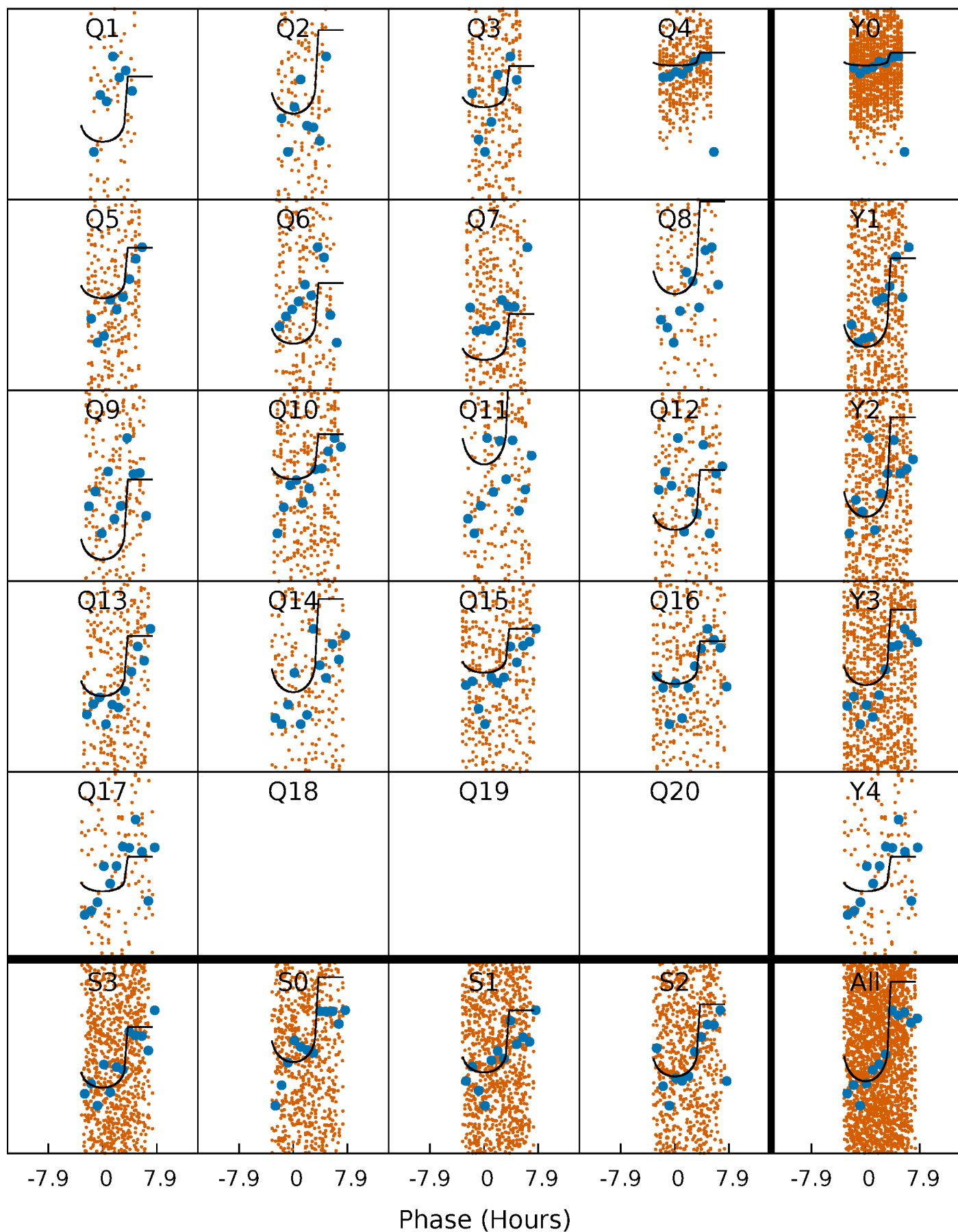
PDC Quarter-Phased Transit Curves

TCE 009138695-04 P= 3.228444 Days $T_0=132.708601$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009138695-04 $P = 3.228444$ Days $T_0 = 132.708601$ (BKJD)

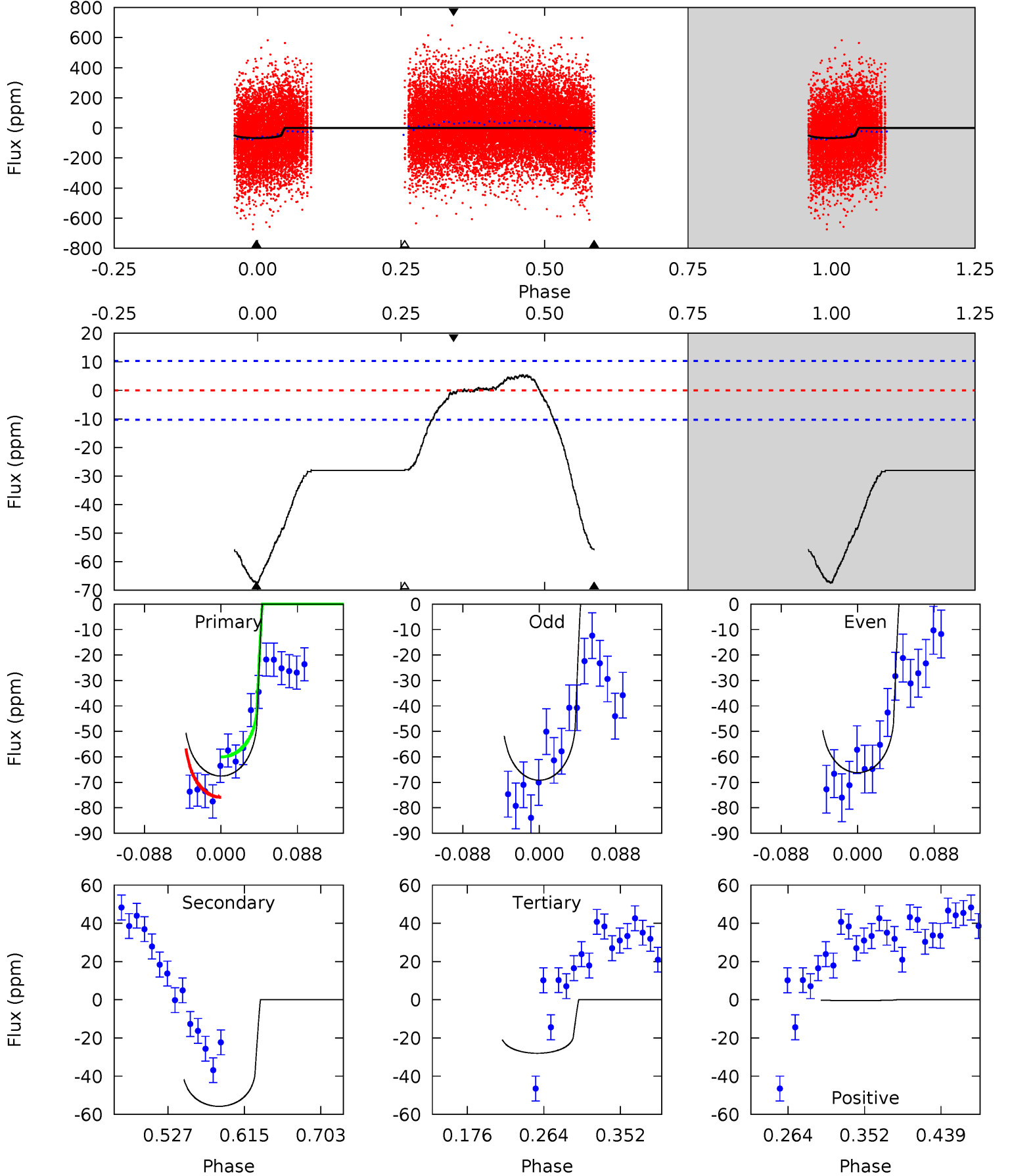


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009138695-04, P = 3.228444 Days, E = 129.480157 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.1	24.8	12.5	-0.16	4.59	1.71	3.68	17.6	30.2	12.4	25.0	0.66	0.98	0.08	3.45



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009138695

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7272^{+226}_{-327}	$3.883^{+0.294}_{-0.126}$	$0.000^{+0.200}_{-0.350}$	$2.536^{+0.518}_{-0.888}$	$1.790^{+0.196}_{-0.392}$	$0.155^{+0.329}_{-0.060}$
	+3%/-4%	+8%/-3%	+inf%/-inf%	+20%/-35%	+11%/-22%	+213%/-39%
Source	PHO1	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 009138695-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-56 ± 2	$1.90^{+0.84}_{-0.72}$	3068^{+242}_{-280}	7248^{+2538}_{-1209}	23^{+36}_{-12}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

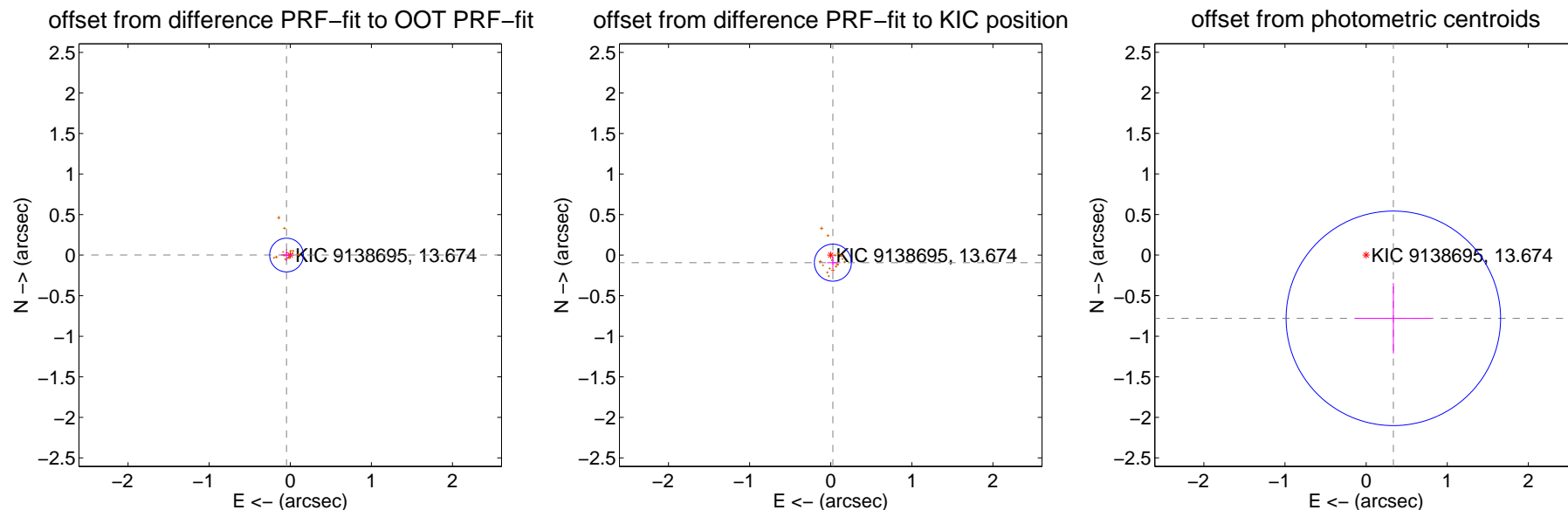
DV Centroid Data

Supplemental centroid analysis for 009138695-04. Kepler magnitude: 13.67. Transit SNR 17.87

There are 0 quarters with good PRF difference image offsets

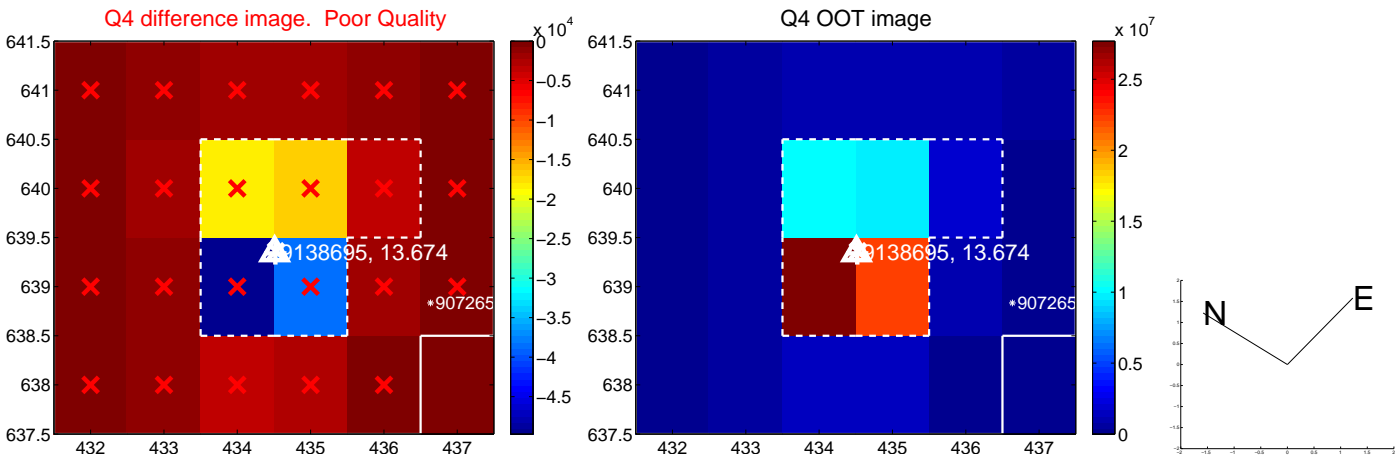
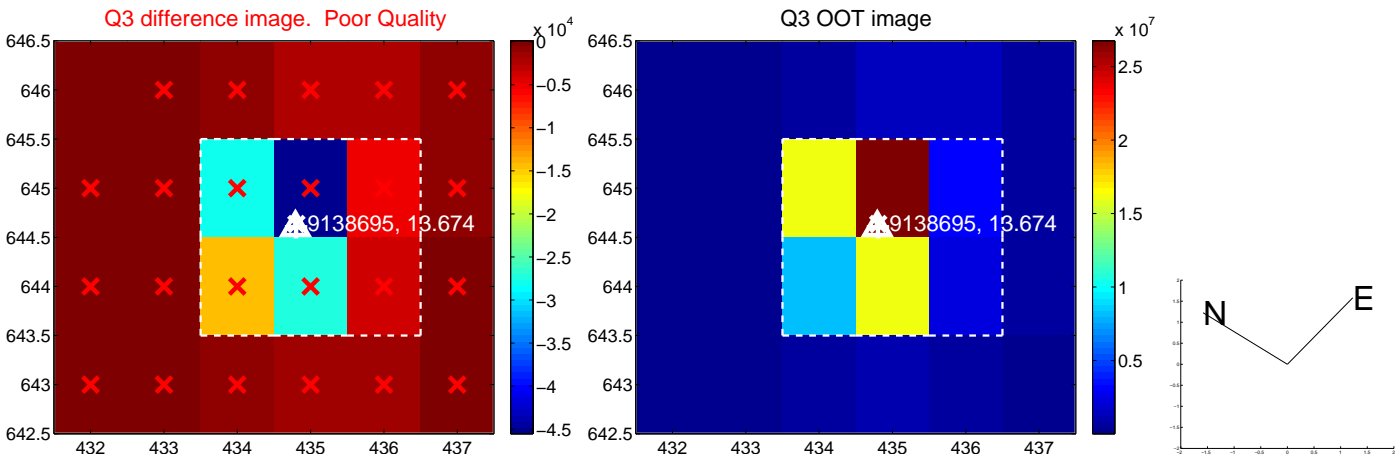
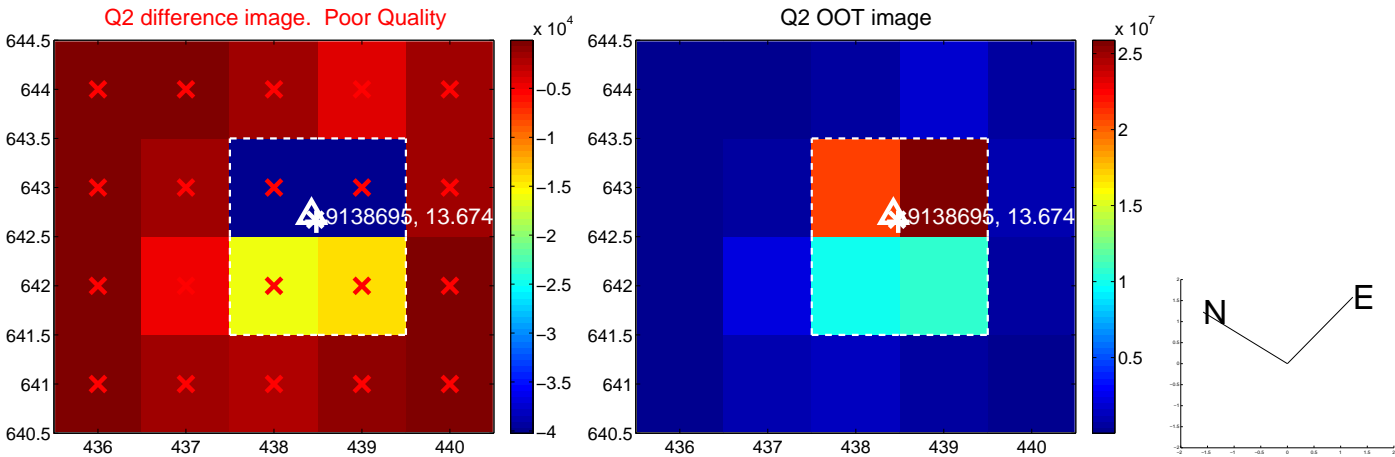
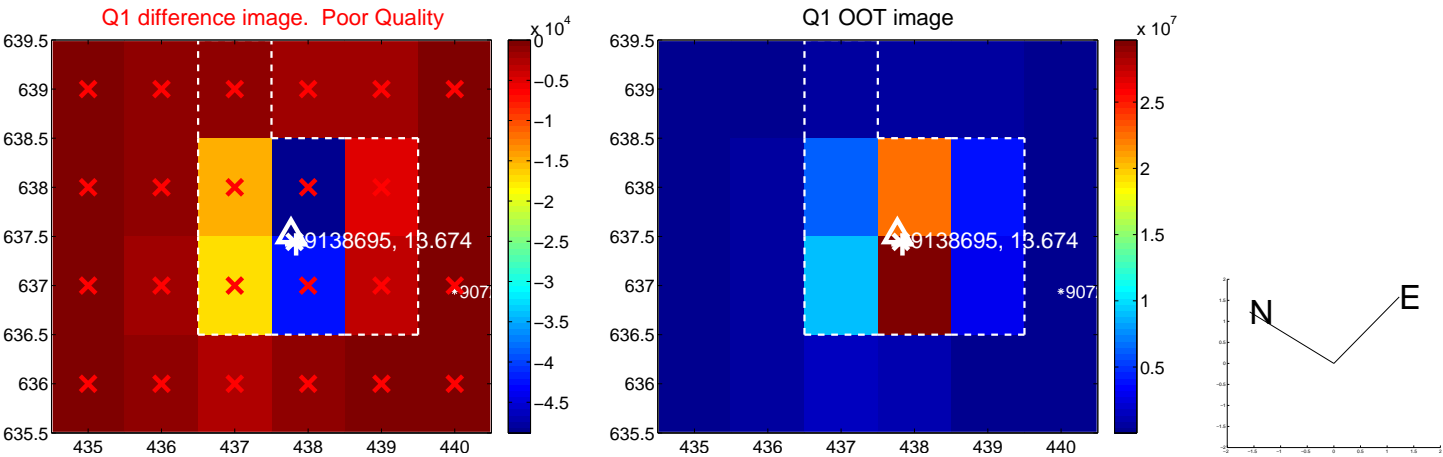
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.069	0.67	0.046 ± 0.069	0.001 ± 0.074
PRF-fit source offset from KIC position	0.096 ± 0.076	1.26	-0.026 ± 0.070	-0.093 ± 0.076
photometric centroid source offset	0.85 ± 0.44	1.93	-0.34 ± 0.47	-0.78 ± 0.43

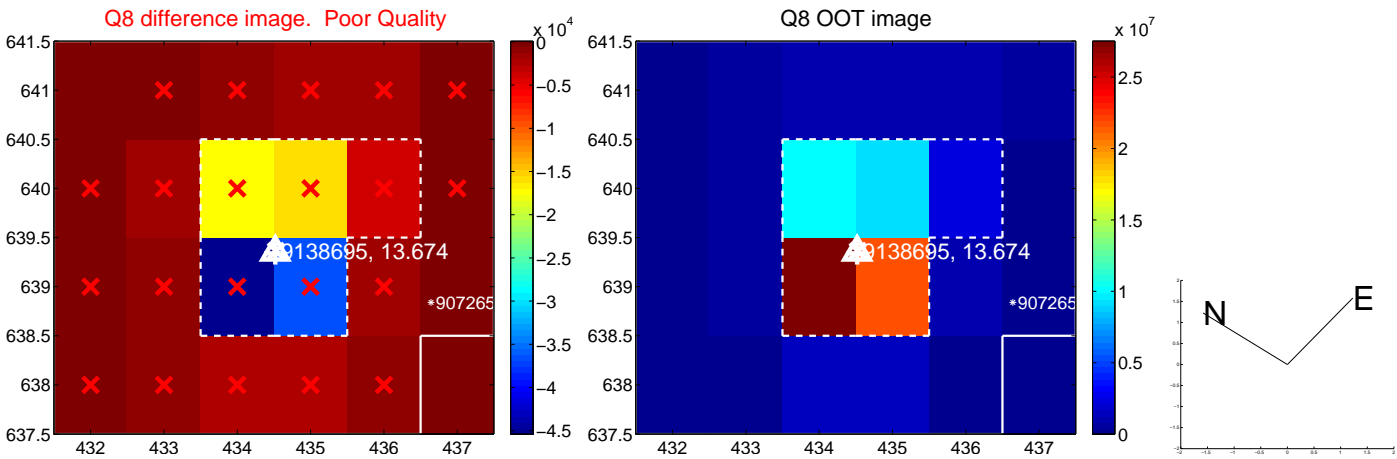
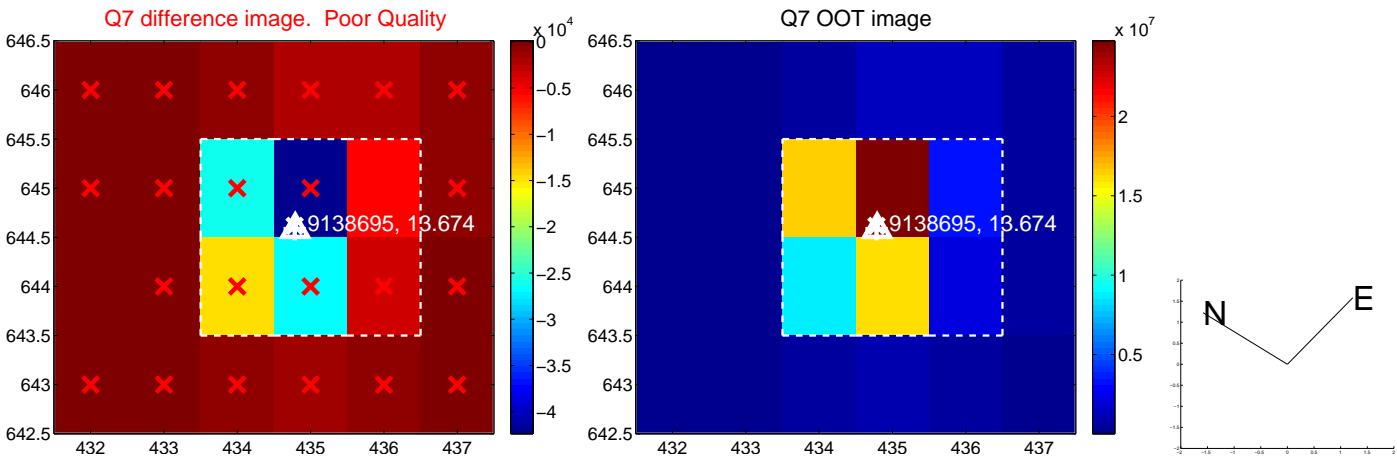
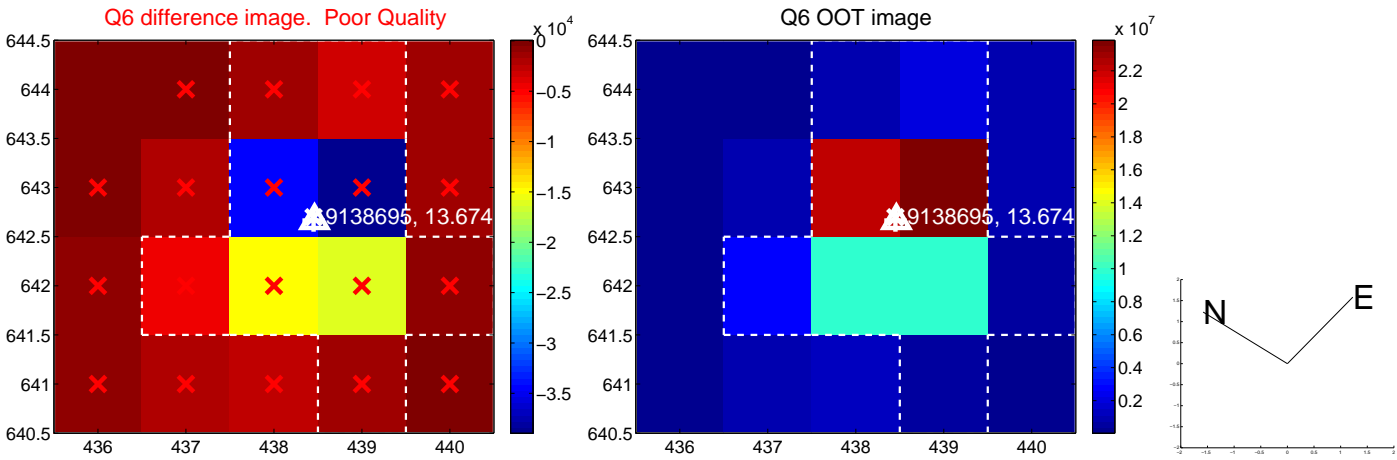
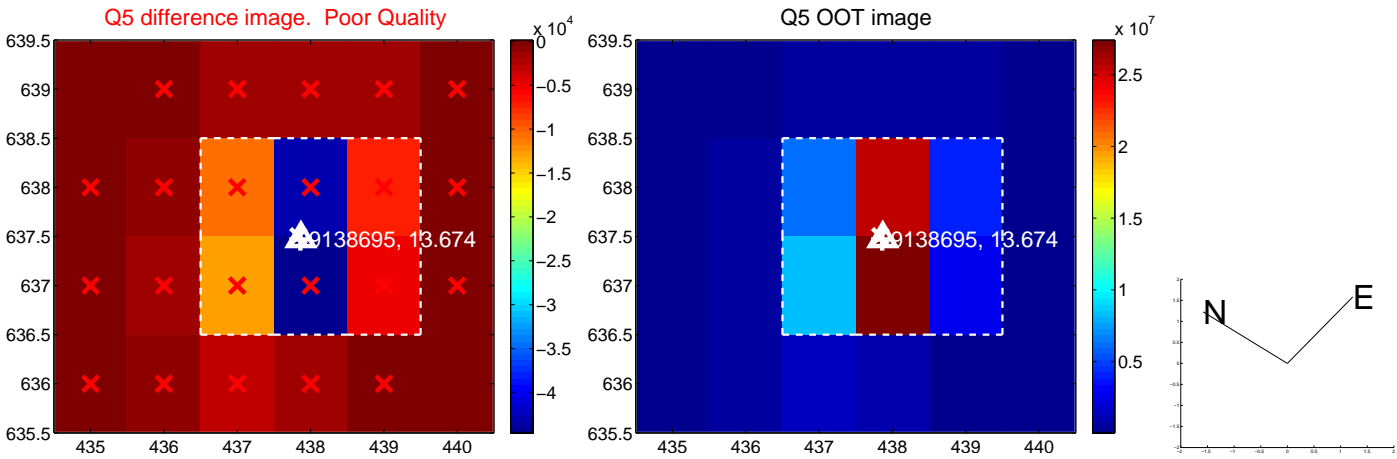


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

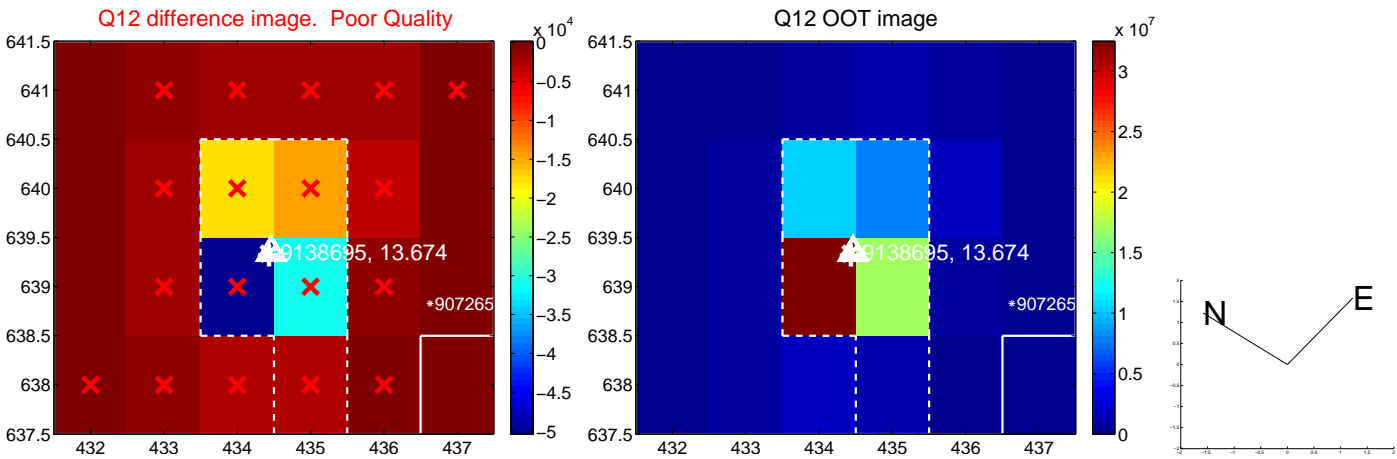
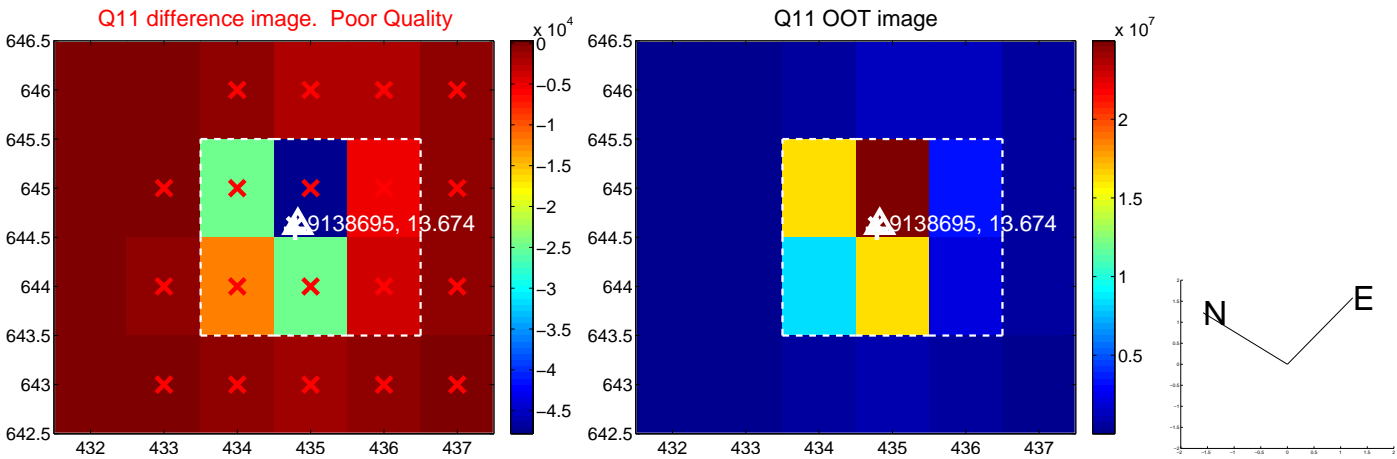
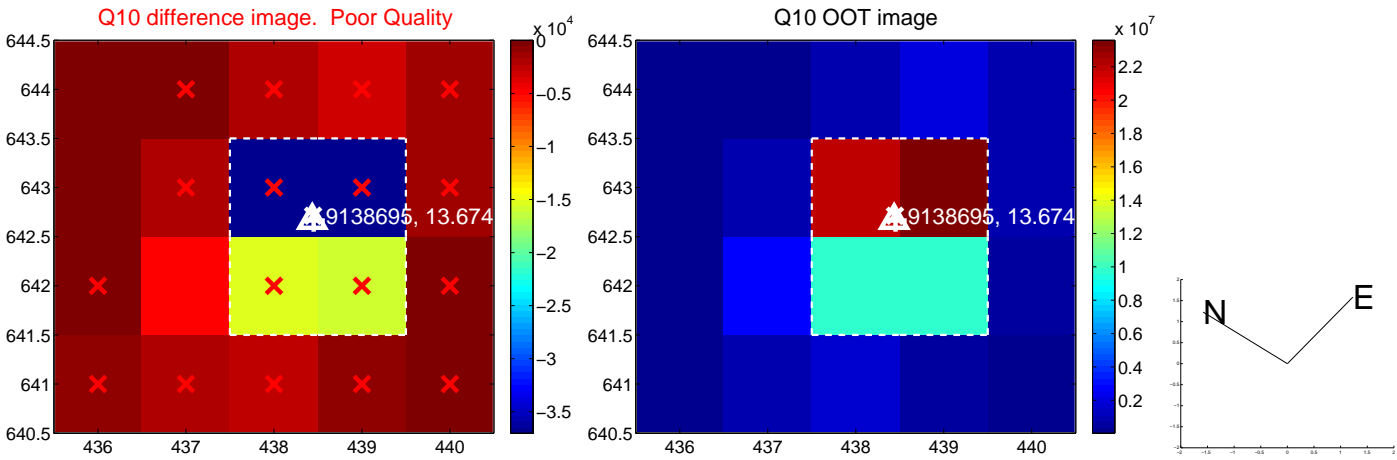
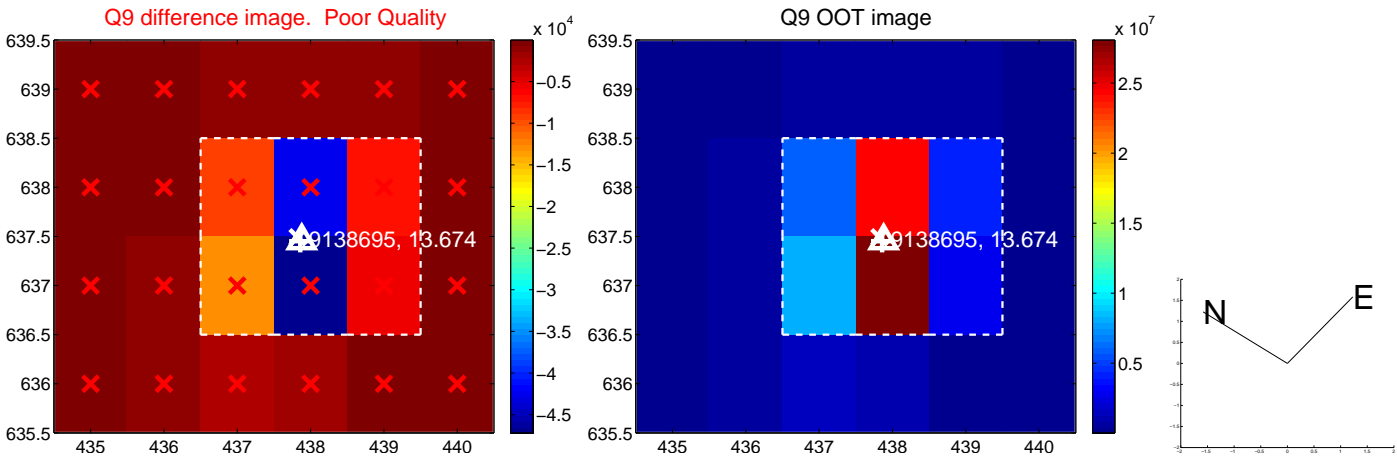
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



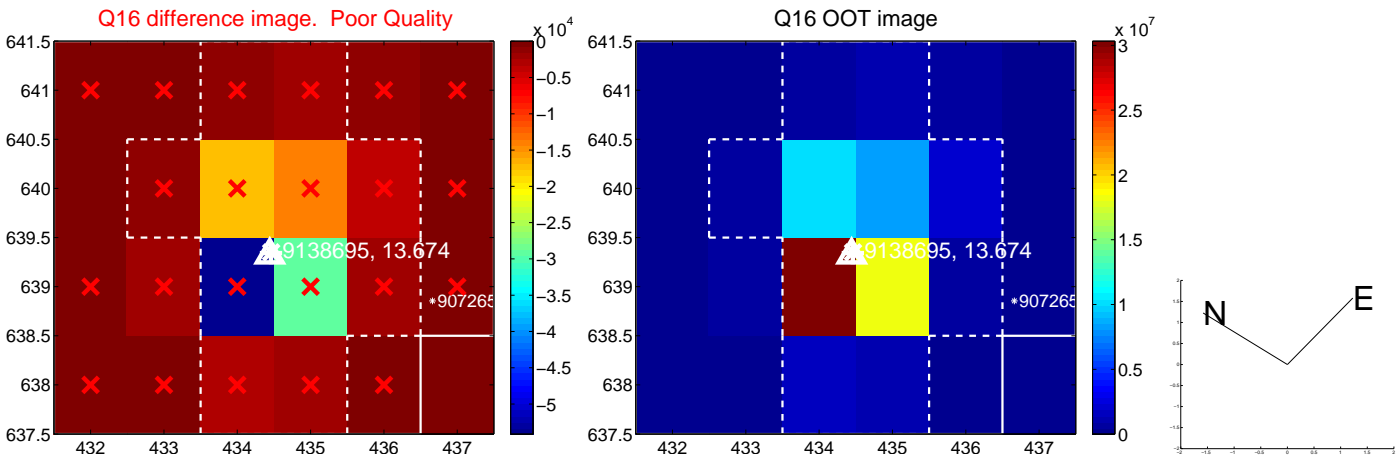
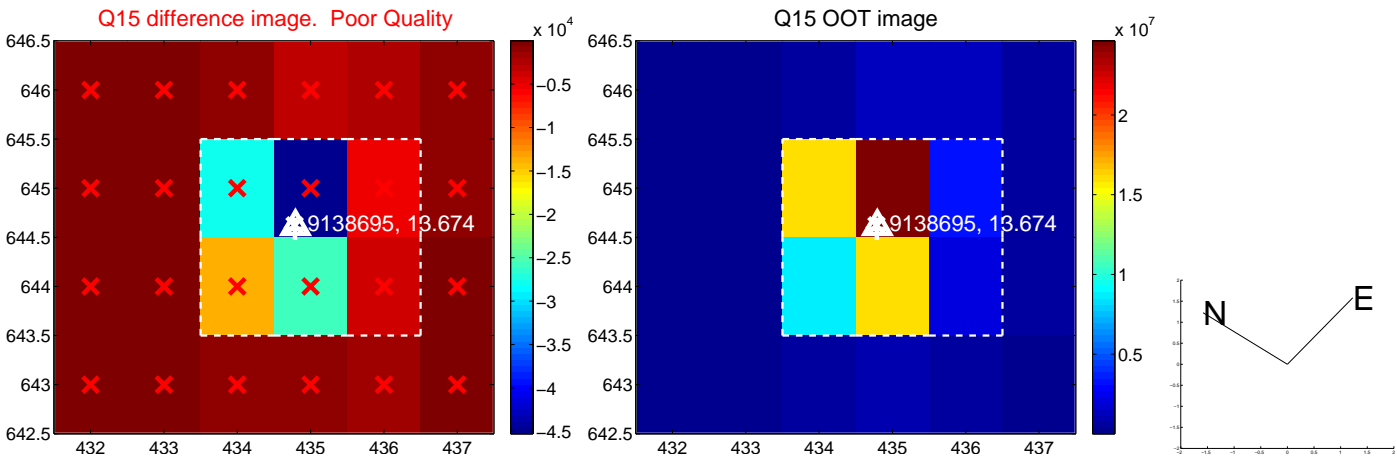
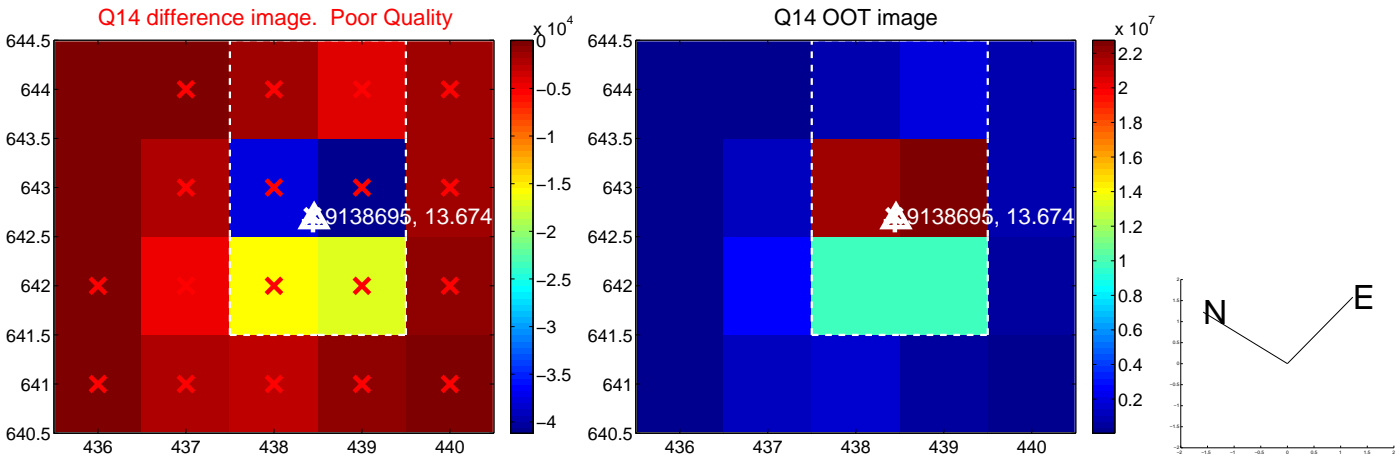
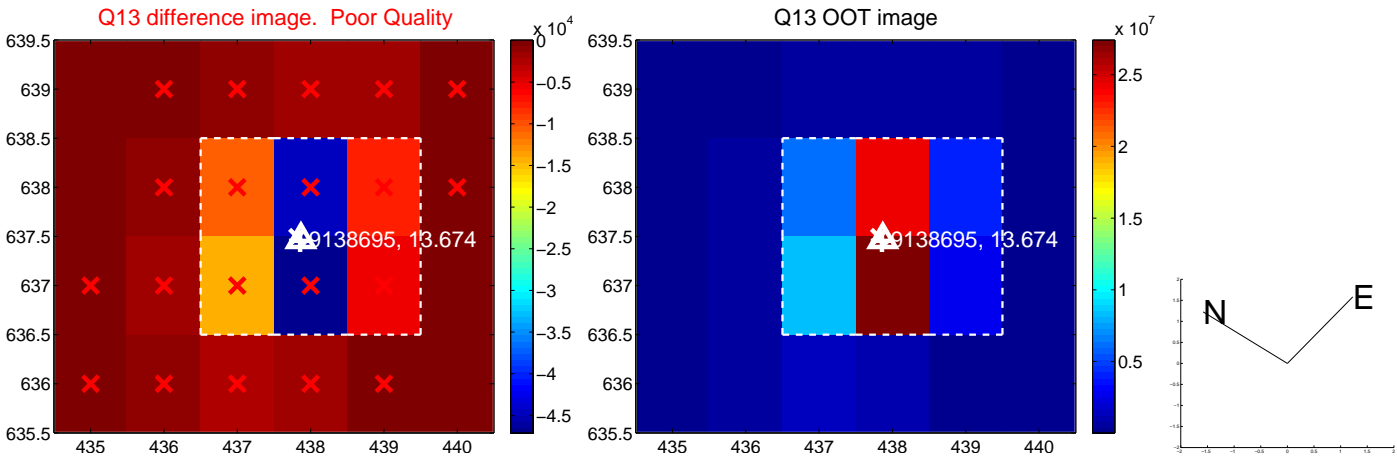
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



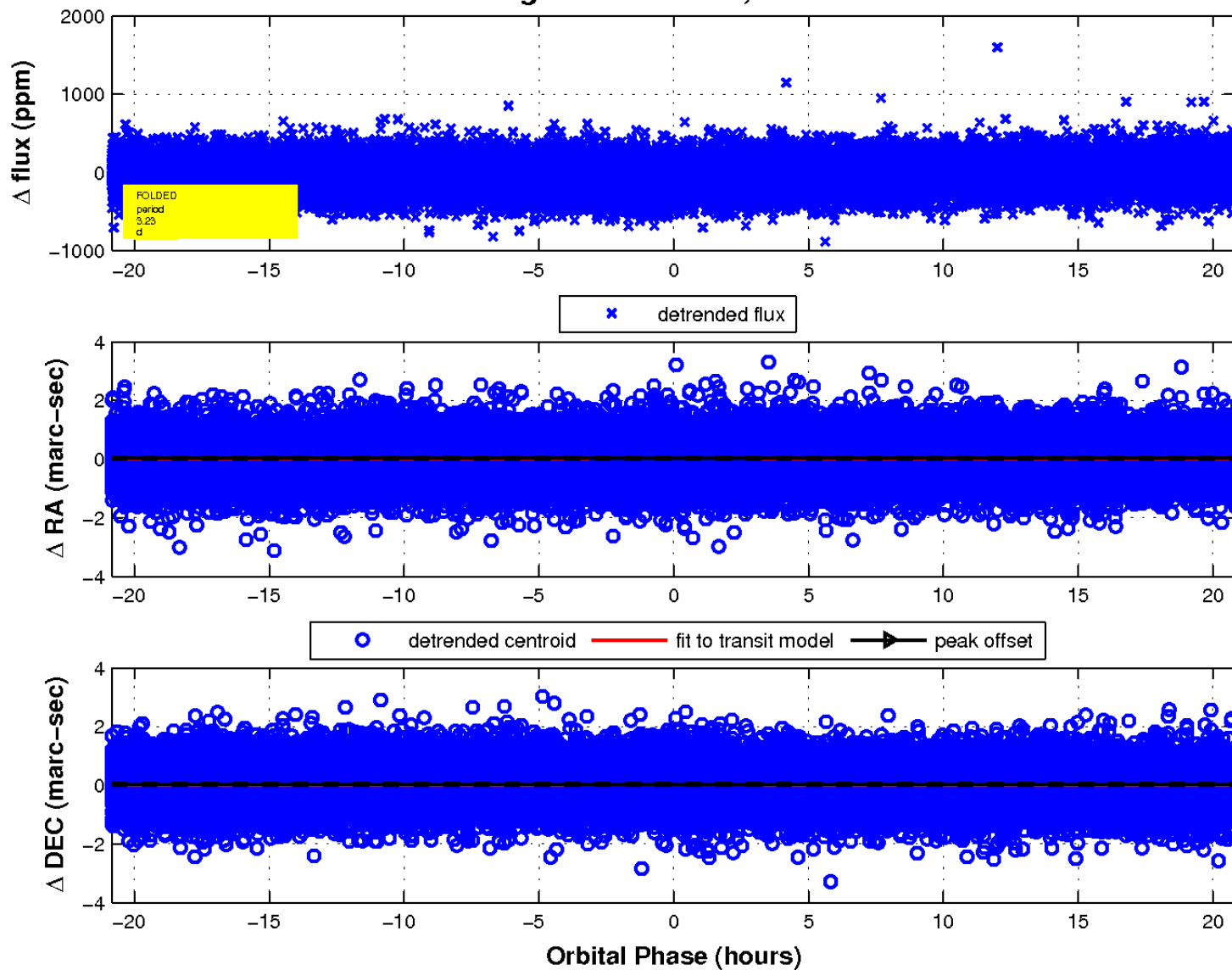
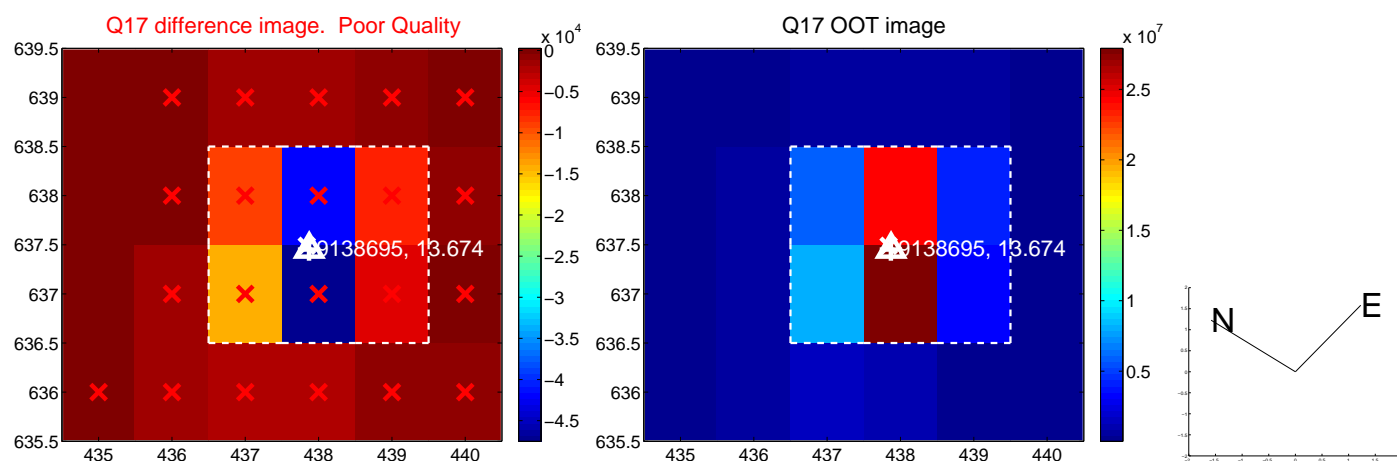
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

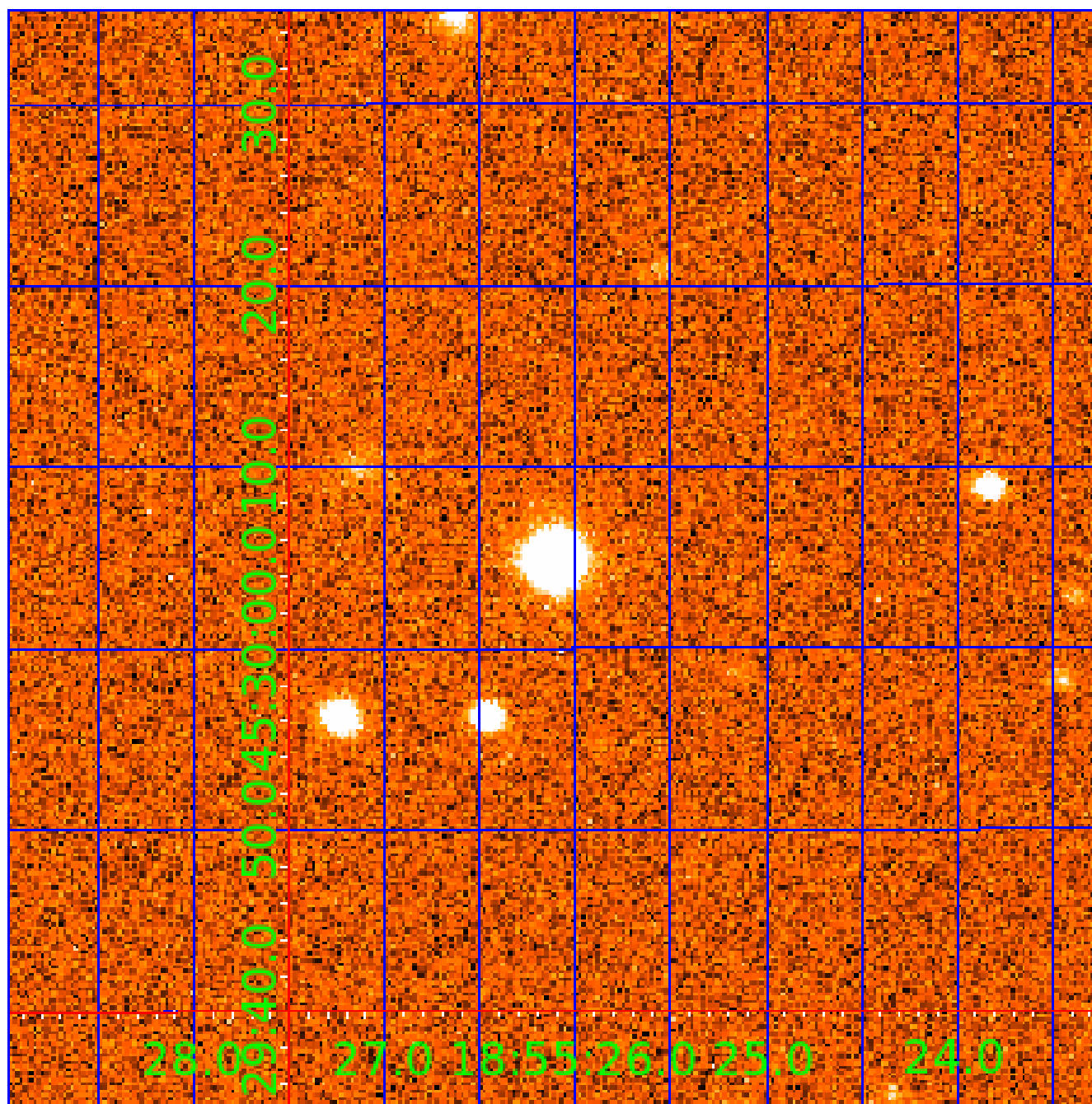


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009138695

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})
009138695-01	OBS	No	3.228332	131.999034	14.5	9.787	8.1	4.0	2.54	7272	1.08	5974.55
009138695-02	OBS	No	3.228697	133.021923	21.0	0.967	12.5	3.1	2.54	7272	1.21	5973.65
009138695-03	OBS	No	3.228589	133.248165	10.5	4.433	12.7	2.7	2.54	7272	0.99	5973.91
009138695-04	OBS	No	3.228444	132.708602	64.1	6.947	13.8	17.9	2.54	7272	2.10	5974.27
009138695-05	OBS	No	322.871851	266.826265	296.3	6.804	9.7	7.2	2.54	7272	4.84	12.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009138695-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_NONUNIQ_ALT
009138695-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD
009138695-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—SAME_NTL_PERIOD
009138695-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—SWEET_NTL—LPP_DV—SAME_NTL_PERIOD—CENT_FEW_DIFFS
009138695-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—INCONSISTENT_TRANS

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

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

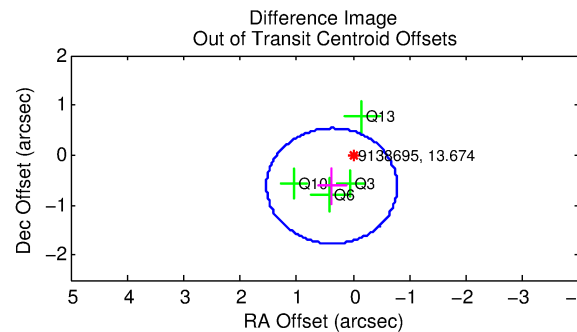
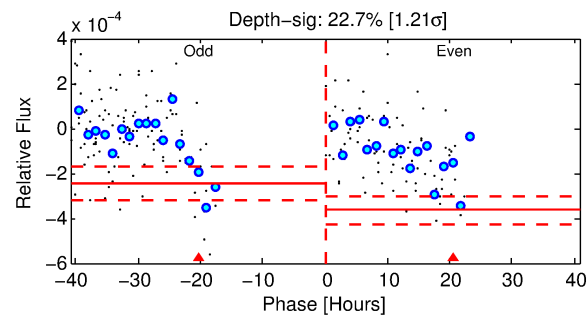
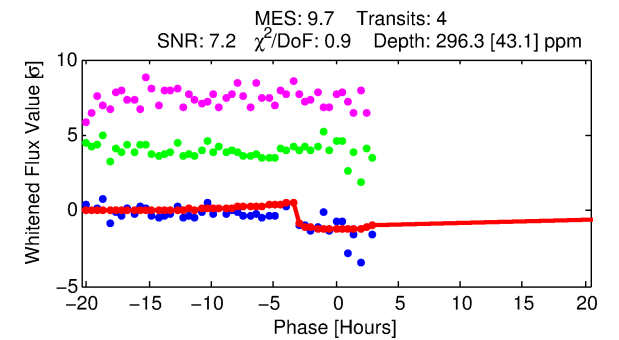
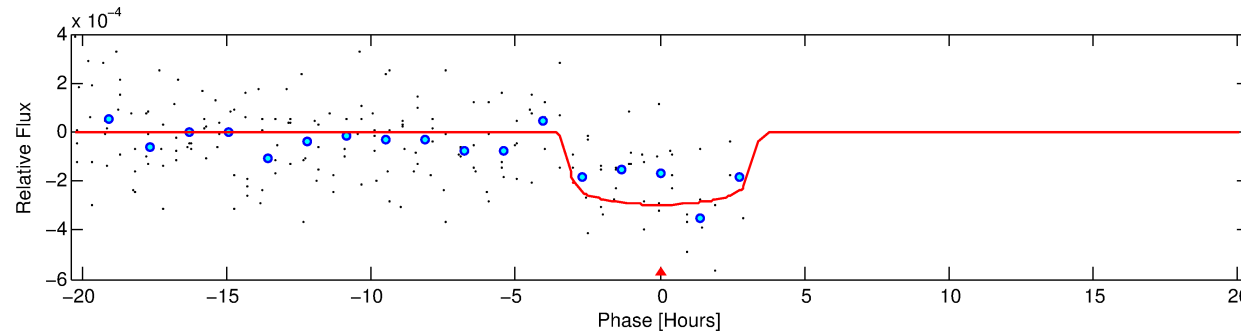
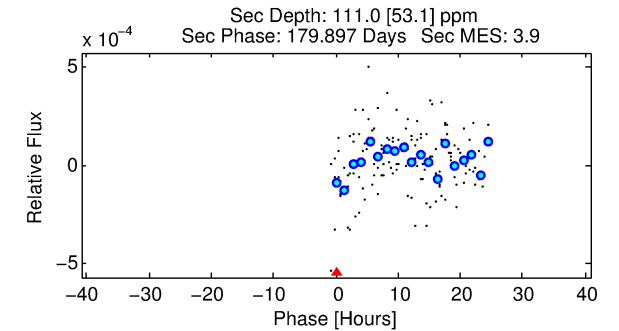
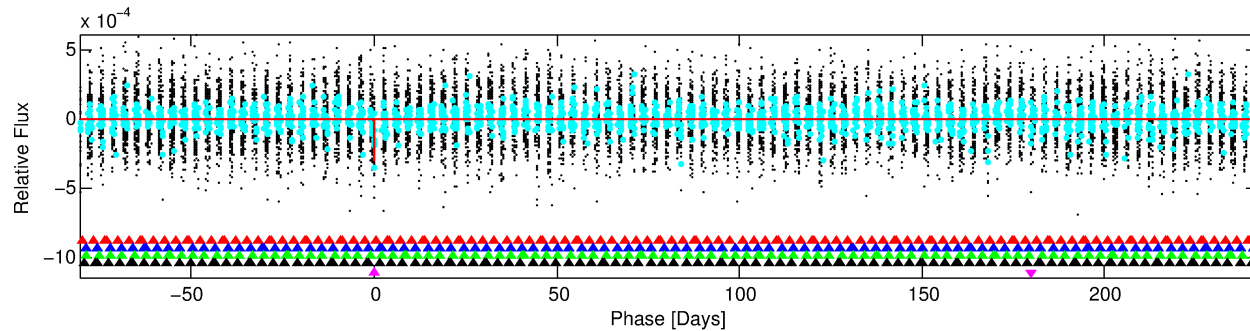
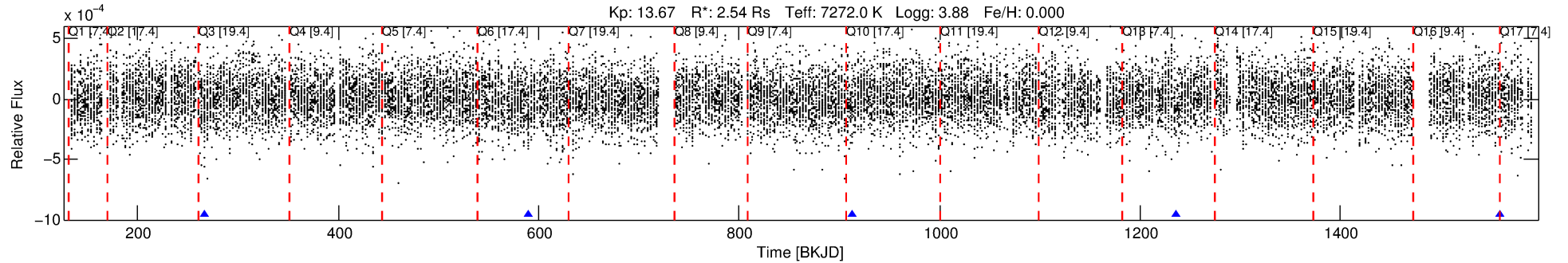
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009138695-05

No Significant Match Found

DV One-Page Summary

KIC: 9138695 Candidate: 5 of 5 Period: 322.872 d



DV Fit Results:

Period = 322.87185 [0.01296] d
Epoch = 266.8263 [0.0261] BKJD
Rp/R* = 0.0175 [0.0048]
a/R* = 220.97 [356.62]
b = 0.81 [0.69]
Seff = 12.87 [6.94]
Teq = 483 [65] K
Rp = 4.84 [2.16] Re
a = 1.1190 [0.3633] AU
Ag = 3267.30 [2906.20] [1.12σ]
Teffp = 5646 [1061] K [4.86σ]

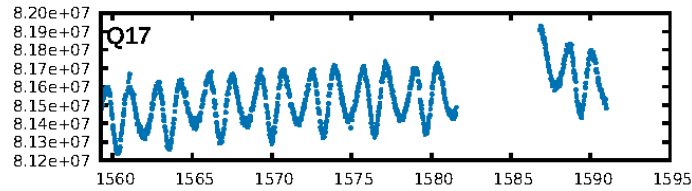
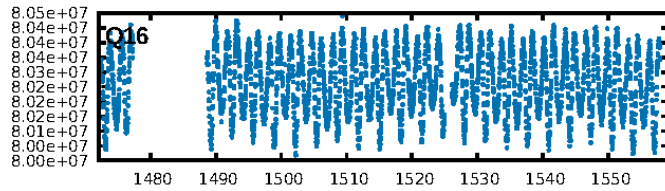
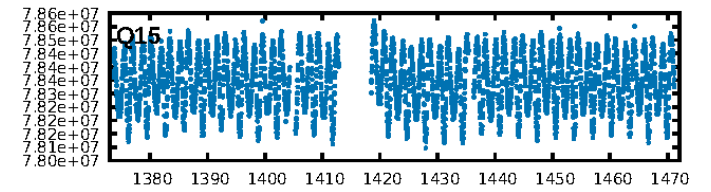
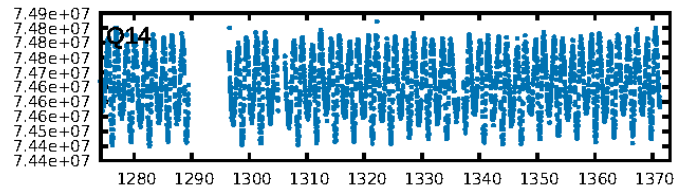
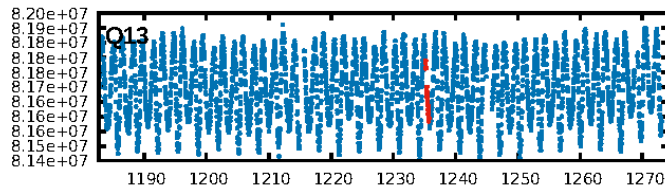
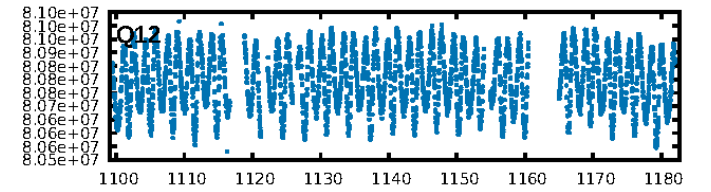
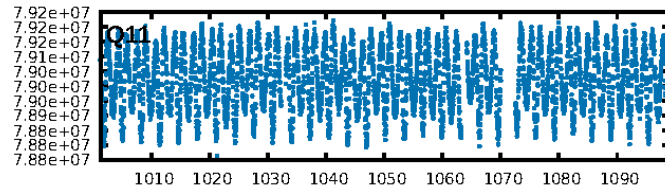
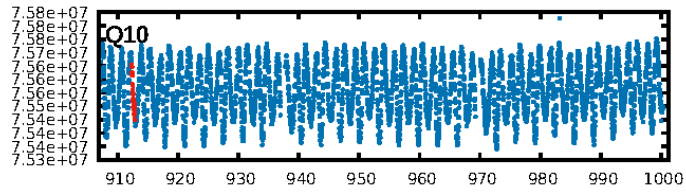
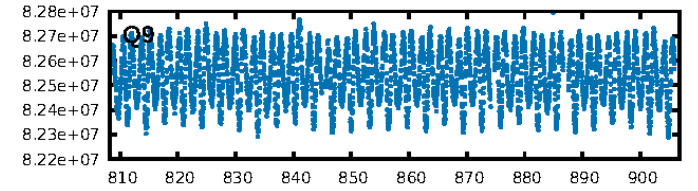
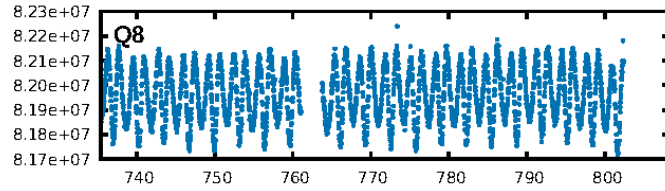
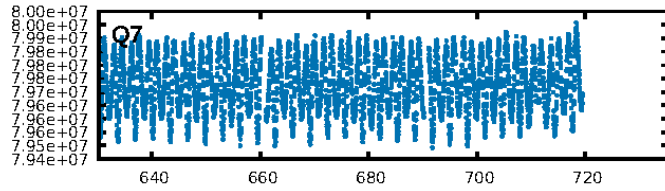
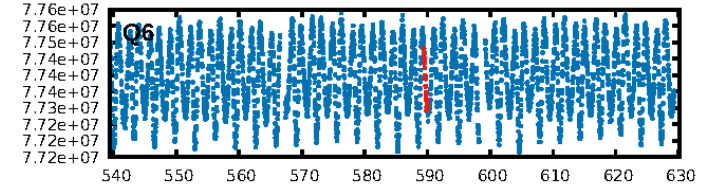
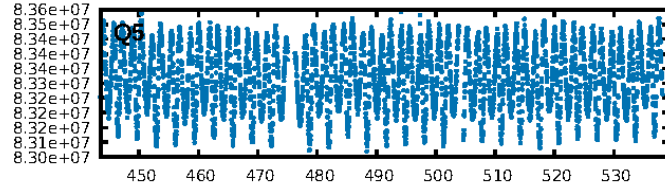
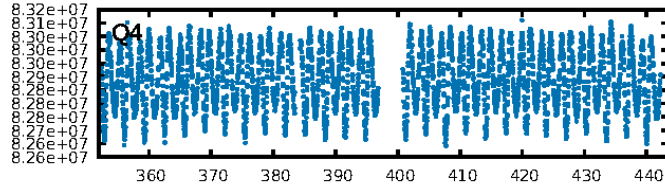
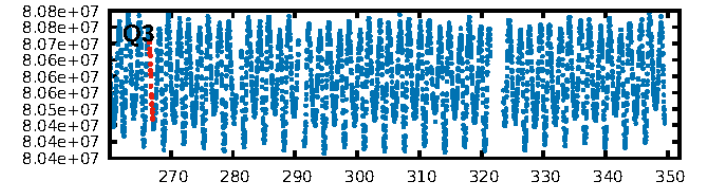
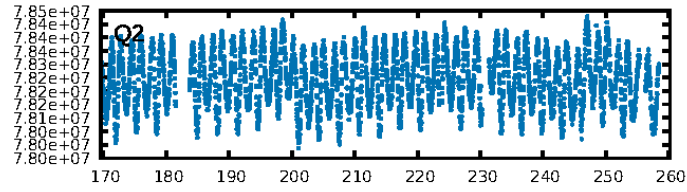
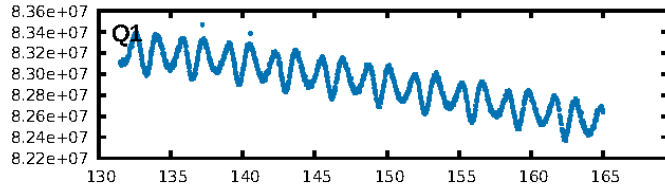
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1116.25σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 2.53e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6592
Centroid-sig: 60.8%
Centroid-so: 0.687 arcsec [0.67σ]
OotOffset-rm: 0.723 arcsec [1.88σ]
OotOffset-st: 2/1/0/1 [4]
KicOffset-rm: 0.752 arcsec [1.95σ]
KicOffset-st: 2/1/0/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 0.00 [0/4]

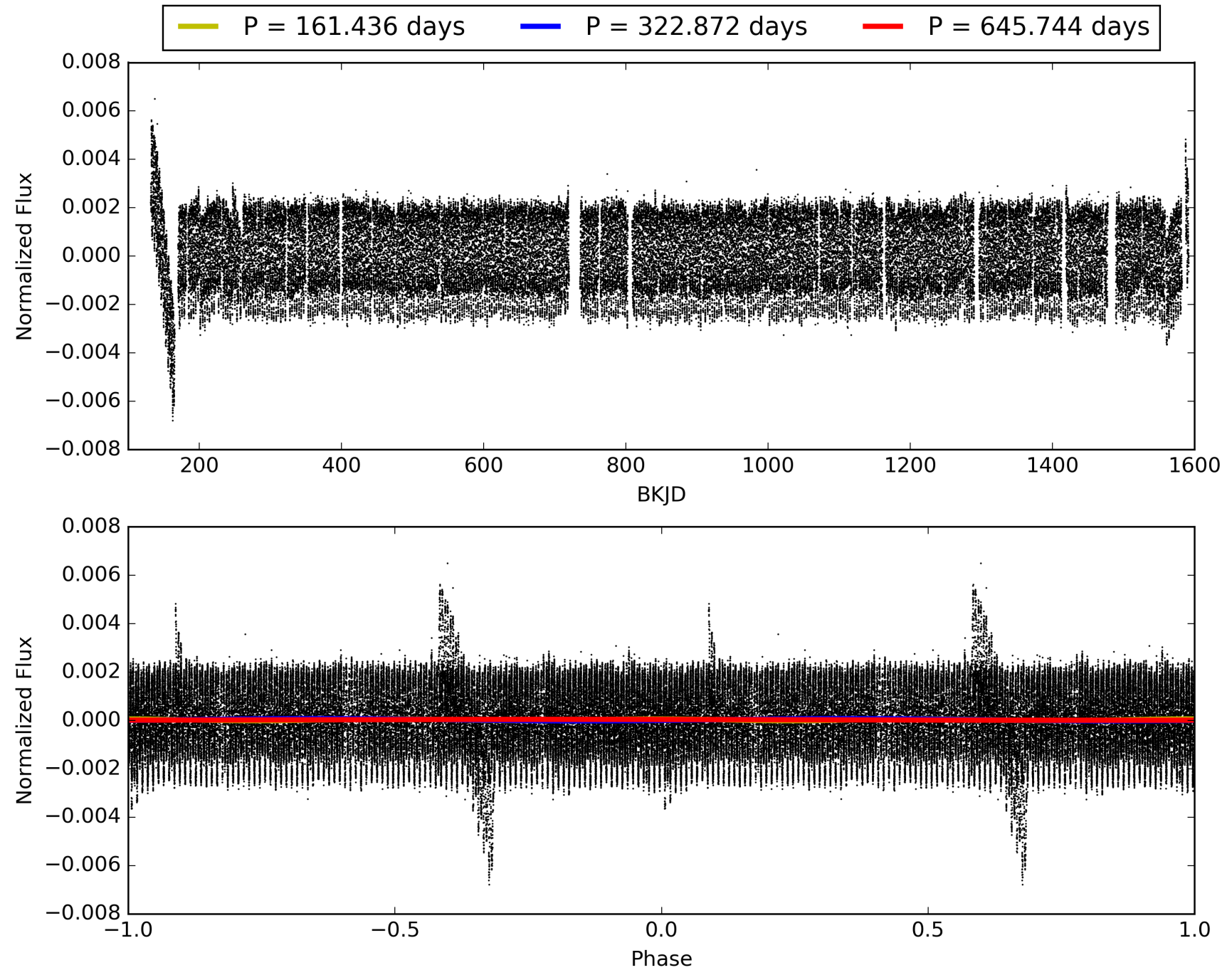
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 19:19:27 Z

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

TCE 009138695-05, PDC Light Curves

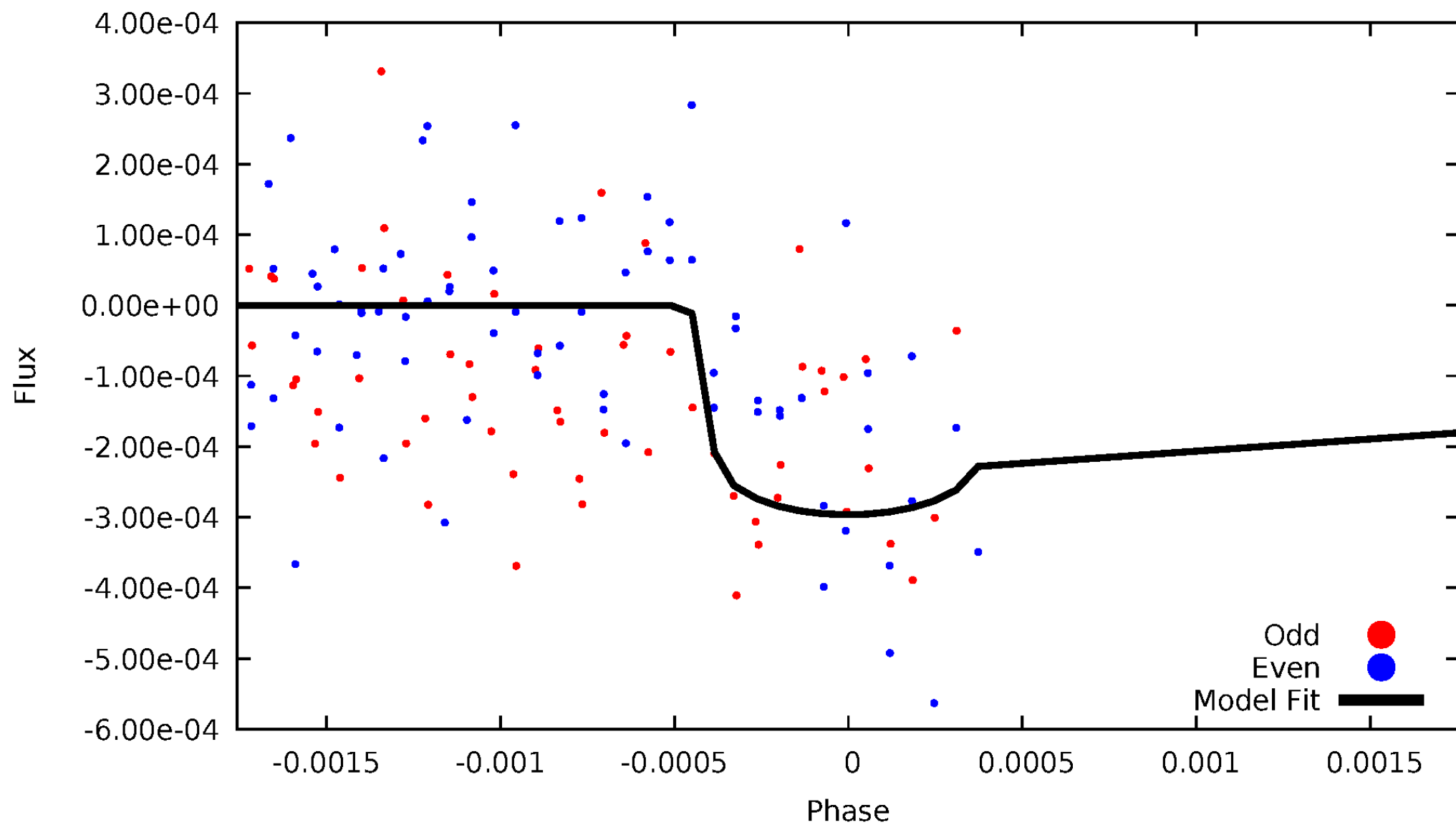


TCE 009138695-05



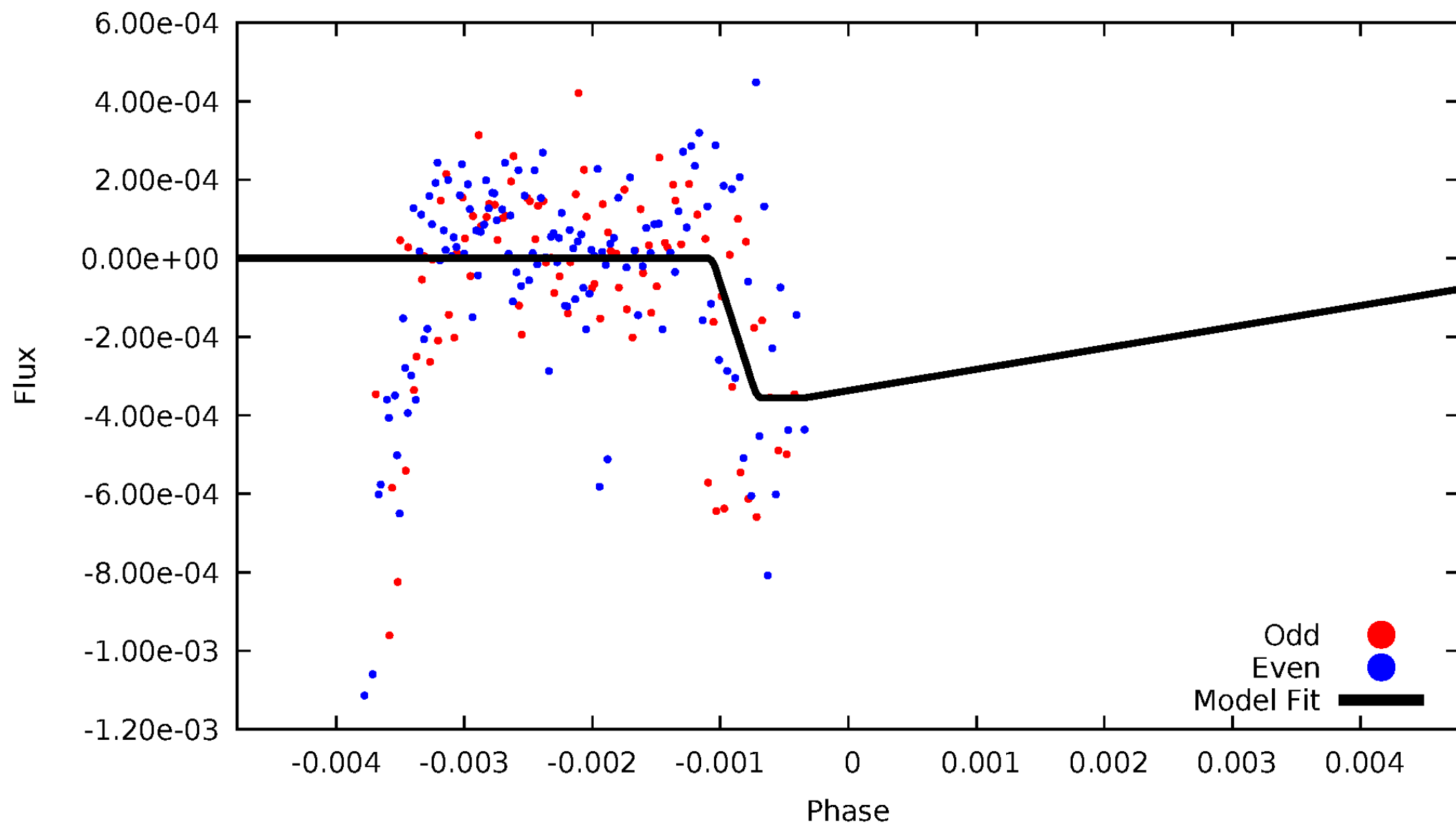
DV Odd/Even

TCE 009138695-05



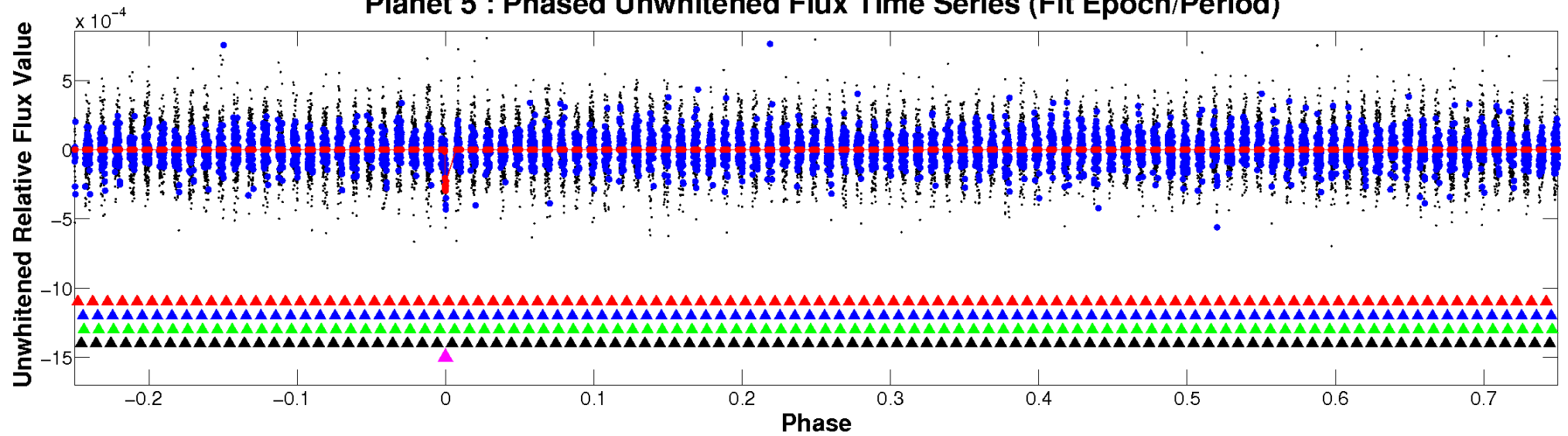
ALT Odd/Even

TCE 009138695-05

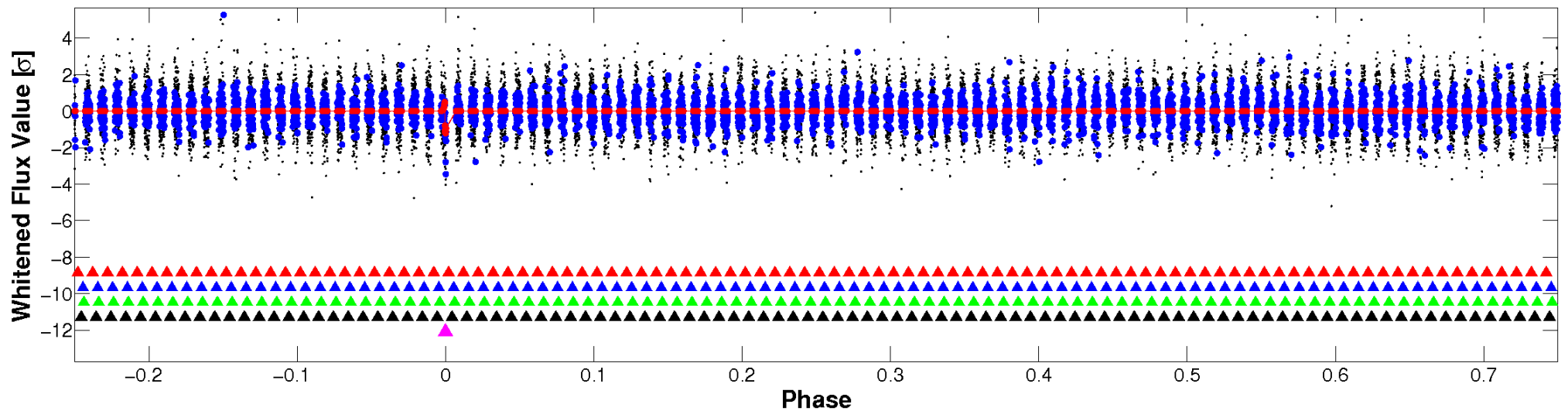


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

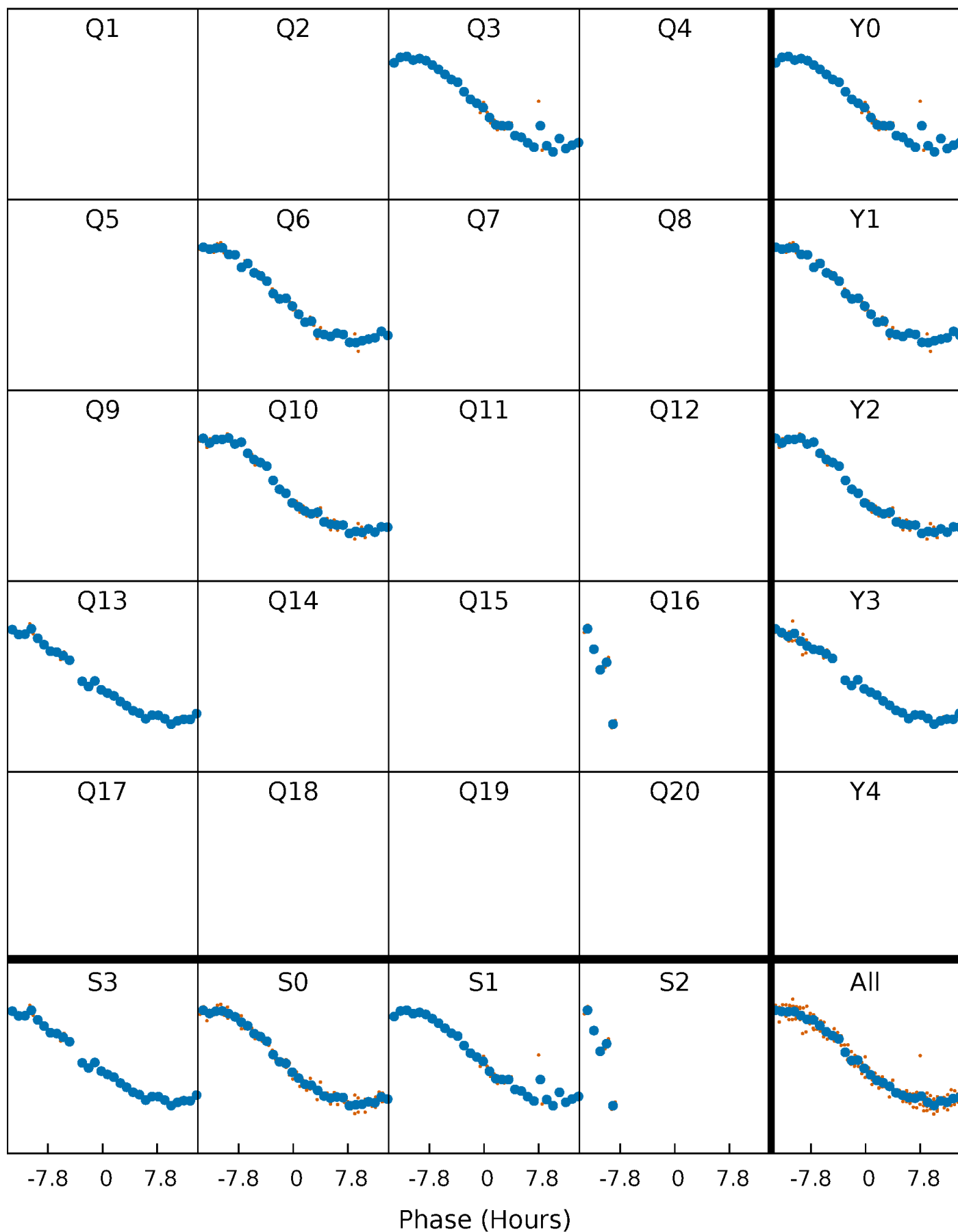


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



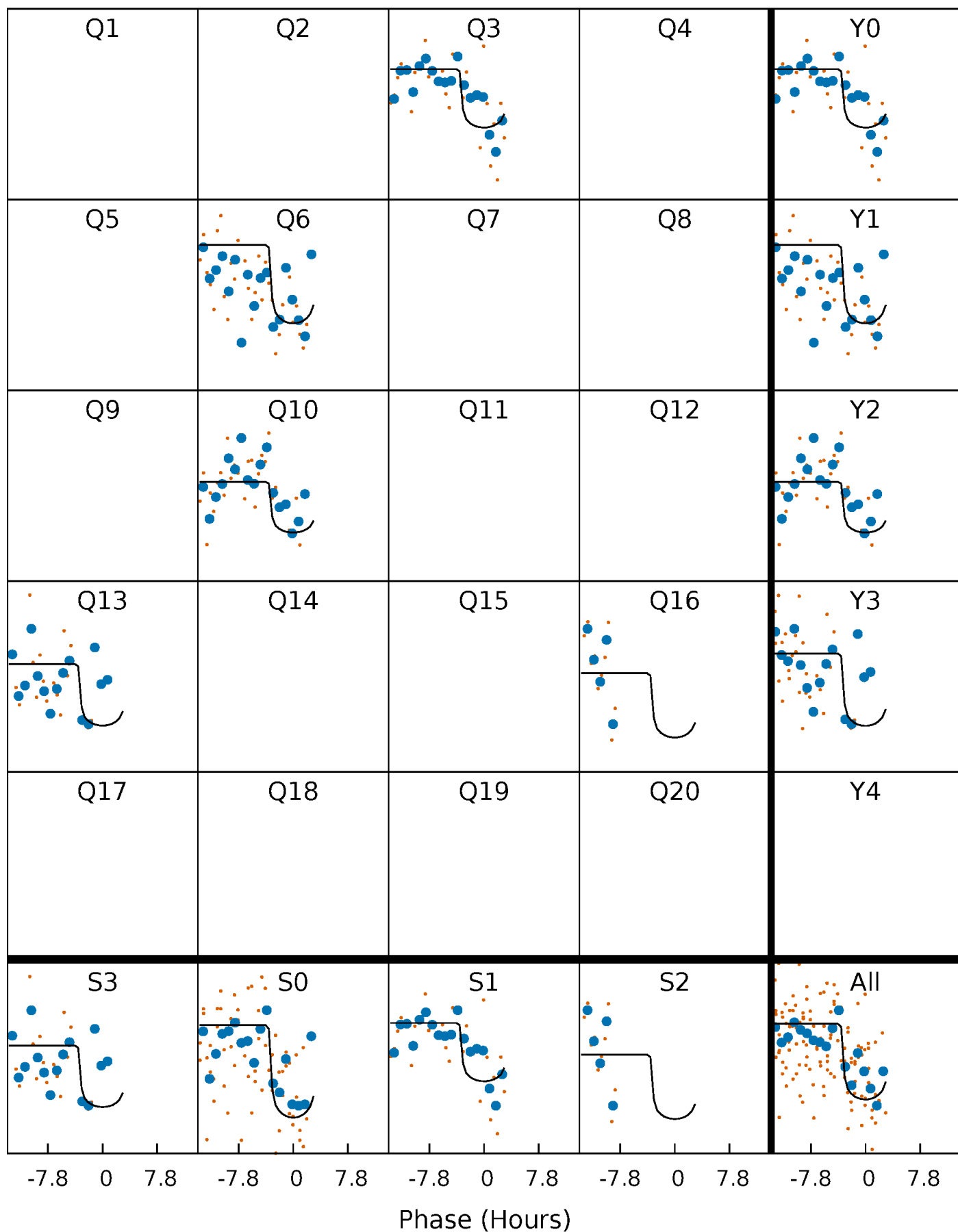
PDC Quarter-Phased Transit Curves

TCE 009138695-05 $P=322.871851$ Days $T_0=266.826265$ (BKJD)



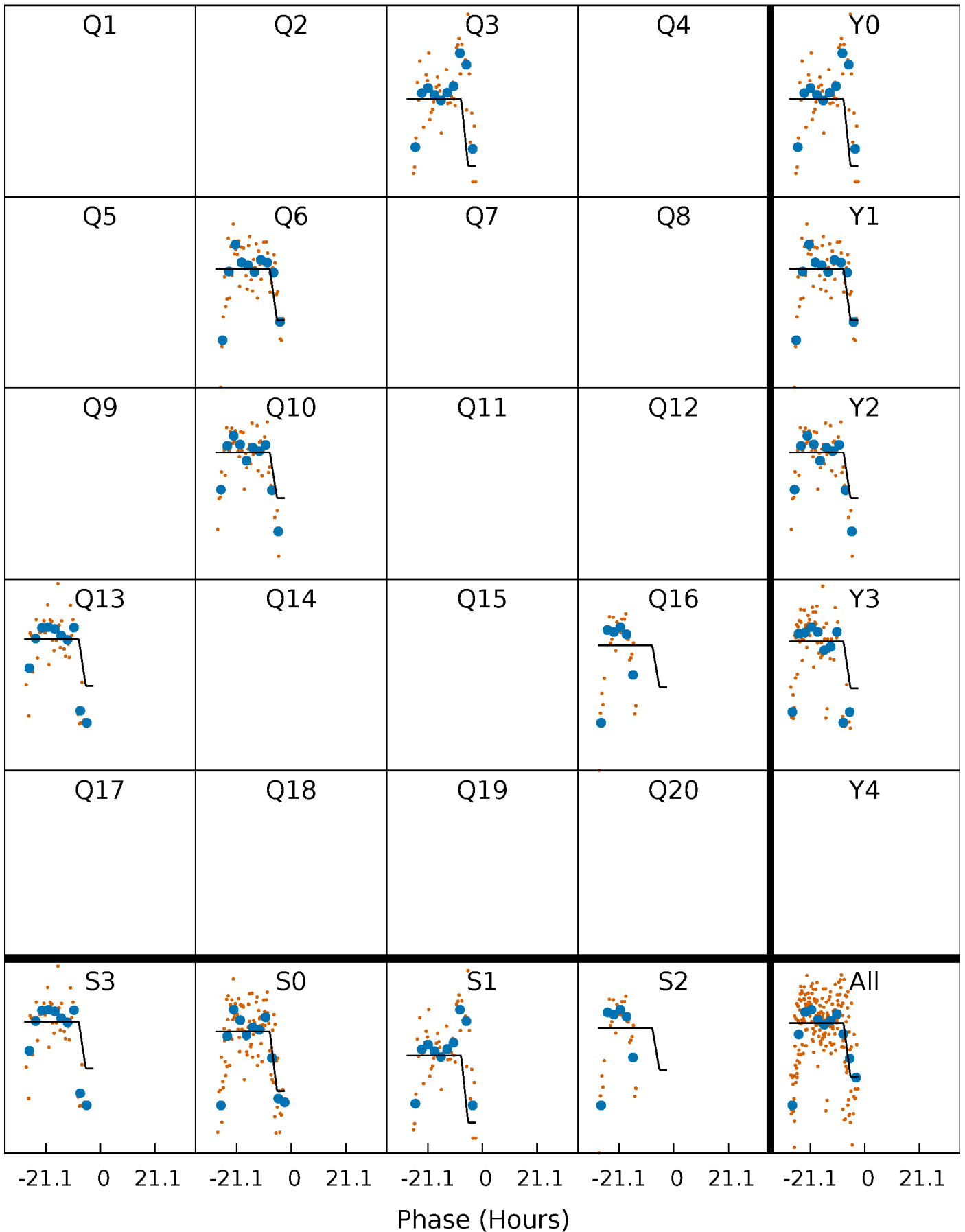
DV Quarter-Phased Transit Curves

TCE 009138695-05 $P=322.871851$ Days $T_0=266.826265$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

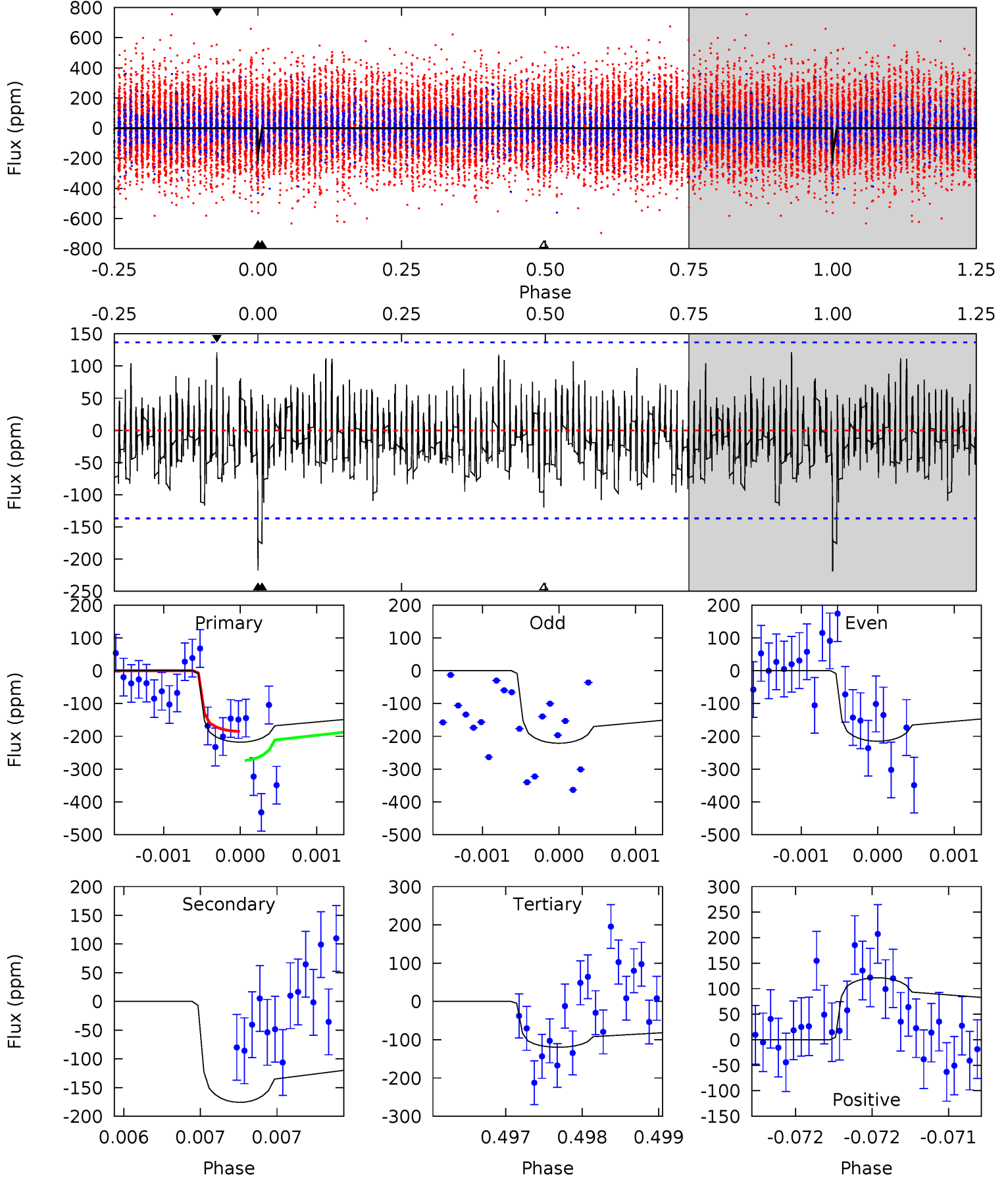
TCE 009138695-05 $P=322.877493$ Days $T_0=267.056876$ (BKJD)



DV Model-Shift Uniqueness Test

009138695-05, P = 322.871851 Days, E = 266.826265 Days

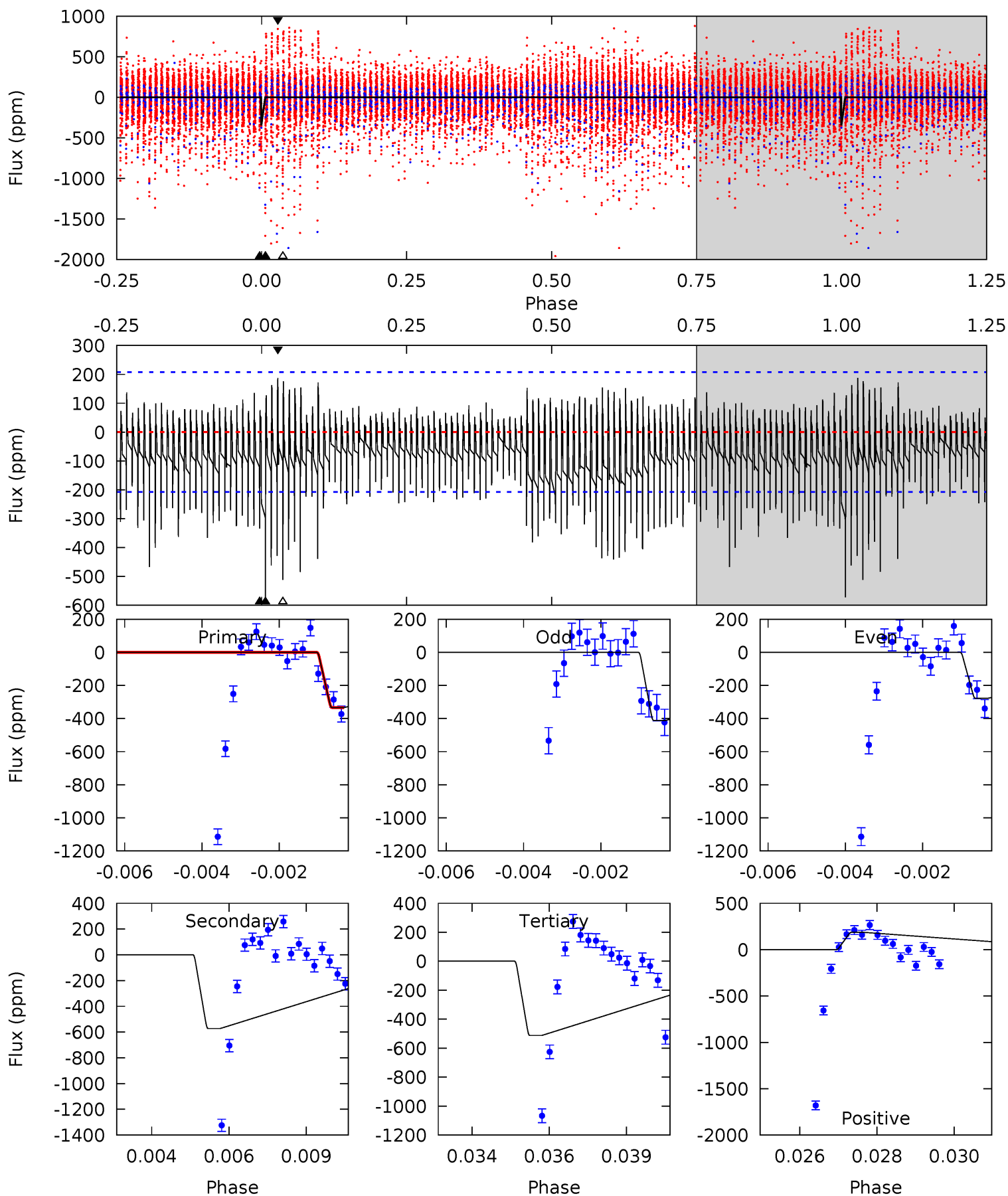
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.74	7.05	4.80	4.87	5.49	3.35	1.47	3.94	3.87	2.25	2.18	0.12	0.99	0.36	1.69



Alt Model-Shift Uniqueness Test

009138695-05, P = 322.877493 Days, E = 267.056876 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.56	14.7	13.1	4.80	5.31	3.07	2.75	-4.57	3.76	1.55	9.88	1.69	0	0.25	0



Stellar Parameters For KIC 009138695

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7272^{+226}_{-327}	$3.883^{+0.294}_{-0.126}$	$0.000^{+0.200}_{-0.350}$	$2.536^{+0.518}_{-0.888}$	$1.790^{+0.196}_{-0.392}$	$0.155^{+0.329}_{-0.060}$
	+3%/-4%	+8%/-3%	+inf%/-inf%	+20%/-35%	+11%/-22%	+213%/-39%
Source	PHO1	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 009138695-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-176 ± 25	$4.57^{+1.59}_{-1.46}$	664^{+49}_{-64}	6206^{+1304}_{-708}	5676^{+6354}_{-2568}
Alt.	-573 ± 39	$4.94^{+1.61}_{-1.49}$	658^{+49}_{-58}	8338^{+2078}_{-1164}	16246^{+16164}_{-7065}

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 $A_{obs} \gg 1.0$

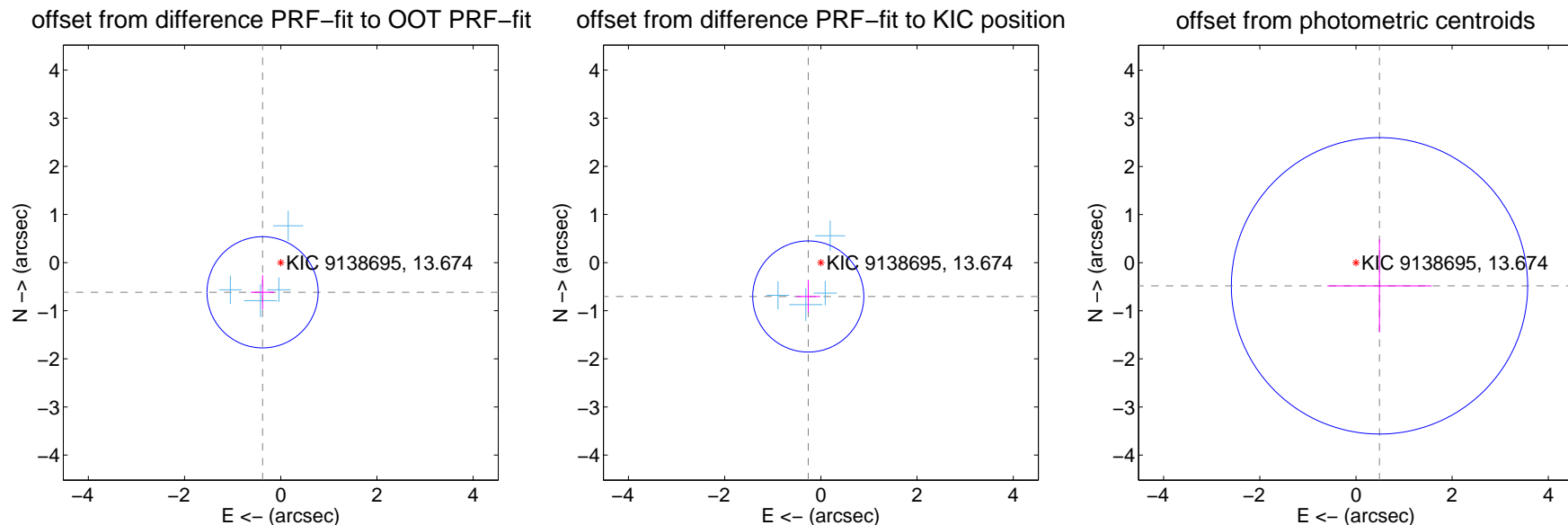
DV Centroid Data

Supplemental centroid analysis for 009138695-05. Kepler magnitude: 13.67. Transit SNR 7.21

There are 4 quarters with good PRF difference image offsets

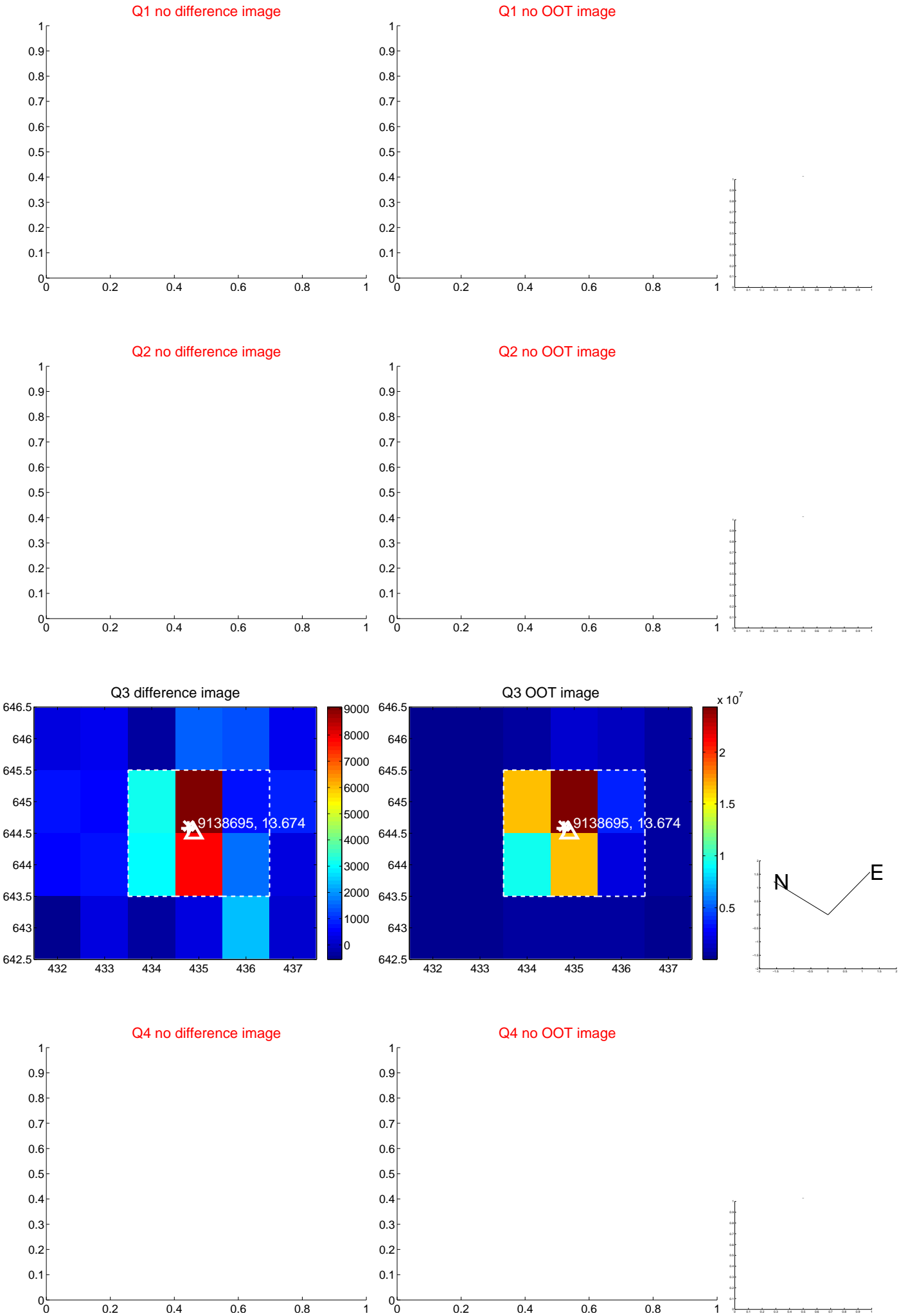
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.723 ± 0.385	1.88	0.377 ± 0.243	-0.617 ± 0.354
PRF-fit source offset from KIC position	0.752 ± 0.385	1.95	0.262 ± 0.247	-0.704 ± 0.340
photometric centroid source offset	0.69 ± 1.03	0.67	-0.49 ± 1.08	-0.48 ± 0.96



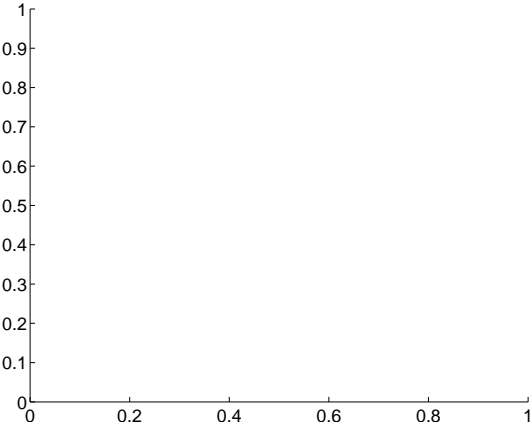
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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

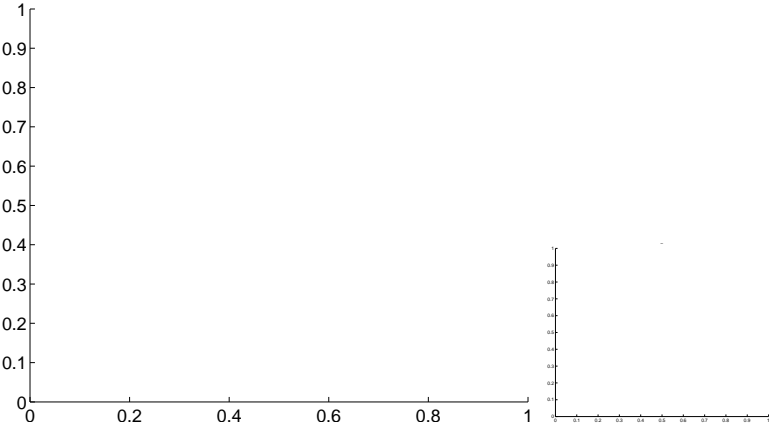


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

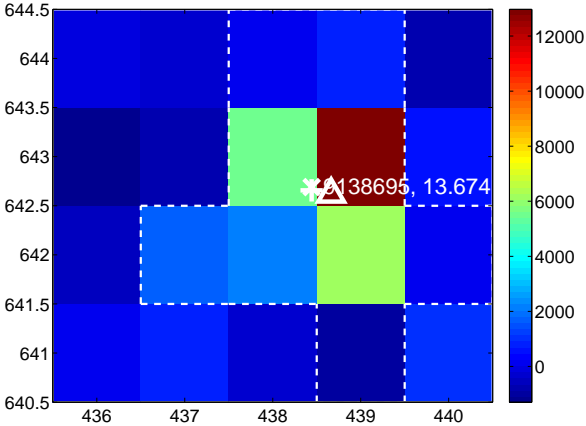
Q5 no difference image



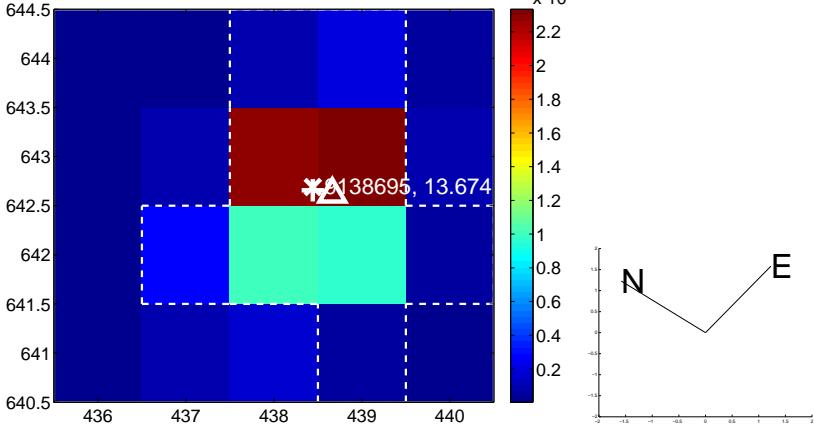
Q5 no OOT image



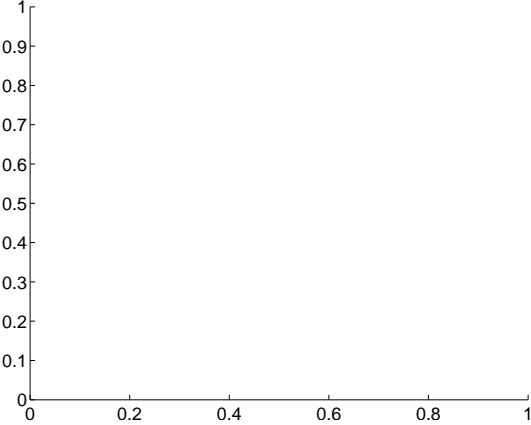
Q6 difference image



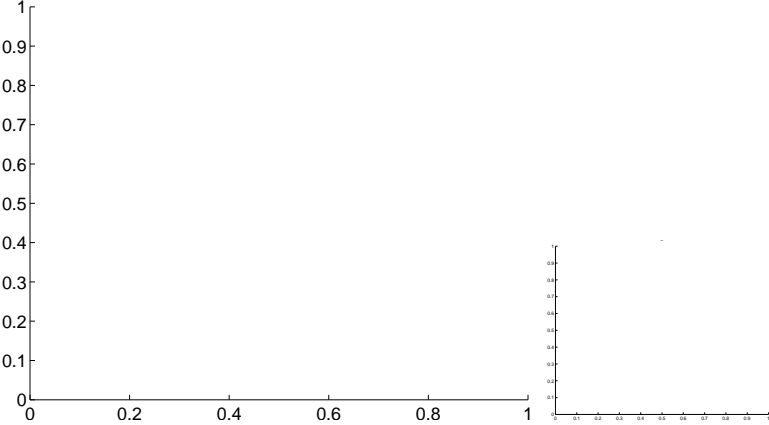
Q6 OOT image



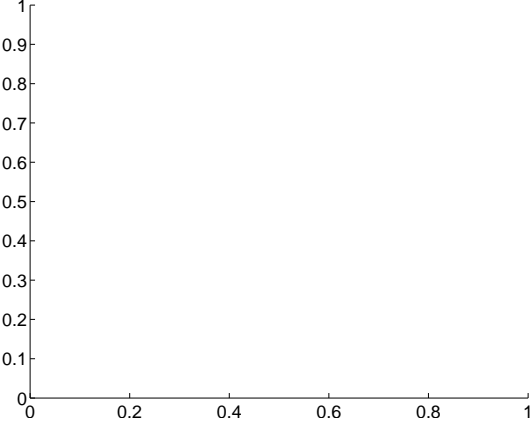
Q7 no difference image



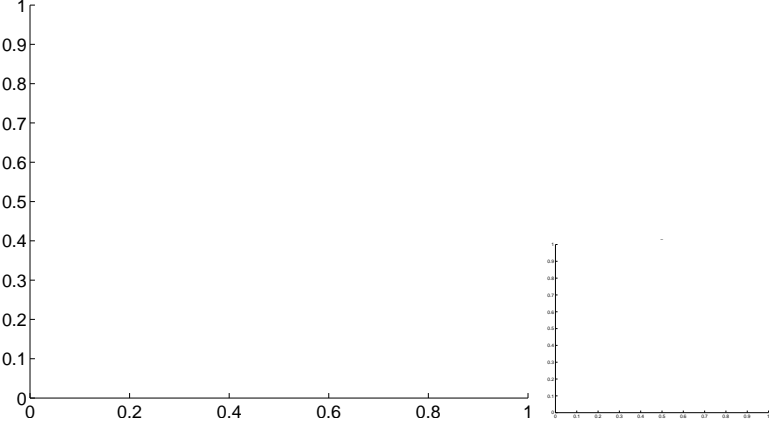
Q7 no OOT image



Q8 no difference image

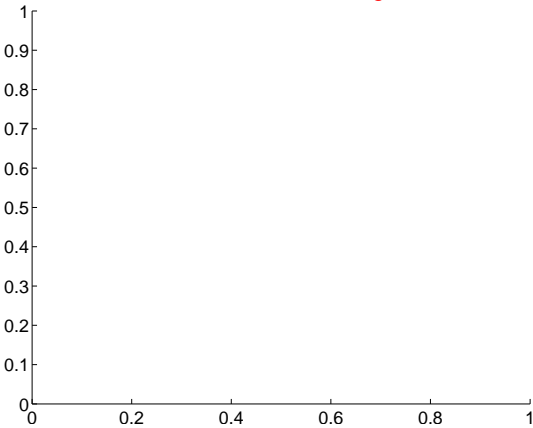


Q8 no OOT image

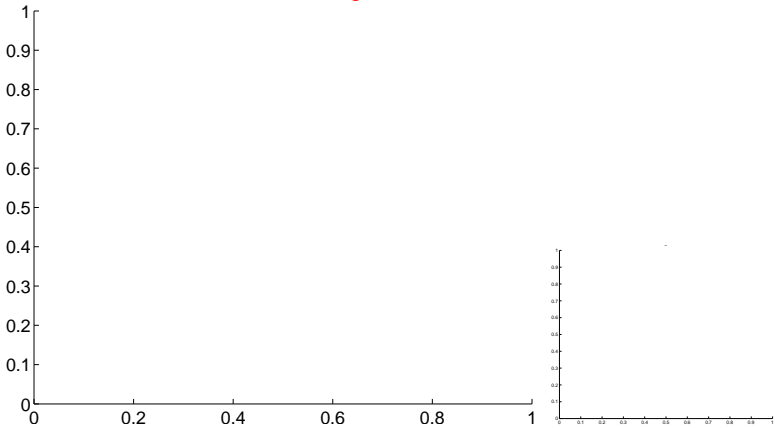


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

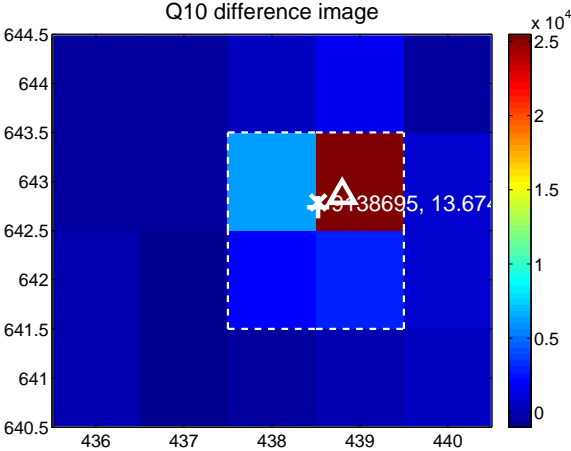
Q9 no difference image



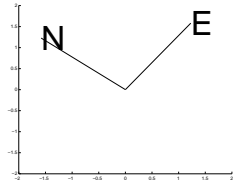
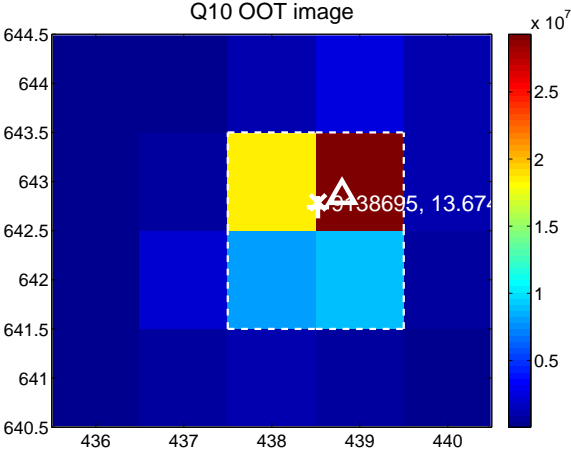
Q9 no OOT image



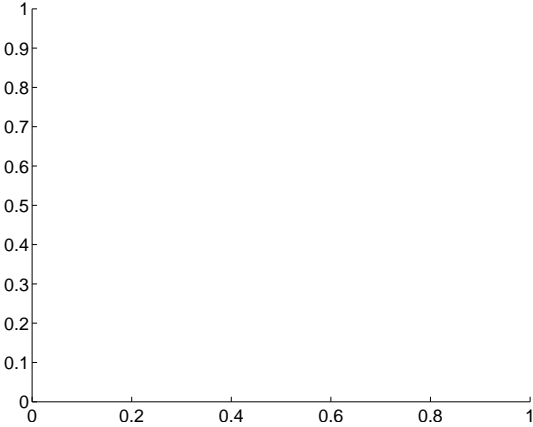
Q10 difference image



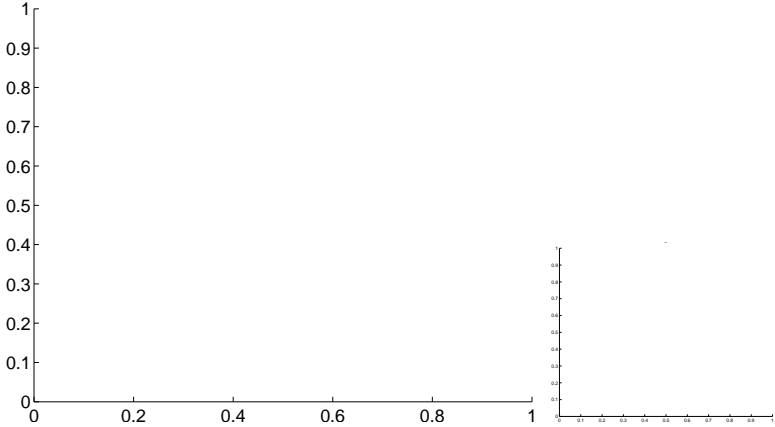
Q10 OOT image



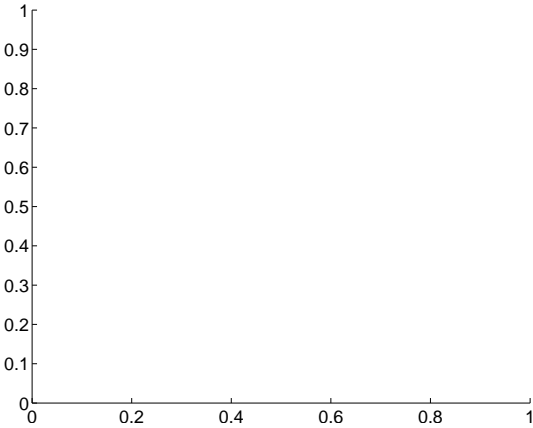
Q11 no difference image



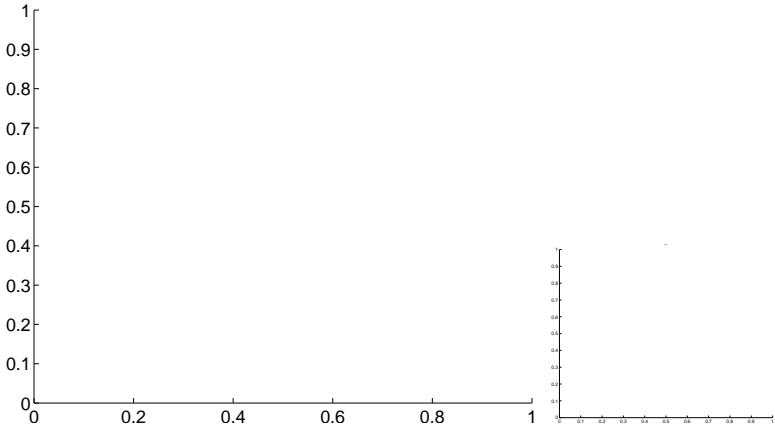
Q11 no OOT image



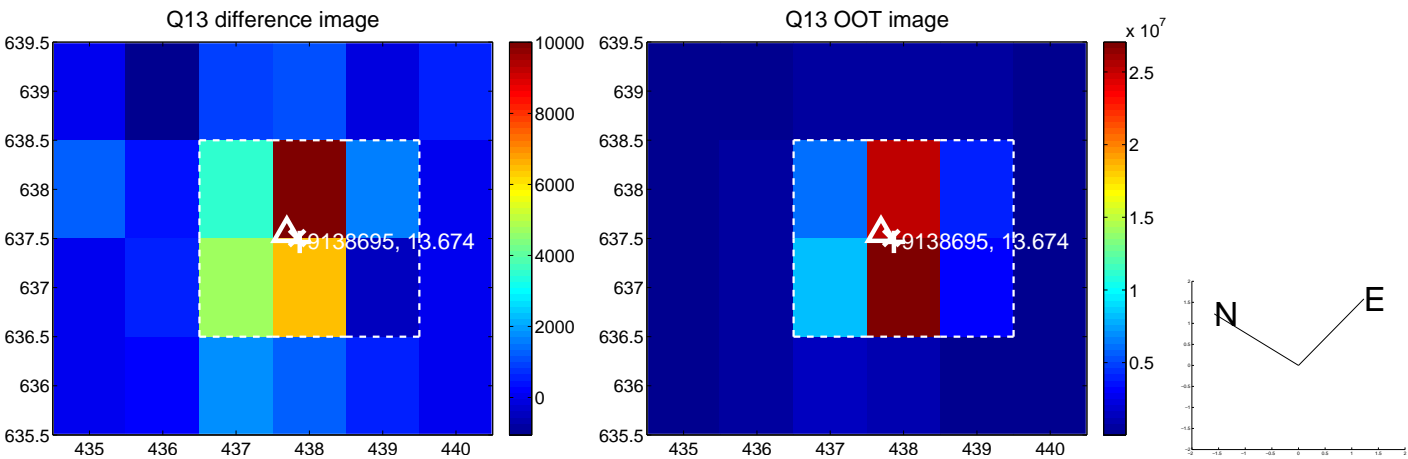
Q12 no difference image



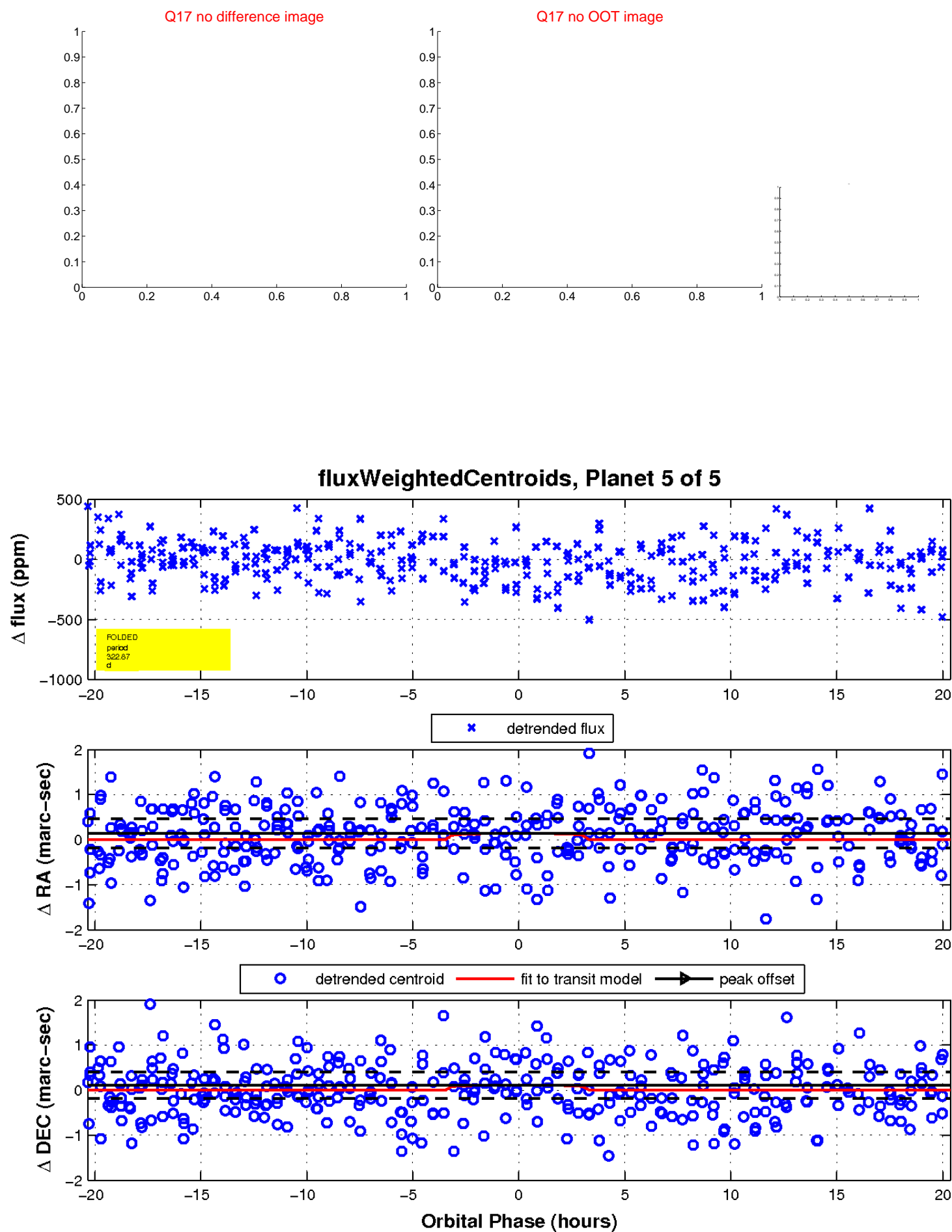
Q12 no OOT image



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.



UKIRT Image

Declination

