

KIC 008411693

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})
008411693-01	OBS	No	0.595229	131.860286	16.0	1.483	8.0	7.2	2.85	7452	1.34	81052.57
008411693-02	OBS	No	199.502875	210.031166	174.5	7.362	7.5	5.6	2.85	7452	4.33	34.81
008411693-03	OBS	No	0.779358	132.042202	25.6	6.628	8.3	12.3	2.85	7452	1.48	56584.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008411693-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008411693-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008411693-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—CENT_FEW_MEAS

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

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

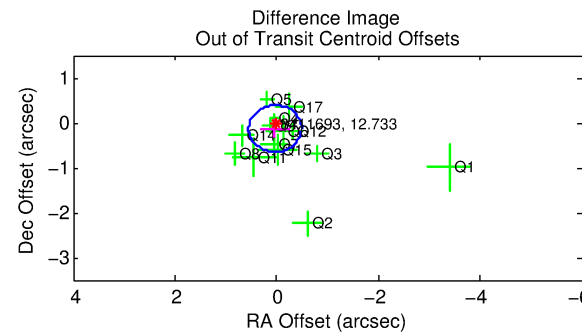
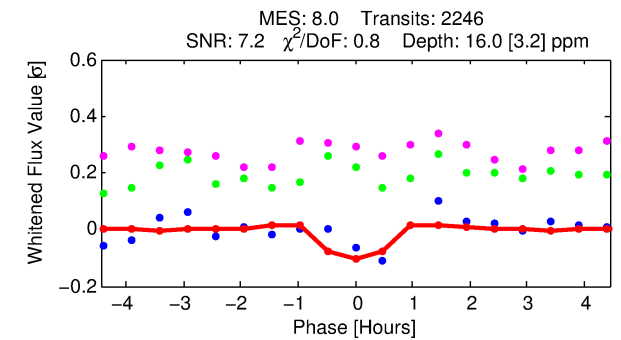
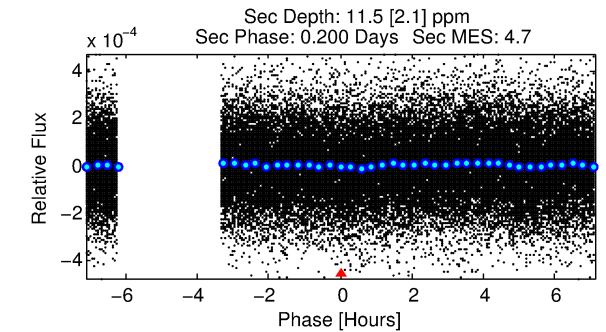
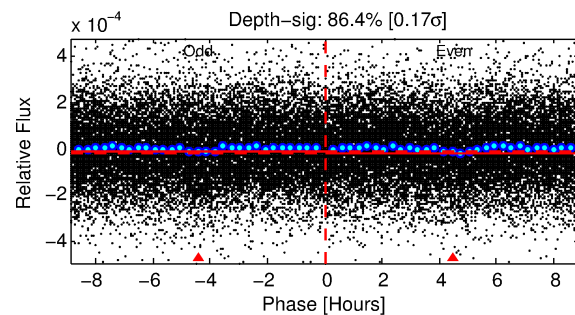
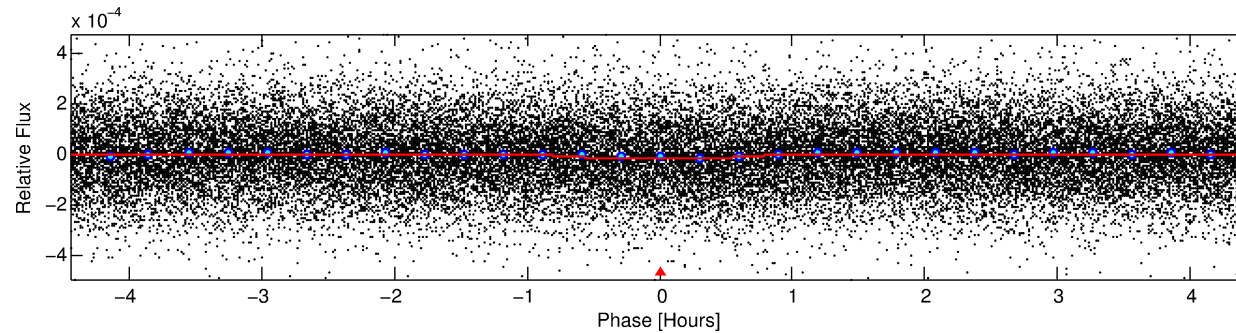
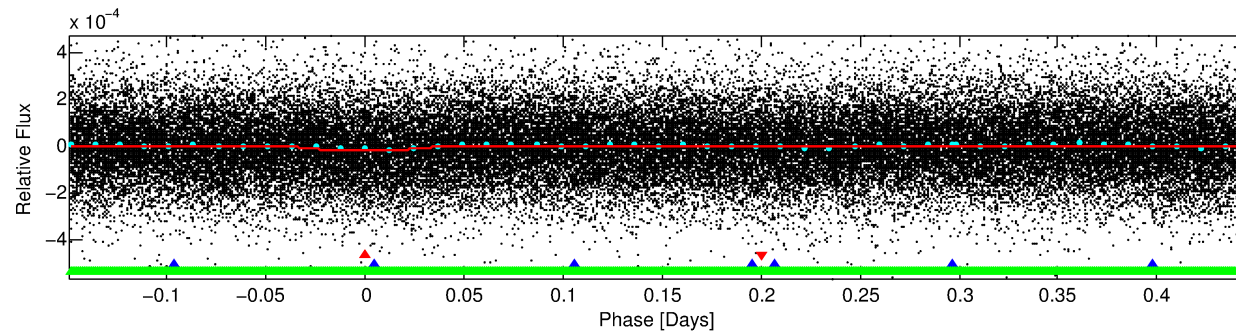
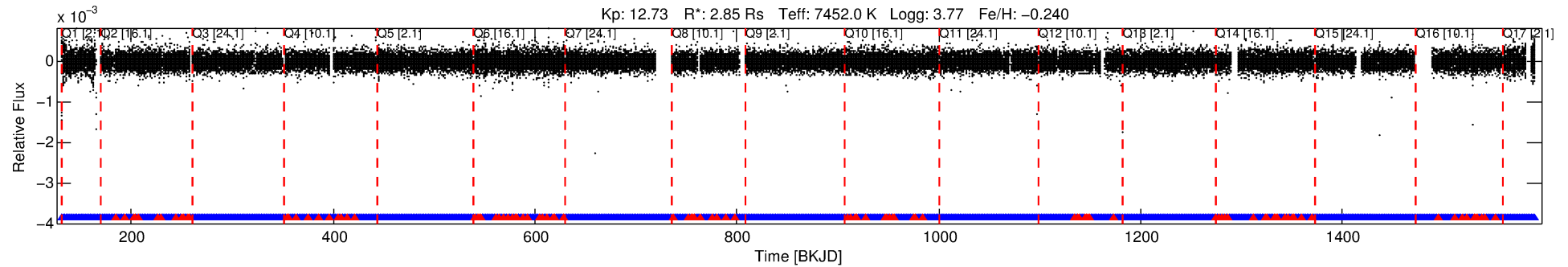
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008411693-01

No Significant Match Found

DV One-Page Summary

KIC: 8411693 Candidate: 1 of 3 Period: 0.595 d



DV Fit Results:

Period = 0.59523 [0.00002] d
Epoch = 131.8603 [0.0025] BKJD
Rp/R* = 0.0043 [0.0010]
a/R* = 1.67 [1.21]
b = 0.90 [0.25]
Seff = 81052.57 [59600.90]
Teq = 4302 [791] K
Rp = 1.34 [0.66] Re
a = 0.0166 [0.0073] AU
Ag = 0.97 [0.84] [-0.03 σ]
Teffp = 6608 [843] K [1.99 σ]

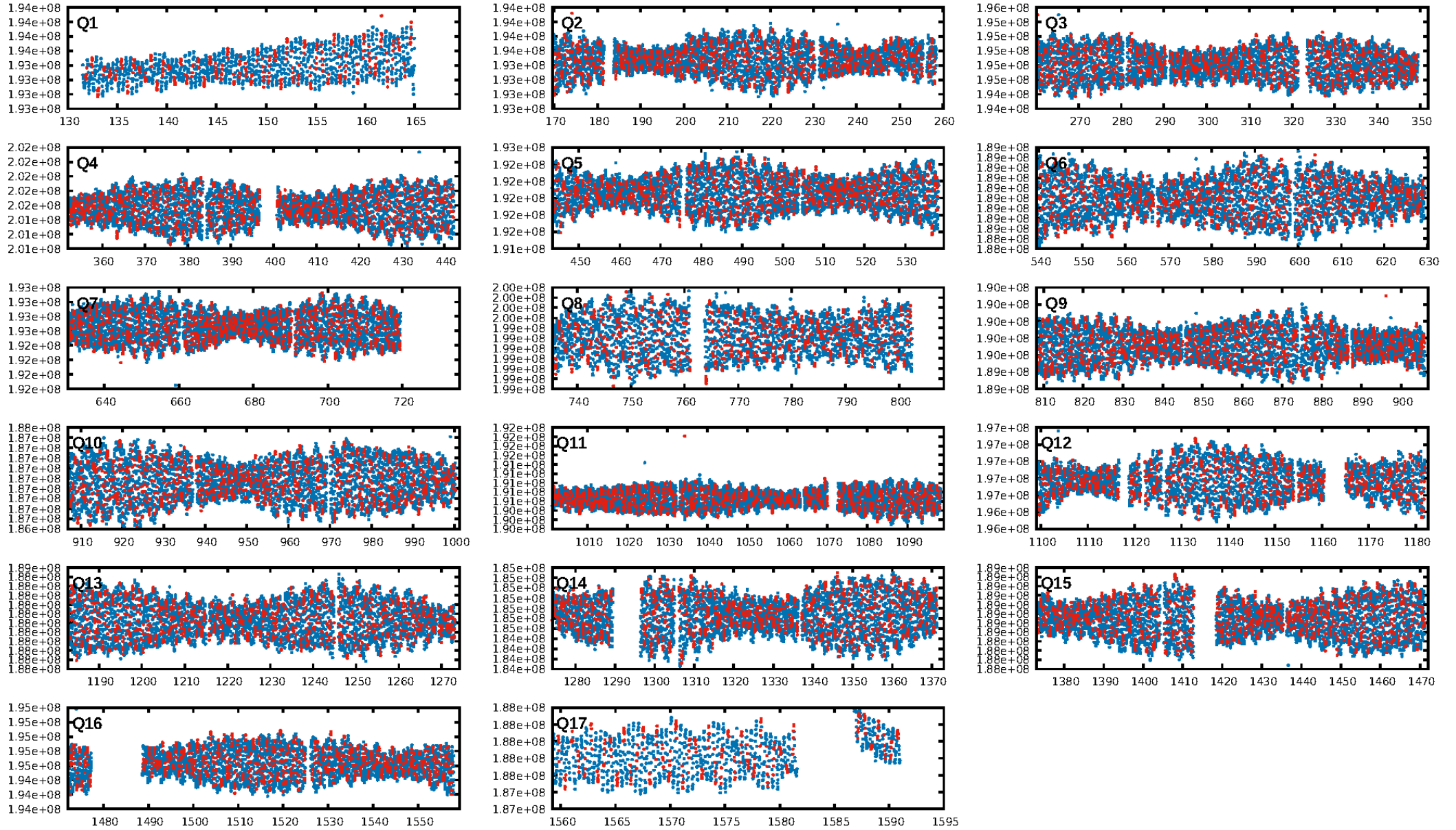
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 48.5% [0.65 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [2039/2145]
GhostDiagnostic-chr: 264
Centroid-sig: N/A
Centroid-so: 1.469 arcsec [1.10 σ]
OotOffset-rm: 0.136 arcsec [0.79 σ]
KicOffset-rm: 0.178 arcsec [0.93 σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 20:11:19 Z

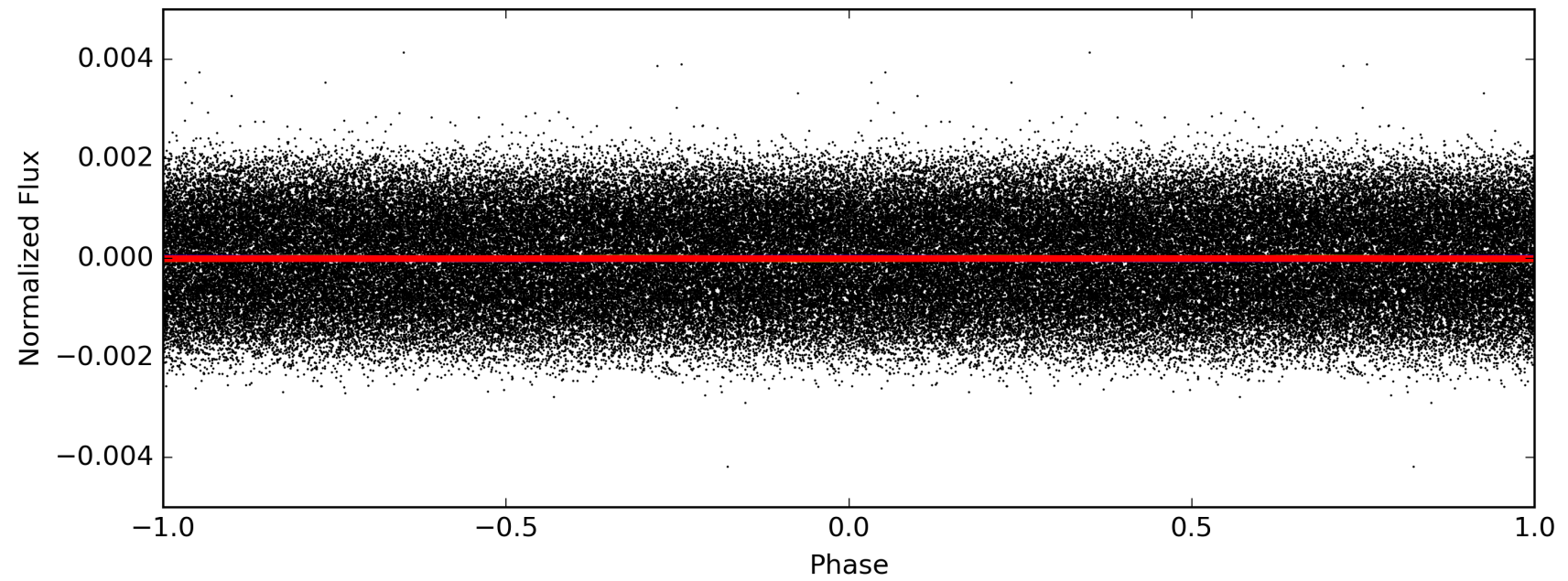
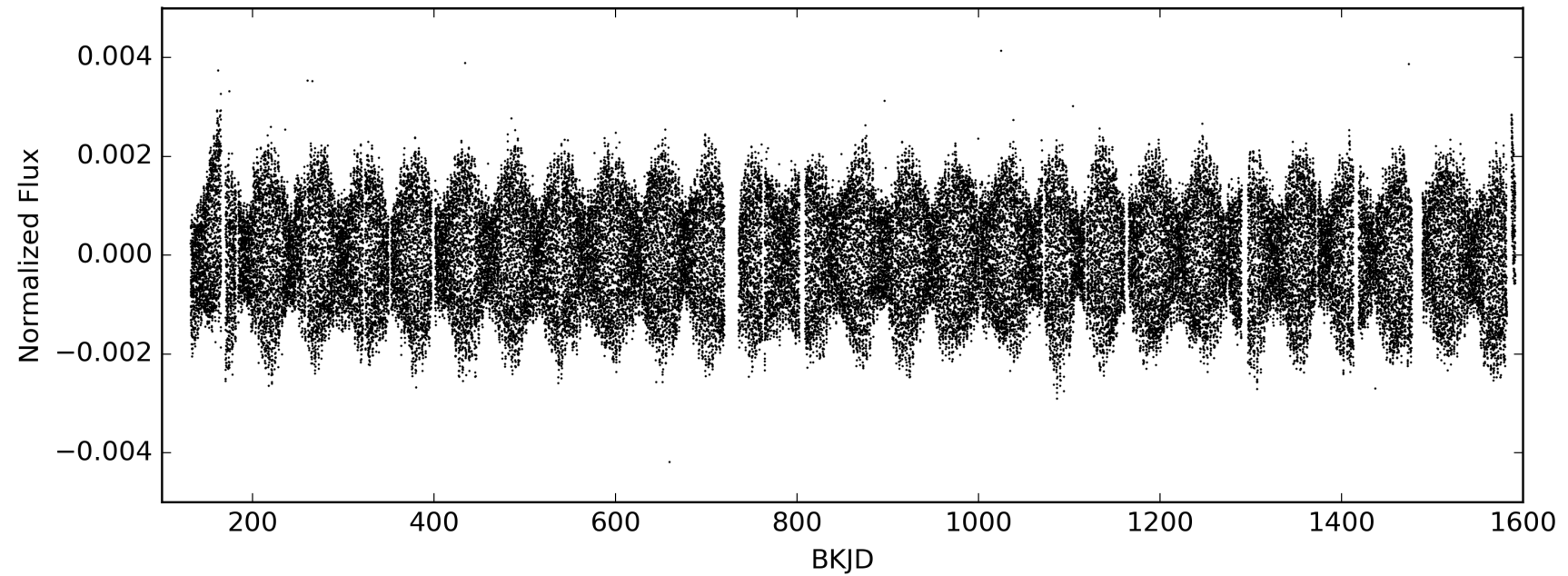
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008411693-01, PDC Light Curves



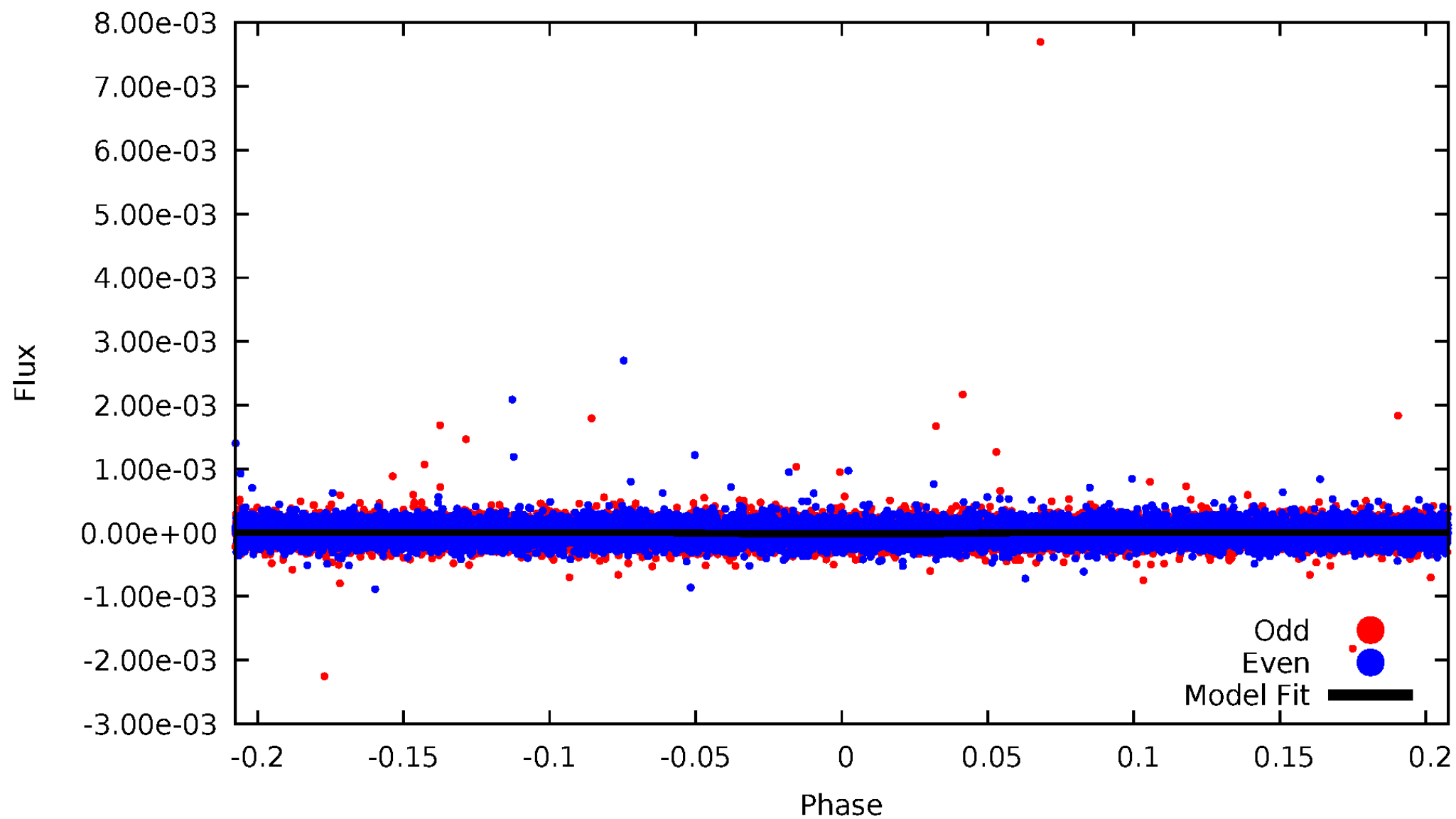
TCE 008411693-01

— P = 0.298 days — P = 0.595 days — P = 1.190 days



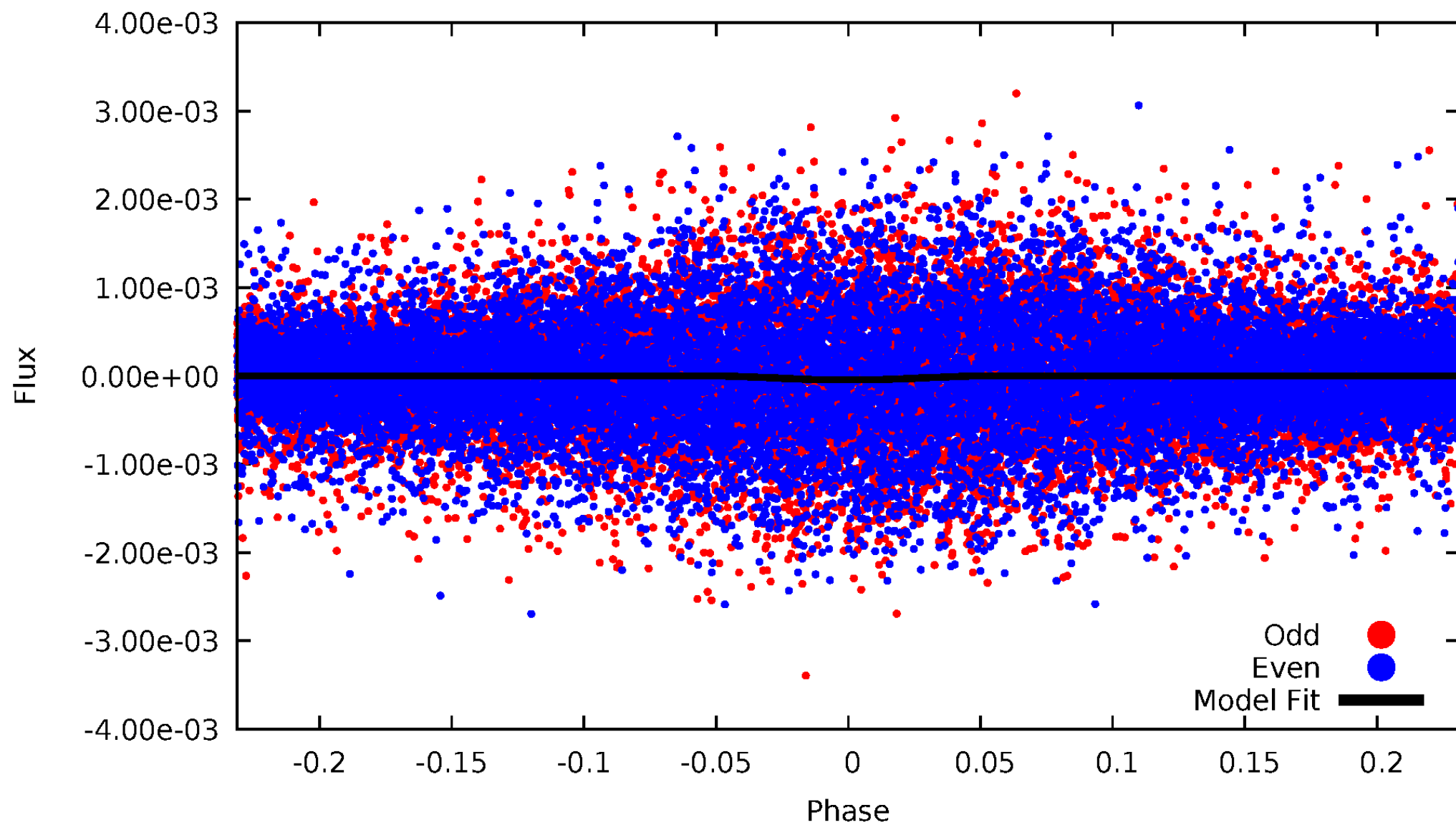
DV Odd/Even

TCE 008411693-01

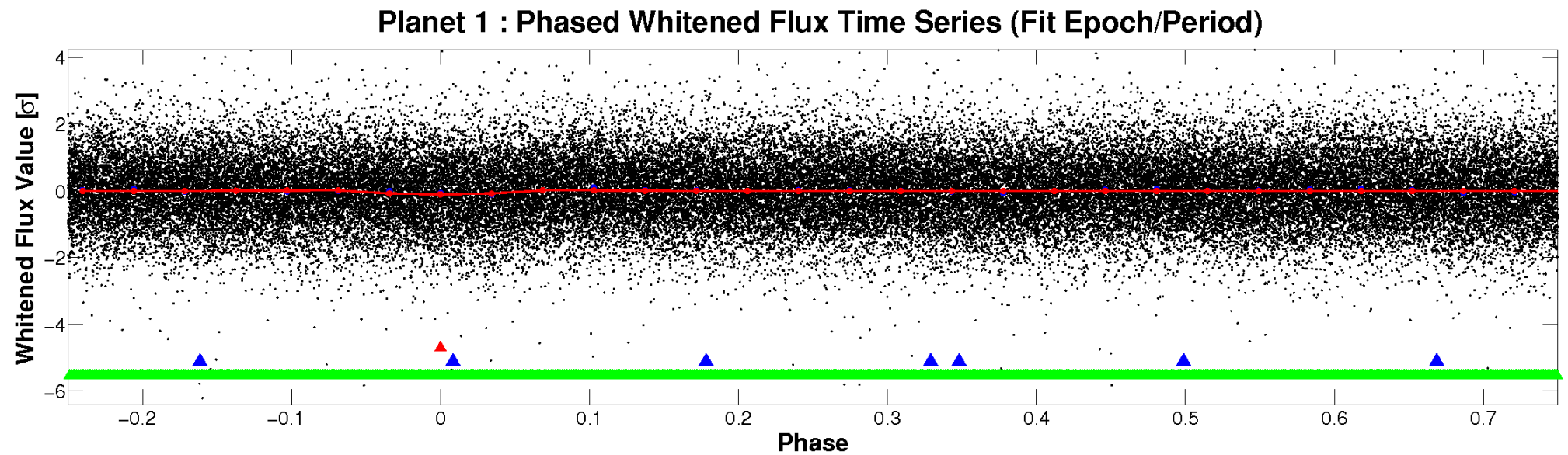
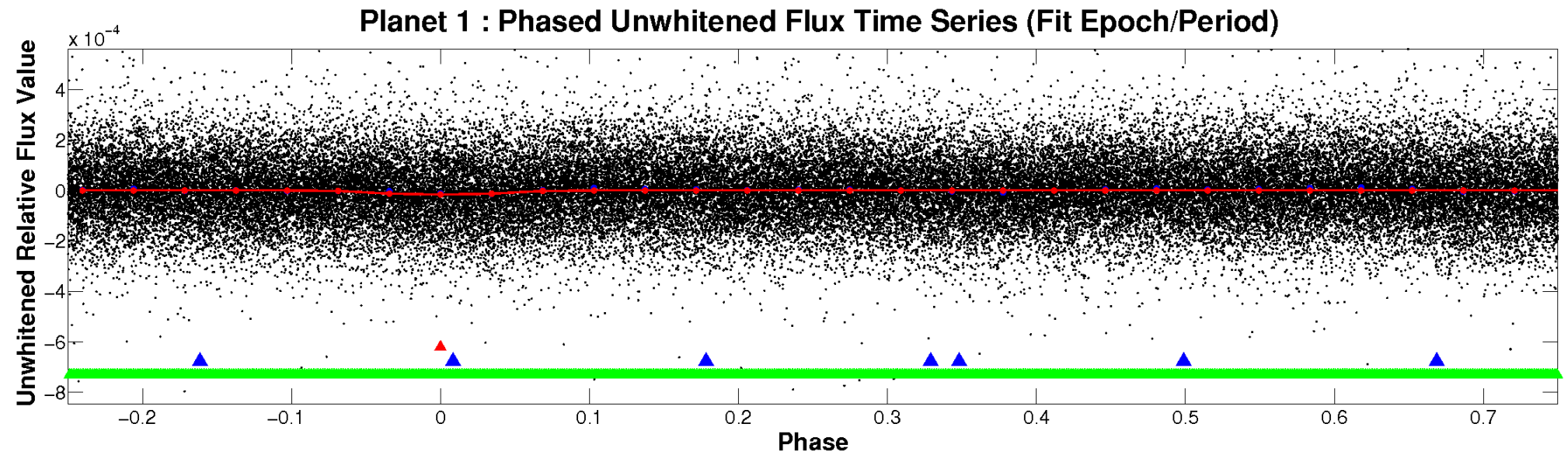


ALT Odd/Even

TCE 008411693-01

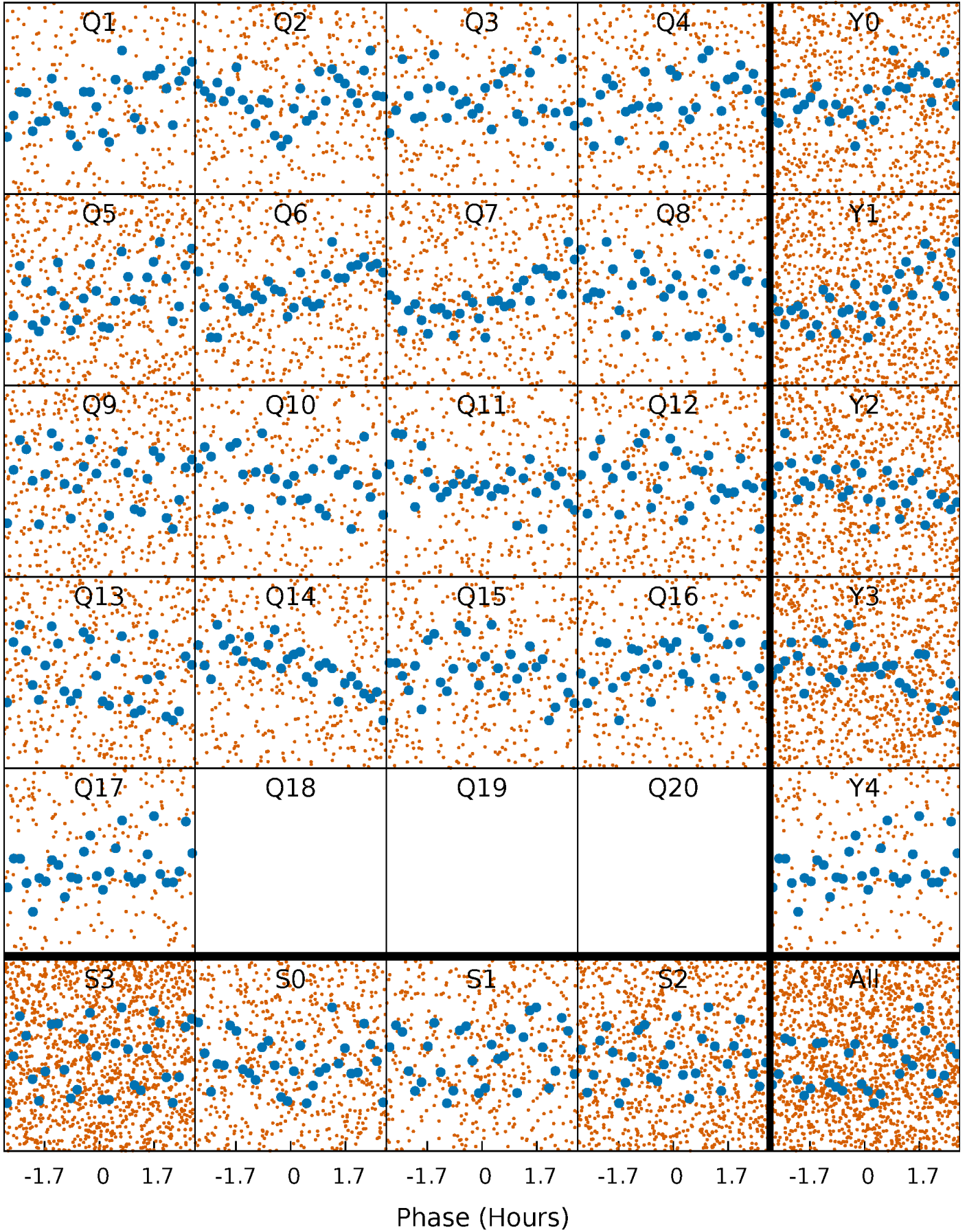


Non-Whitened Vs. Whitened Light Curve



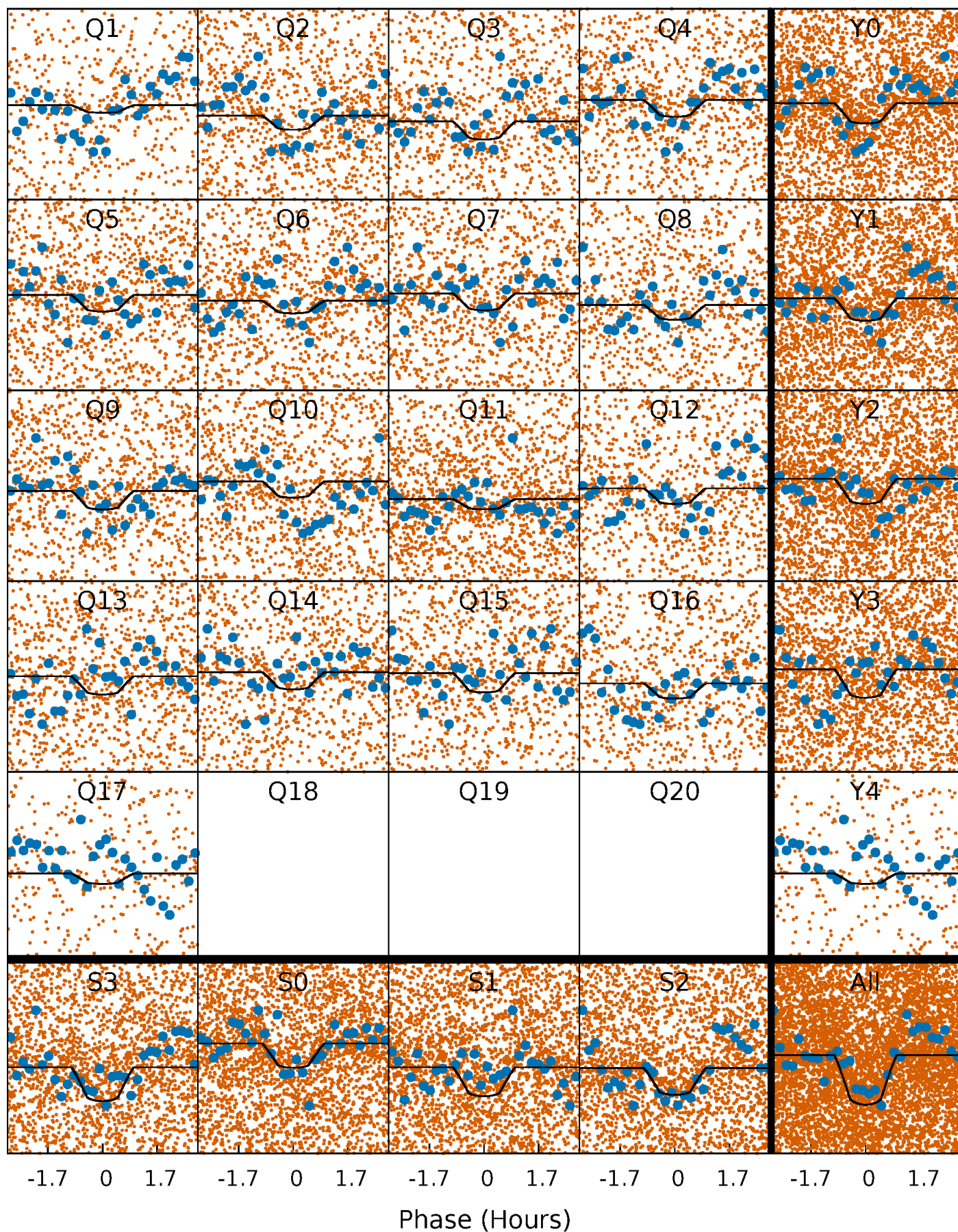
PDC Quarter-Phased Transit Curves

TCE 008411693-01 P= 0.595229 Days $T_0=131.860286$ (BKJD)



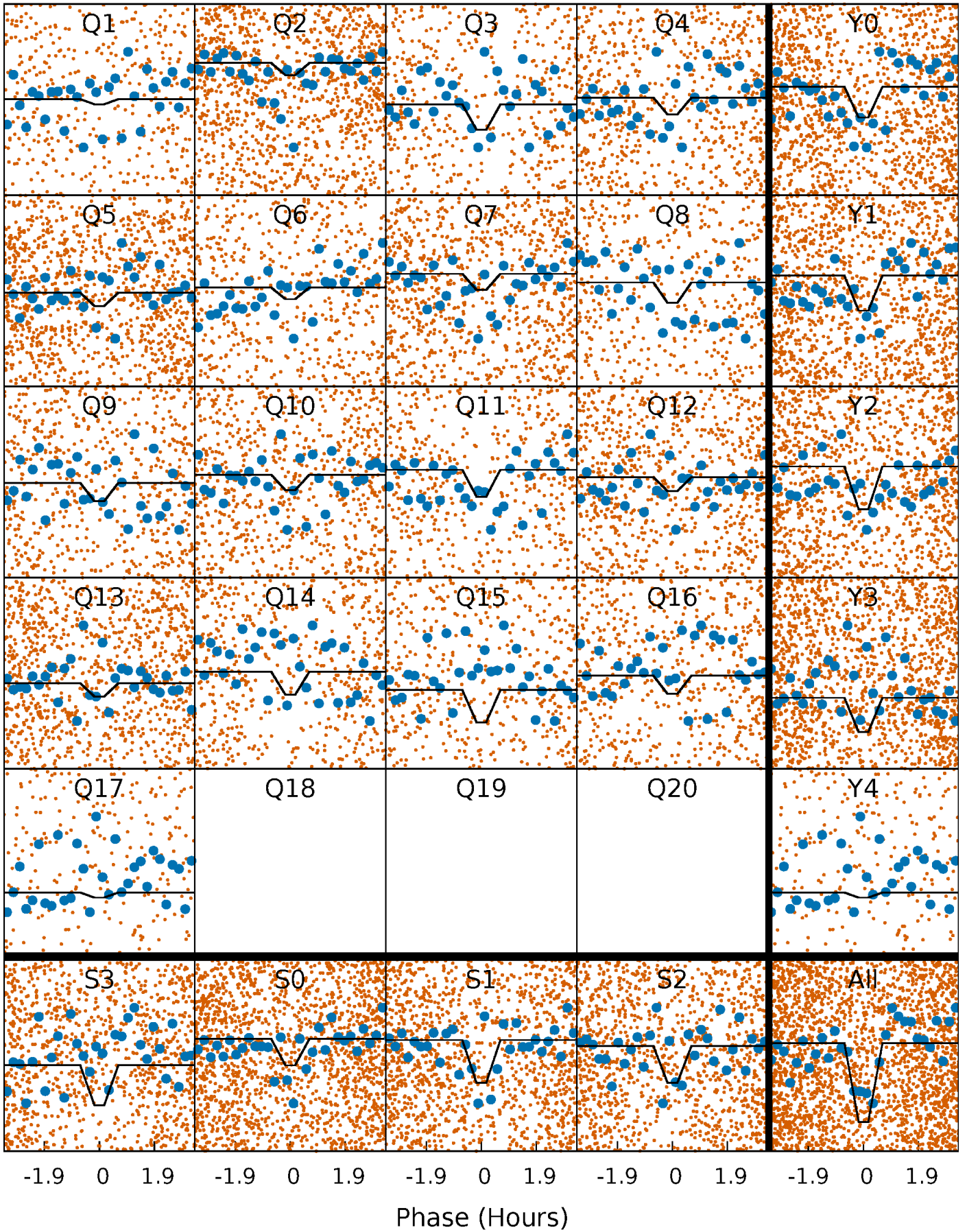
DV Quarter-Phased Transit Curves

TCE 008411693-01 P= 0.595229 Days $T_0=131.860286$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

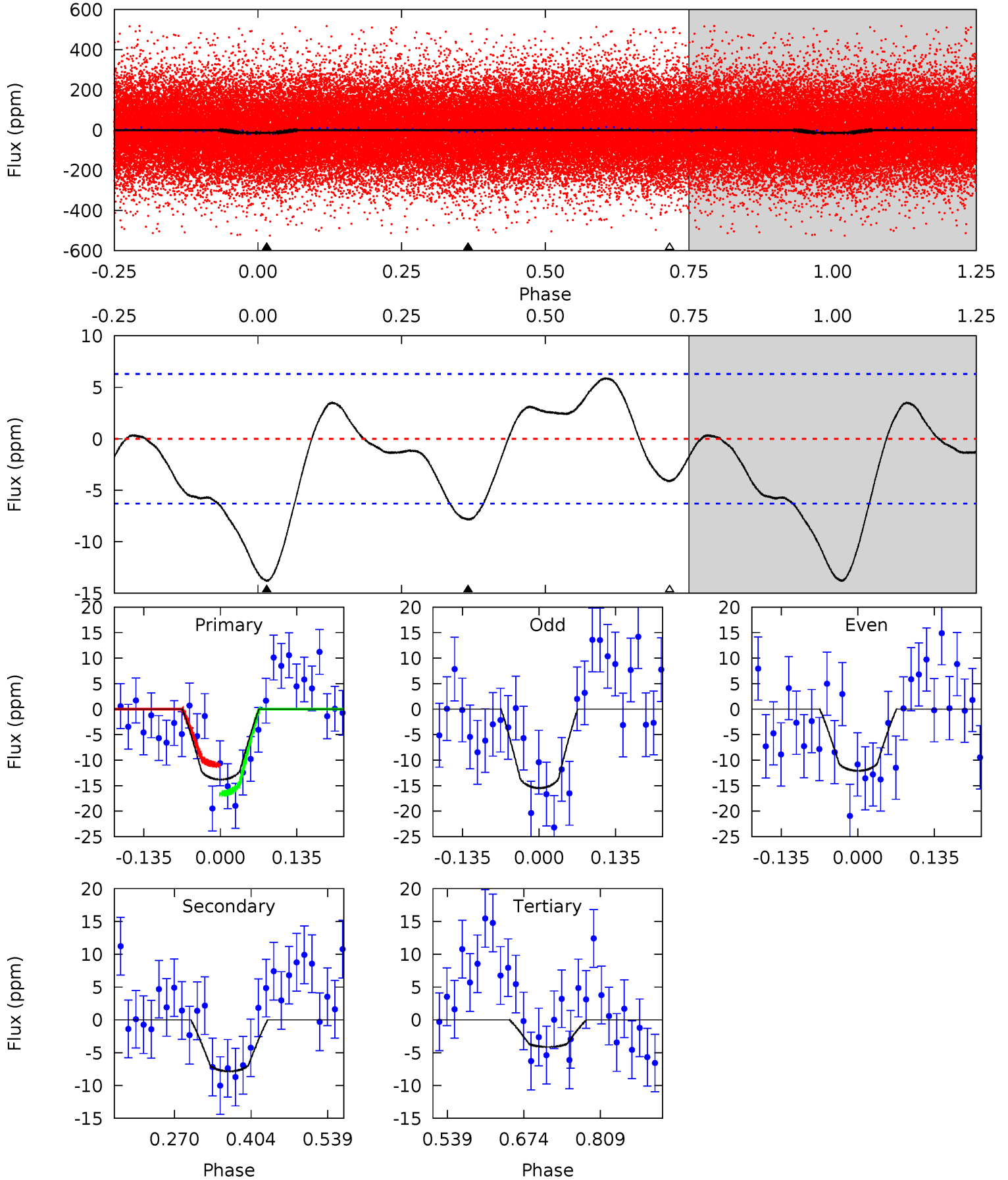
TCE 008411693-01 P= 0.595246 Days $T_0=131.853162$ (BKJD)



DV Model-Shift Uniqueness Test

008411693-01, P = 0.595229 Days, E = 131.265057 Days

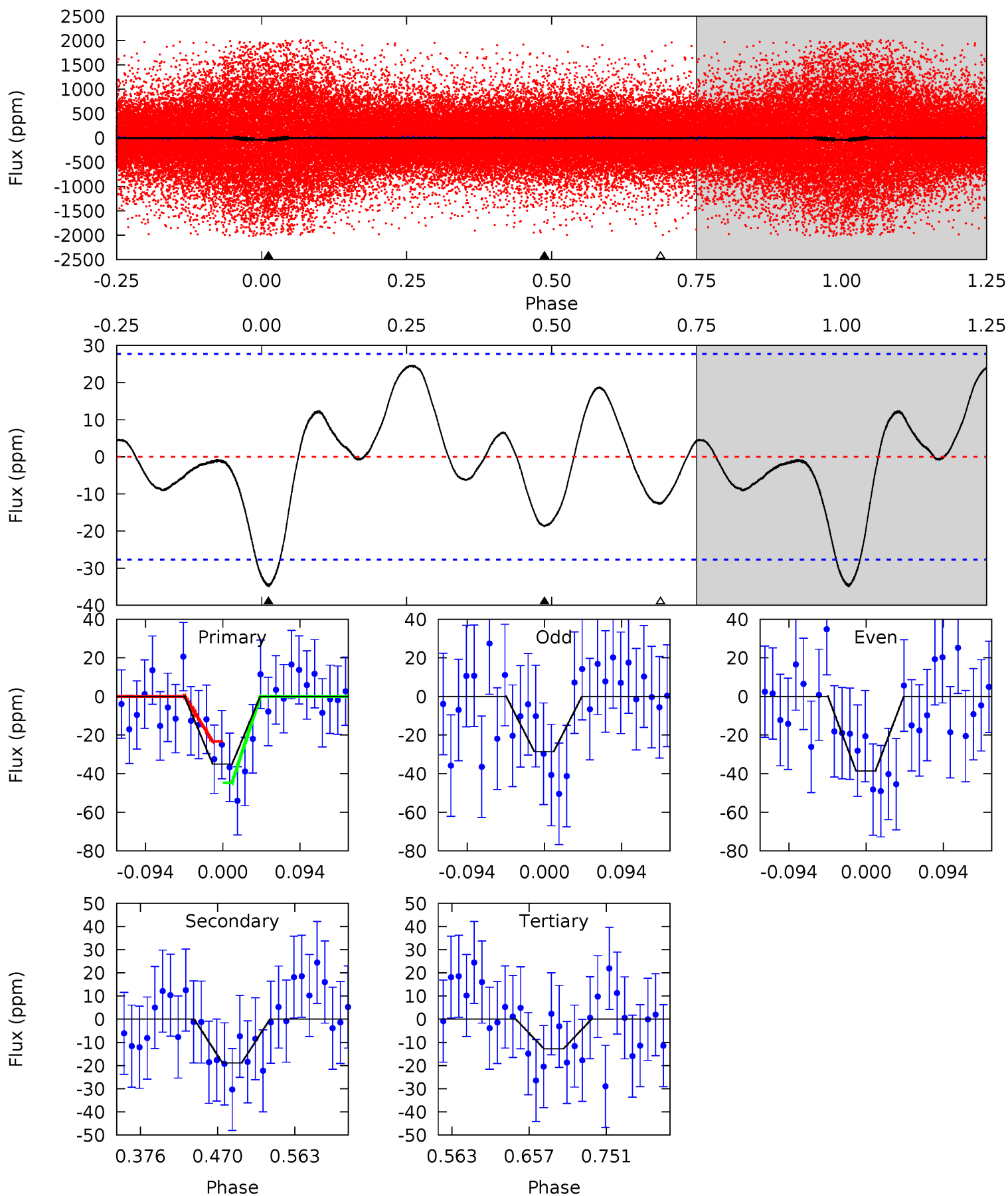
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.88	5.61	2.95	0	4.50	1.50	2.16	6.93	9.88	2.66	5.61	1.22	0.83	0.30	2.02



Alt Model-Shift Uniqueness Test

008411693-01, P = 0.595246 Days, E = 131.257916 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.79	3.11	2.12	0	4.58	1.68	1.62	3.67	5.79	0.99	3.11	0.82	1.55	0.41	1.78



Stellar Parameters For KIC 008411693

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7452^{+206}_{-310}	$3.767^{+0.425}_{-0.075}$	$-0.240^{+0.250}_{-0.350}$	$2.848^{+0.421}_{-1.263}$	$1.729^{+0.181}_{-0.393}$	$0.105^{+0.369}_{-0.033}$
	+3%/-4%	+11%/-2%	+104%/-146%	+15%/-44%	+10%/-23%	+350%/-32%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008411693-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 1	$1.23^{+0.38}_{-0.40}$	5772^{+417}_{-638}	5240^{+1153}_{-929}	$0.796^{+0.888}_{-0.341}$
Alt.	-19 ± 6	$1.87^{+0.39}_{-0.47}$	5772^{+405}_{-570}	5423^{+816}_{-1022}	$0.840^{+0.661}_{-0.353}$

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

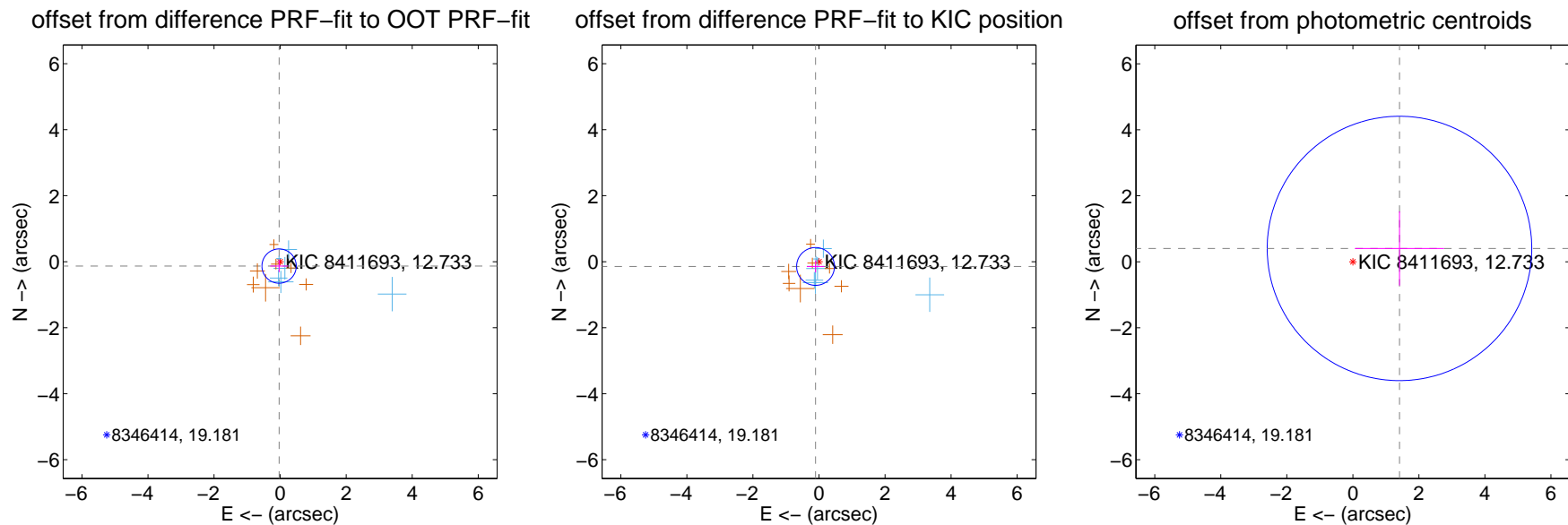
DV Centroid Data

Supplemental centroid analysis for 008411693-01. Kepler magnitude: 12.73. Transit SNR 7.24

There are 6 quarters with good PRF difference image offsets

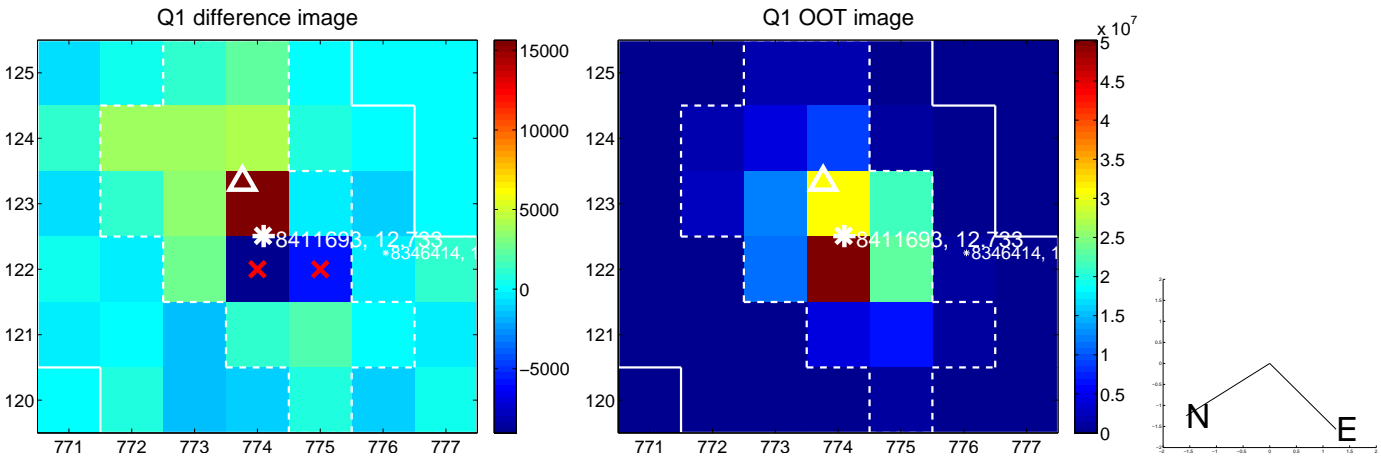
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.136 ± 0.173	0.79	0.031 ± 0.269	-0.133 ± 0.184
PRF-fit source offset from KIC position	0.178 ± 0.191	0.93	0.105 ± 0.261	-0.144 ± 0.183
photometric centroid source offset	1.47 ± 1.34	1.10	-1.41 ± 1.35	0.40 ± 1.13

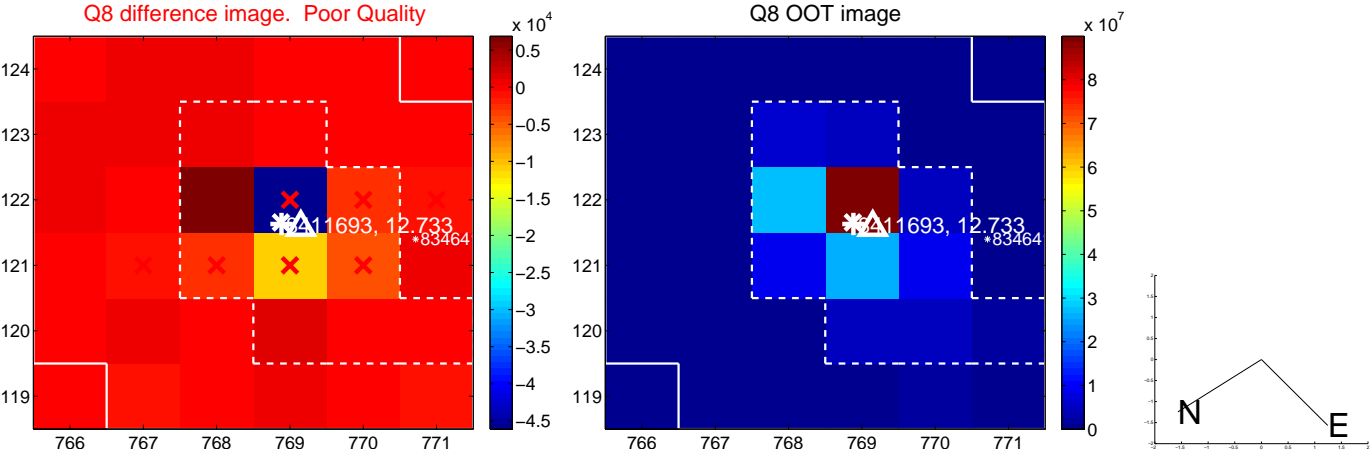
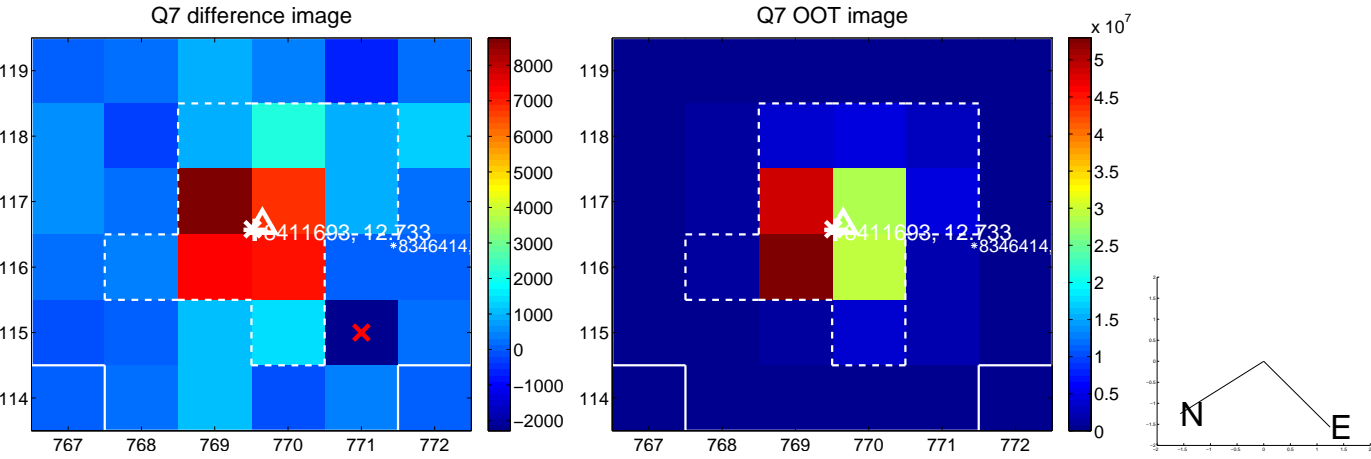
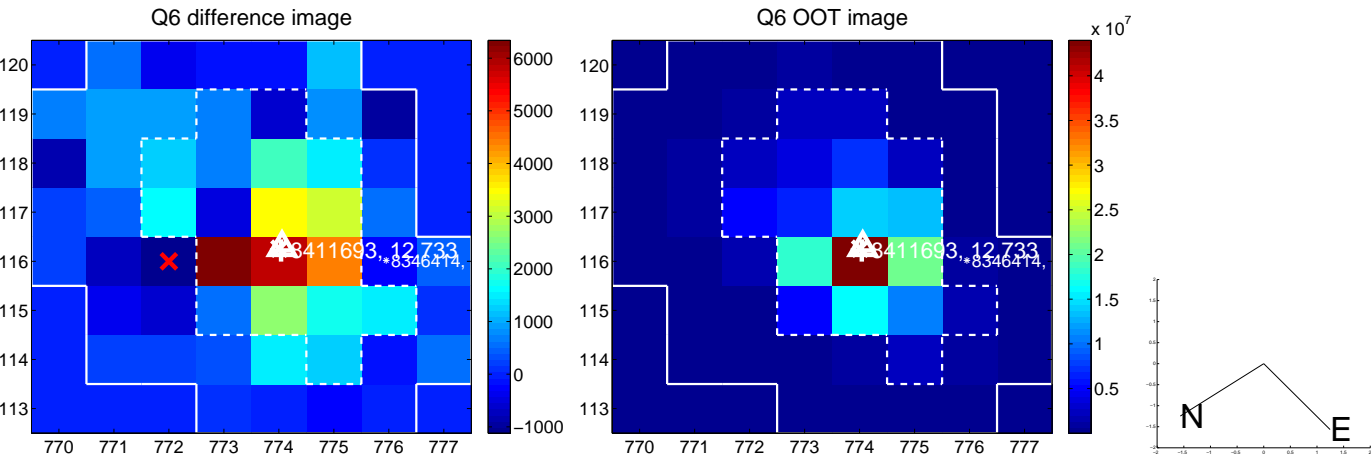
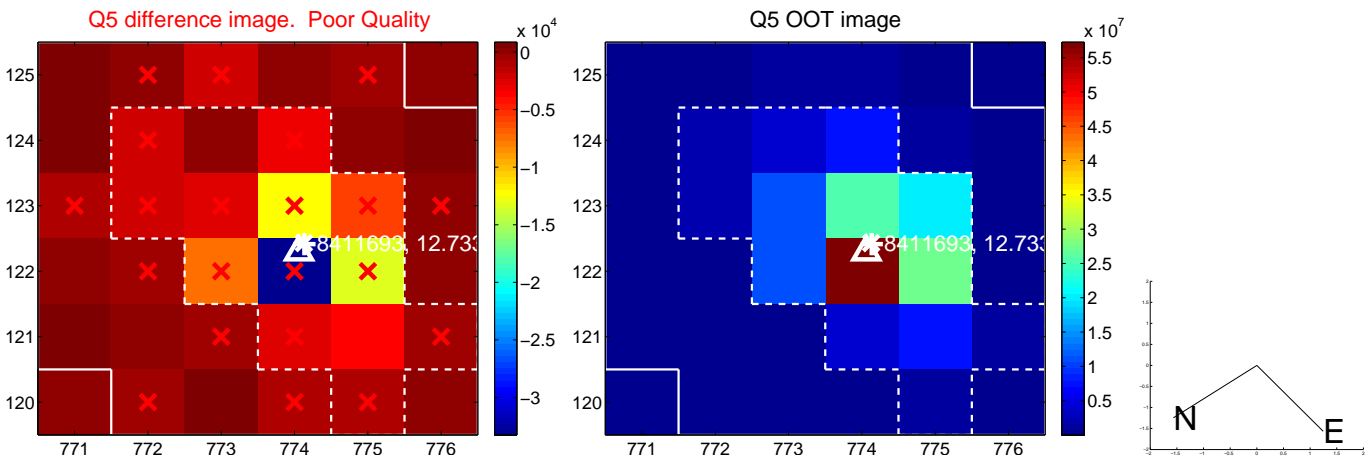


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

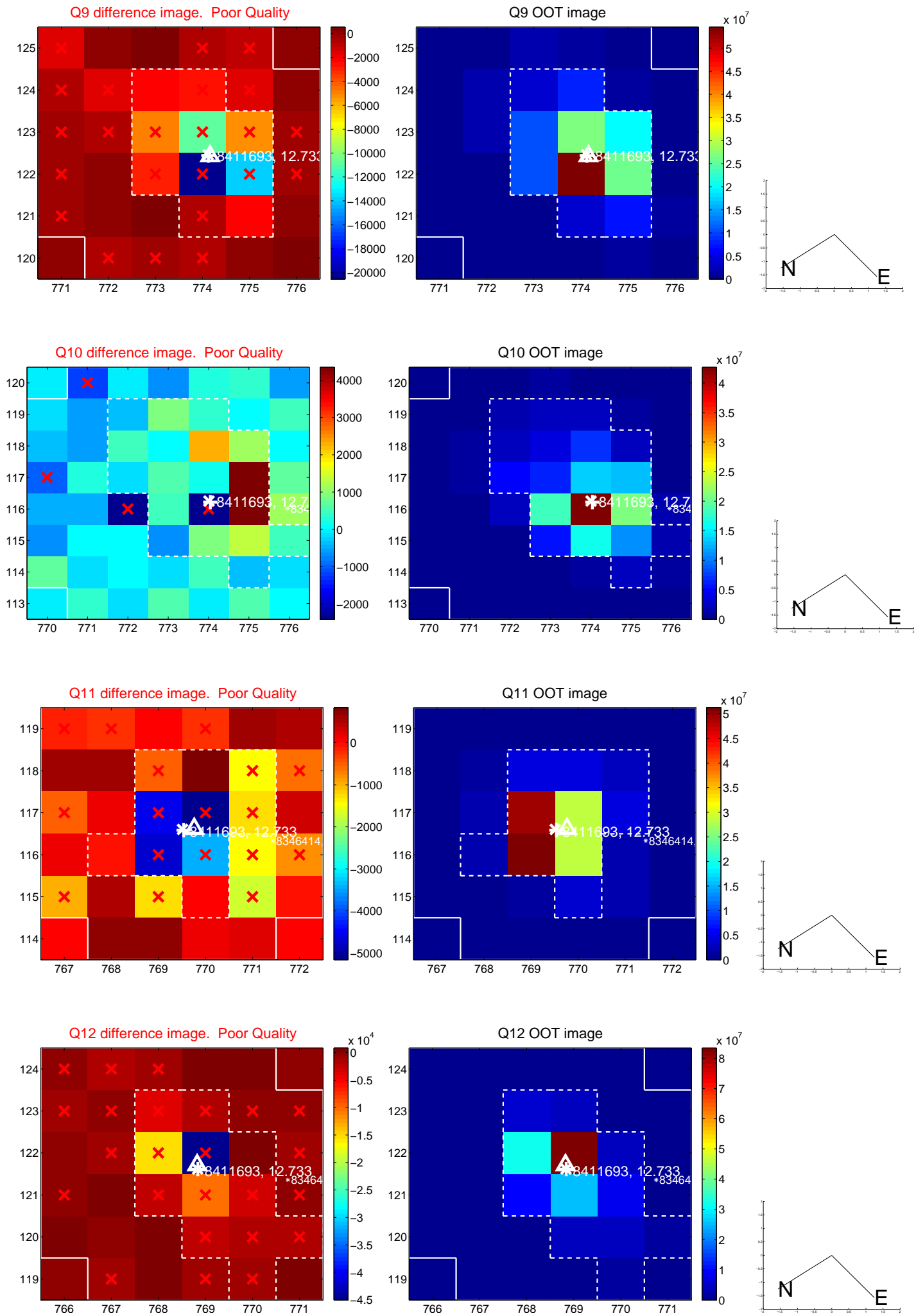
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



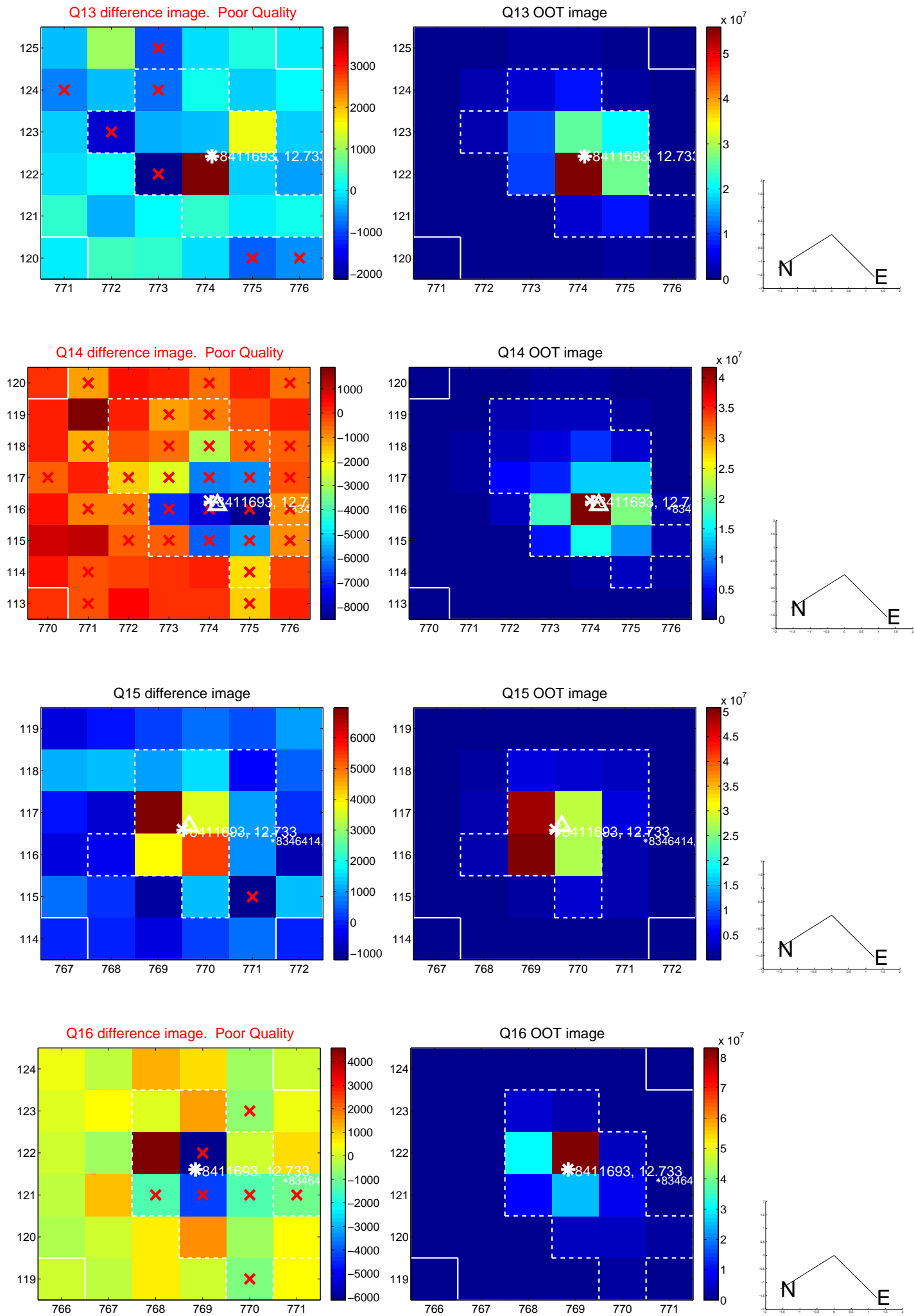
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



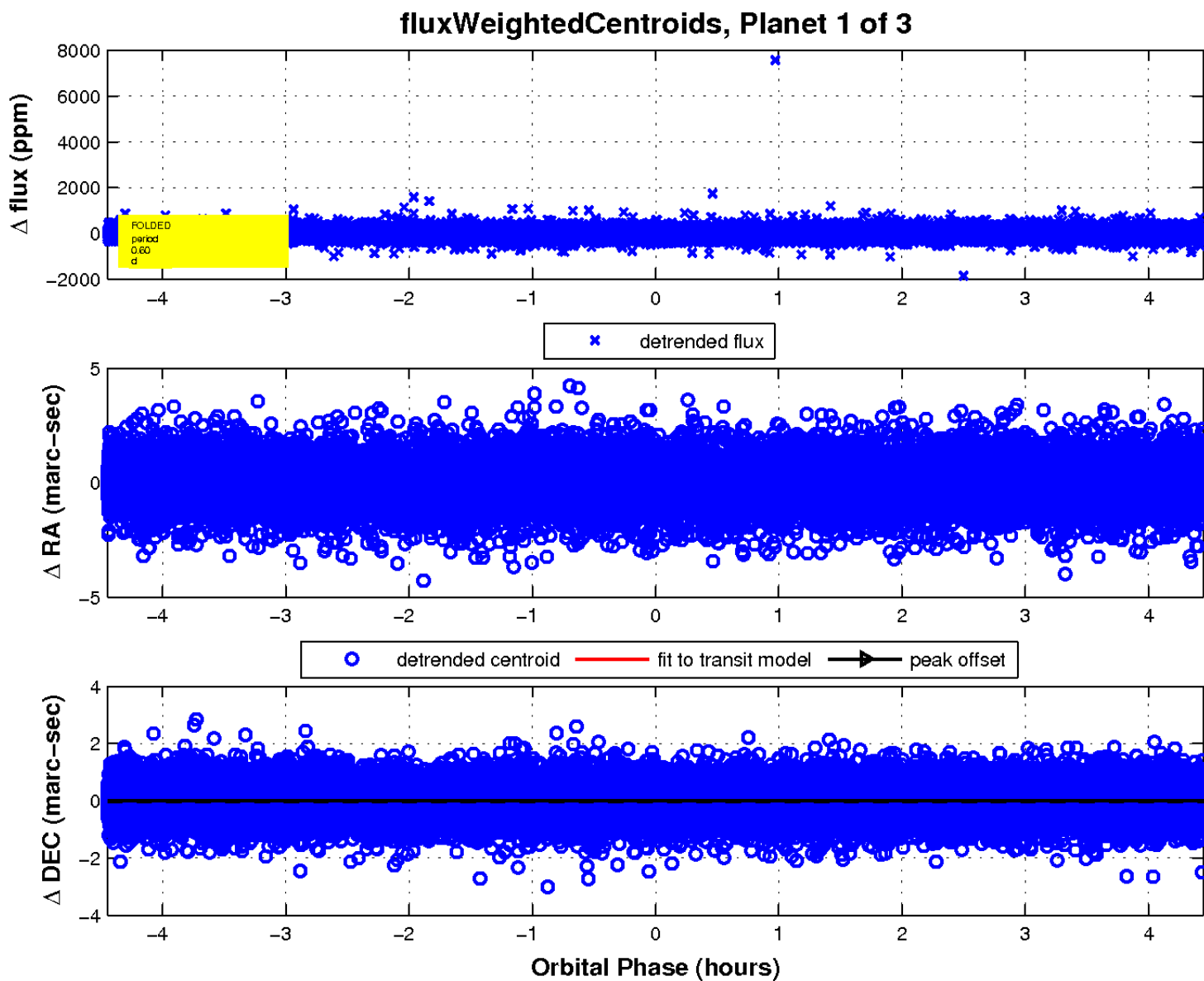
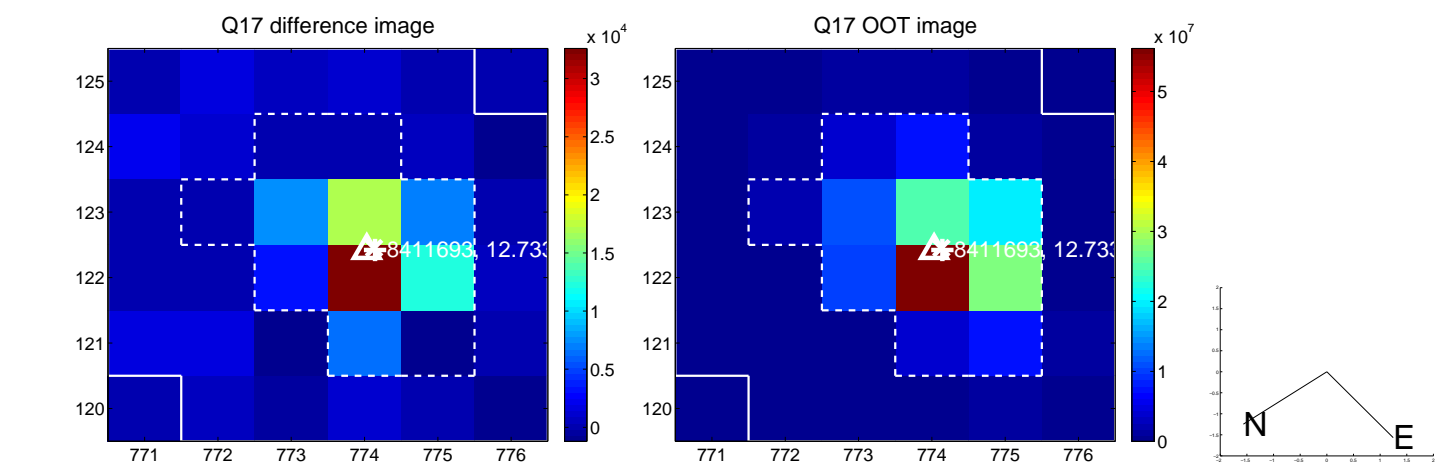
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

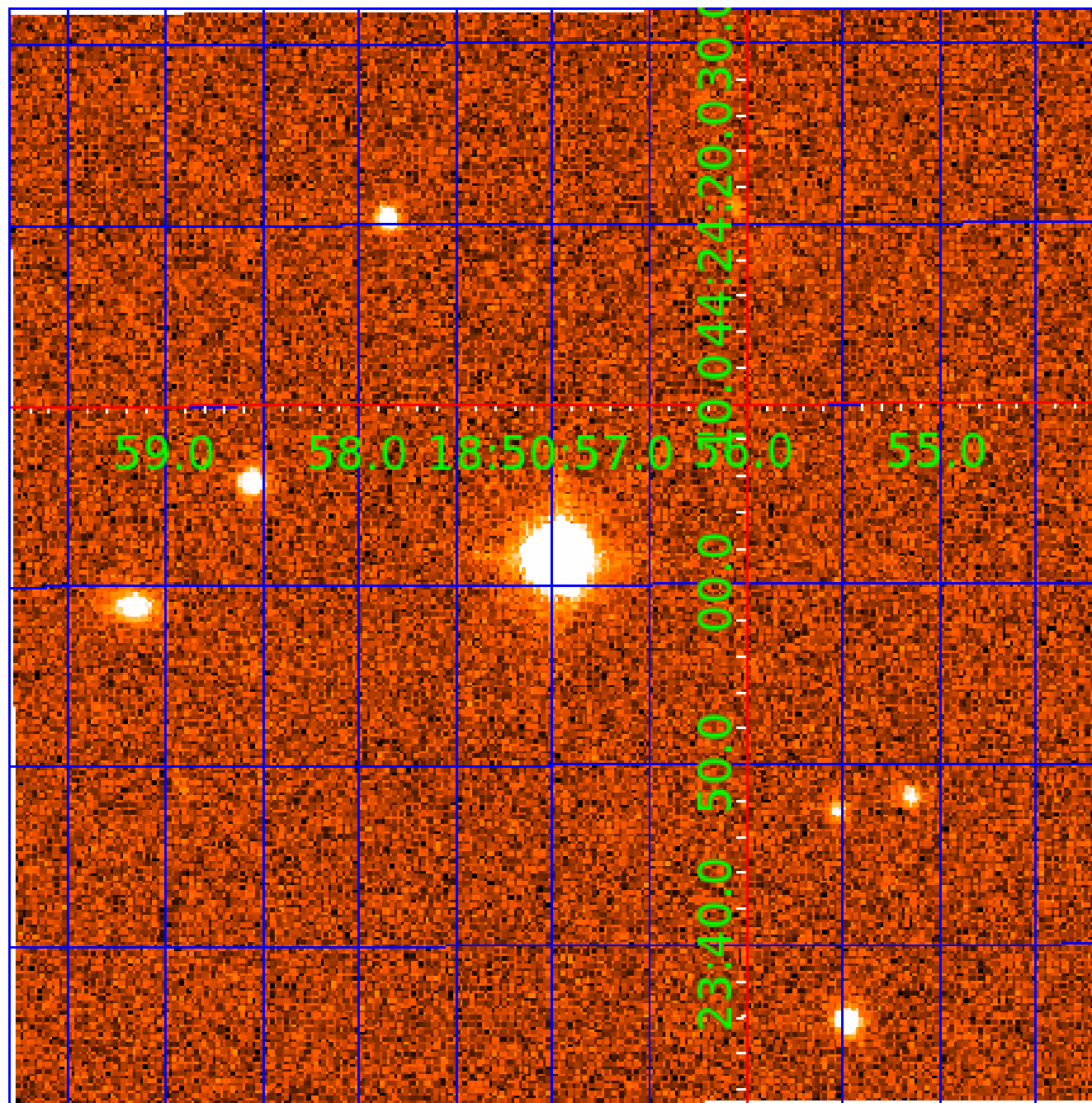


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008411693

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})
008411693-01	OBS	No	0.595229	131.860286	16.0	1.483	8.0	7.2	2.85	7452	1.34	81052.57
008411693-02	OBS	No	199.502875	210.031166	174.5	7.362	7.5	5.6	2.85	7452	4.33	34.81
008411693-03	OBS	No	0.779358	132.042202	25.6	6.628	8.3	12.3	2.85	7452	1.48	56584.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008411693-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008411693-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008411693-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—CENT_FEW_MEAS

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

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

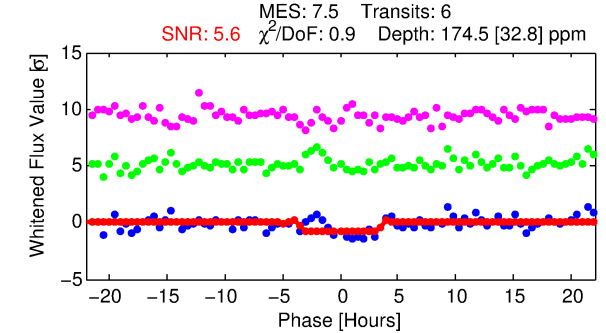
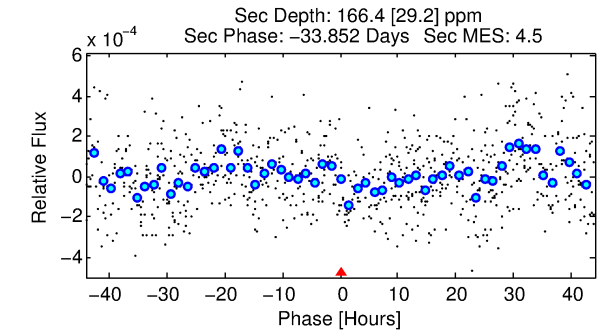
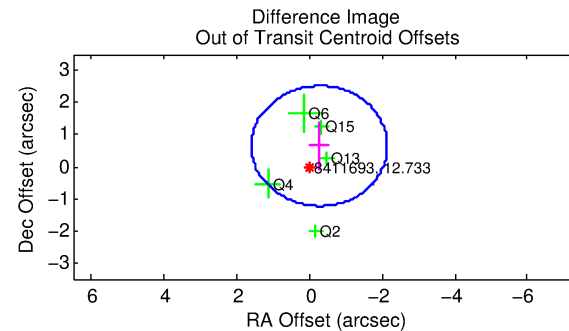
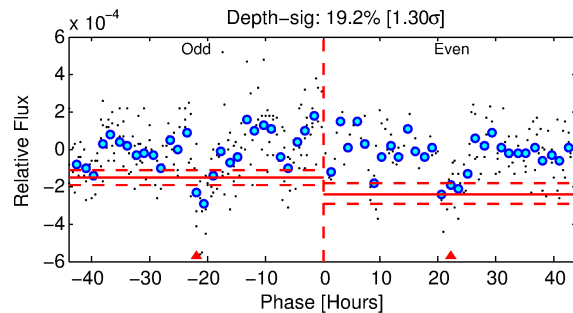
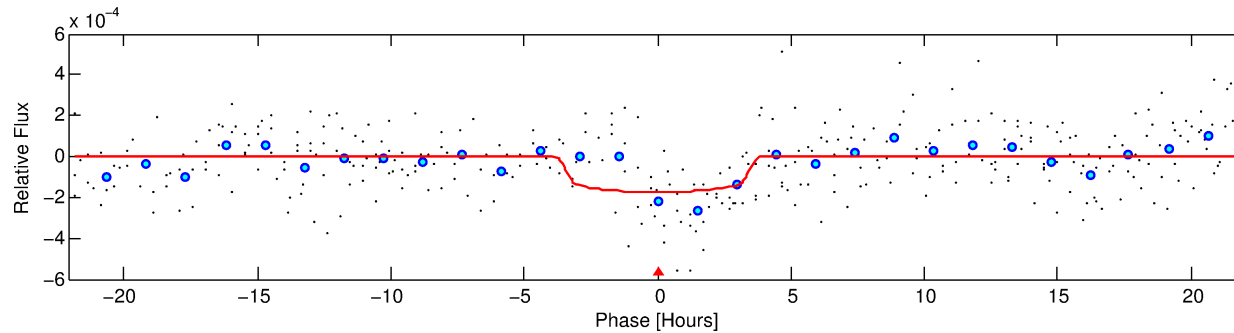
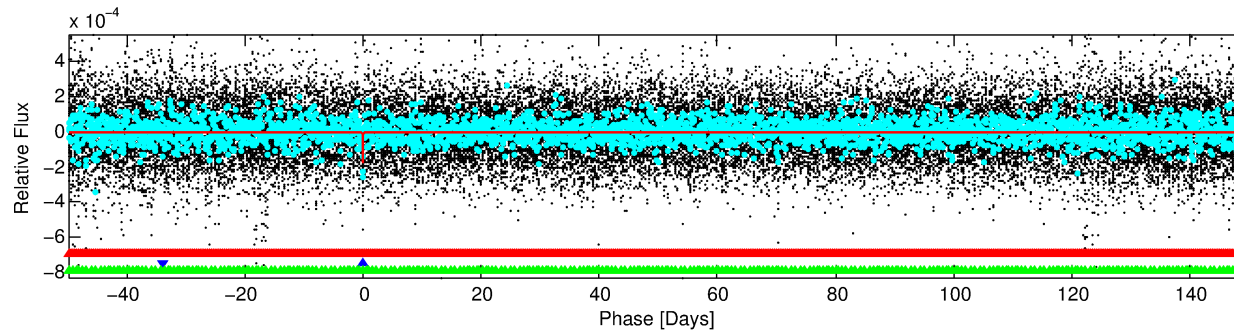
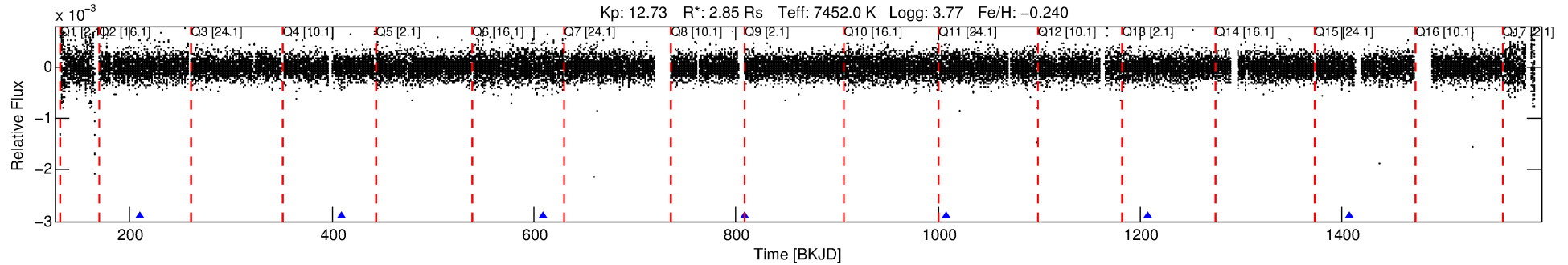
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008411693-02

No Significant Match Found

DV One-Page Summary

KIC: 8411693 Candidate: 2 of 3 Period: 199.503 d



DV Fit Results:

Period = 199.50288 [0.00511] d
Epoch = 210.0312 [0.0179] BKJD
Rp/R* = 0.0139 [0.0036]
a/R* = 105.62 [134.68]
b = 0.88 [0.34]
Seff = 34.81 [25.60]
Teq = 619 [114] K
Rp = 4.33 [2.22] Re
a = 0.8023 [0.3532] AU
Ag = 3139.66 [2829.14] [1.11 σ]
Teffp = 7168 [1024] K [6.35 σ]

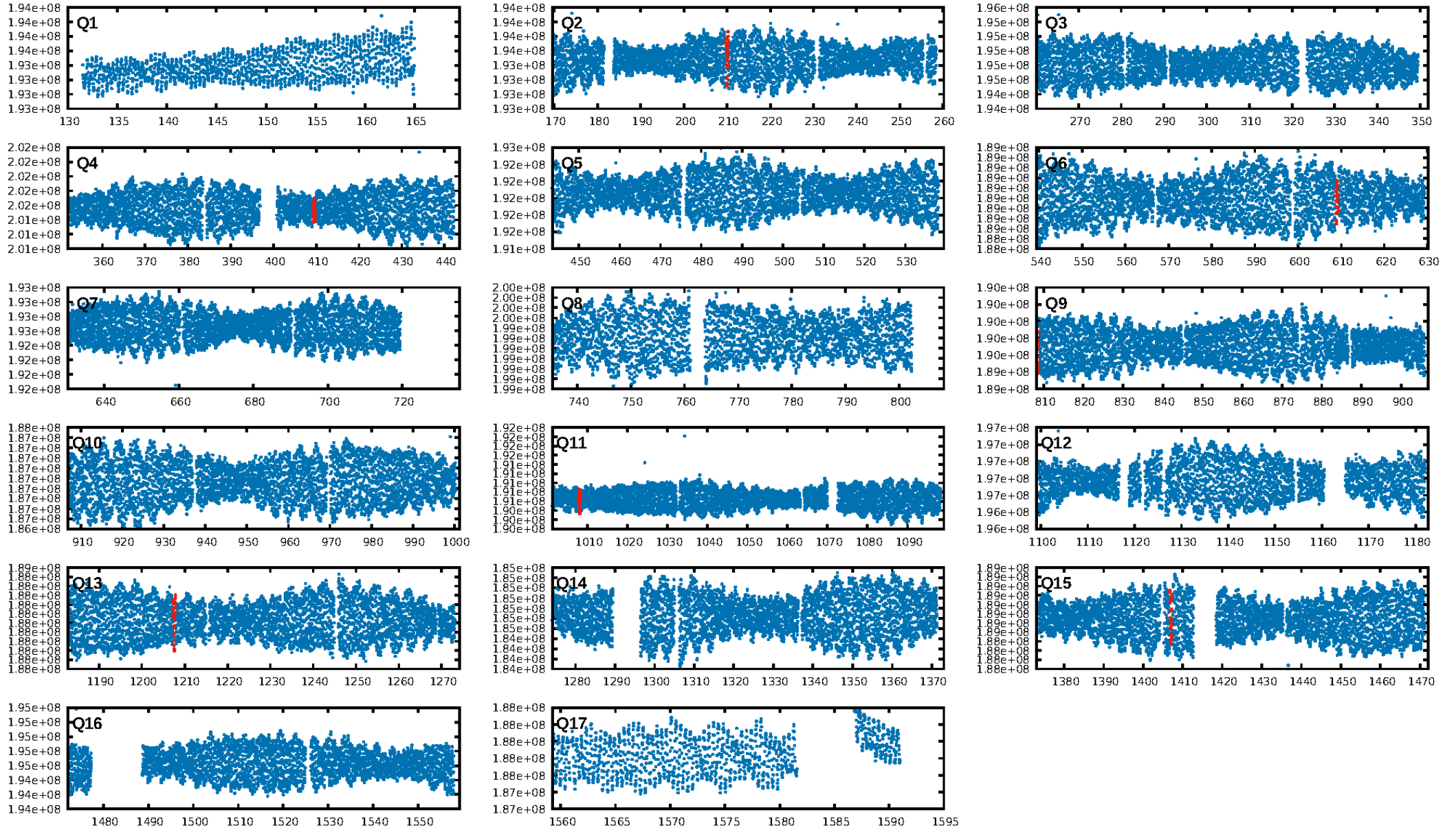
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [481.46 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 5.863
Centroid-sig: N/A
Centroid-so: 0.362 arcsec [0.32 σ]
OotOffset-rm: 0.700 arcsec [1.12 σ]
KicOffset-rm: 0.659 arcsec [1.28 σ]
OotOffset-st: 2/1/1/1 [5]
KicOffset-st: 2/1/1/1 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 0.00 [0/5]

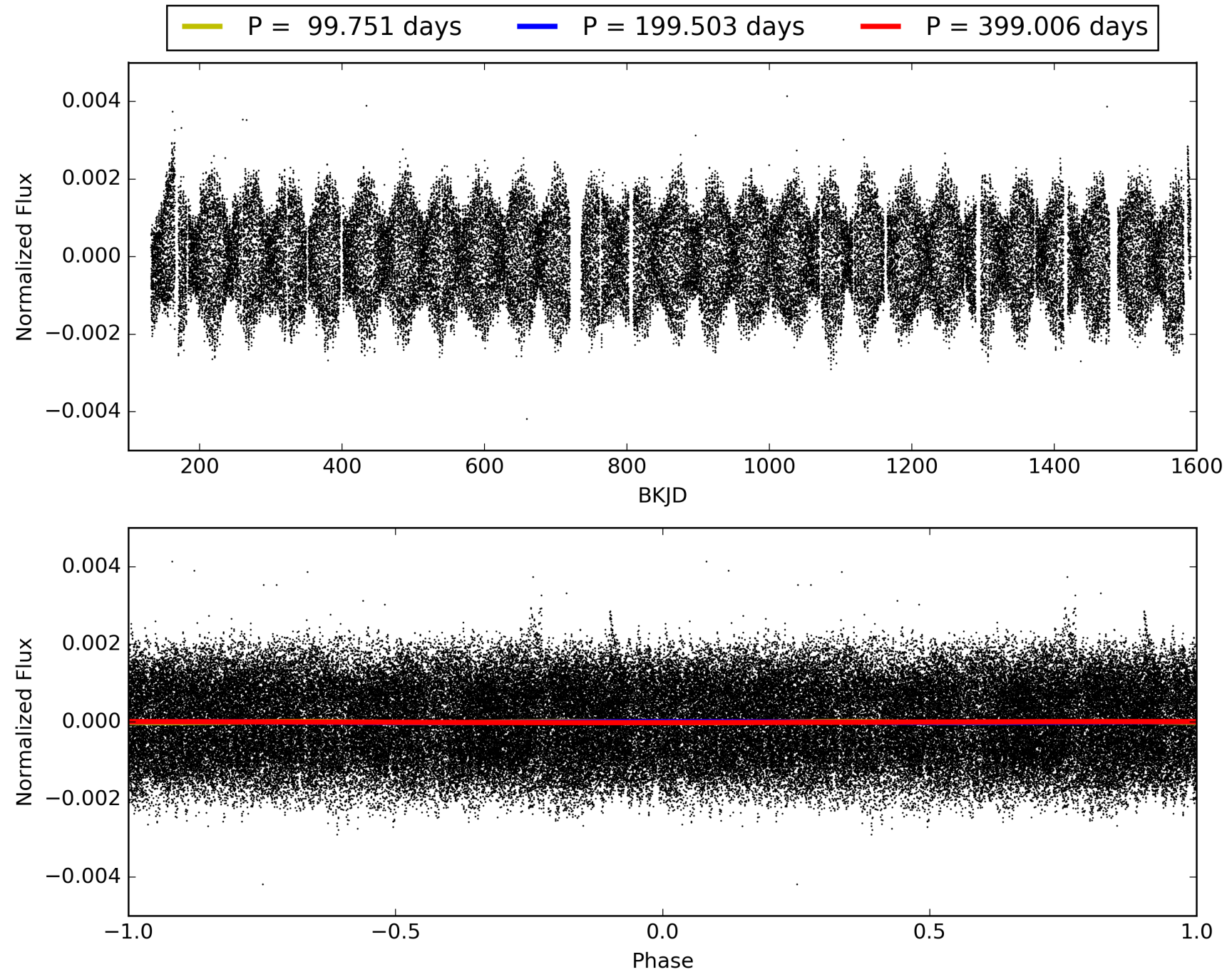
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 20:11:30 Z

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

TCE 008411693-02, PDC Light Curves

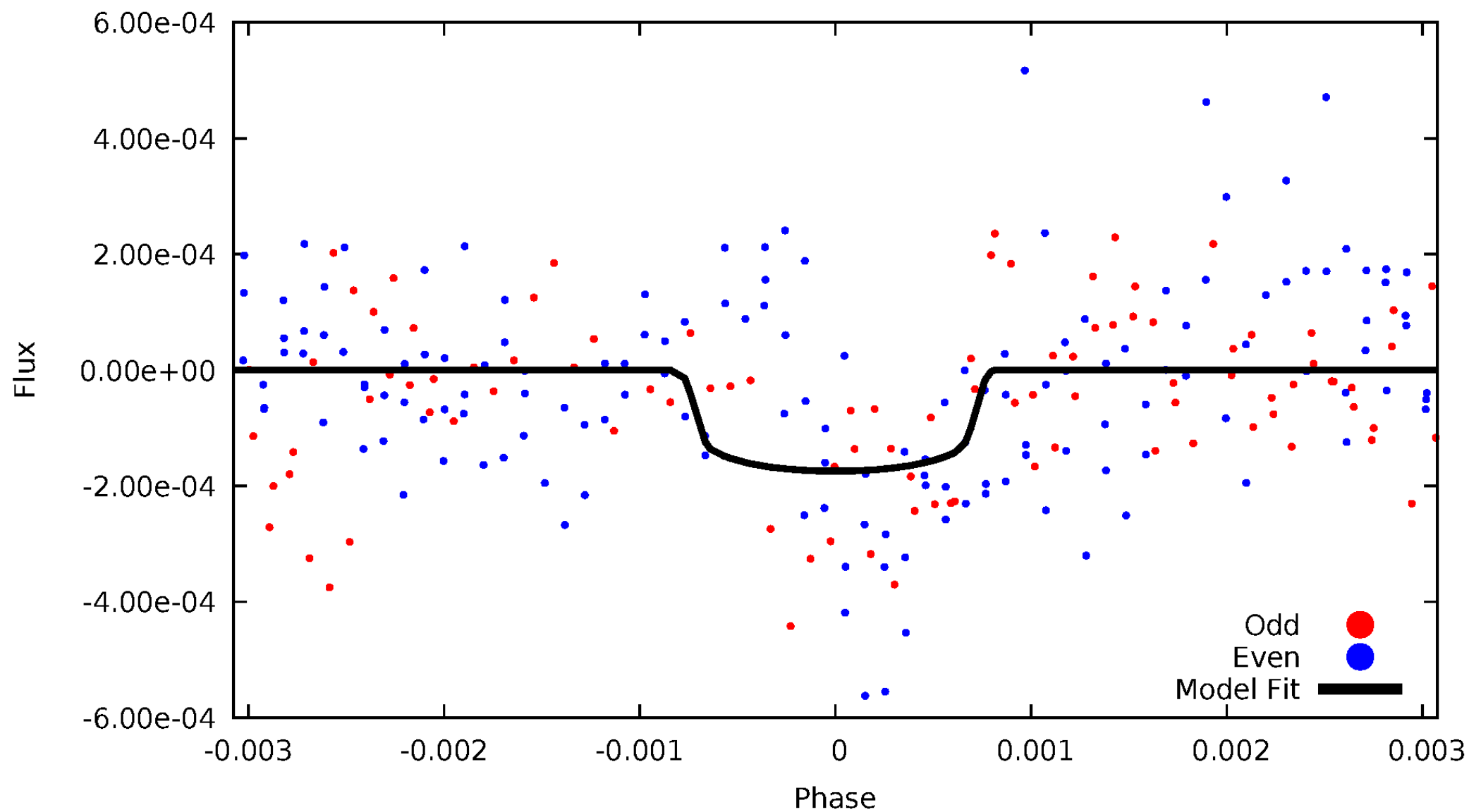


TCE 008411693-02



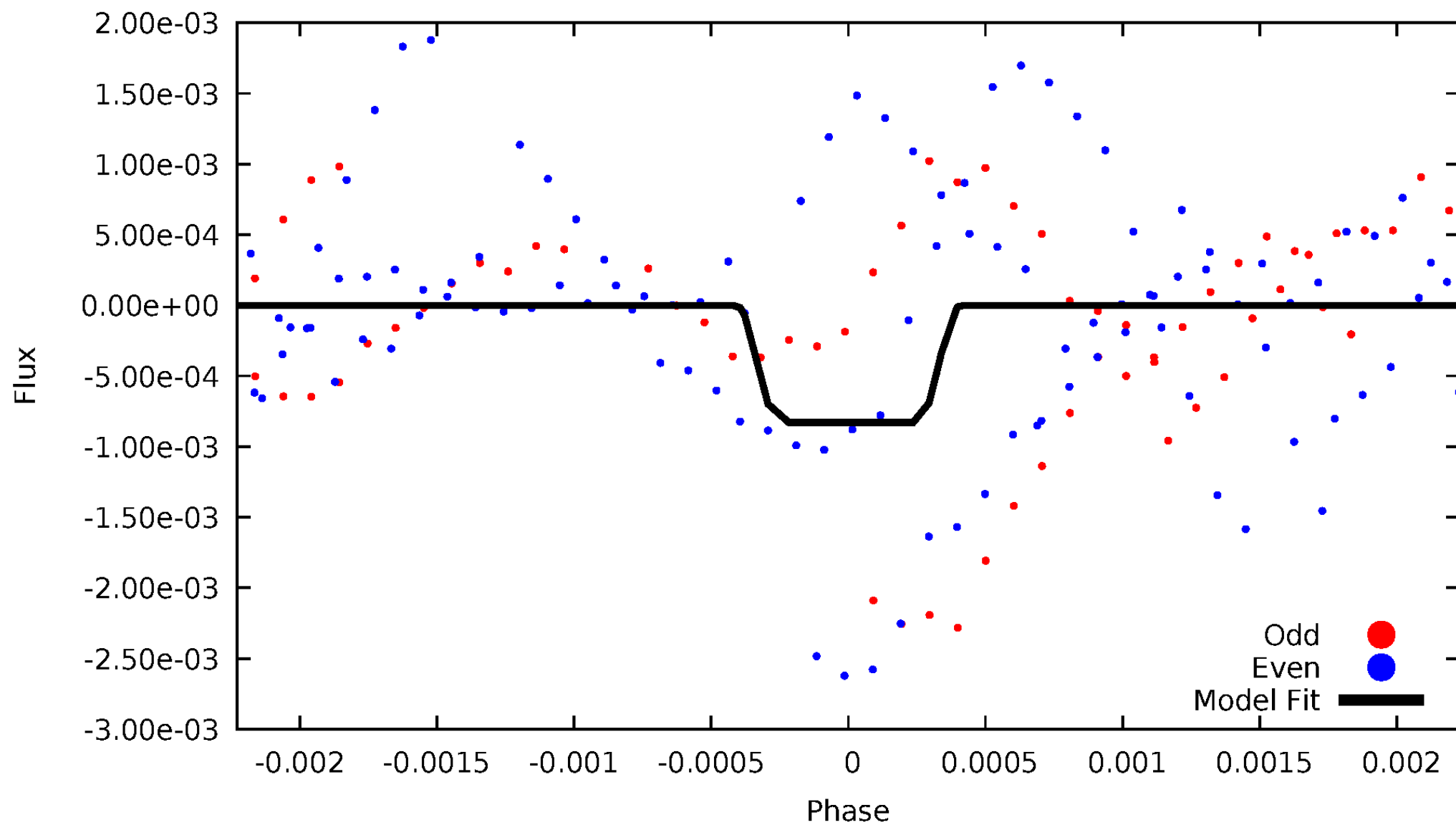
DV Odd/Even

TCE 008411693-02



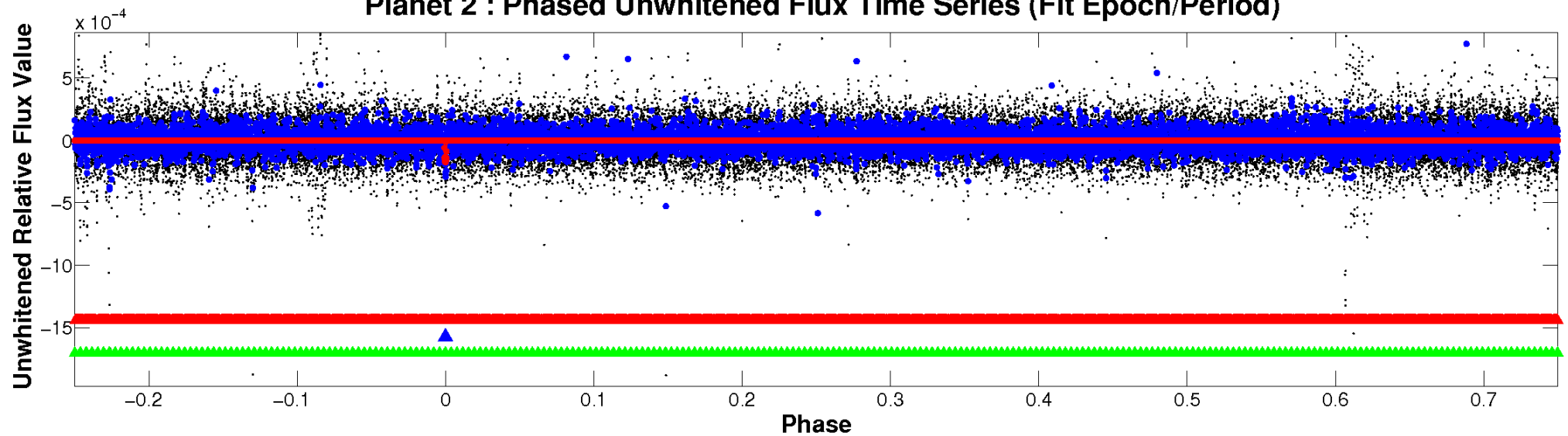
ALT Odd/Even

TCE 008411693-02

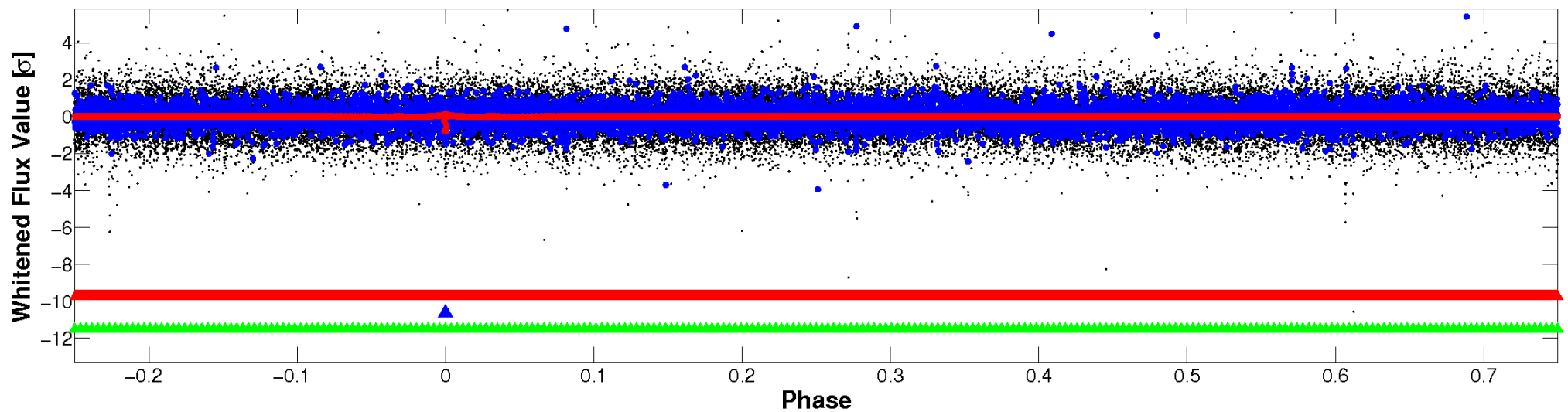


Non-Whitened Vs. Whitened Light Curve

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

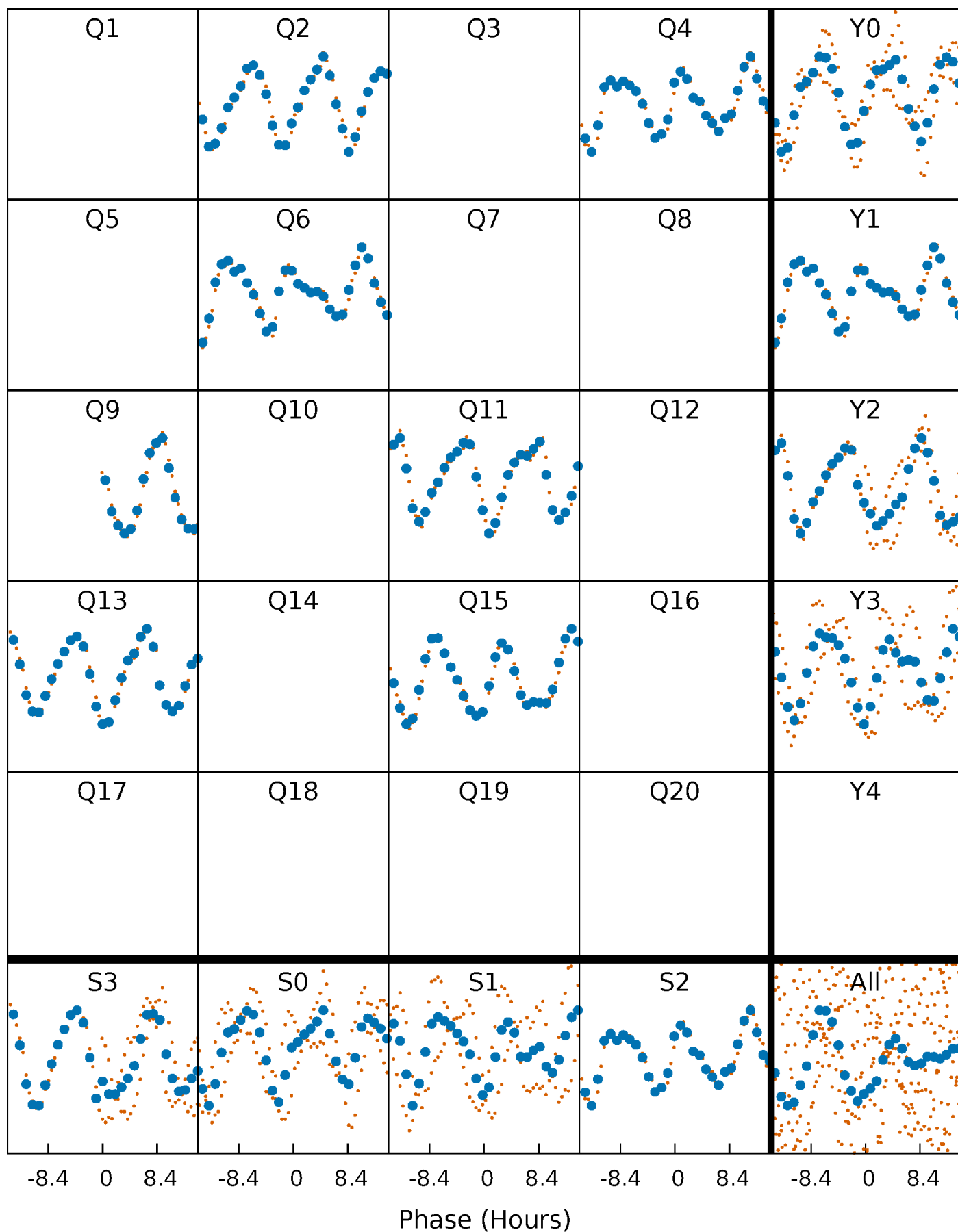


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



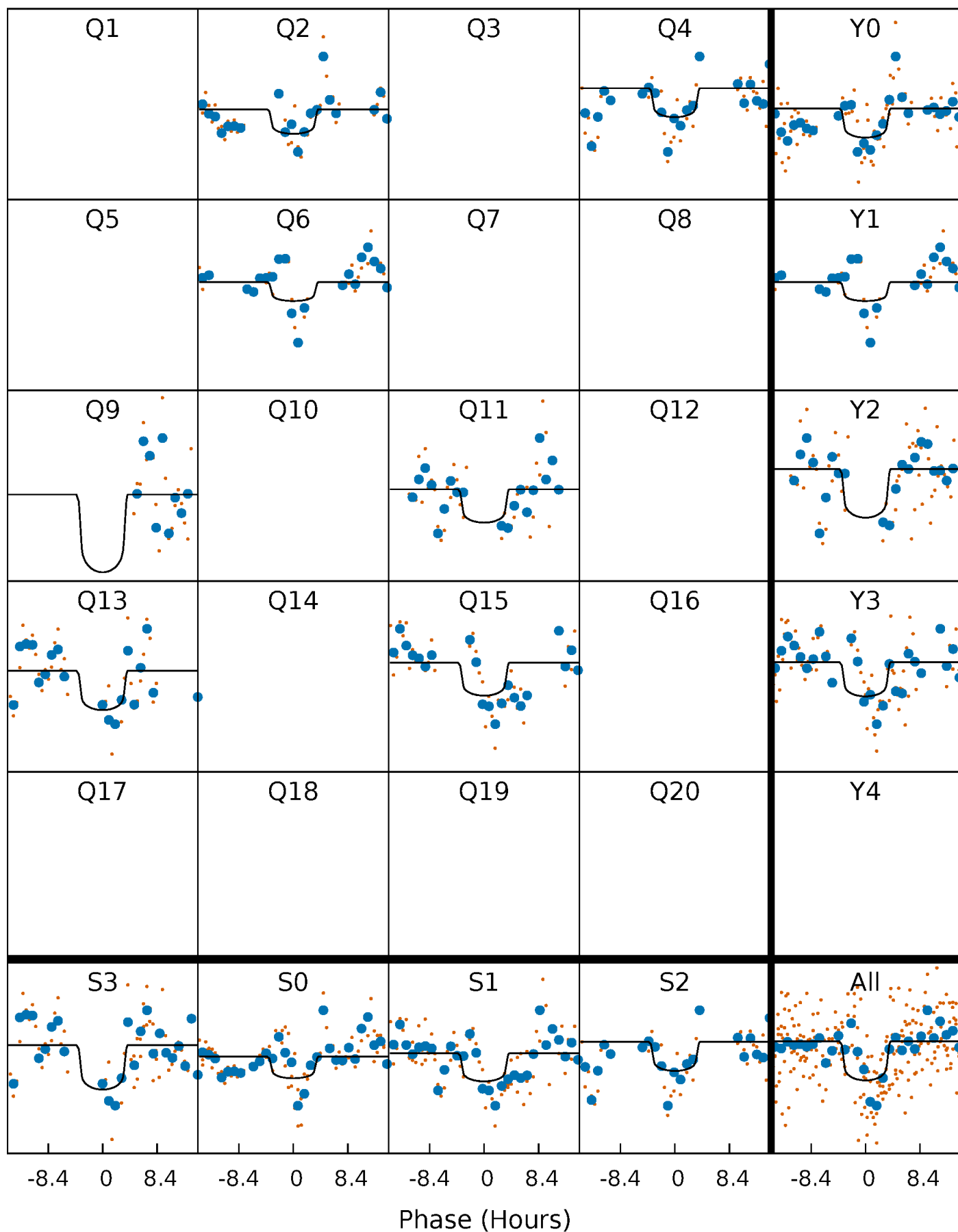
PDC Quarter-Phased Transit Curves

TCE 008411693-02 P=199.502875 Days $T_0=210.031166$ (BKJD)



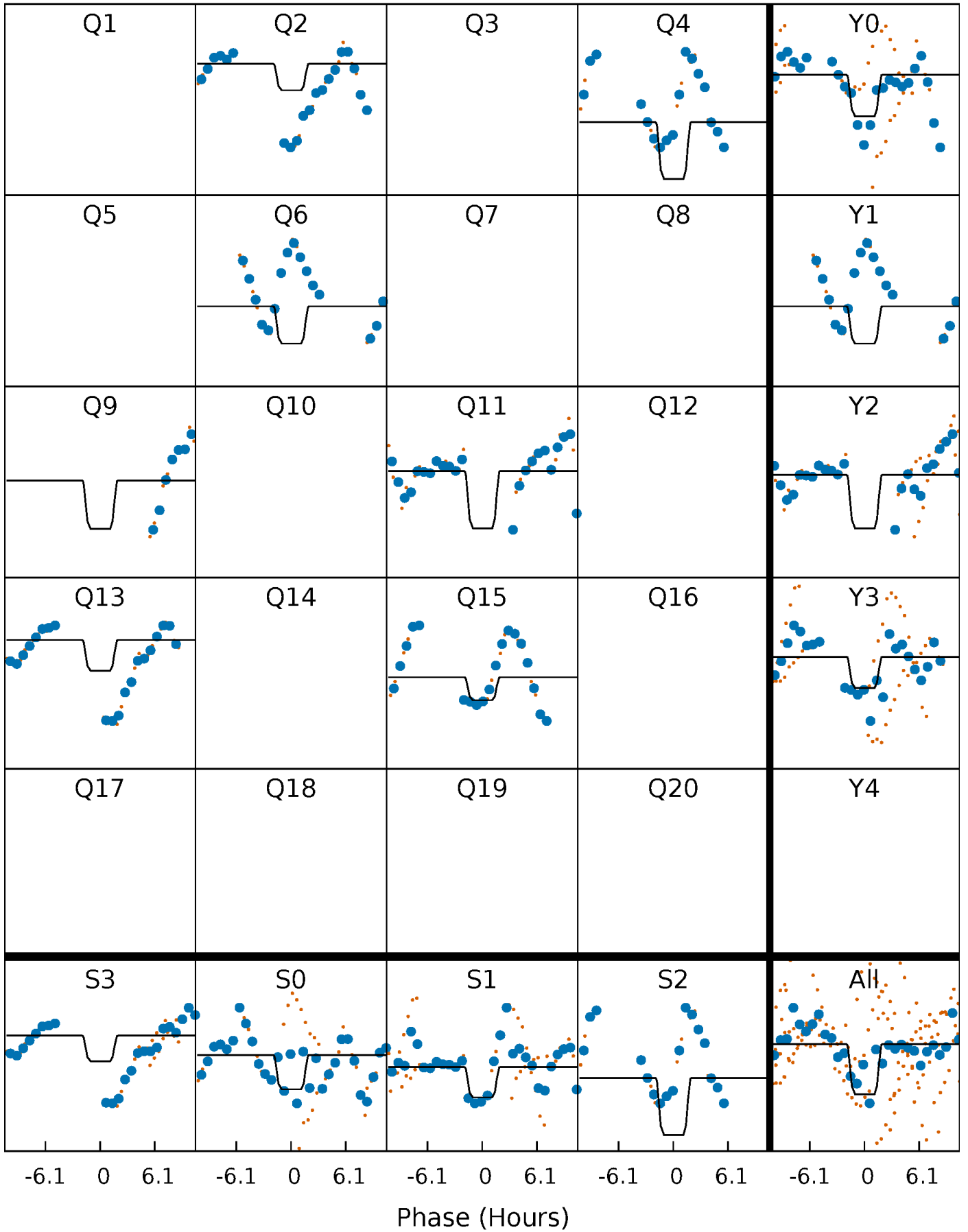
DV Quarter-Phased Transit Curves

TCE 008411693-02 P=199.502875 Days $T_0=210.031166$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

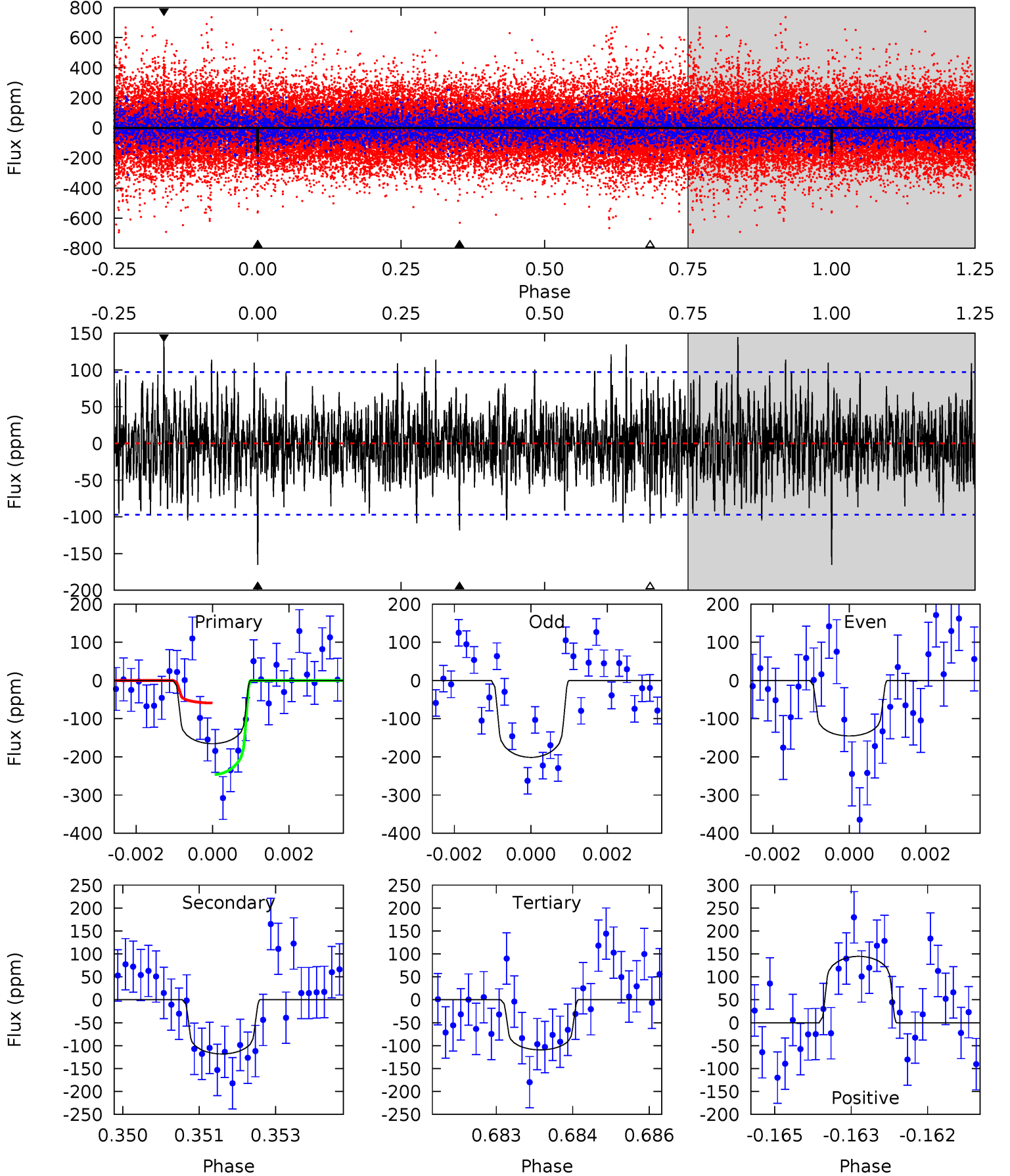
TCE 008411693-02 P=199.508937 Days $T_0=209.981832$ (BKJD)



DV Model-Shift Uniqueness Test

008411693-02, $P = 199.502875$ Days, $E = 10.528291$ Days

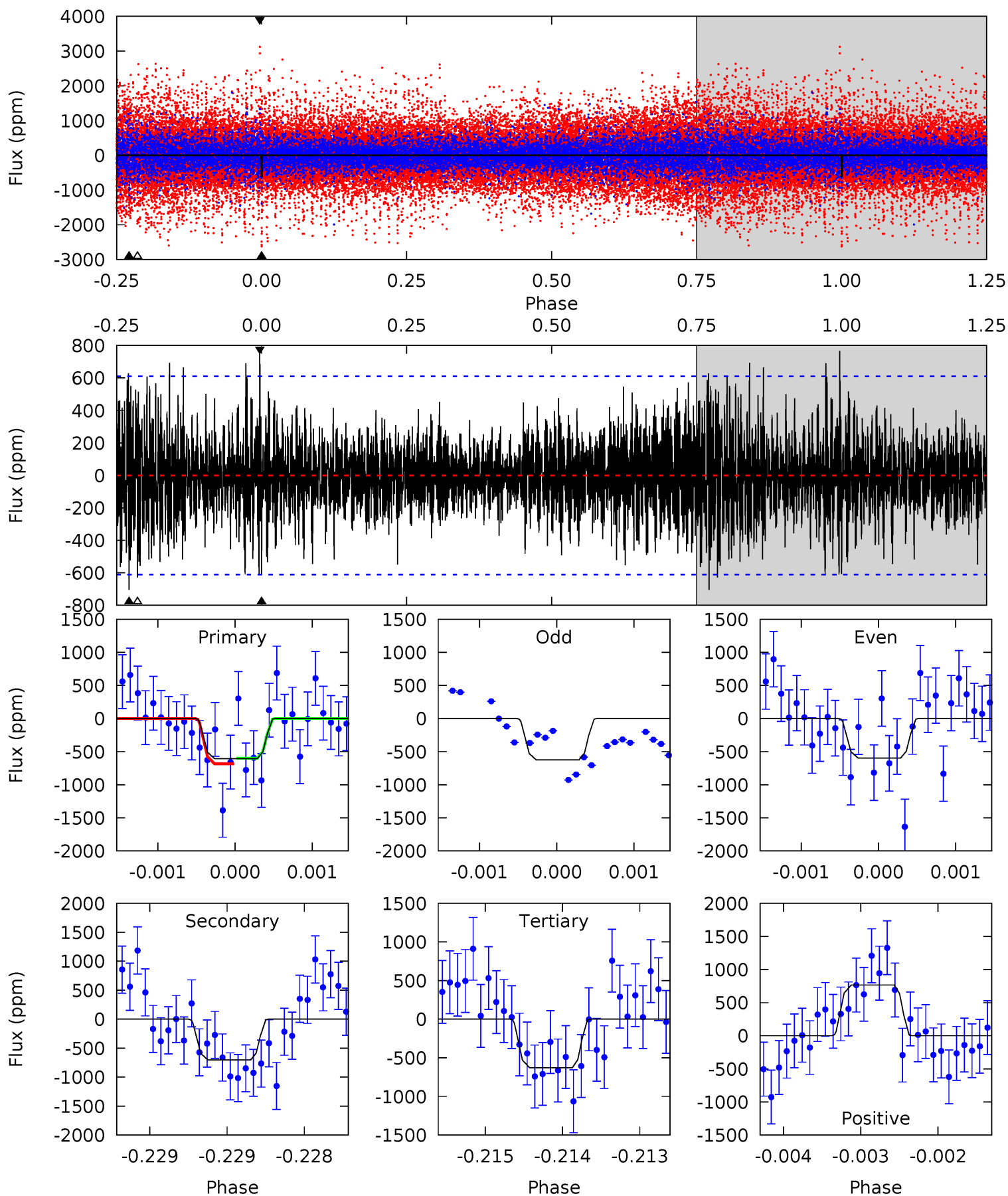
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.13	6.53	6.03	7.99	5.36	3.15	1.95	3.10	1.15	0.49	-1.46	1.51	1.10	0.47	5.02



Alt Model-Shift Uniqueness Test

008411693-02, $P = 199.508937$ Days, $E = 10.472895$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.44	6.33	5.65	6.89	5.49	3.35	1.67	-0.21	-1.44	0.68	-0.56	0.14	1.16	0.52	0.37



Stellar Parameters For KIC 008411693

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7452^{+206}_{-310}	$3.767^{+0.425}_{-0.075}$	$-0.240^{+0.250}_{-0.350}$	$2.848^{+0.421}_{-1.263}$	$1.729^{+0.181}_{-0.393}$	$0.105^{+0.369}_{-0.033}$
	+3%/-4%	+11%/-2%	+104%/-146%	+15%/-44%	+10%/-23%	+350%/-32%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008411693-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-118 ± 18	$3.95^{+1.35}_{-1.19}$	838^{+56}_{-87}	6444^{+1219}_{-747}	2681^{+2650}_{-1243}
Alt.	-704 ± 111	$8.13^{+1.82}_{-1.96}$	834^{+55}_{-93}	7064^{+681}_{-575}	3736^{+2569}_{-1244}

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

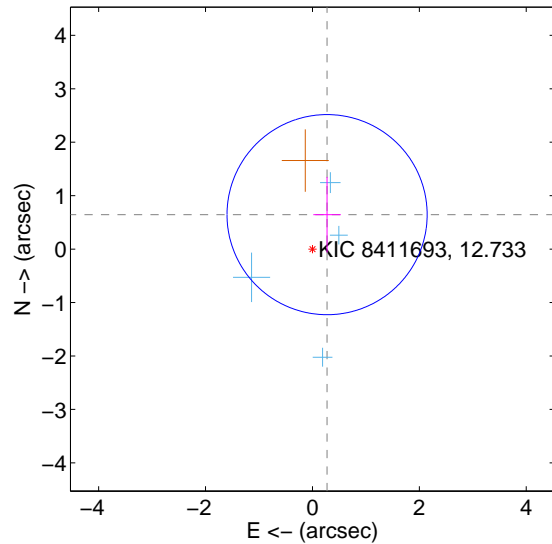
Supplemental centroid analysis for 008411693-02. Kepler magnitude: 12.73. Transit SNR 5.57

There are 4 quarters with good PRF difference image offsets

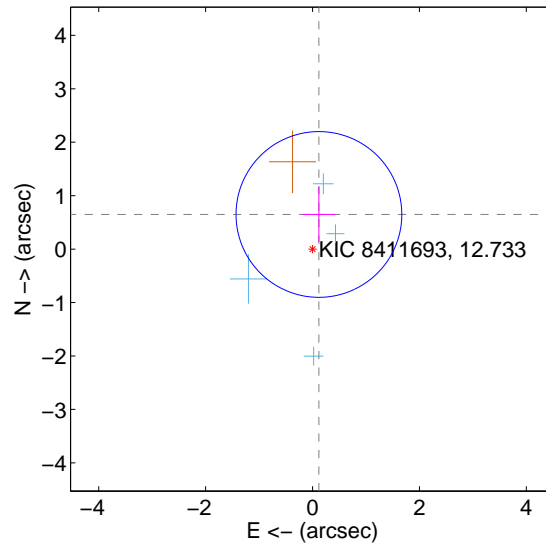
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.700 ± 0.624	1.12	-0.274 ± 0.257	0.645 ± 0.707
PRF-fit source offset from KIC position	0.659 ± 0.517	1.28	-0.119 ± 0.309	0.648 ± 0.519
photometric centroid source offset	0.36 ± 1.14	0.32	0.36 ± 1.14	0.03 ± 0.98

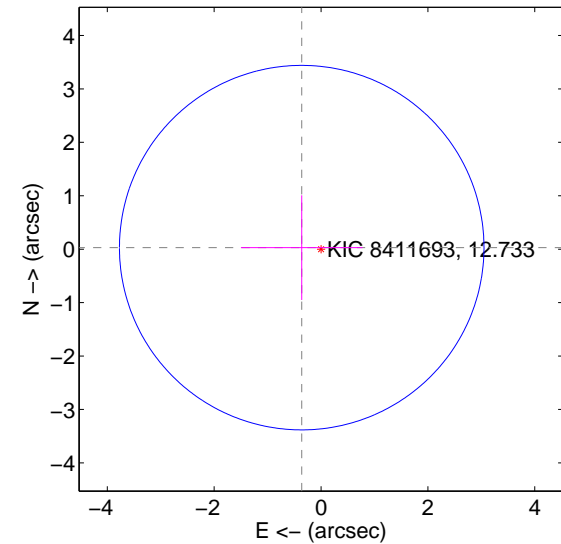
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

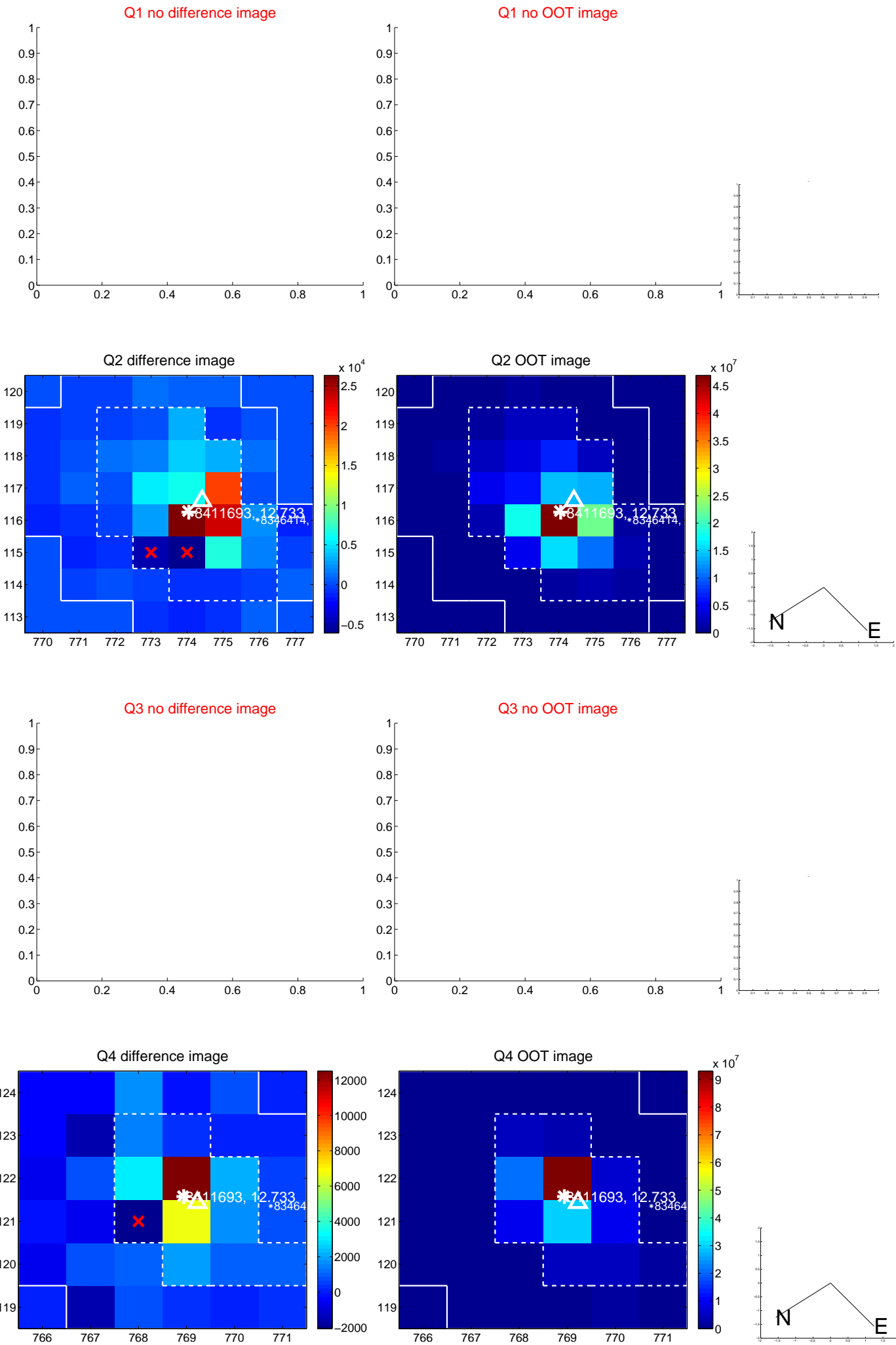


offset from photometric centroids



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.

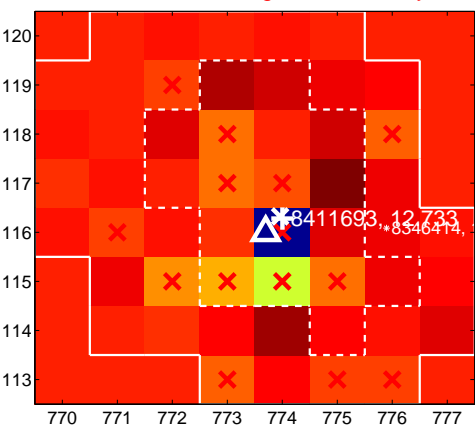
Q5 no difference image



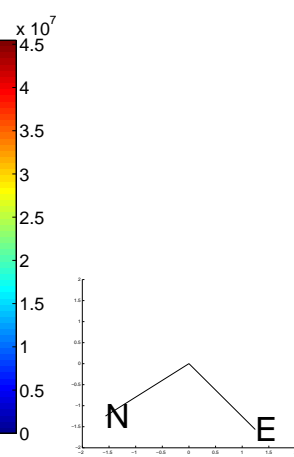
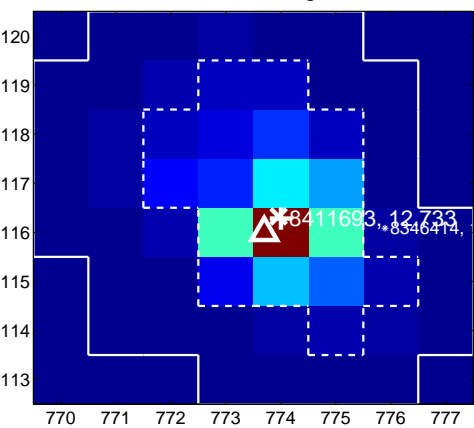
Q5 no OOT image



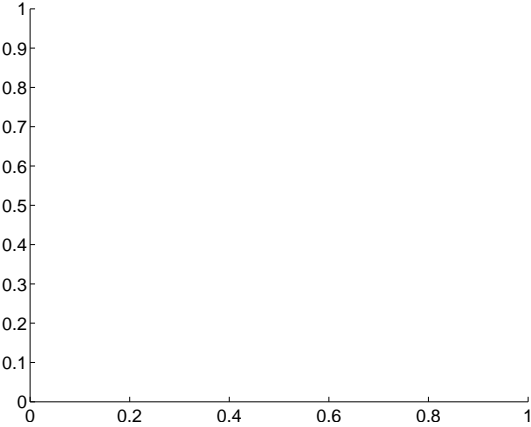
Q6 difference image. Poor Quality



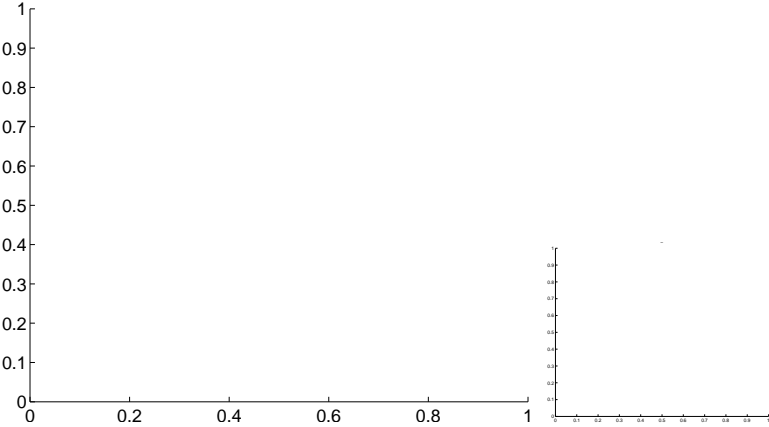
Q6 OOT image



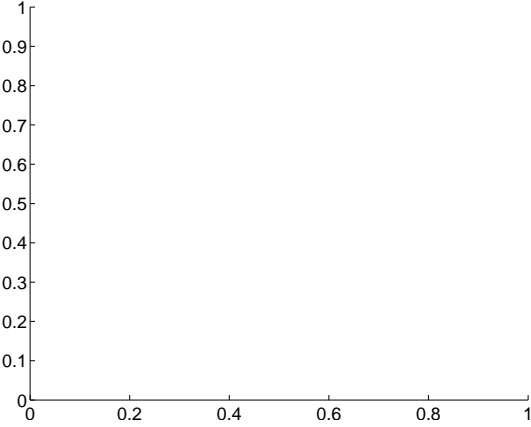
Q7 no difference image



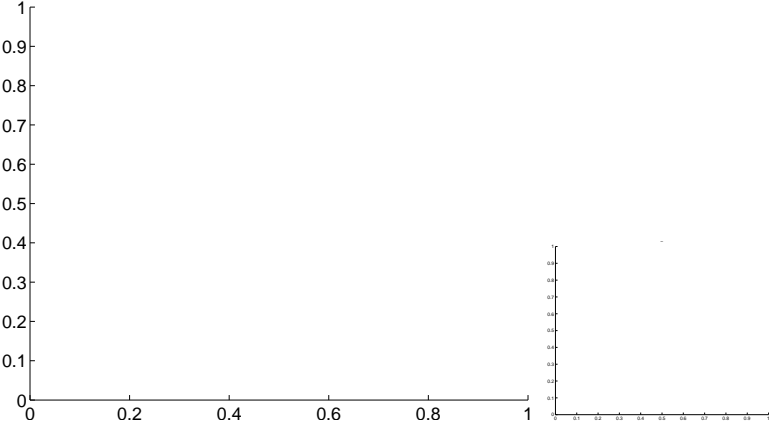
Q7 no OOT image



Q8 no difference image



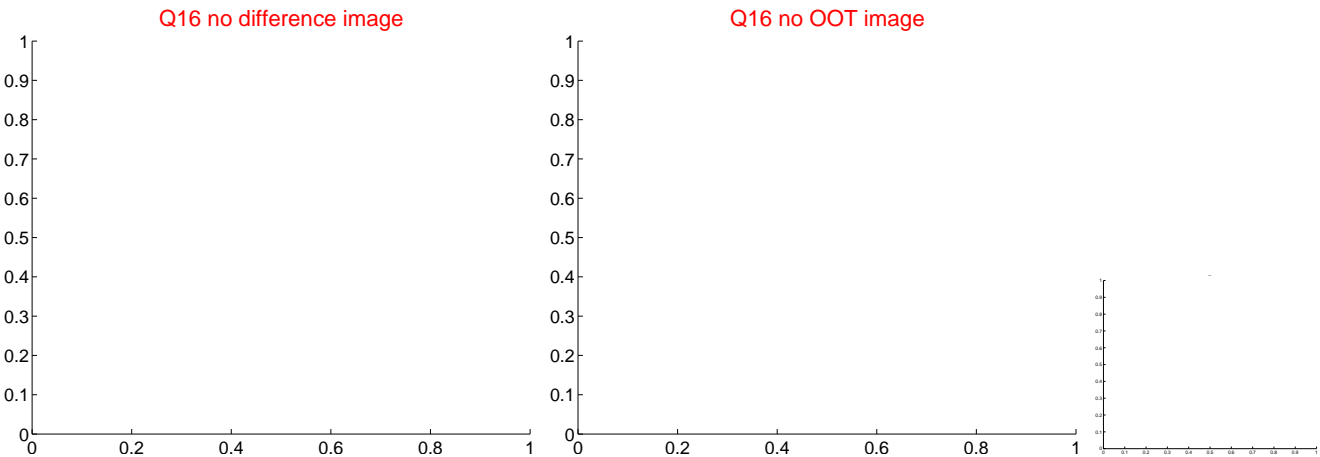
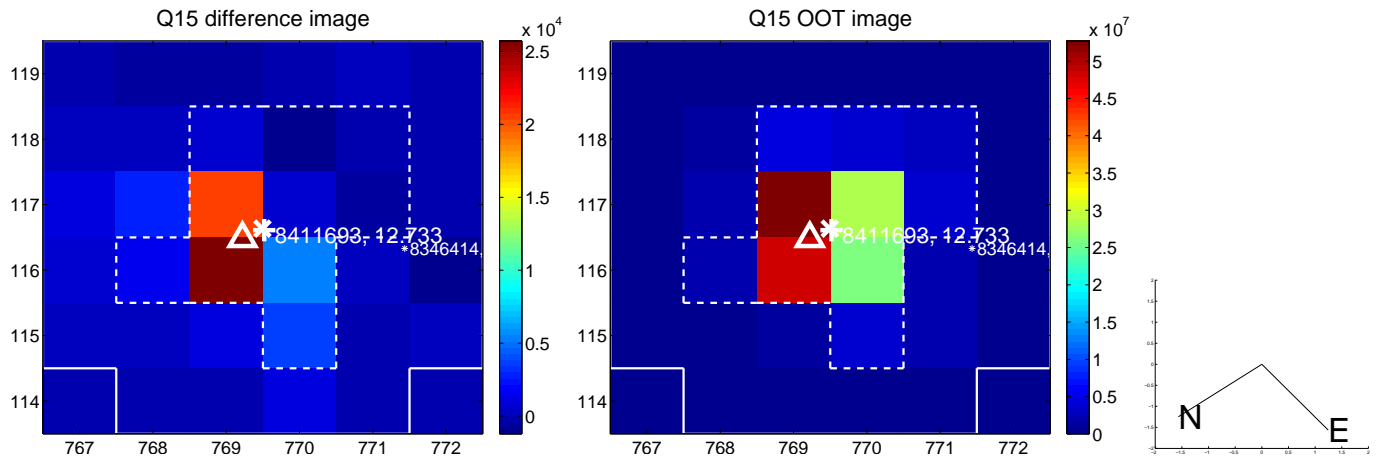
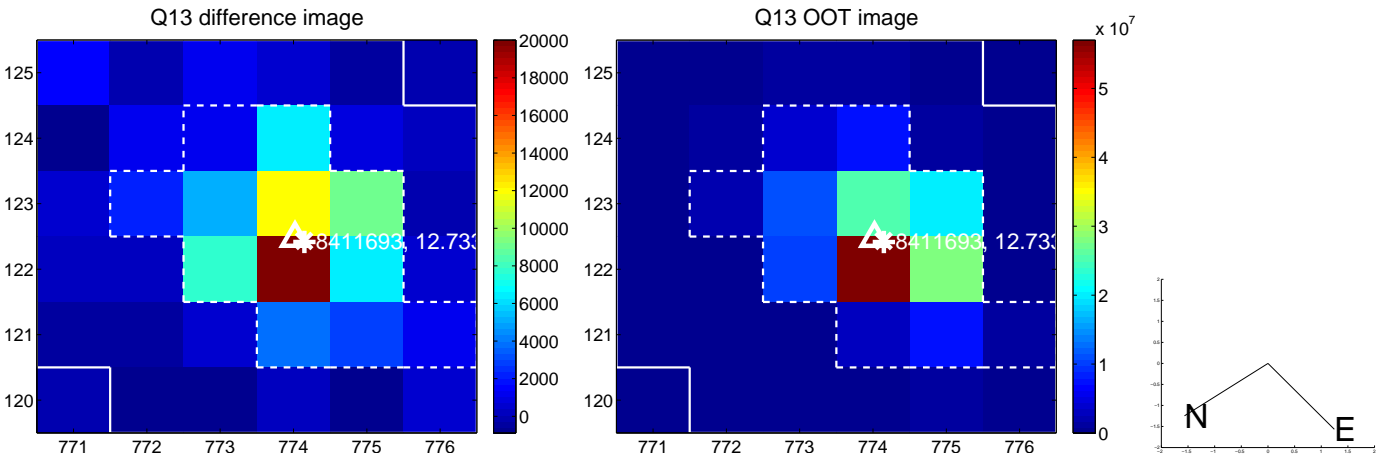
Q8 no OOT image



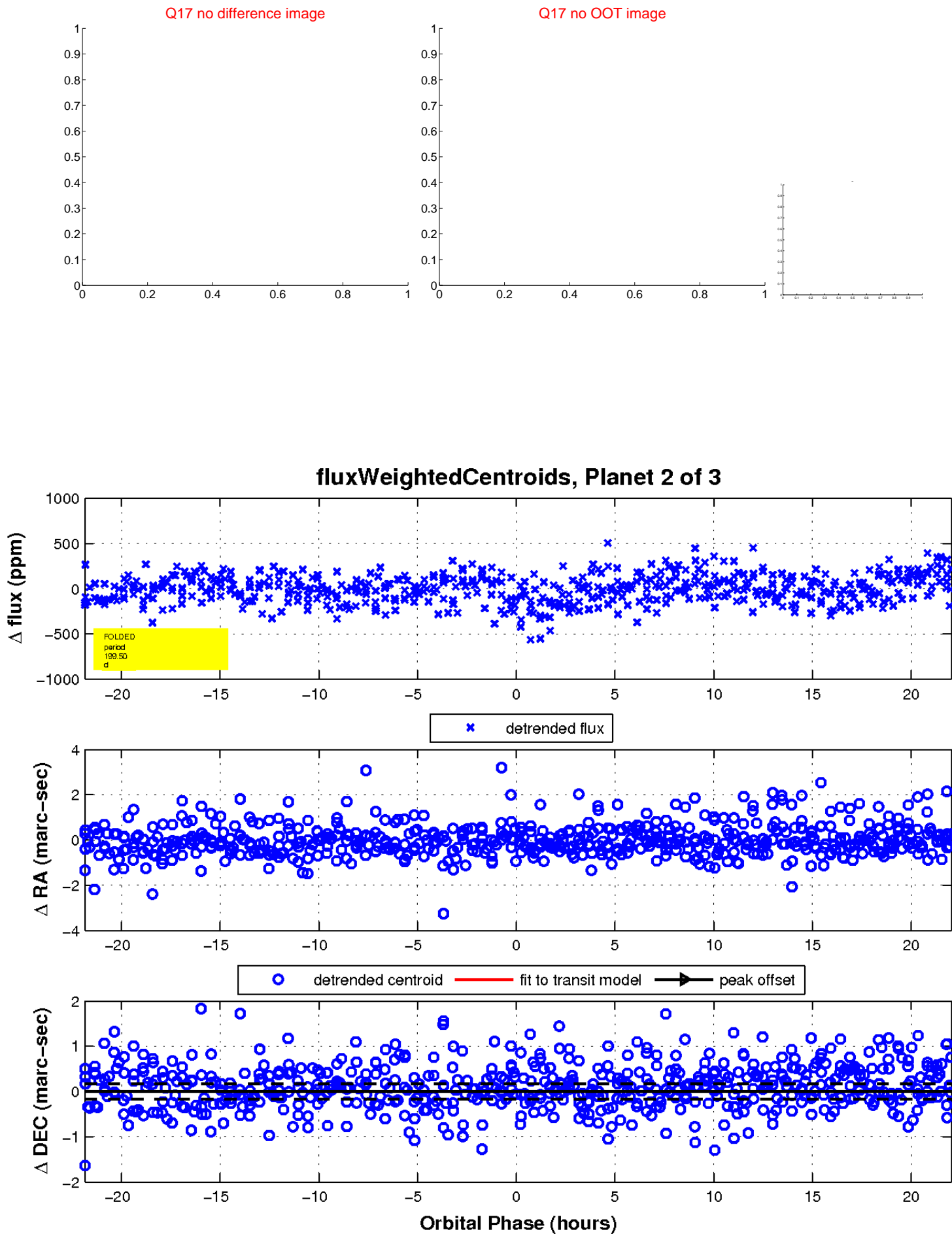
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

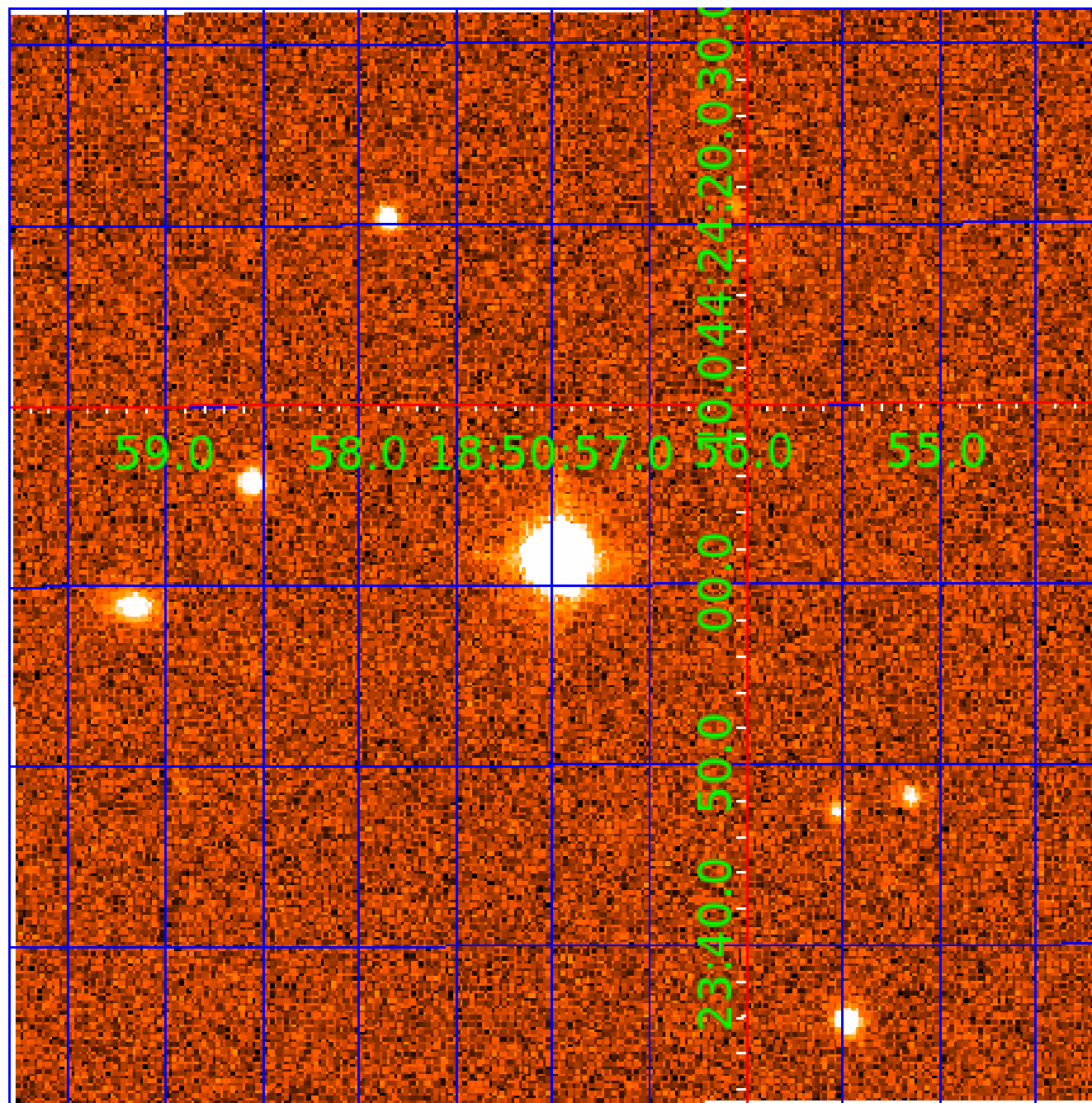


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008411693

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})
008411693-01	OBS	No	0.595229	131.860286	16.0	1.483	8.0	7.2	2.85	7452	1.34	81052.57
008411693-02	OBS	No	199.502875	210.031166	174.5	7.362	7.5	5.6	2.85	7452	4.33	34.81
008411693-03	OBS	No	0.779358	132.042202	25.6	6.628	8.3	12.3	2.85	7452	1.48	56584.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008411693-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008411693-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008411693-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—CENT_FEW_MEAS

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

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

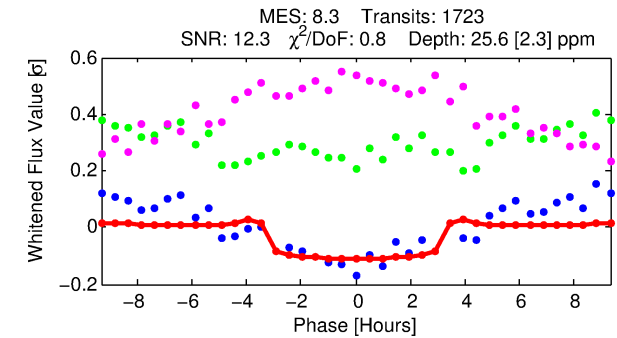
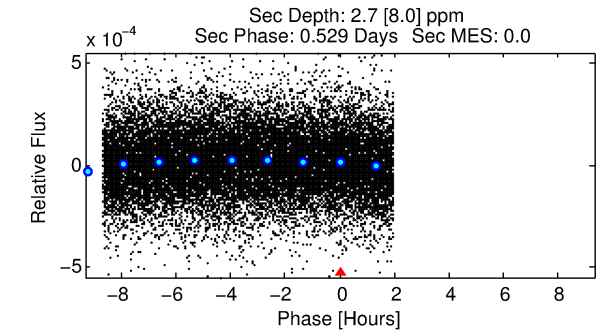
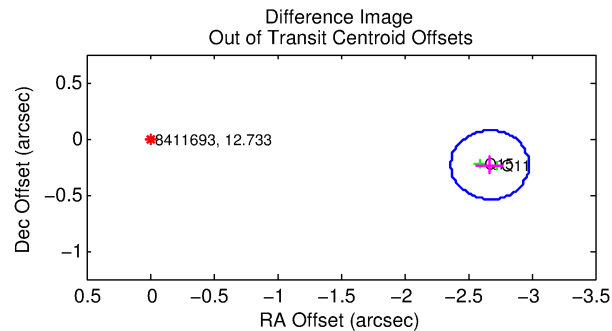
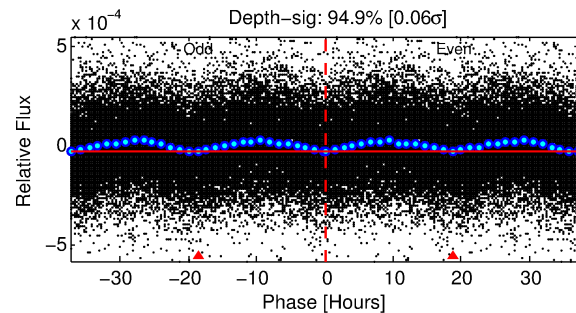
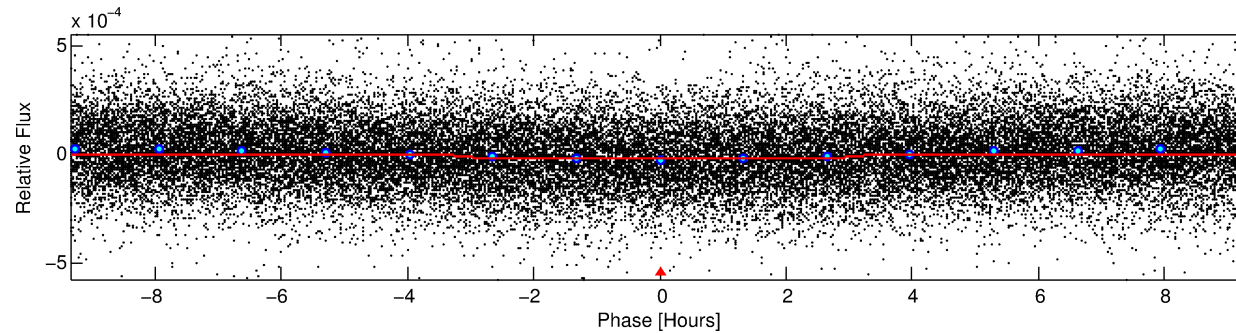
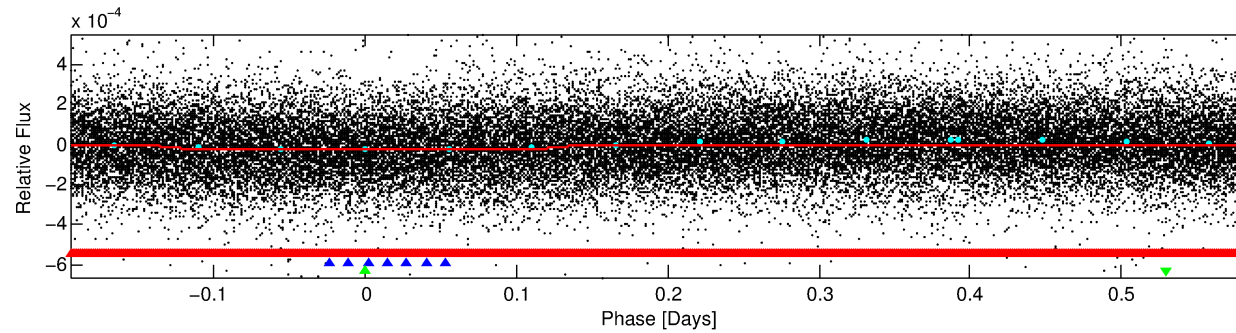
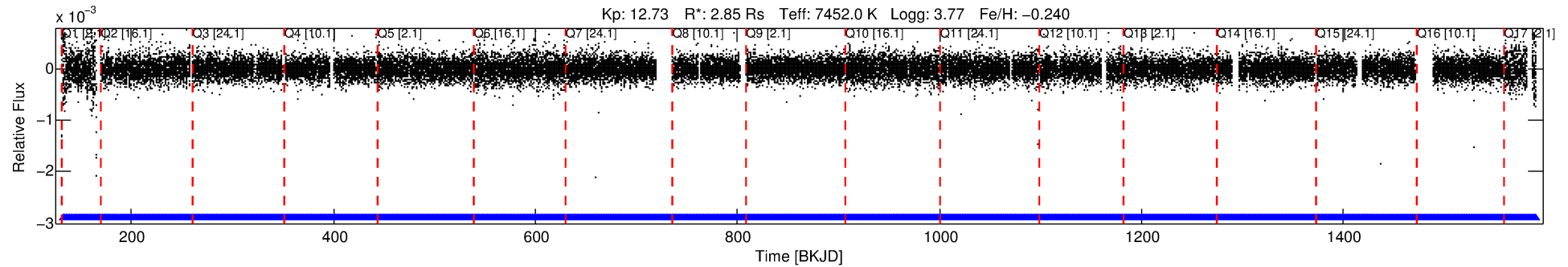
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008411693-03

No Significant Match Found

DV One-Page Summary

KIC: 8411693 Candidate: 3 of 3 Period: 0.779 d



DV Fit Results:

Period = 0.77936 [0.00001] d
Epoch = 132.0422 [0.0036] BKJD
Rp/R* = 0.0048 [0.0028]
a/R* = 1.10 [0.57]
b = 0.45 [5.57]
Seff = 56584.35 [41608.53]
Teq = 3933 [723] K
Rp = 1.48 [1.09] Re
a = 0.0199 [0.0088] AU
Ag = 0.27 [0.88] [-0.83 σ]
Teff = 4366 [3548] K [0.12 σ]

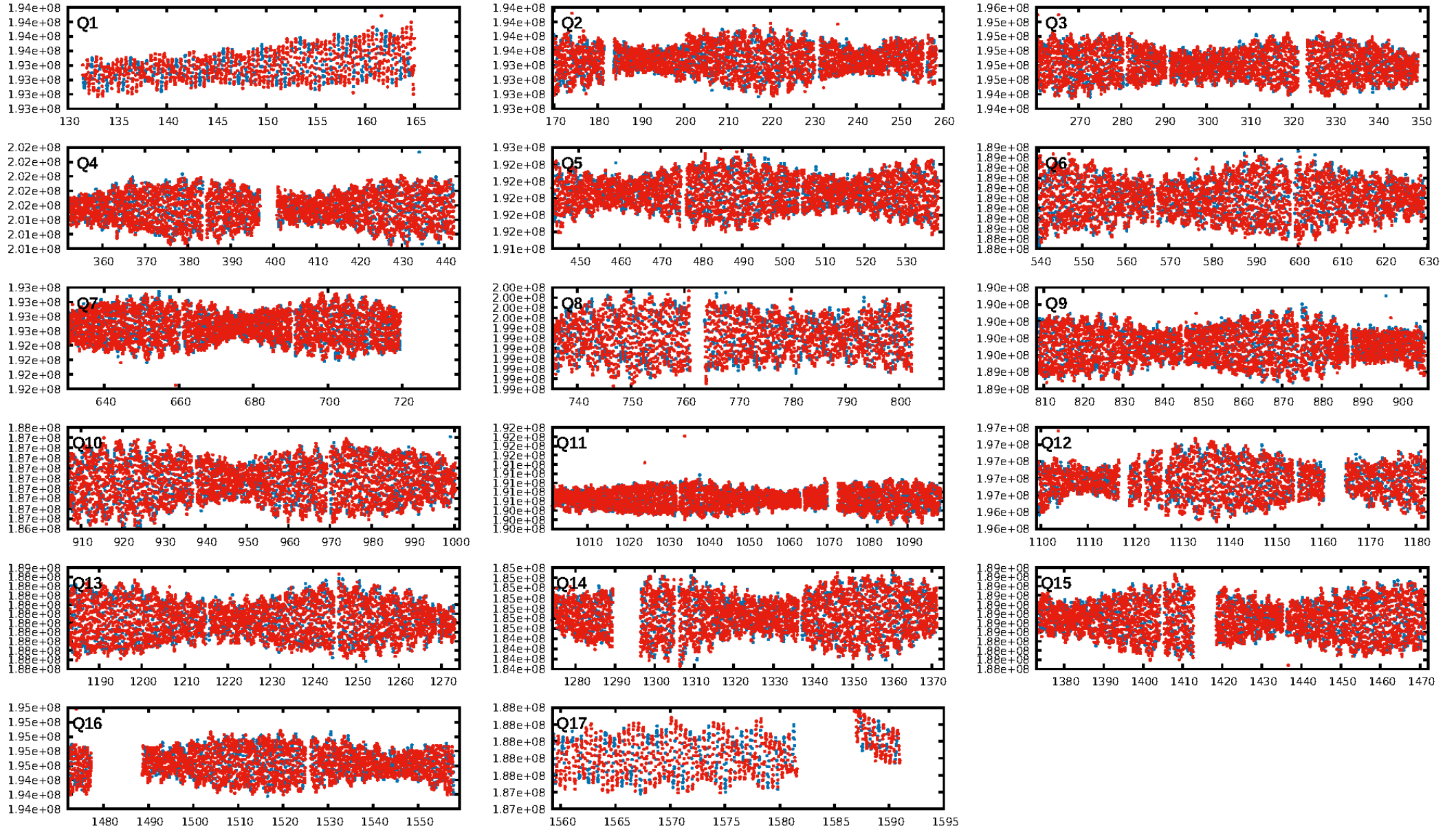
DV Diagnostic Results:

ShortPeriod-sig: 48.5% [0.65 σ]
LongPeriod-sig: 100.0% [481.46 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1645/1645]
GhostDiagnostic-chr: 1.979
Centroid-sig: N/A
Centroid-so: 0.559 arcsec [1.25 σ]
OotOffset-rm: 2.682 arcsec [26.24 σ]
KicOffset-rm: 2.560 arcsec [23.87 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/17]

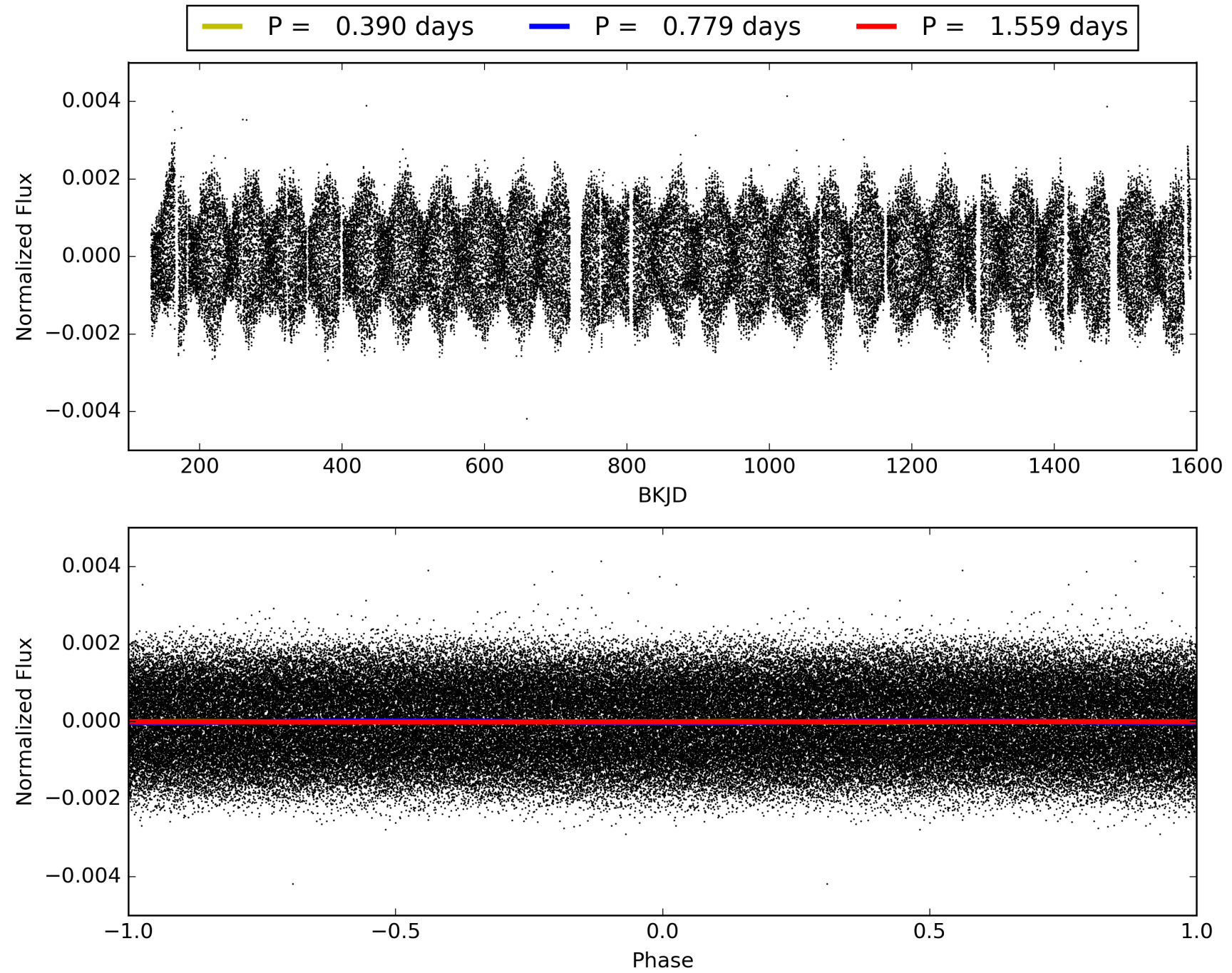
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 20:11:39 Z

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

TCE 008411693-03, PDC Light Curves

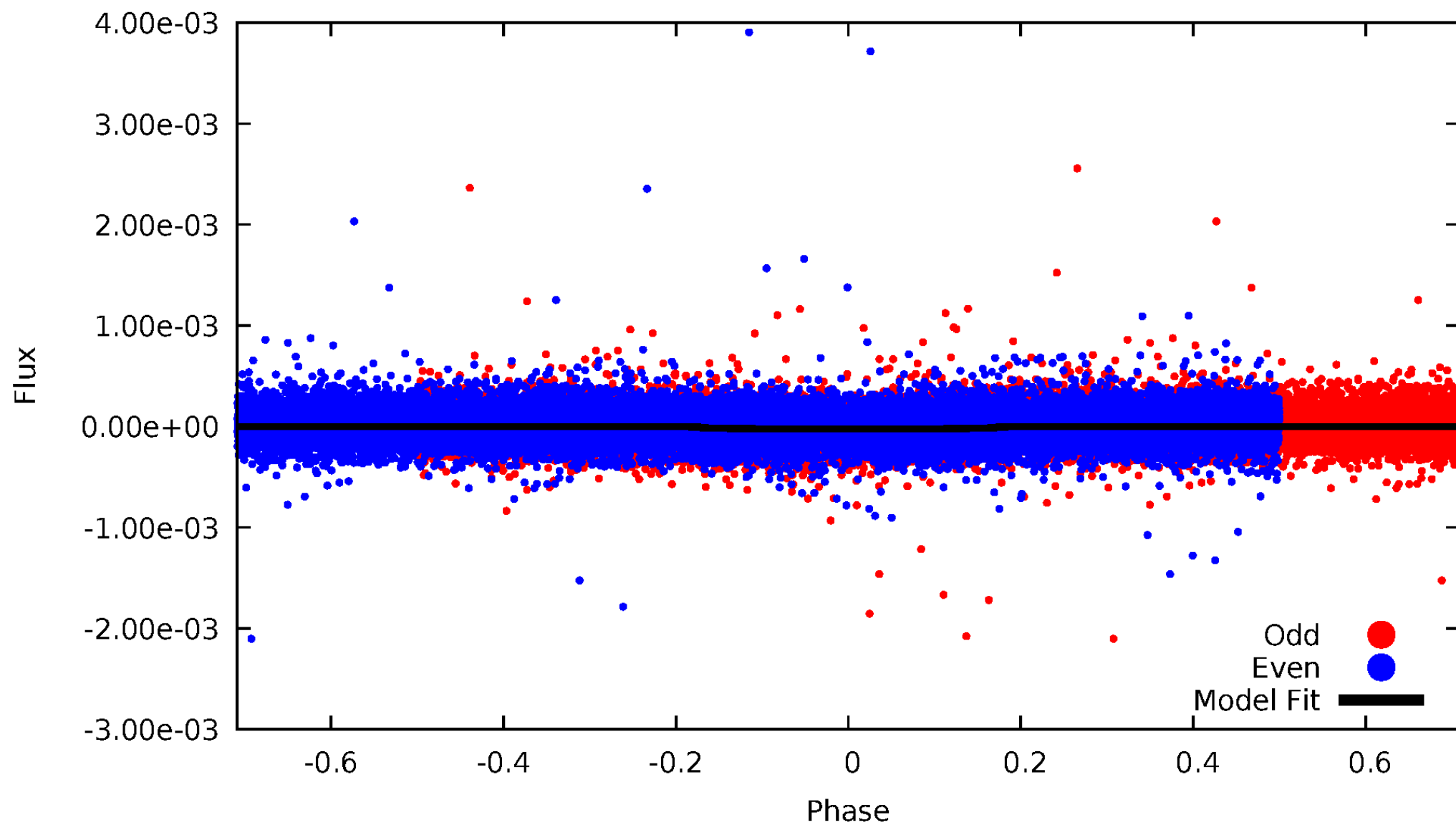


TCE 008411693-03



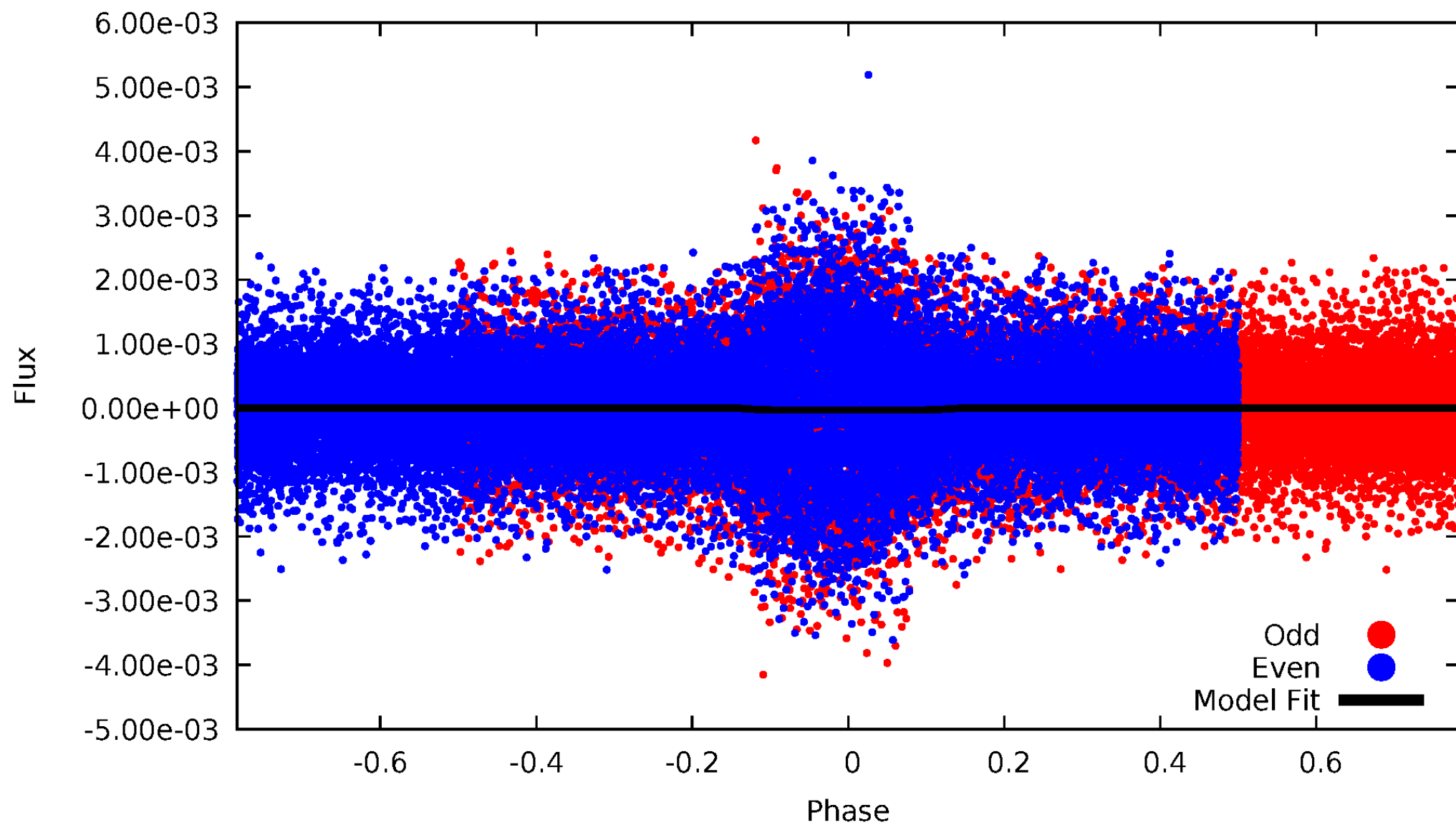
DV Odd/Even

TCE 008411693-03



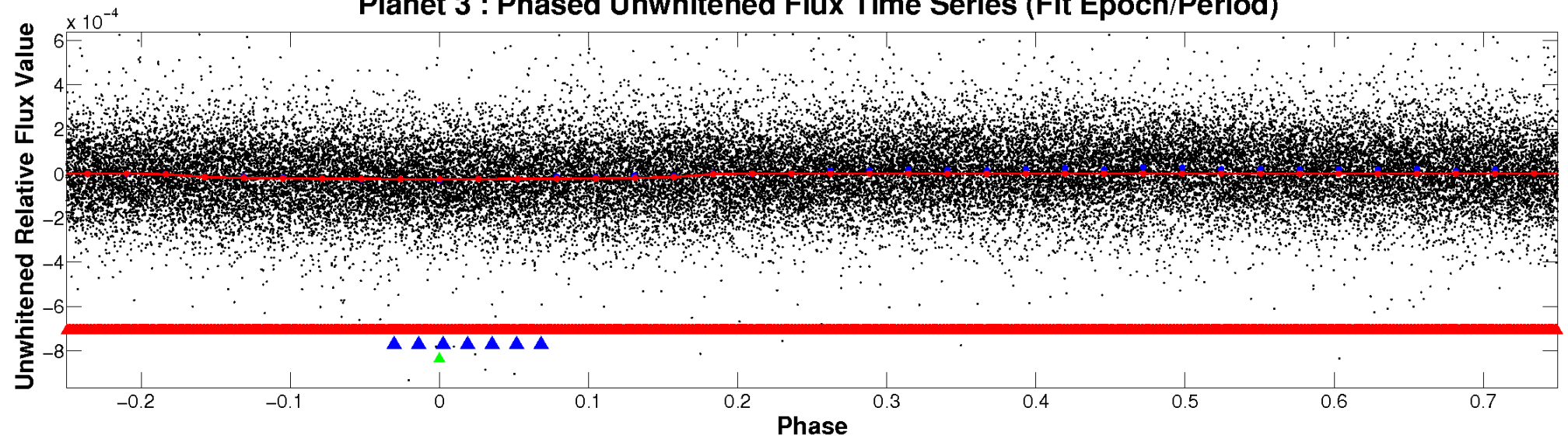
ALT Odd/Even

TCE 008411693-03

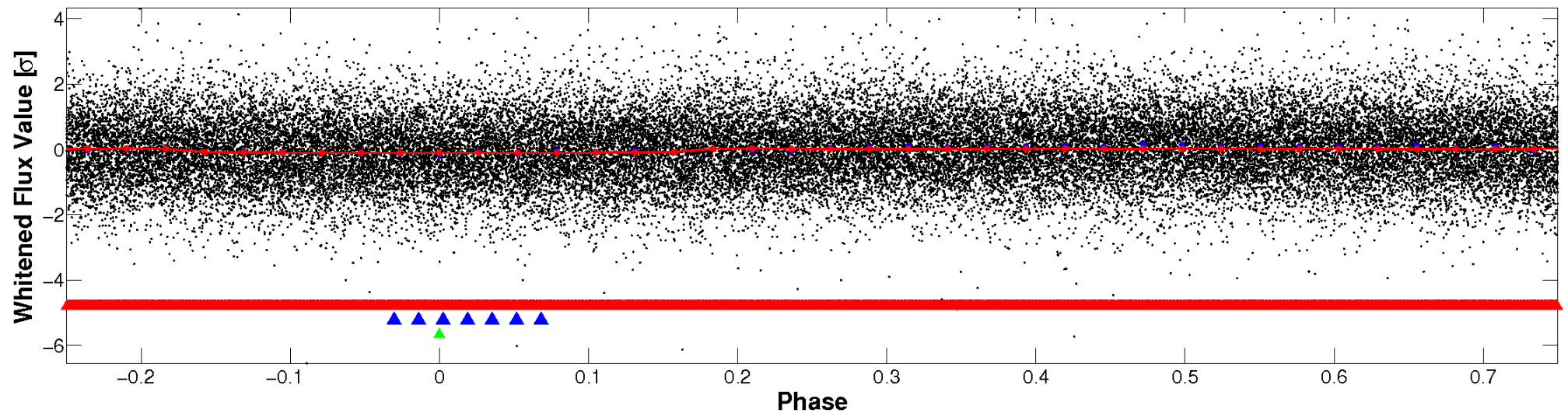


Non-Whitened Vs. Whitened Light Curve

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

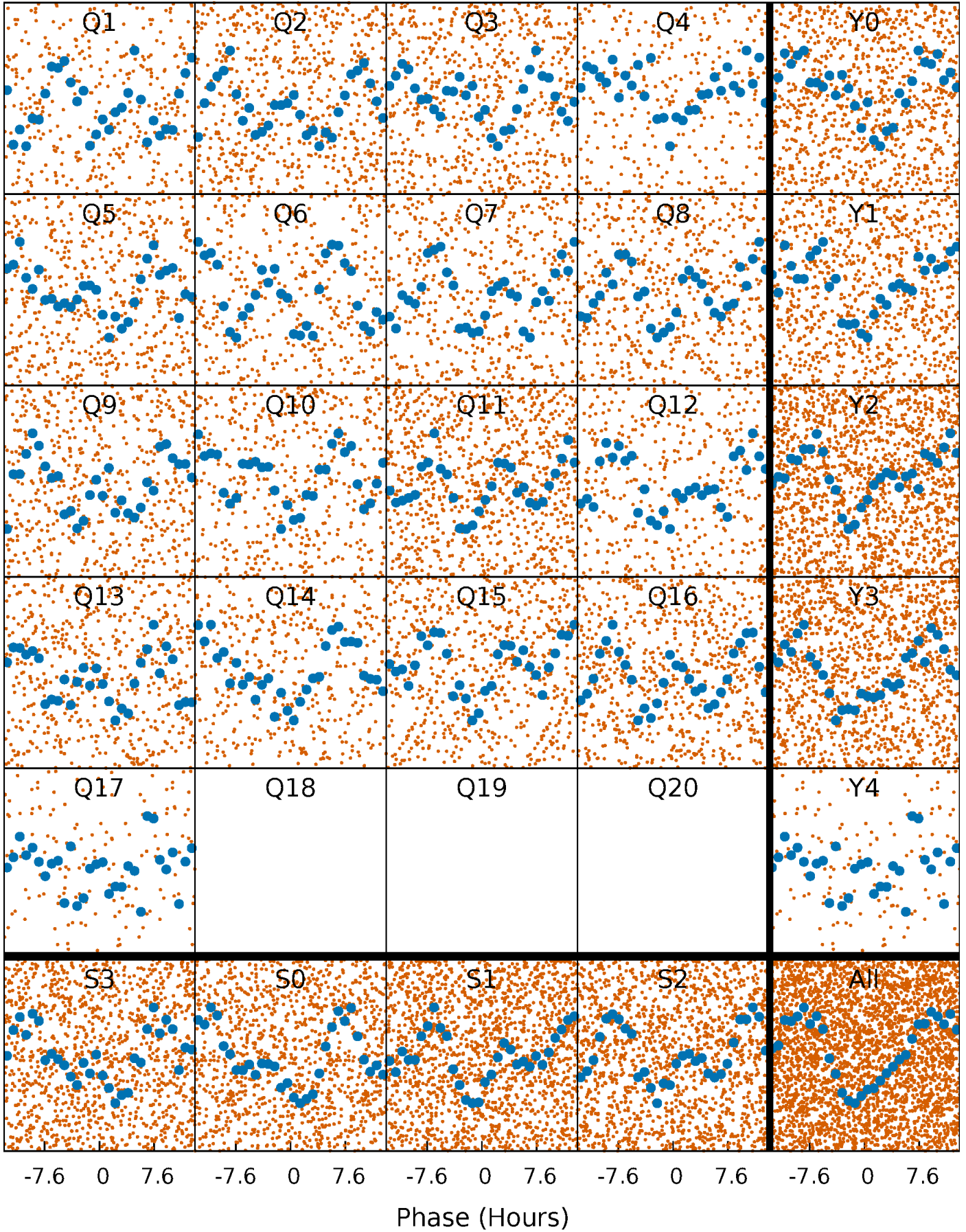


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



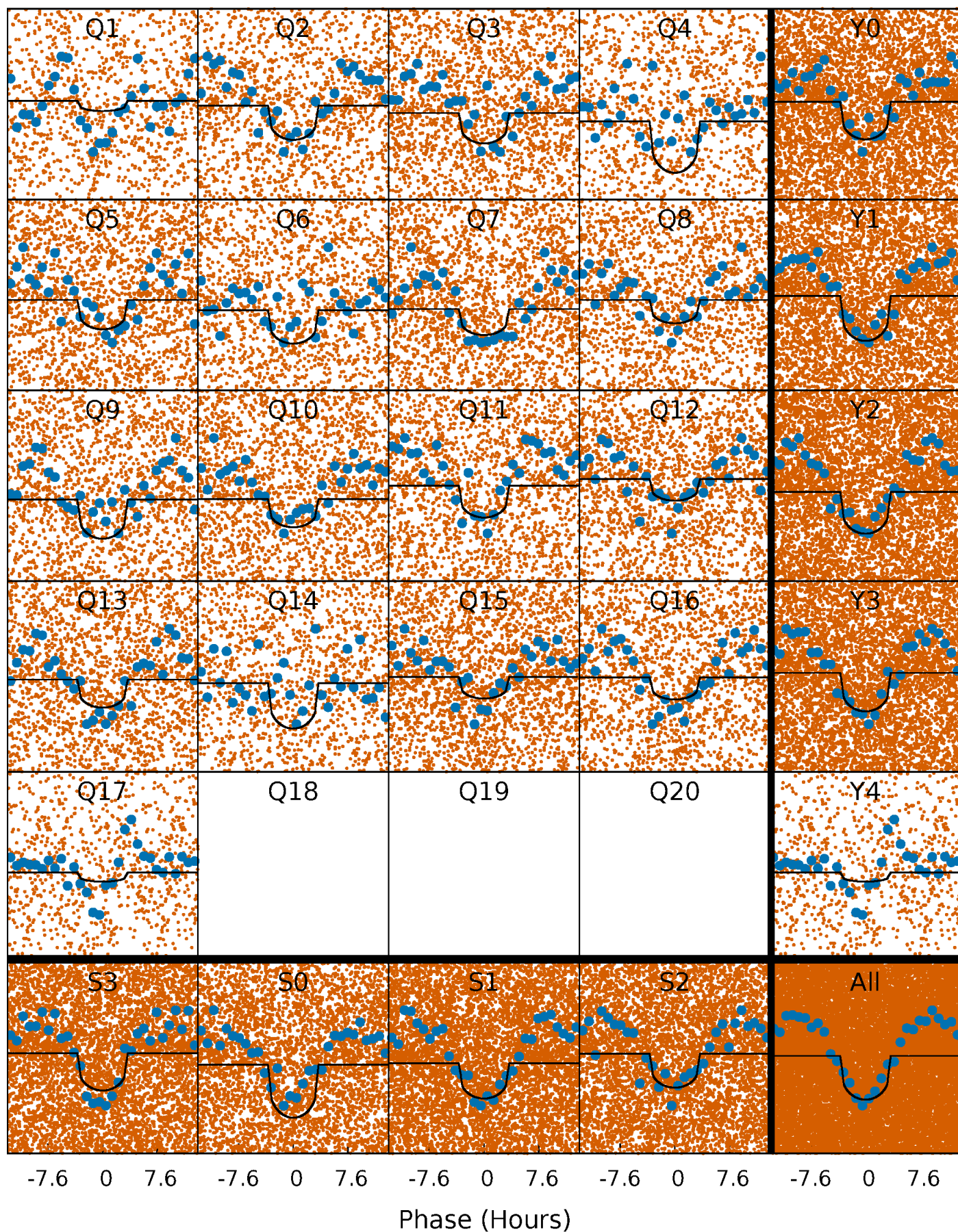
PDC Quarter-Phased Transit Curves

TCE 008411693-03 P= 0.779358 Days $T_0=132.042202$ (BKJD)



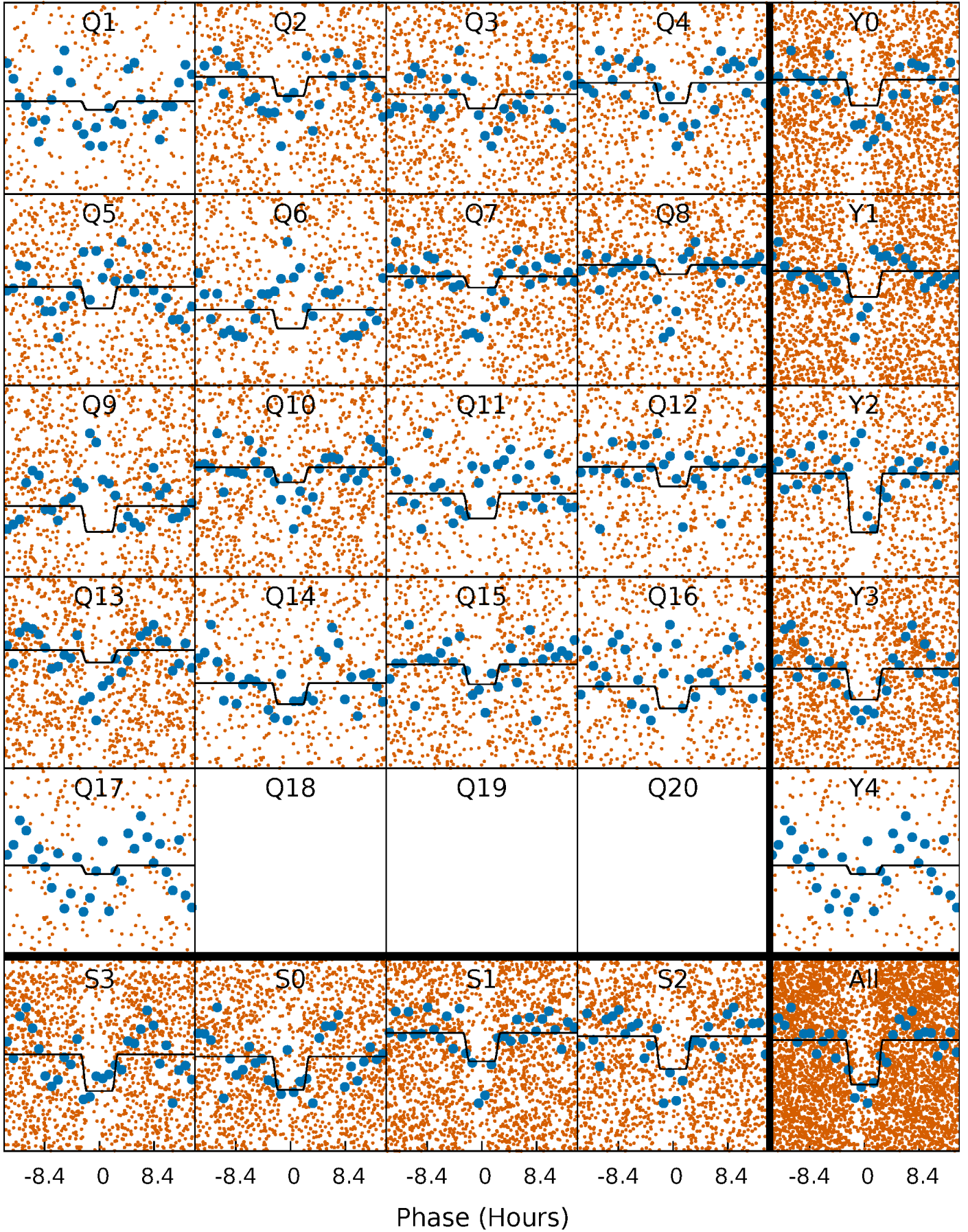
DV Quarter-Phased Transit Curves

TCE 008411693-03 P= 0.779358 Days $T_0=132.042202$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

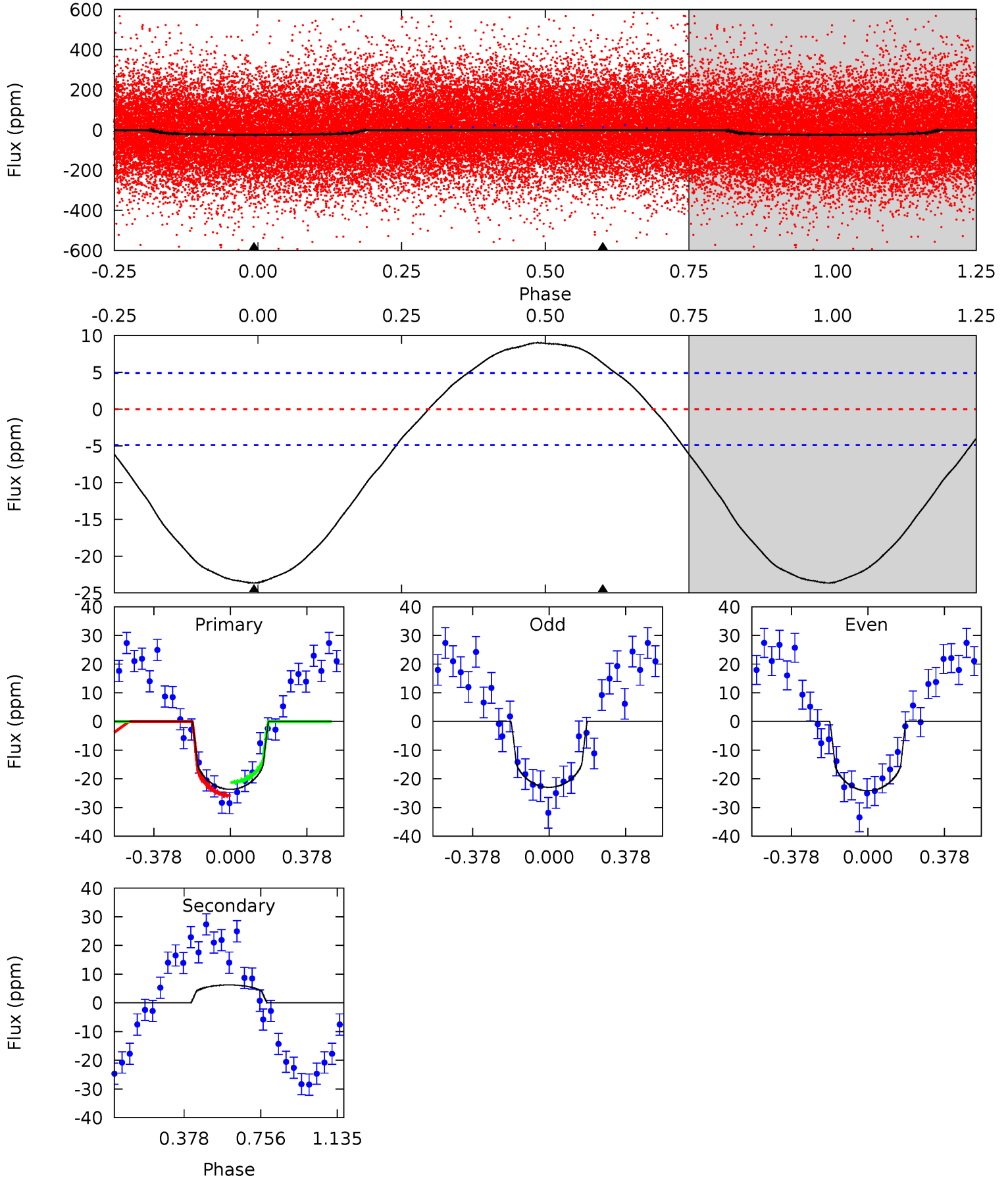
TCE 008411693-03 P= 0.779368 Days $T_0=132.040419$ (BKJD)



DV Model-Shift Uniqueness Test

008411693-03, P = 0.779358 Days, E = 131.262844 Days

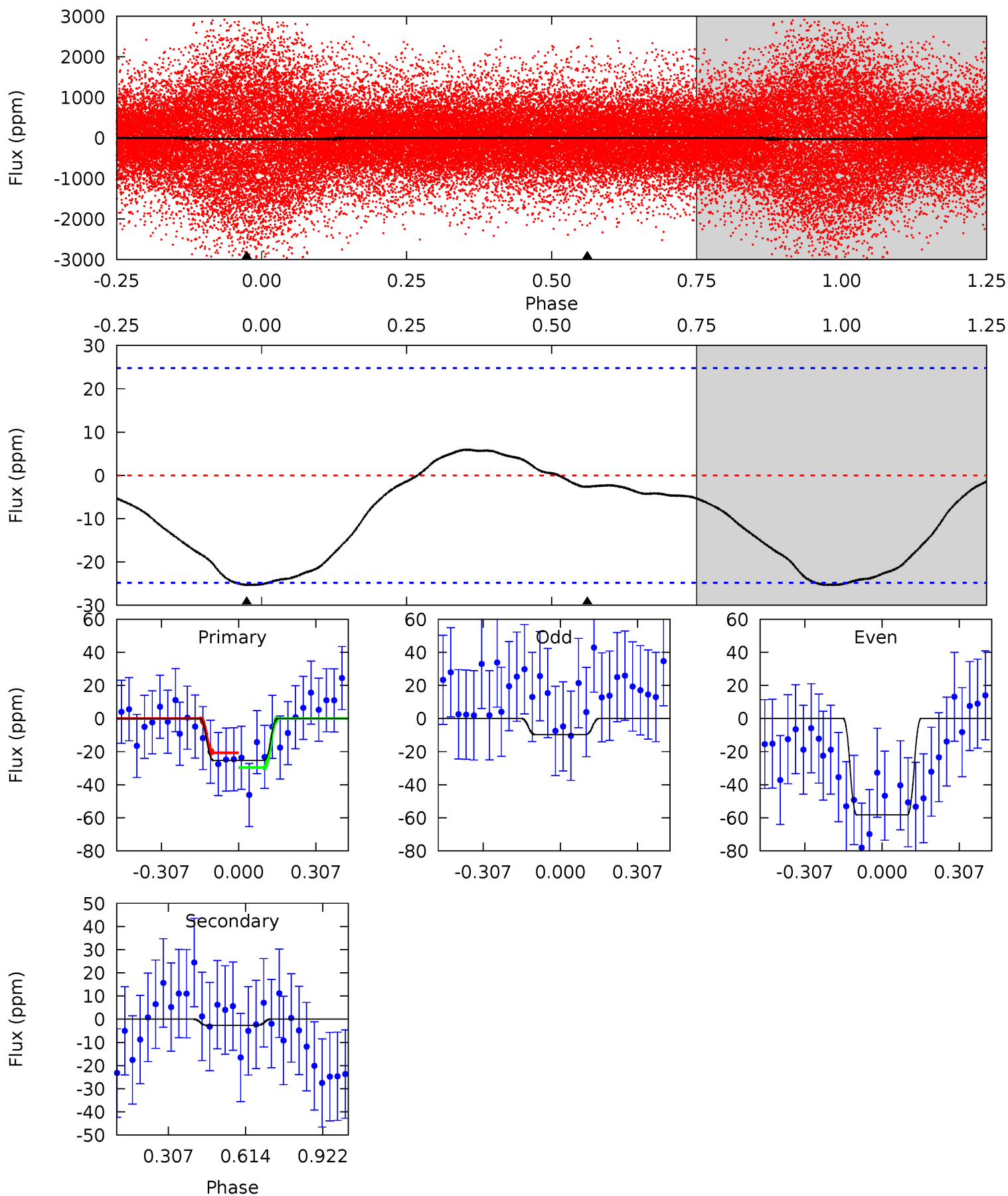
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	-5.48	0	0	4.28	0.88	2.15	20.7	20.7	-5.48	-5.48	0.53	1.04	0.28	2.01



Alt Model-Shift Uniqueness Test

008411693-03, P = 0.779368 Days, E = 131.261051 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.41	0.46	0	0	4.32	1.02	0.45	4.41	4.41	0.46	0.46	3.82	-0.08	0.19	0.65



Stellar Parameters For KIC 008411693

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7452^{+206}_{-310}	$3.767^{+0.425}_{-0.075}$	$-0.240^{+0.250}_{-0.350}$	$2.848^{+0.421}_{-1.263}$	$1.729^{+0.181}_{-0.393}$	$0.105^{+0.369}_{-0.033}$
	+3%/-4%	+11%/-2%	+104%/-146%	+15%/-44%	+10%/-23%	+350%/-32%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008411693-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	6 ± 1	$1.32^{+0.88}_{-0.70}$	5286^{+369}_{-592}	-5739^{+683}_{-2167}	$-0.773^{+0.506}_{-2.440}$
Alt.	-3 ± 6	$1.37^{+0.95}_{-0.74}$	5284^{+383}_{-632}	-3359^{+9276}_{-1747}	$0.236^{+1.435}_{-0.532}$

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

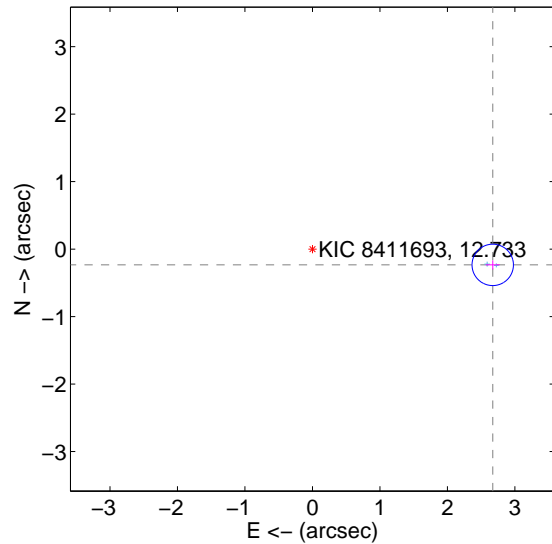
Supplemental centroid analysis for 008411693-03. Kepler magnitude: 12.73. Transit SNR 12.34

There are 2 quarters with good PRF difference image offsets

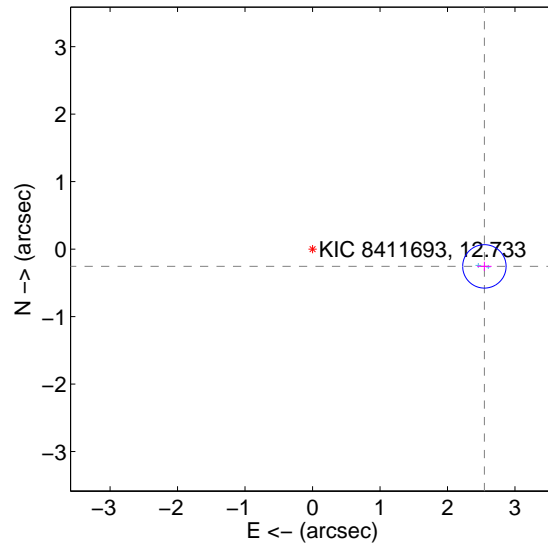
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.682 ± 0.102	26.24	-2.672 ± 0.102	-0.234 ± 0.068
PRF-fit source offset from KIC position	2.560 ± 0.107	23.87	-2.547 ± 0.108	-0.256 ± 0.068
photometric centroid source offset	0.56 ± 0.45	1.25	0.41 ± 0.49	0.38 ± 0.39

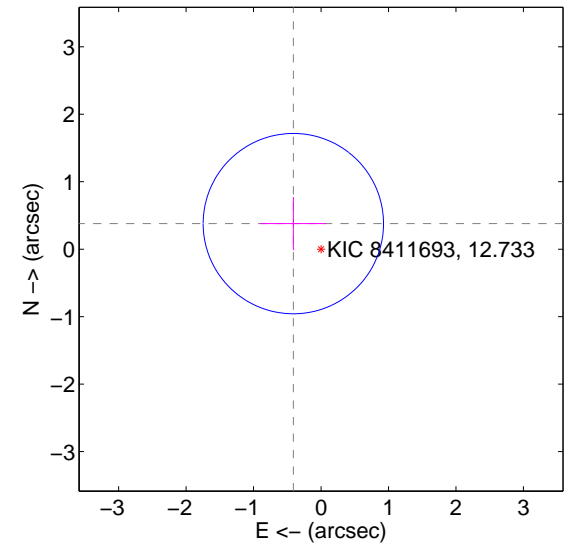
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

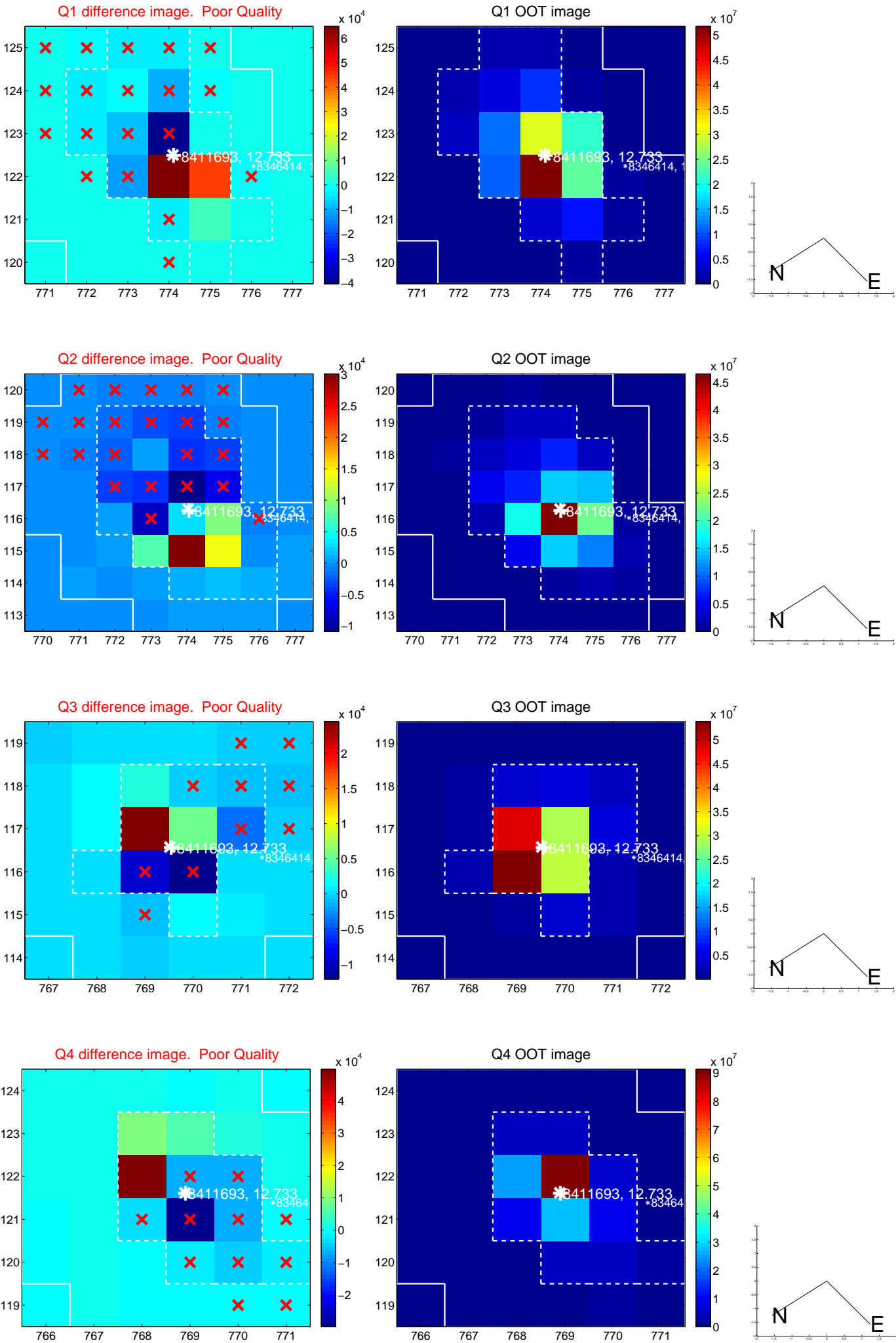


offset from photometric centroids

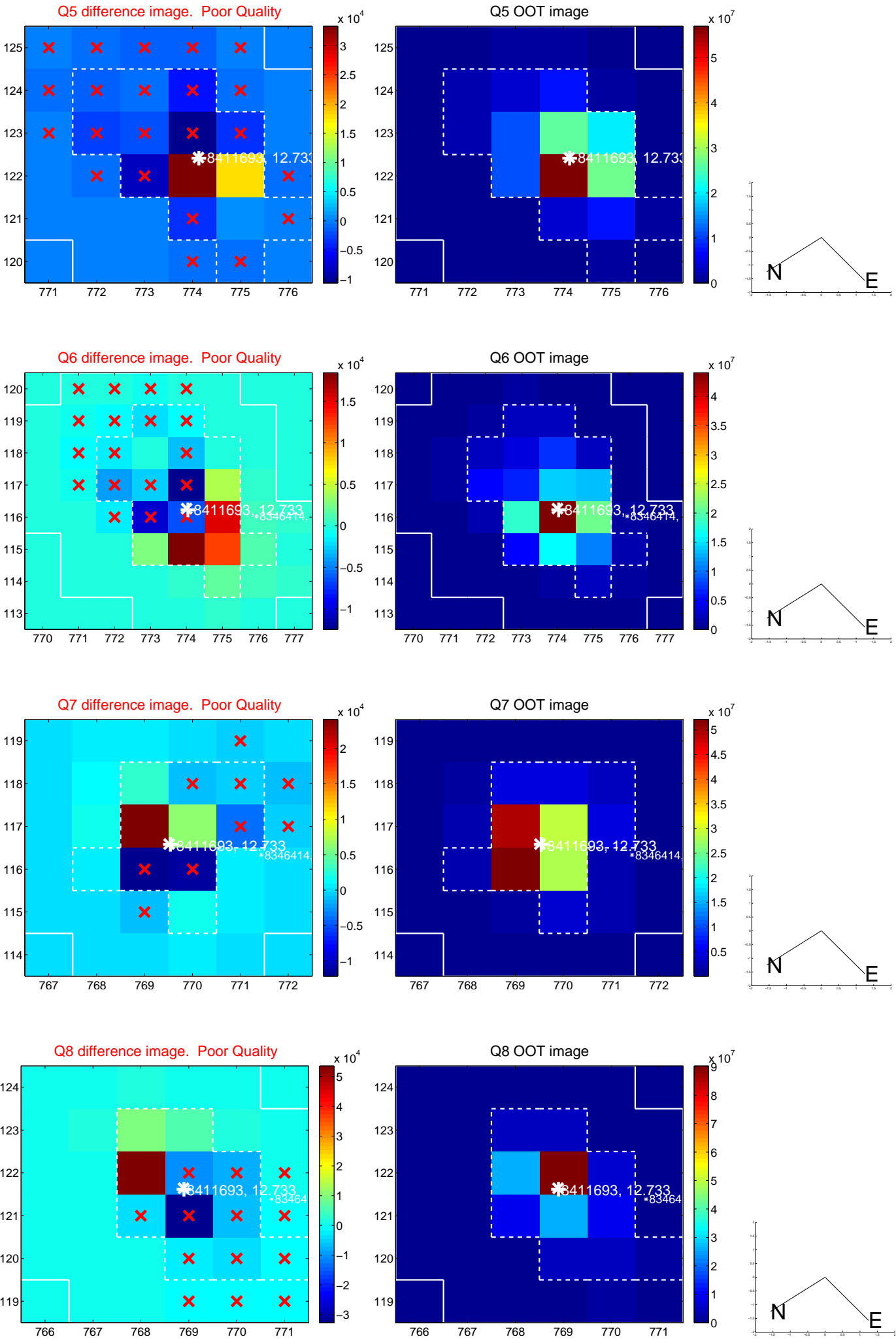


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

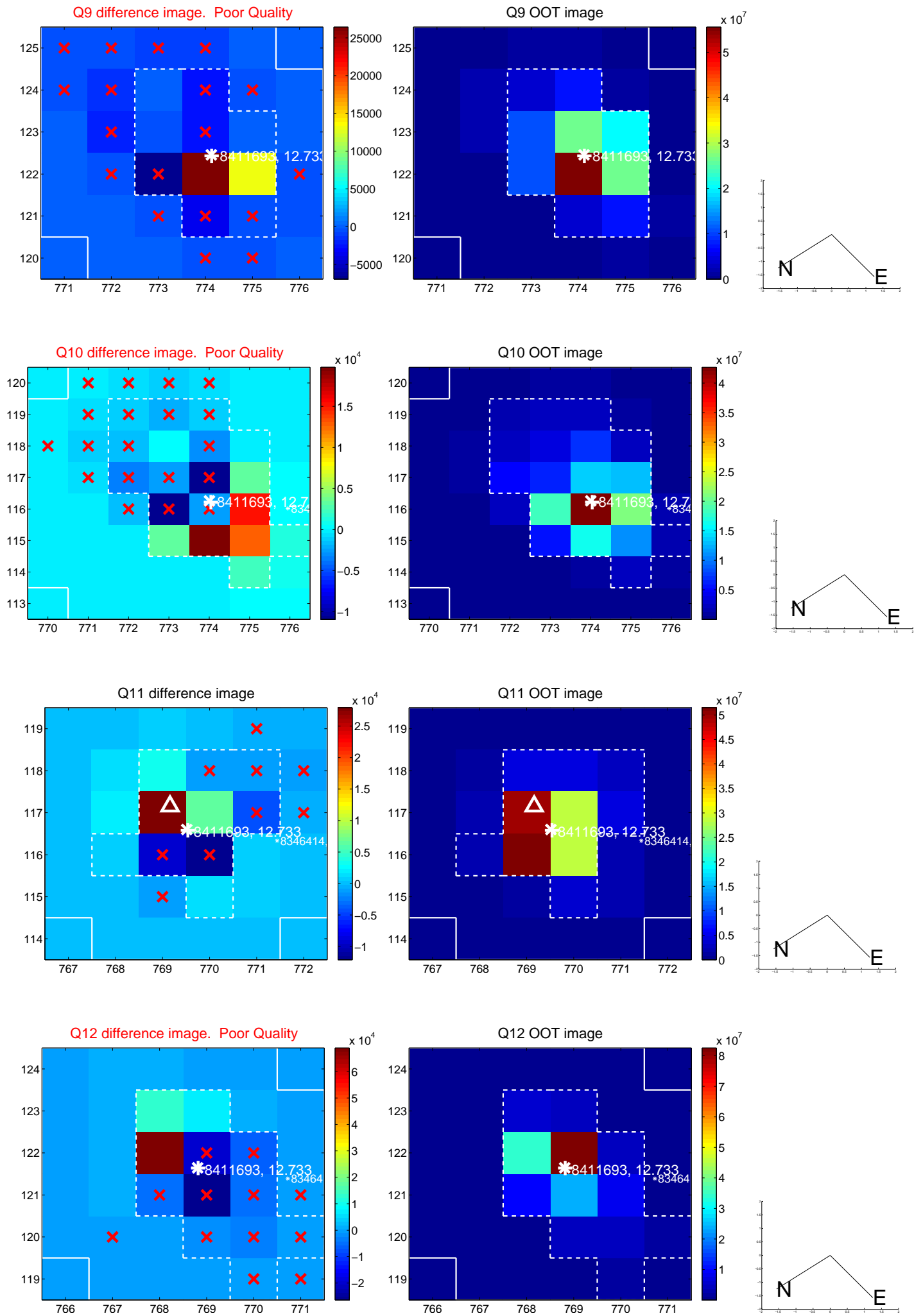
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



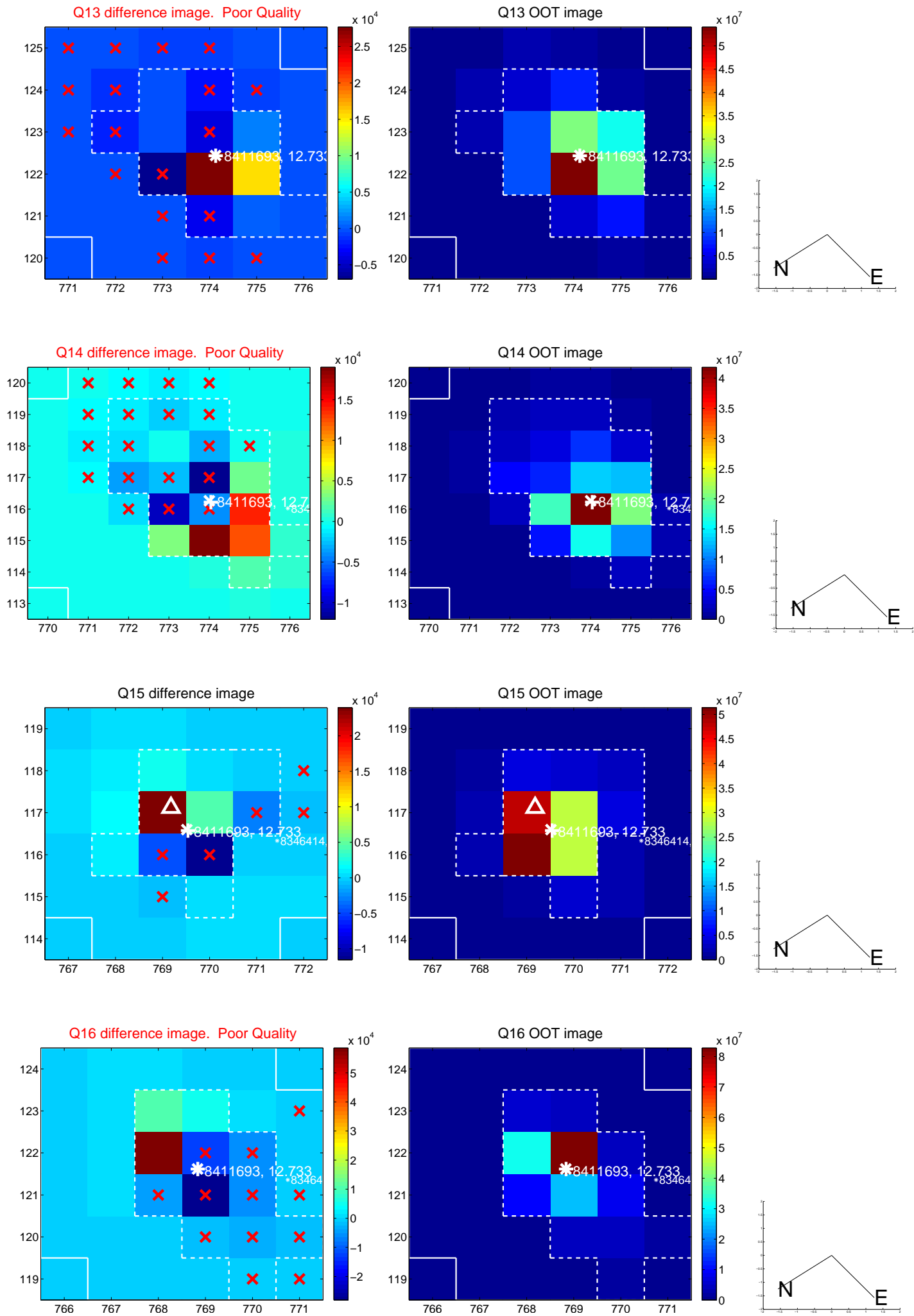
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



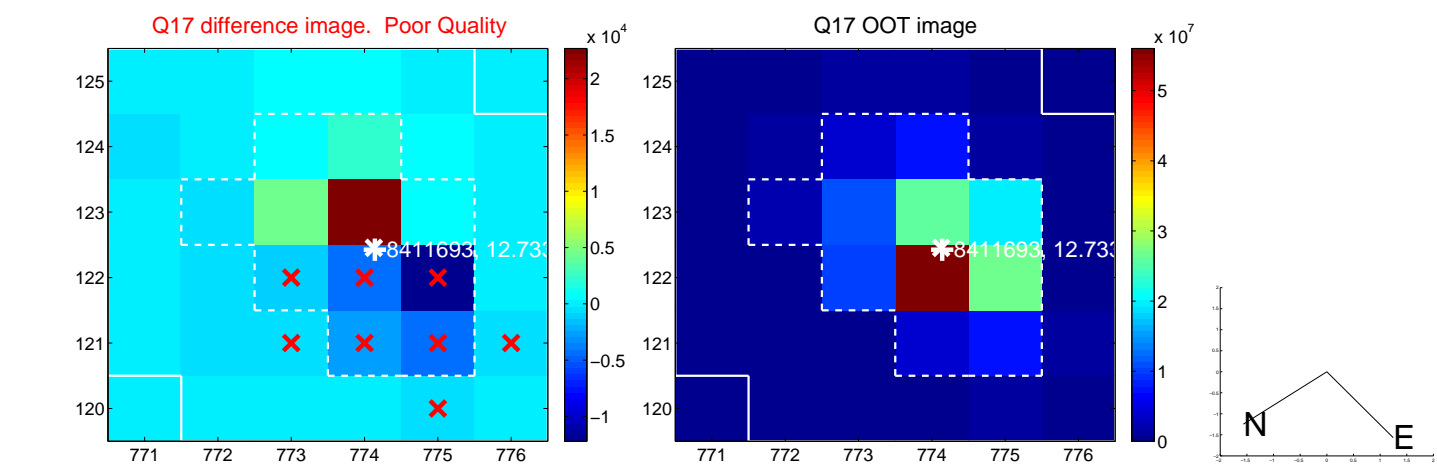
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



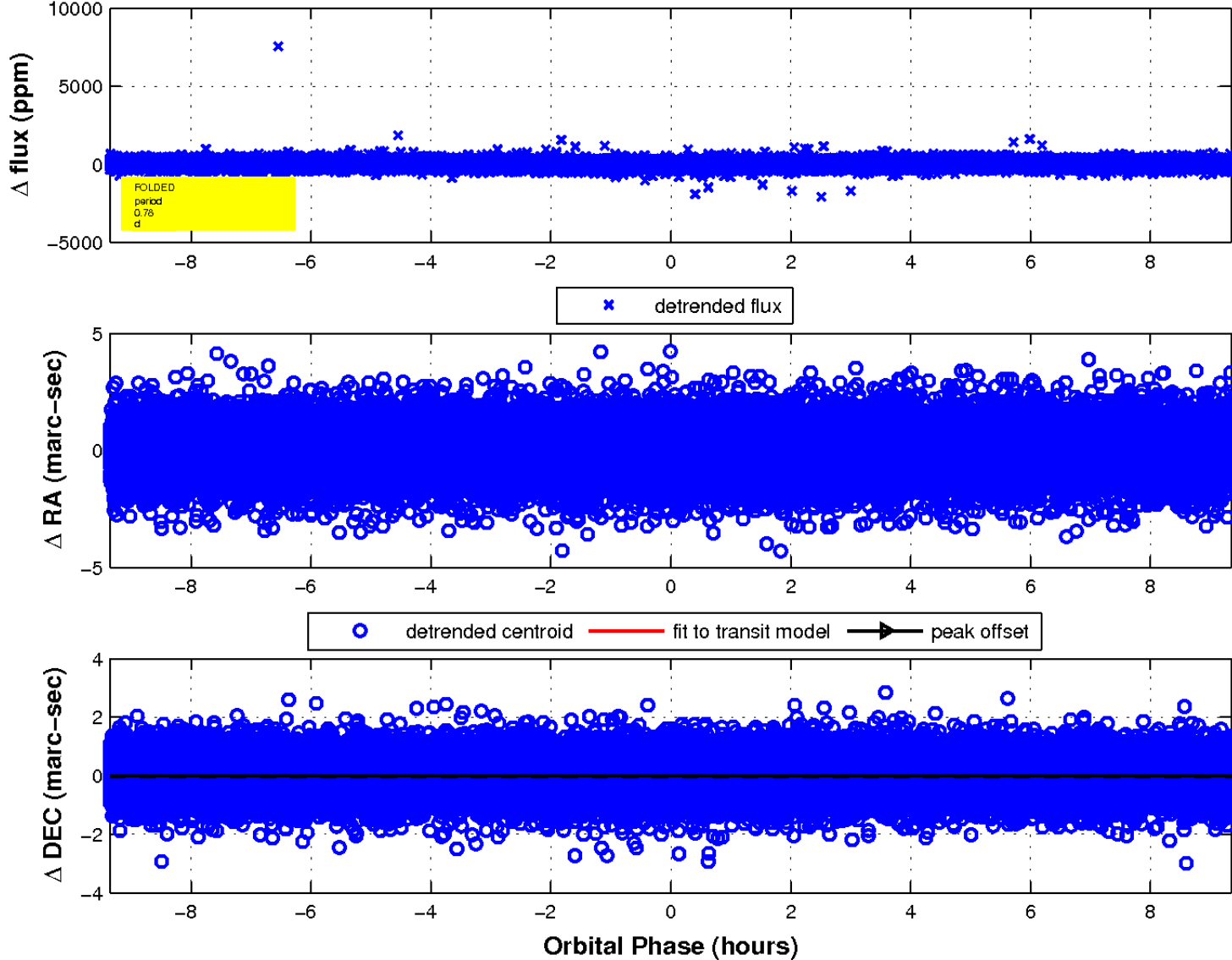
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

