

KIC 011773909

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})
011773909-01	OBS	No	0.582877	132.078658	208.5	1.909	13.0	11.8	1.48	7620	2.30	29307.67
011773909-02	OBS	No	0.582872	131.800425	219.7	1.655	11.1	12.0	1.48	7620	2.55	29308.04
011773909-03	OBS	No	0.679939	131.963627	550.9	1.363	10.8	11.5	1.48	7620	4.04	23866.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011773909-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011773909-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
011773909-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

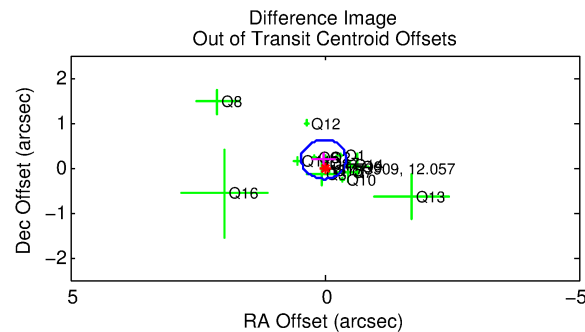
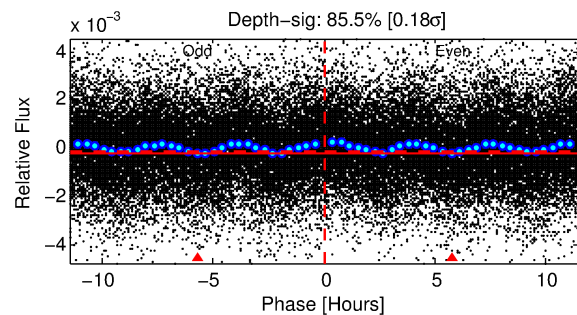
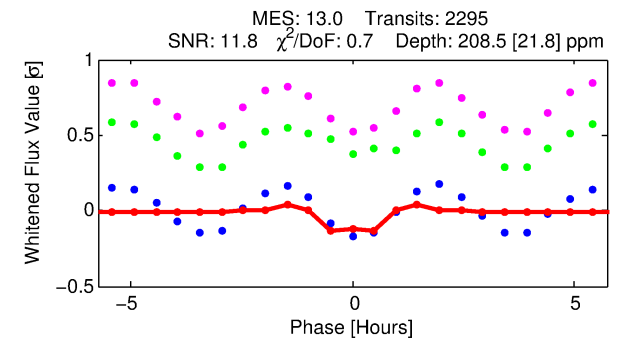
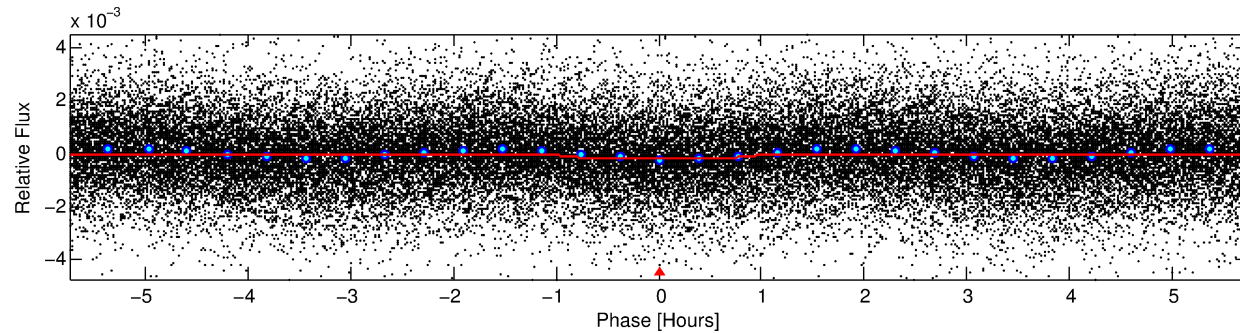
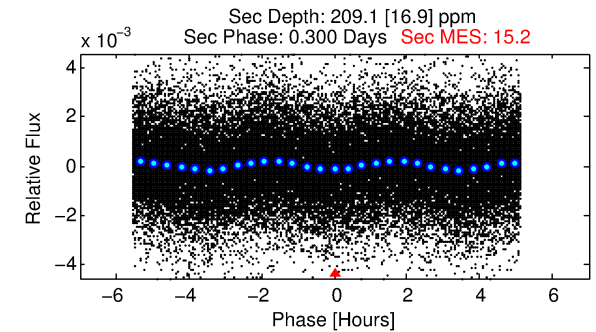
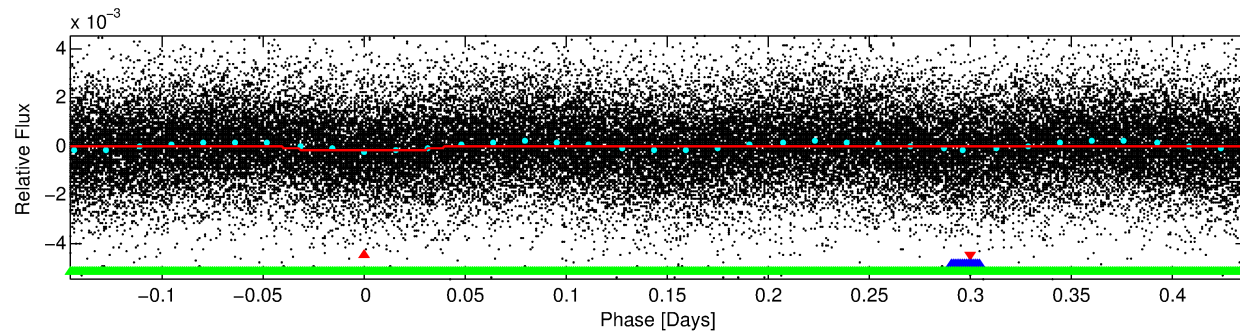
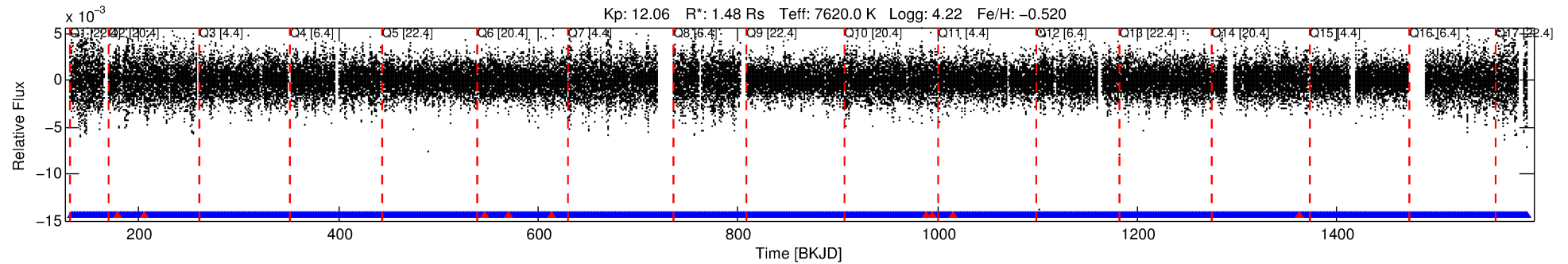
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011773909-01

No Significant Match Found

DV One-Page Summary

KIC: 11773909 Candidate: 1 of 3 Period: 0.583 d



DV Fit Results:

Period = 0.58288 [0.00001] d
Epoch = 132.0787 [0.0012] BKJD
Rp/R* = 0.0142 [0.0041]
a/R* = 1.89 [2.45]
b = 0.70 [1.30]
Seff = 29307.67 [11319.39]
Teq = 3336 [322] K
Rp = 2.30 [0.96] Re
a = 0.0150 [0.0037] AU
Ag = 4.93 [3.37] [1.17σ]
Teffp = 7685 [1174] K [3.57σ]

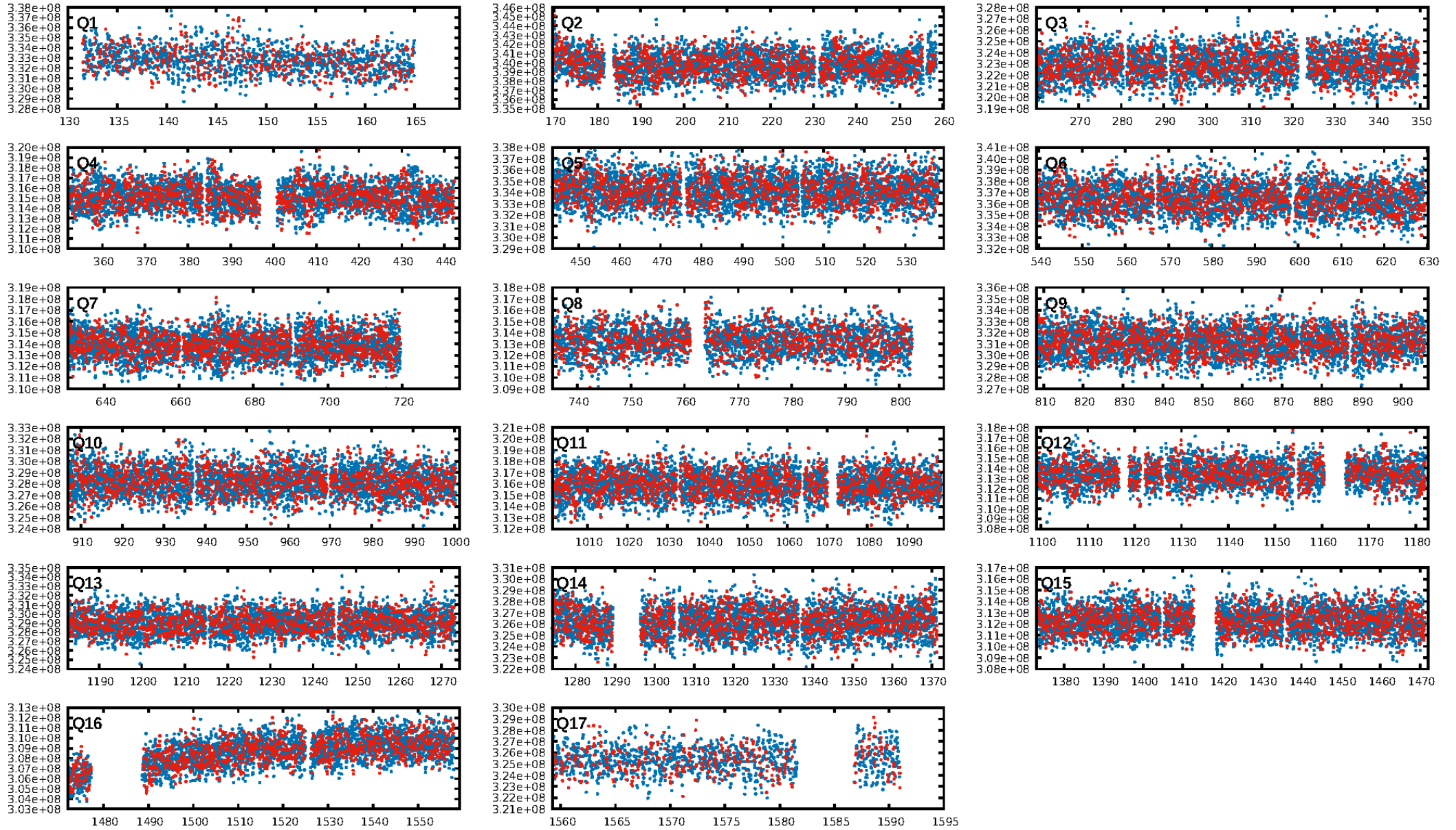
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 67.9% [0.99σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2182/2191]
GhostDiagnostic-chr: 0.7986
Centroid-sig: 11.7%
Centroid-so: 0.173 arcsec [2.61σ]
OotOffset-rm: 0.187 arcsec [1.28σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.157 arcsec [1.05σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 1.00 [17/17]

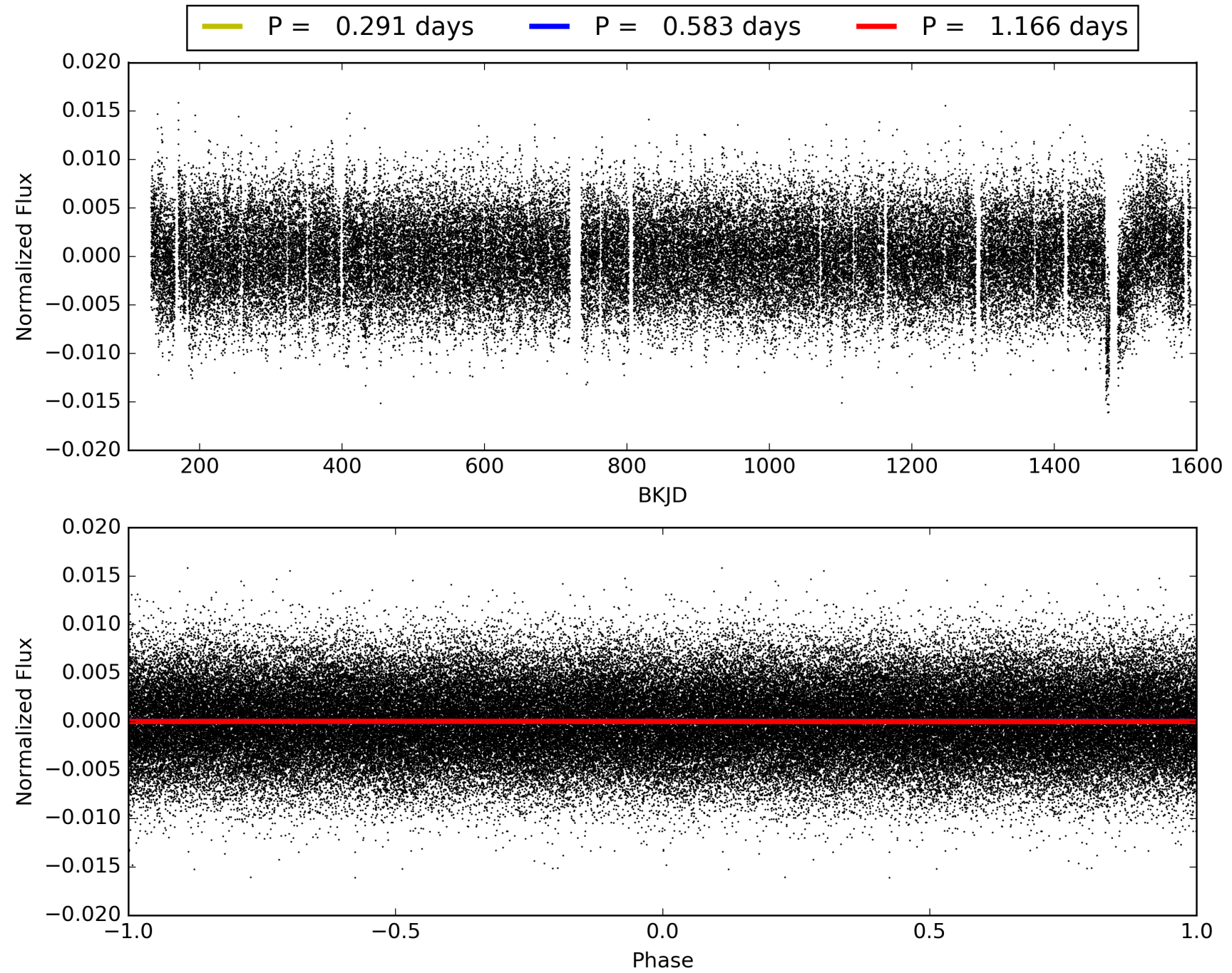
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:59:46 Z

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

TCE 011773909-01, PDC Light Curves

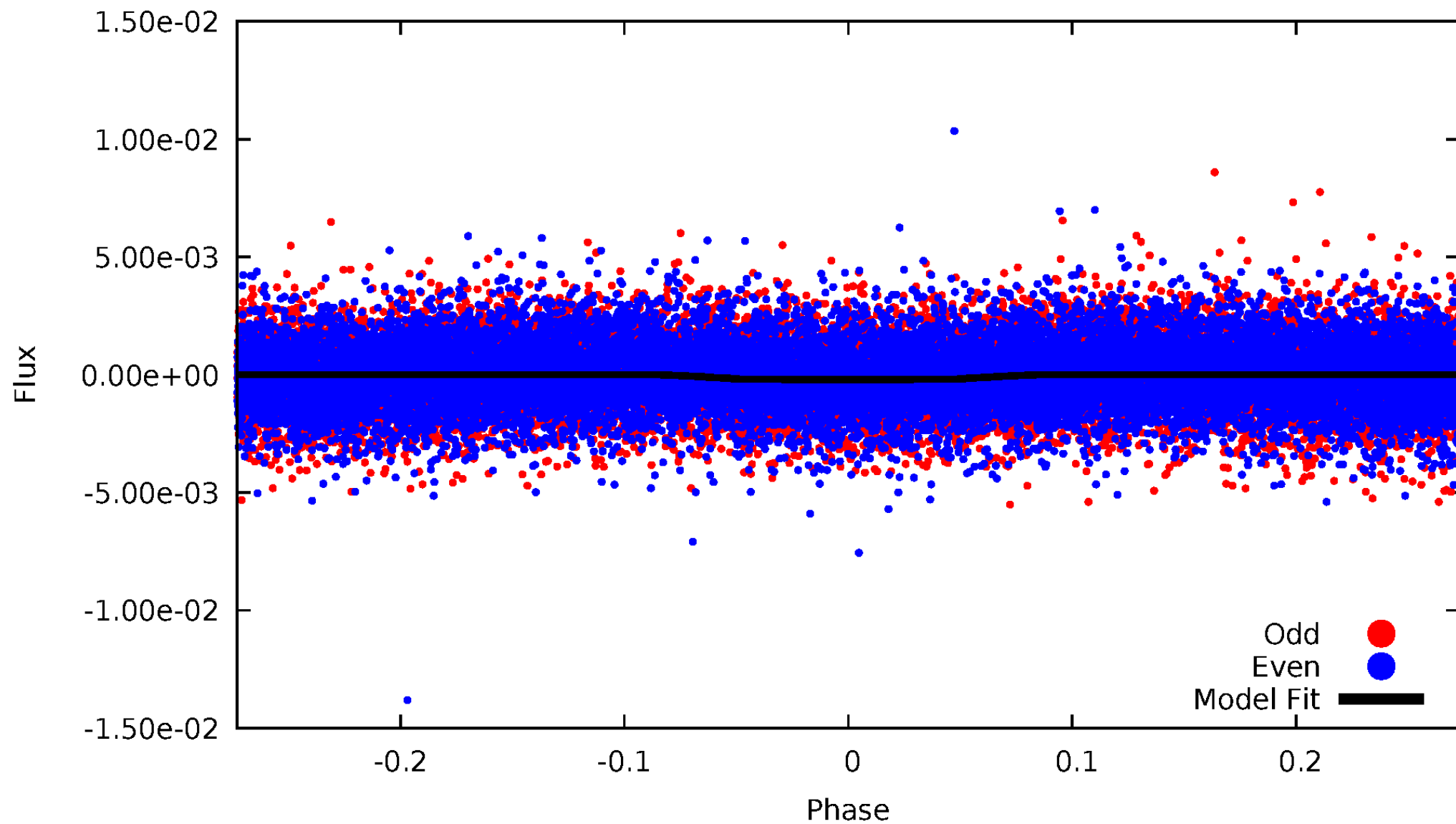


TCE 011773909-01



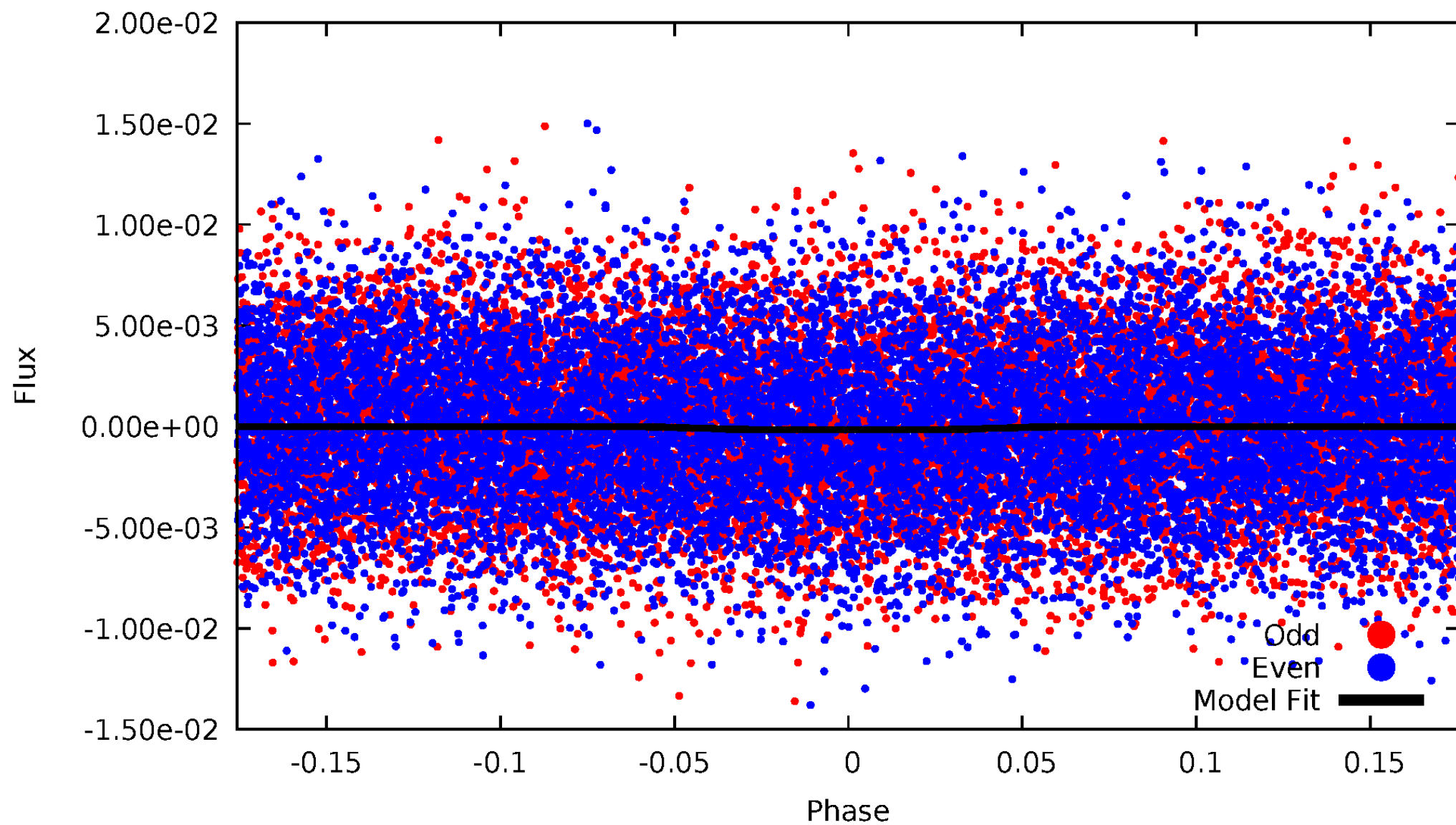
DV Odd/Even

TCE 011773909-01



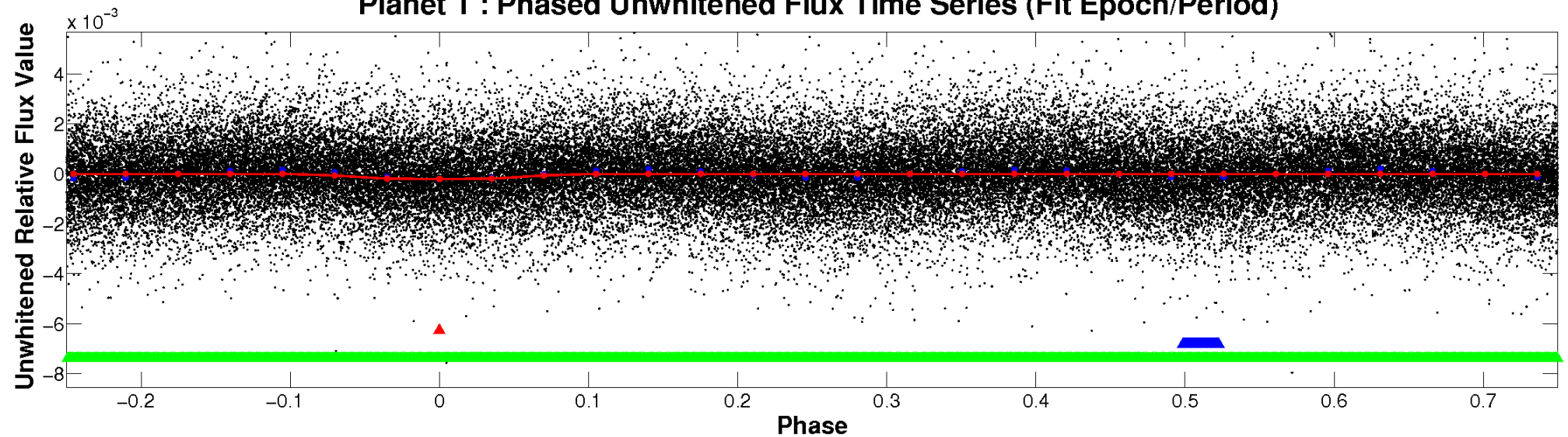
ALT Odd/Even

TCE 011773909-01

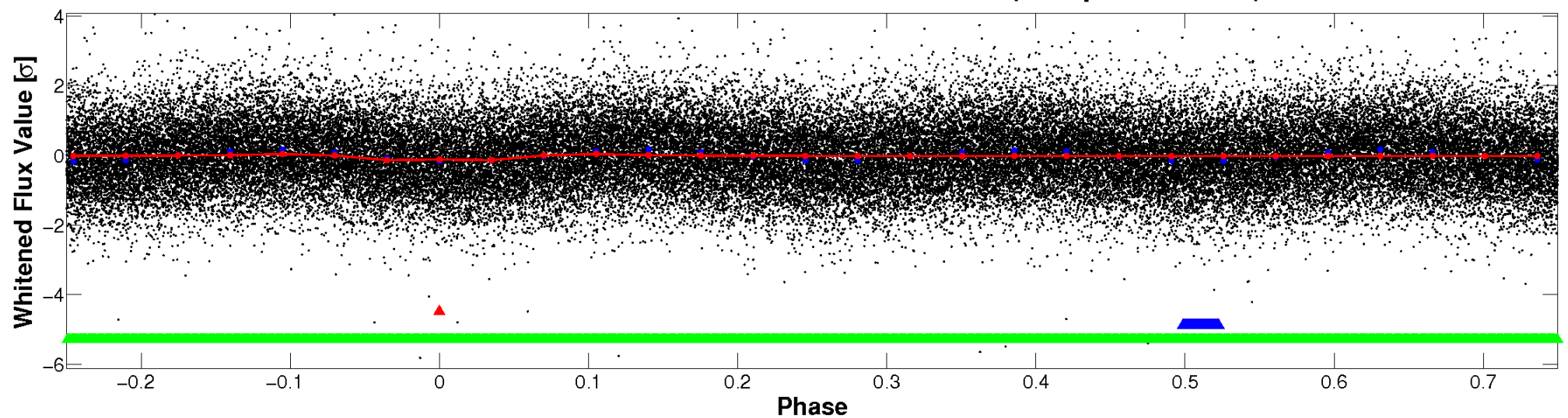


Non-Whitened Vs. Whitened Light Curve

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

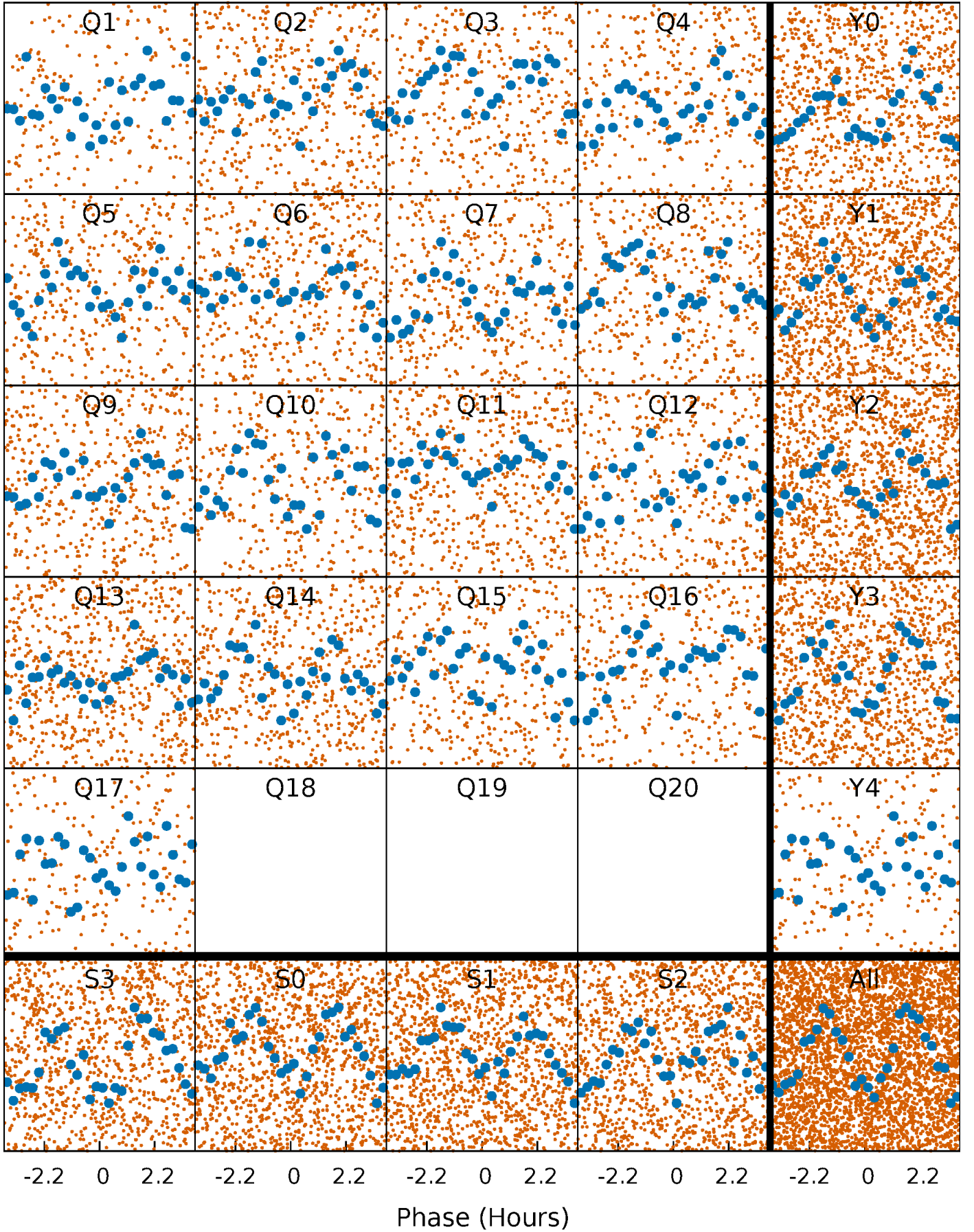


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



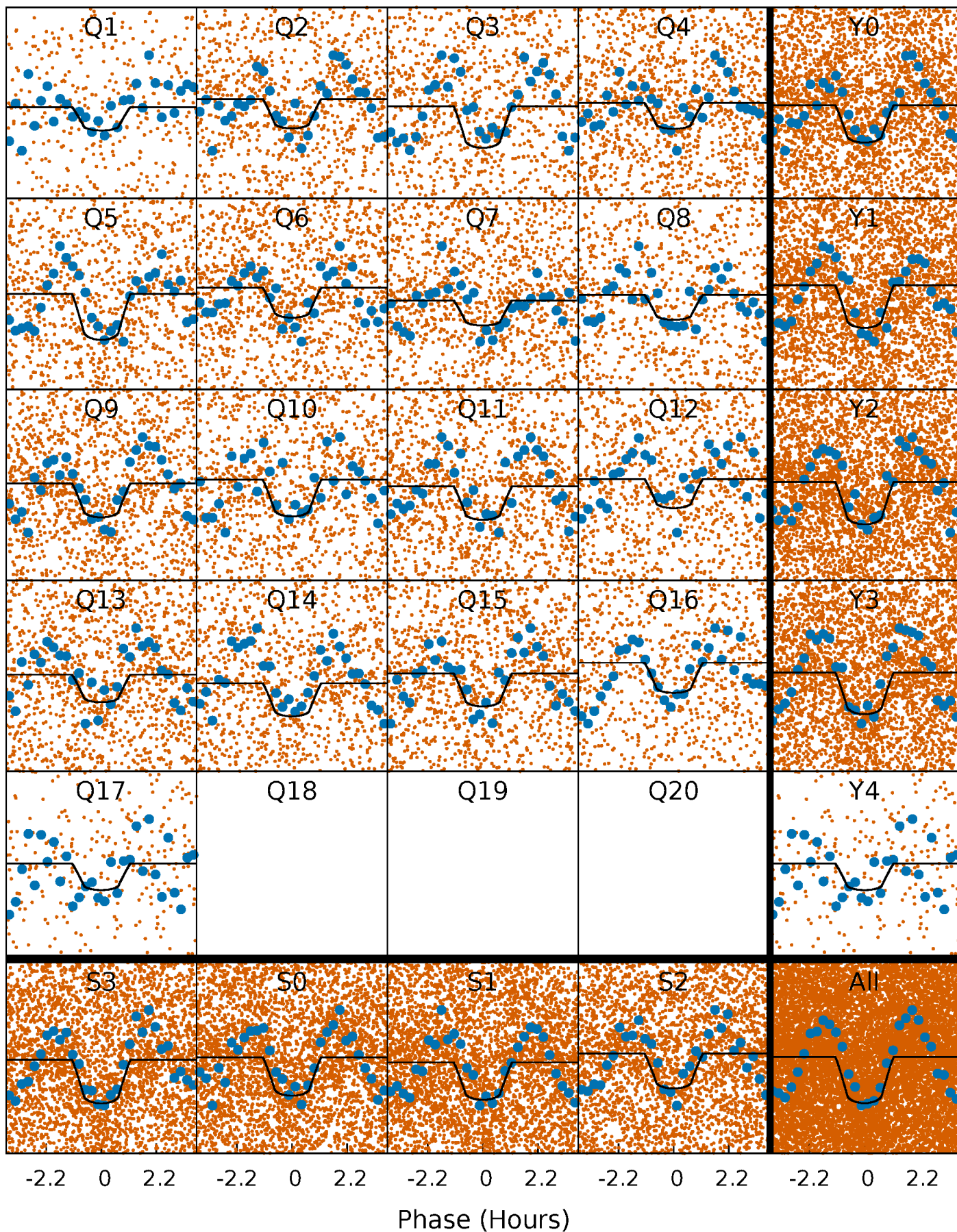
PDC Quarter-Phased Transit Curves

TCE 011773909-01 P= 0.582877 Days $T_0=132.078658$ (BKJD)



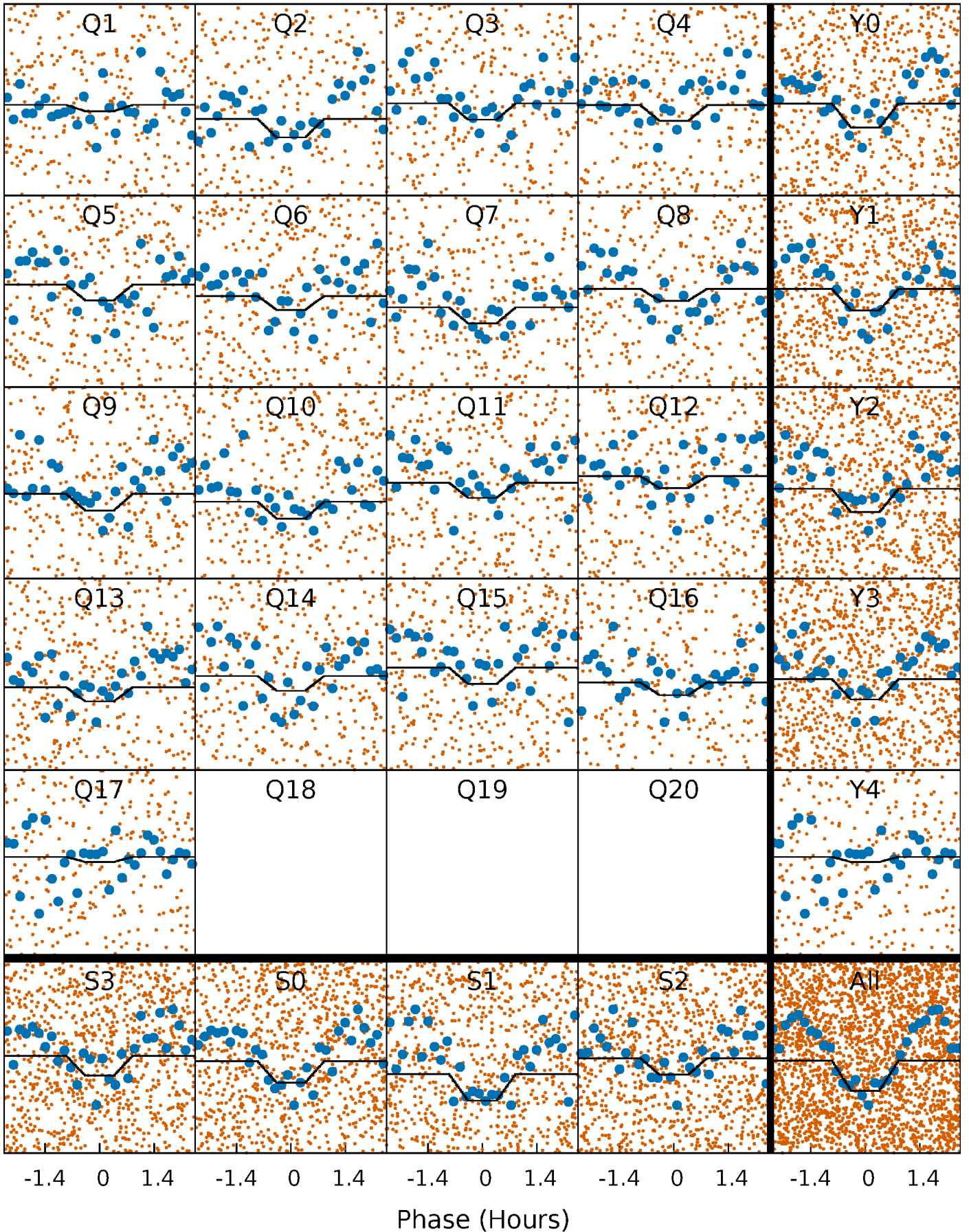
DV Quarter-Phased Transit Curves

TCE 011773909-01 P= 0.582877 Days $T_0=132.078658$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

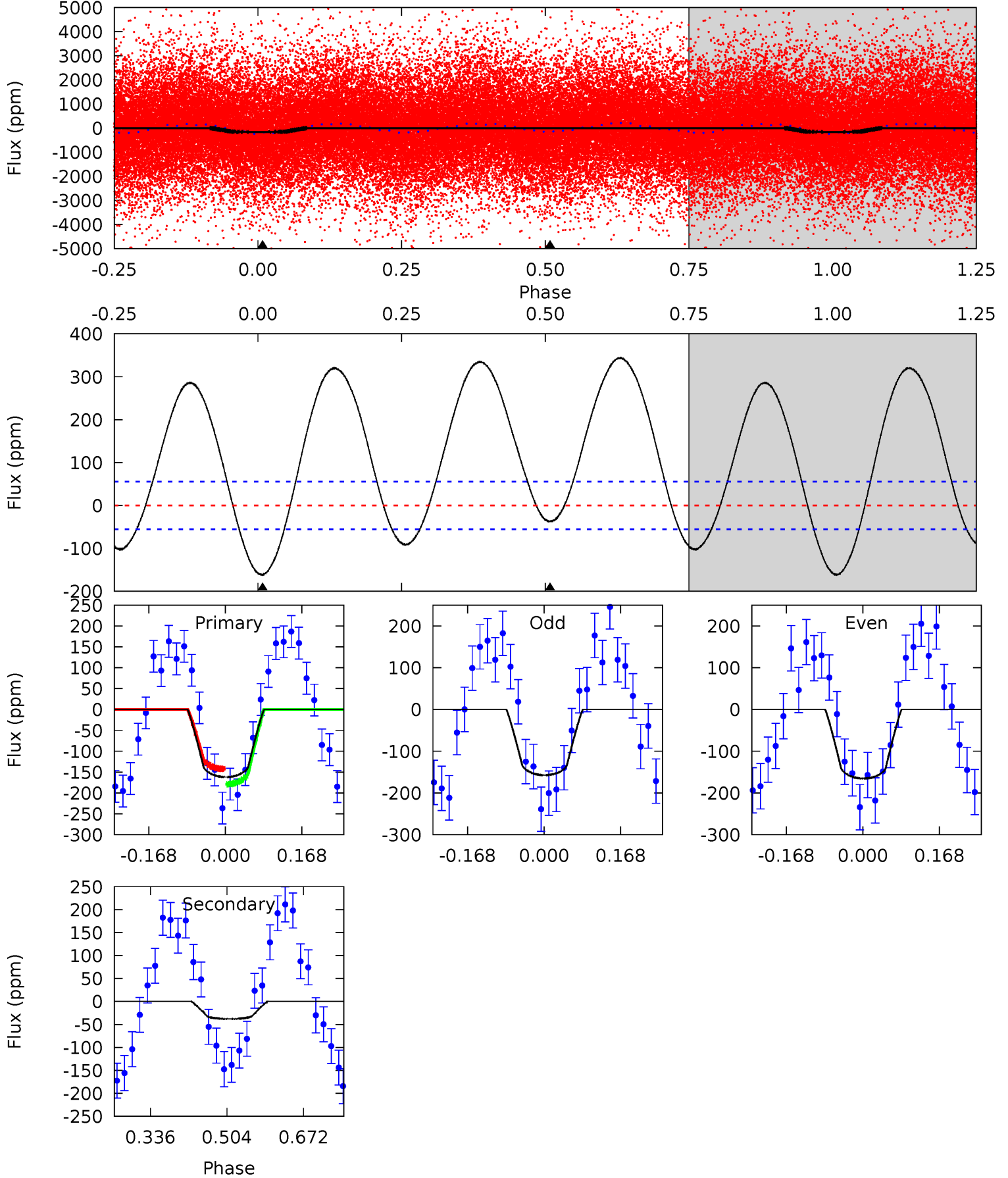
TCE 011773909-01 P= 0.582873 Days $T_0=131.507750$ (BKJD)



DV Model-Shift Uniqueness Test

011773909-01, P = 0.582877 Days, E = 131.495781 Days

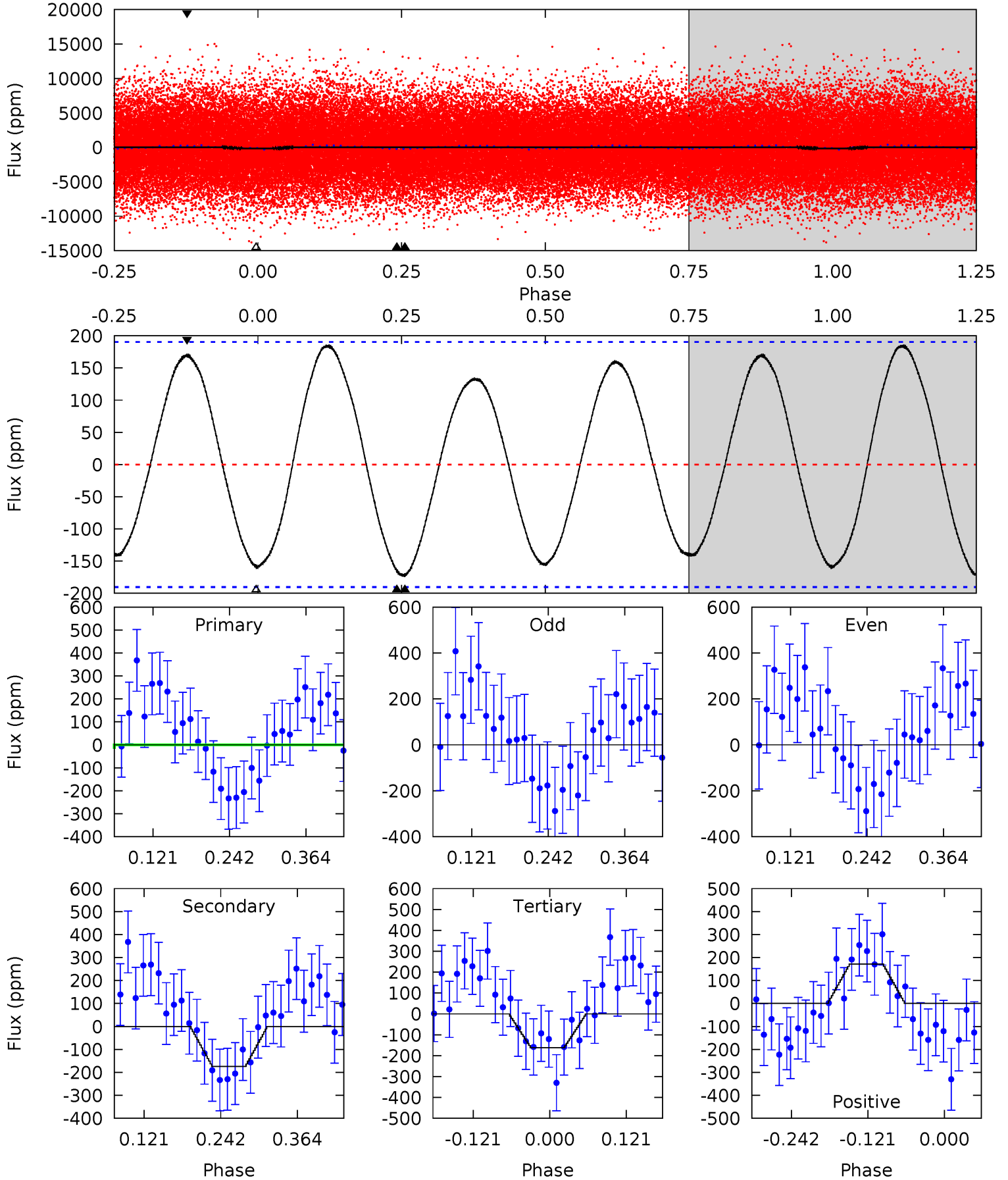
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	3.06	0	0	4.45	1.38	7.71	13.0	13.0	3.06	3.06	0.32	0.87	0.68	1.46



Alt Model-Shift Uniqueness Test

011773909-01, P = 0.582873 Days, E = 131.507750 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.99	4.15	3.85	4.09	4.52	1.55	2.64	0.15	-0.09	0.30	0.06	0.11	0.86	0.52	0.06



Stellar Parameters For KIC 011773909

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7620^{+236}_{-315}	$4.222^{+0.124}_{-0.186}$	$-0.520^{+0.250}_{-0.300}$	$1.481^{+0.446}_{-0.275}$	$1.334^{+0.203}_{-0.185}$	$0.579^{+0.382}_{-0.264}$
	+3%/-4%	+3%/-4%	+48%/-58%	+30%/-19%	+15%/-14%	+66%/-46%
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 011773909-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-38 ± 12	$2.35^{+0.88}_{-0.70}$	4691^{+375}_{-325}	4513^{+1091}_{-1122}	$0.828^{+0.949}_{-0.436}$
Alt.	-175 ± 42	$2.14^{+0.82}_{-0.70}$	4711^{+340}_{-353}	7493^{+2092}_{-1418}	$4.612^{+5.588}_{-2.400}$

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

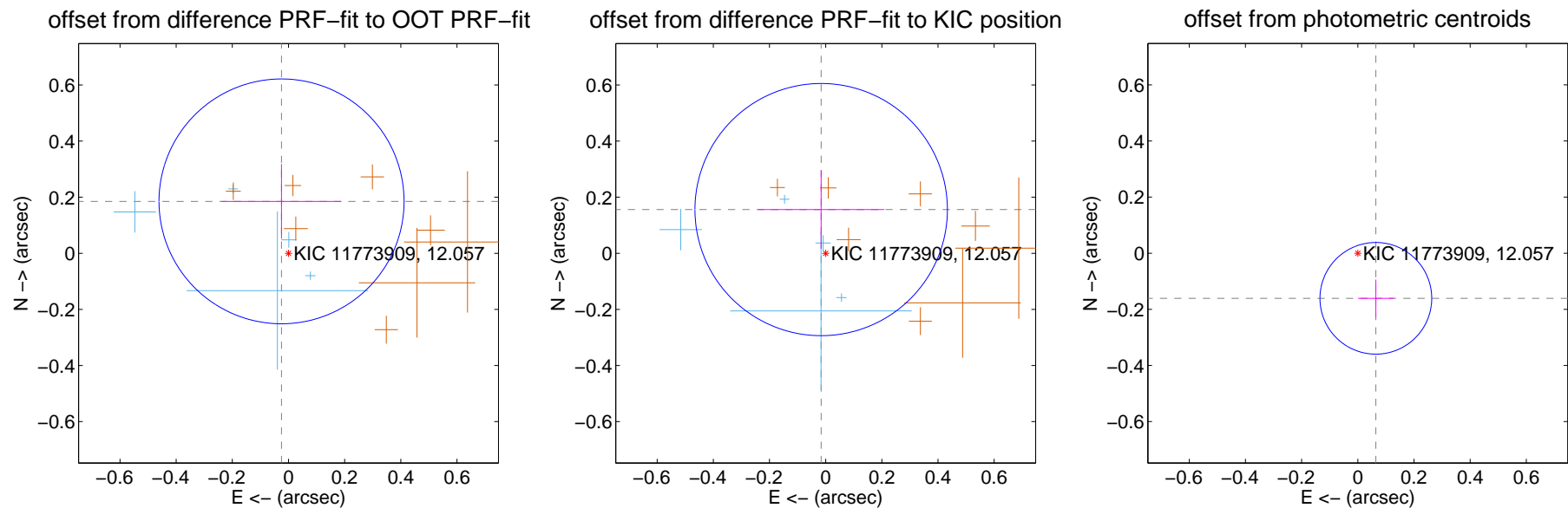
DV Centroid Data

Supplemental centroid analysis for 011773909-01. Kepler magnitude: 12.06. Transit SNR 11.79

There are 7 quarters with good PRF difference image offsets

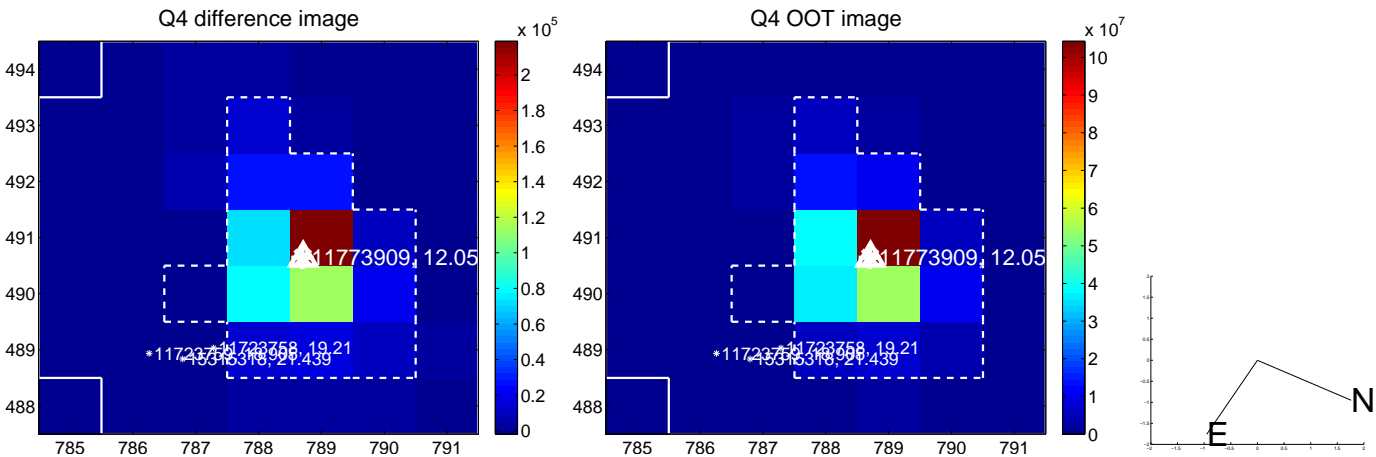
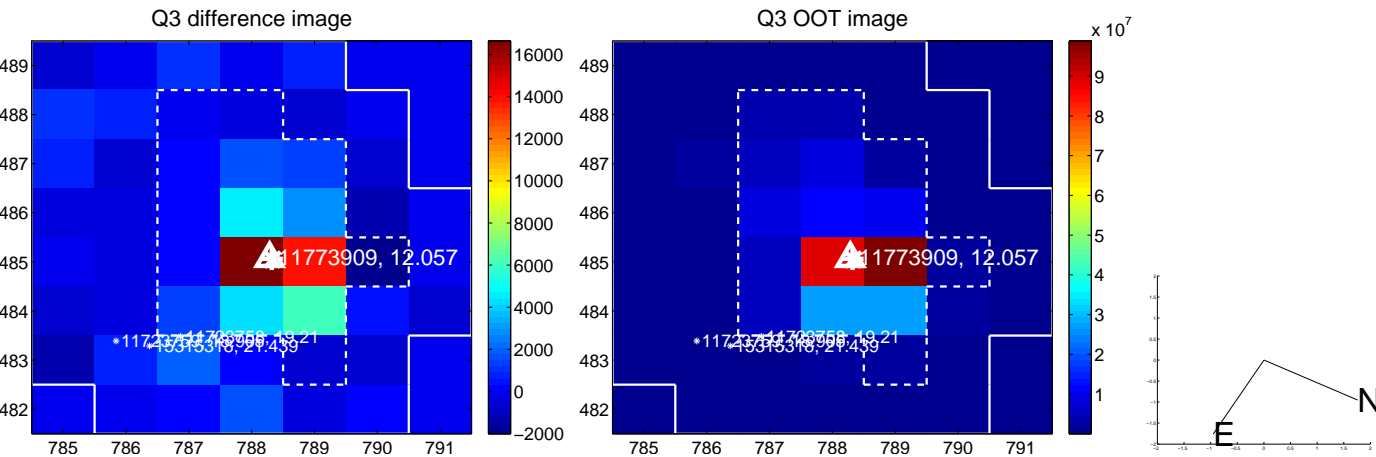
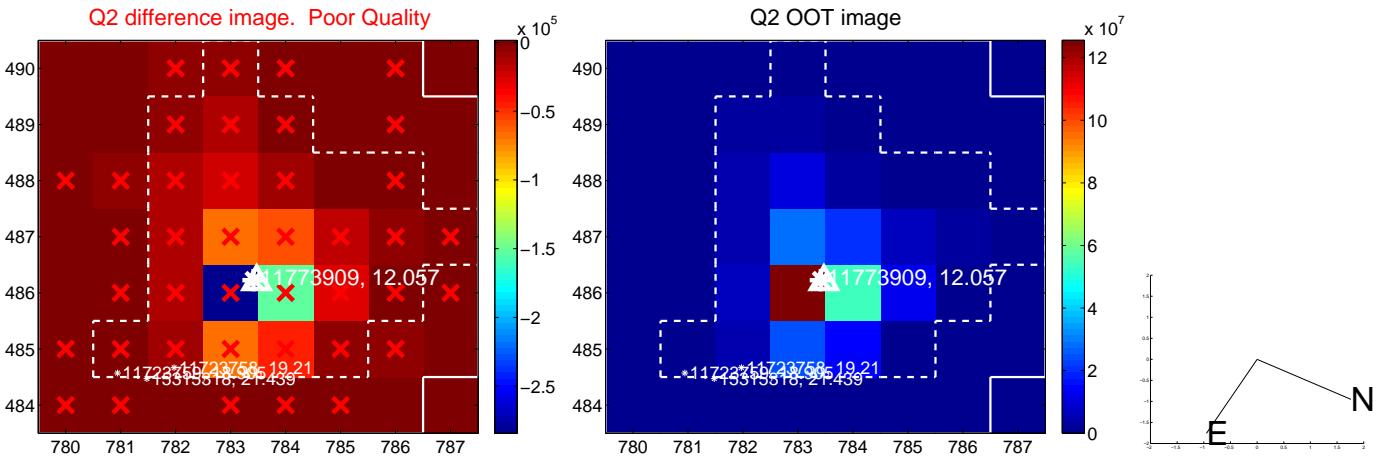
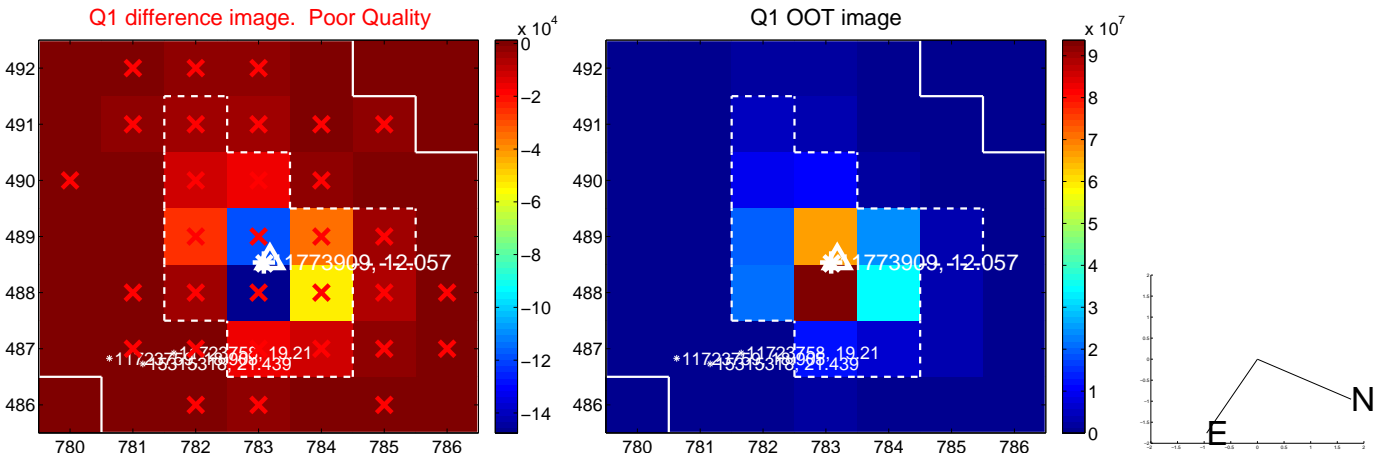
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.187 ± 0.146	1.28	0.025 ± 0.213	0.185 ± 0.133
PRF-fit source offset from KIC position	0.157 ± 0.150	1.05	0.016 ± 0.225	0.156 ± 0.140
photometric centroid source offset	0.17 ± 0.07	2.61	-0.06 ± 0.06	-0.16 ± 0.07

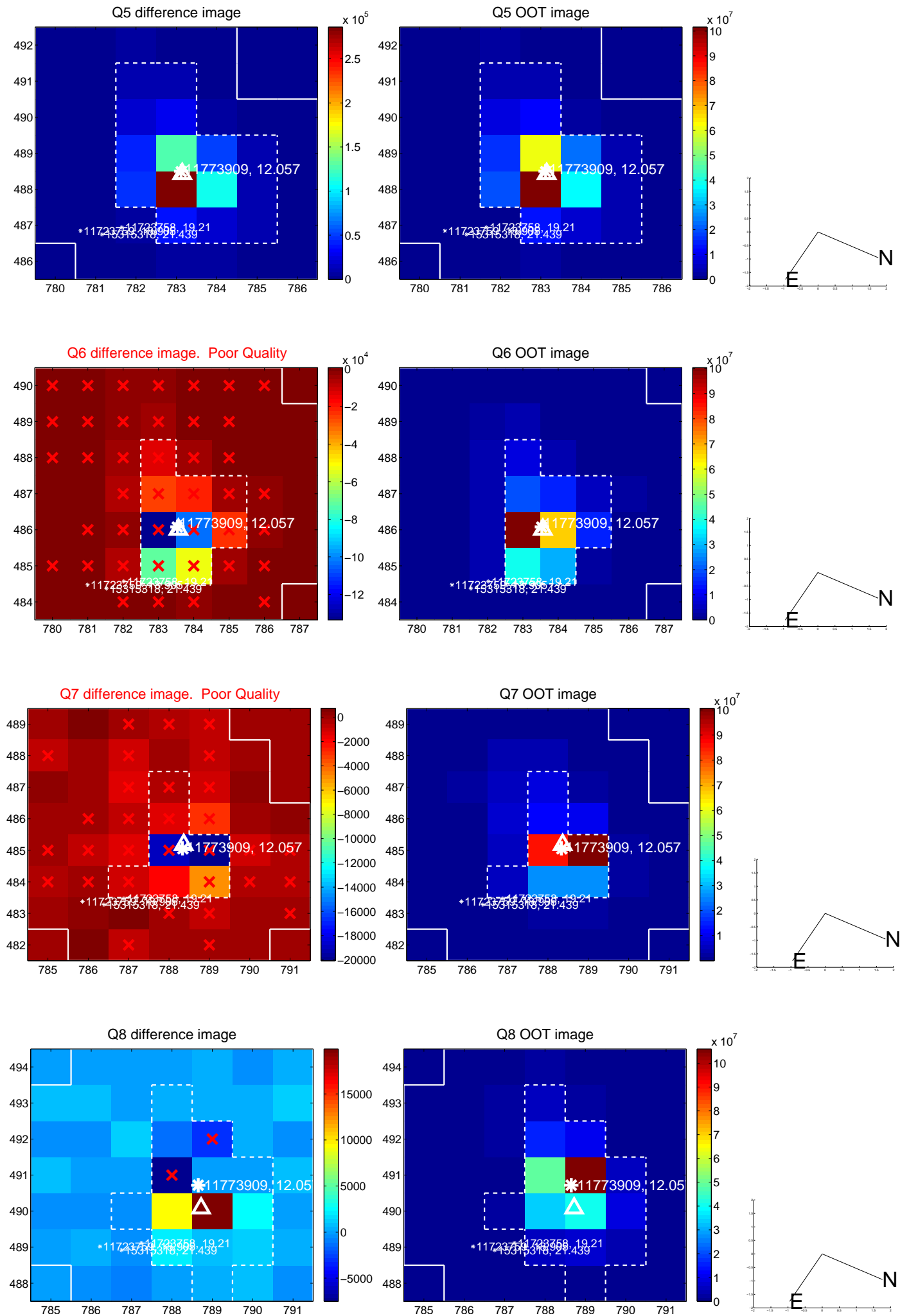


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

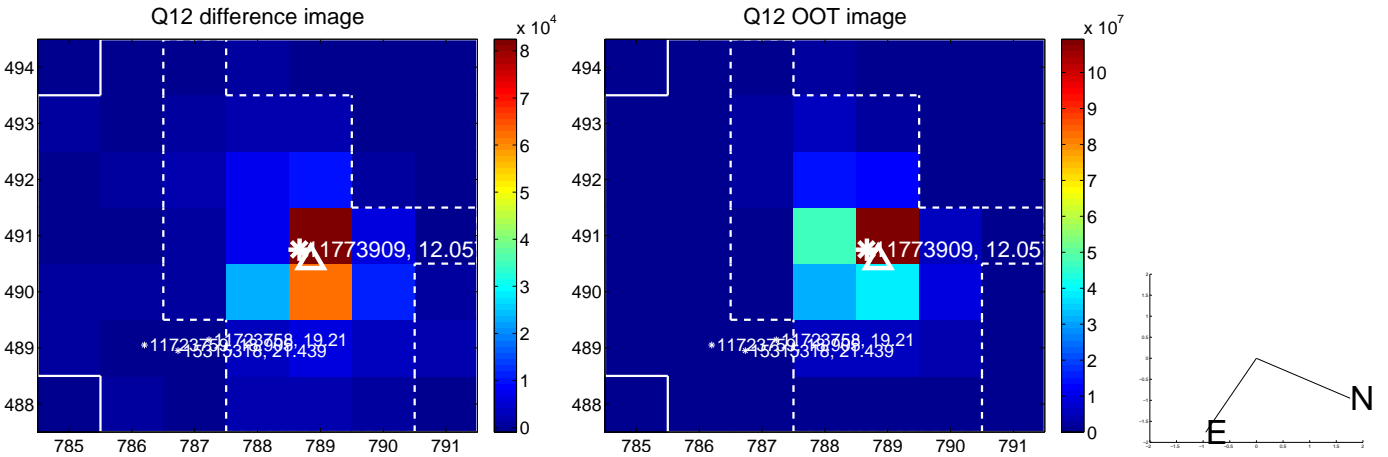
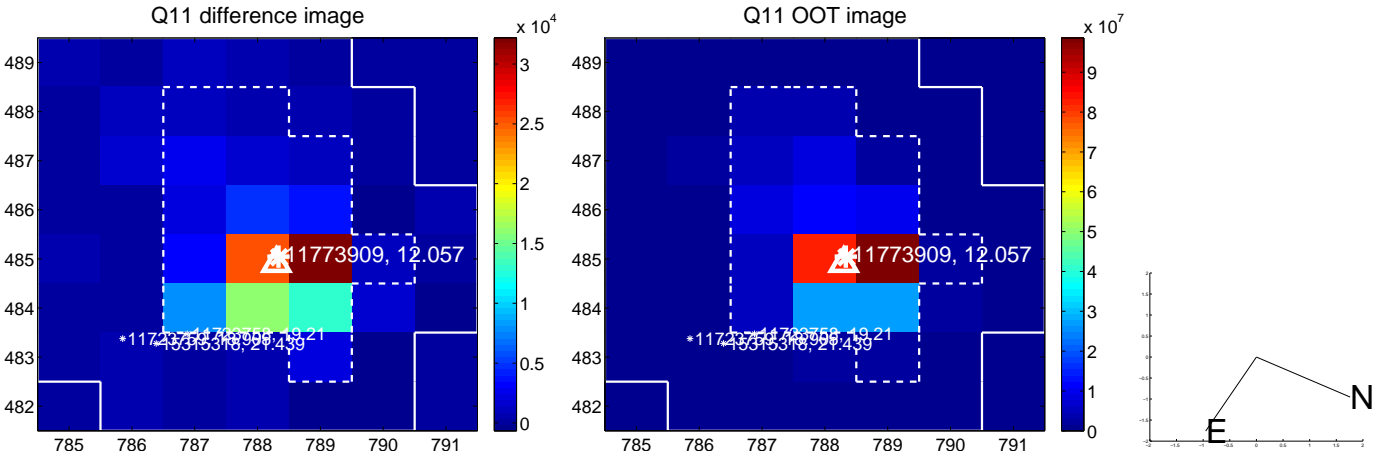
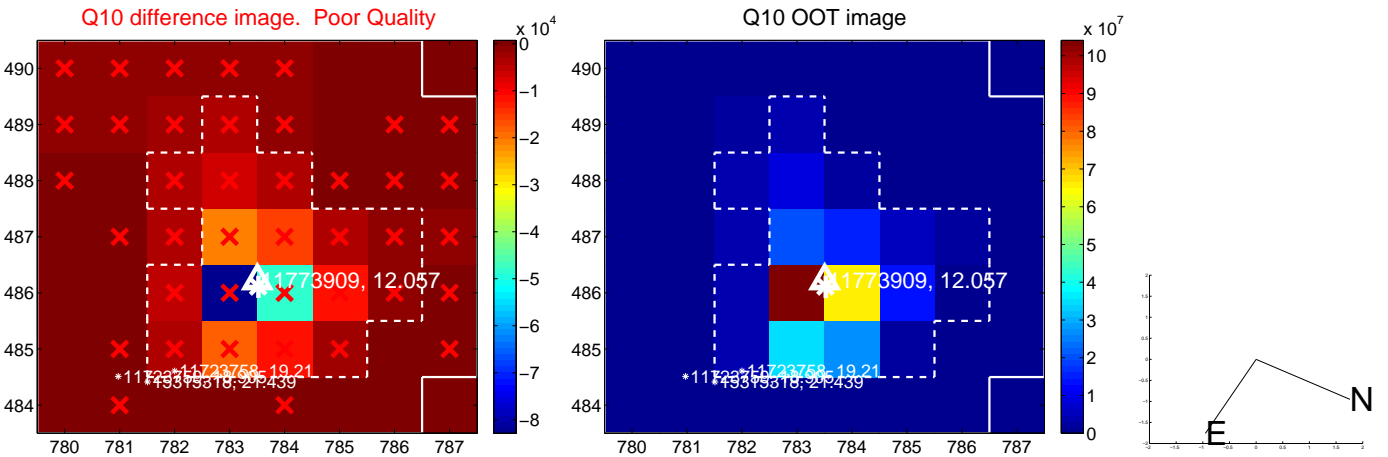
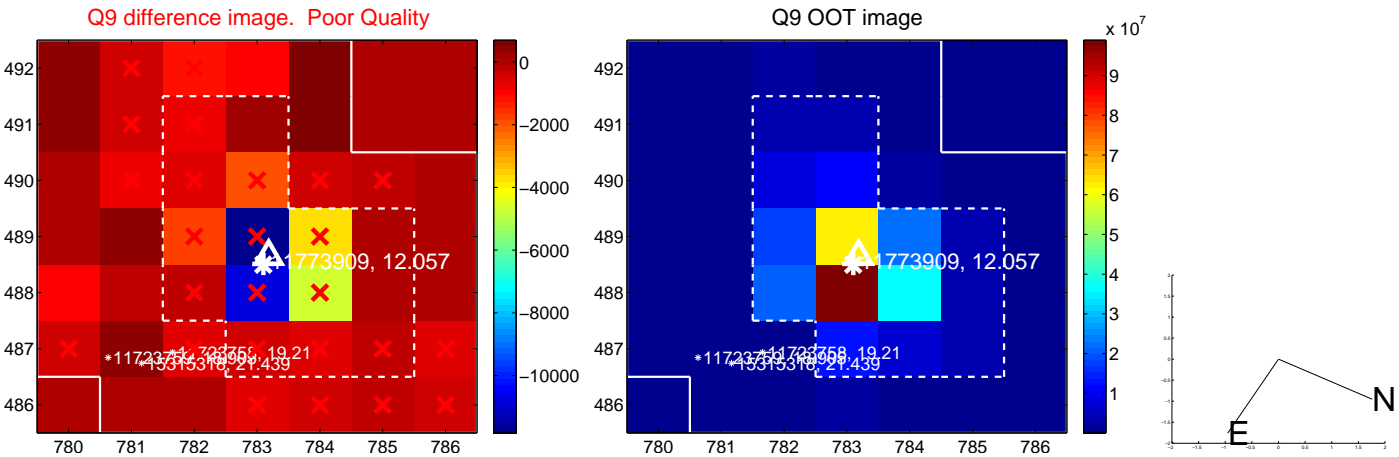
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



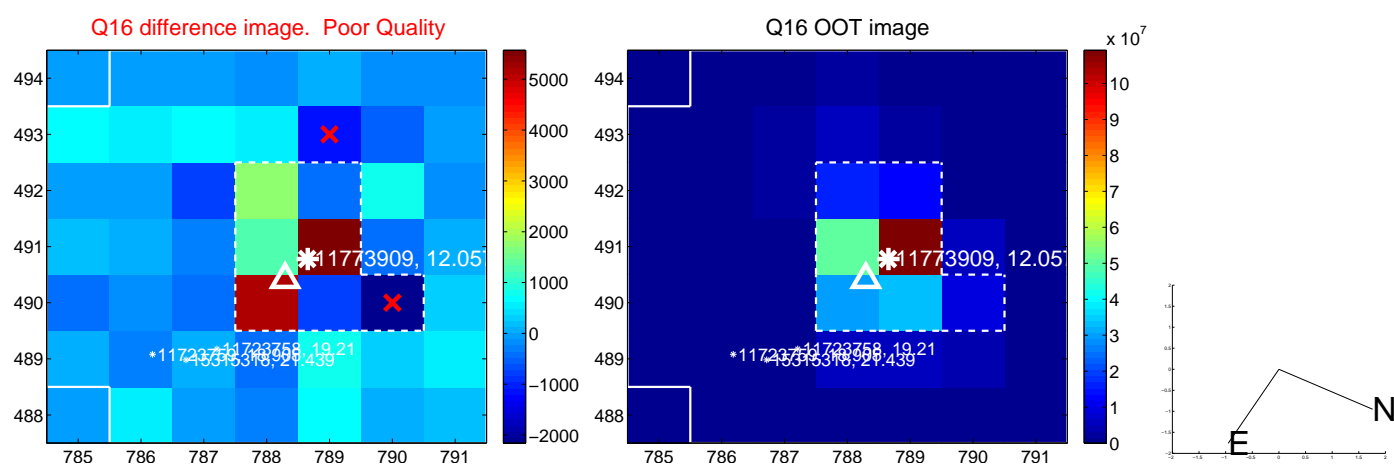
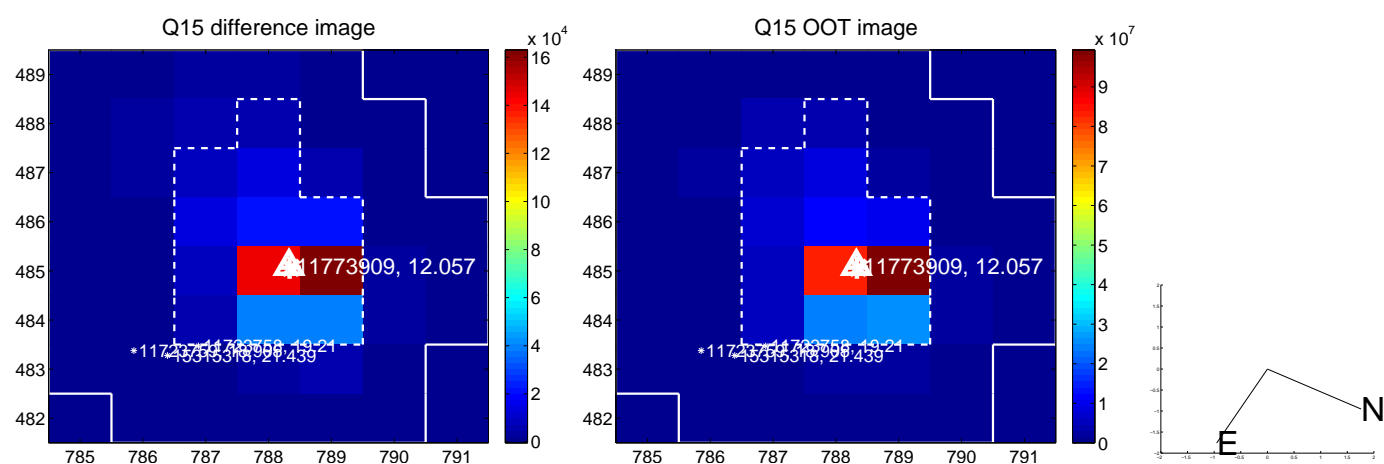
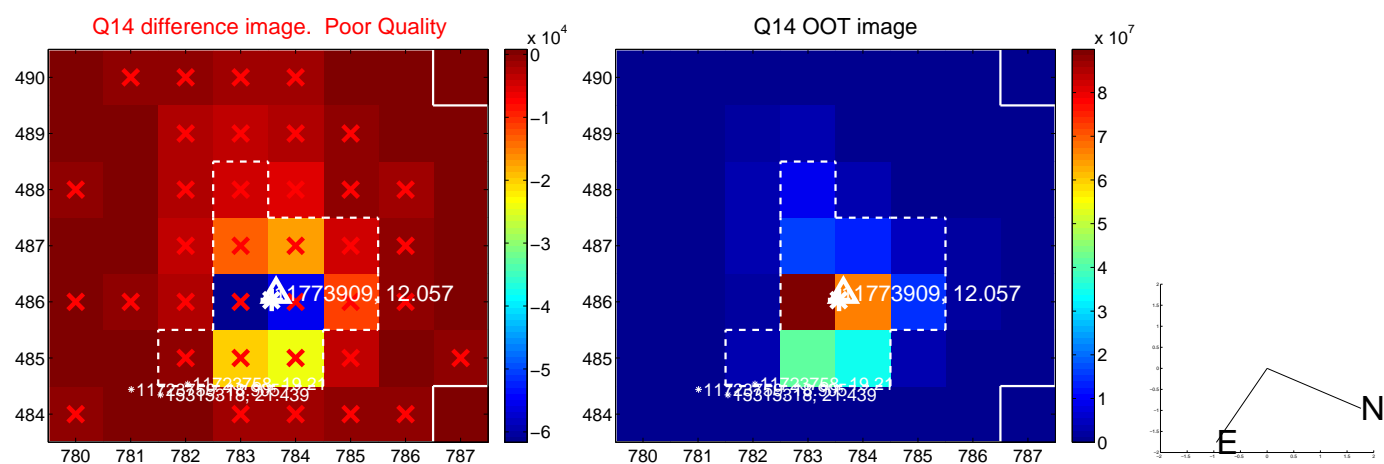
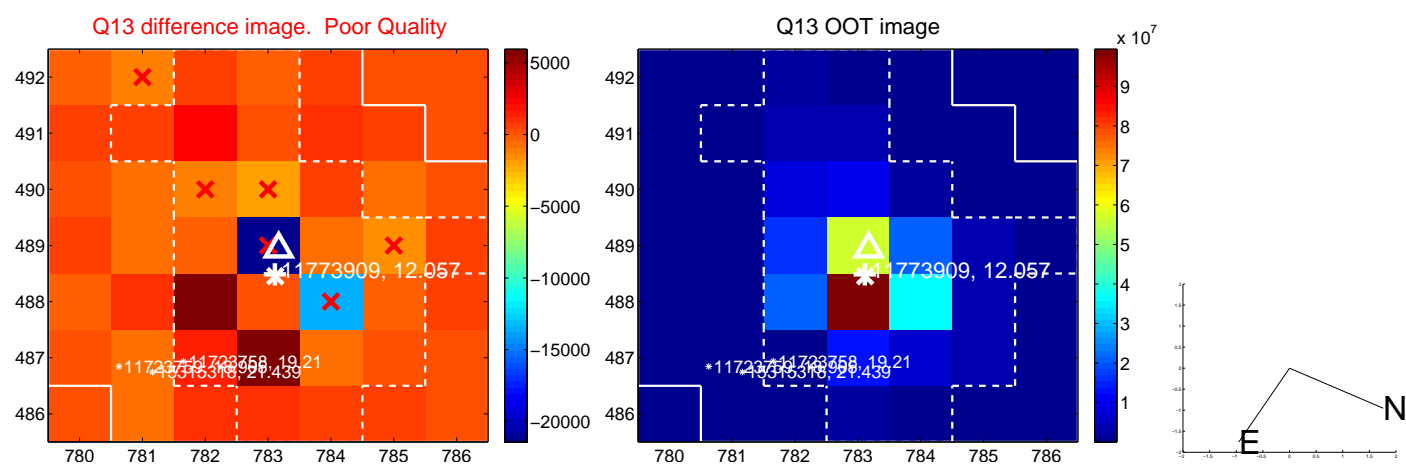
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

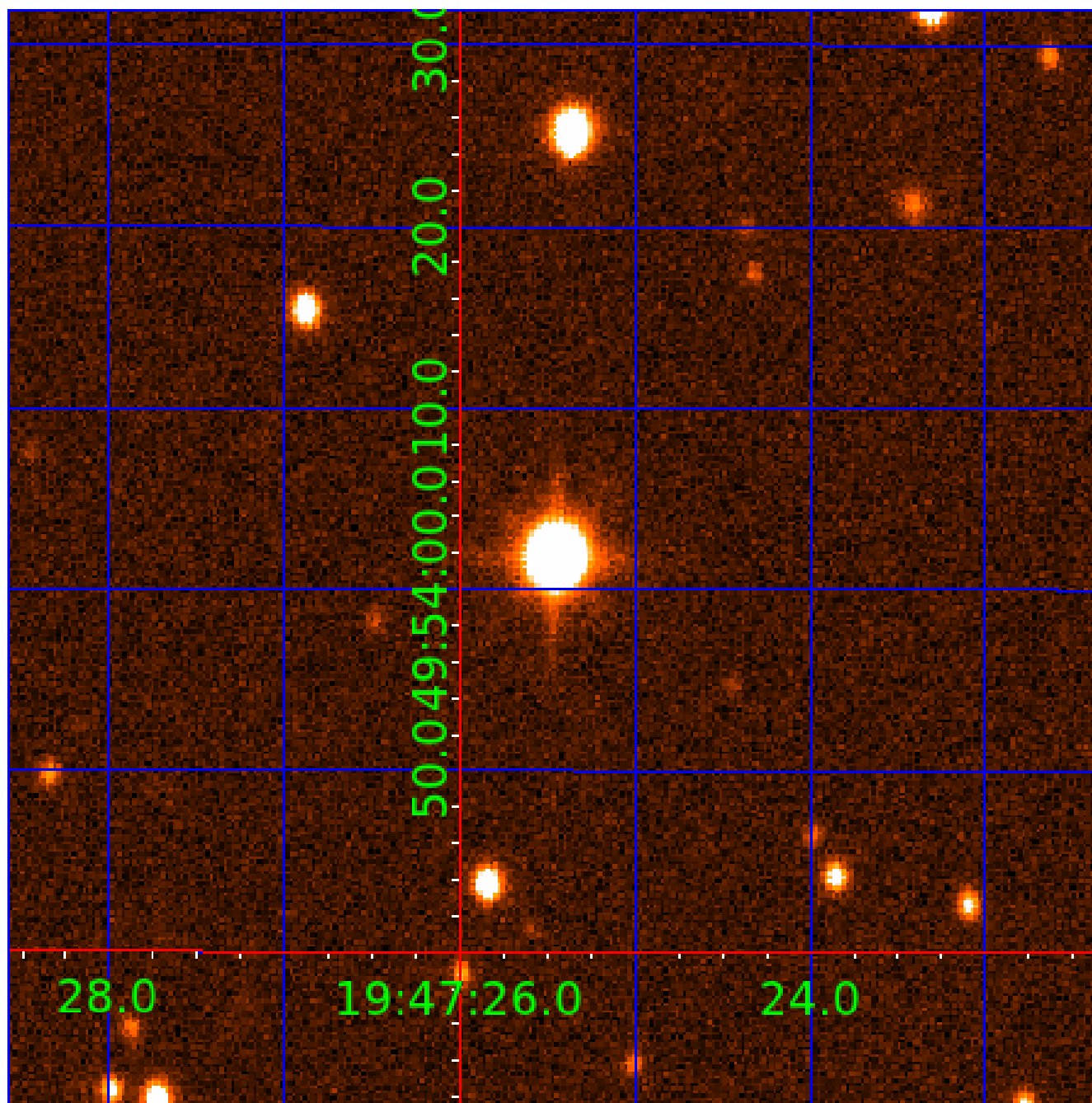


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011773909

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})
011773909-01	OBS	No	0.582877	132.078658	208.5	1.909	13.0	11.8	1.48	7620	2.30	29307.67
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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011773909-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
011773909-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

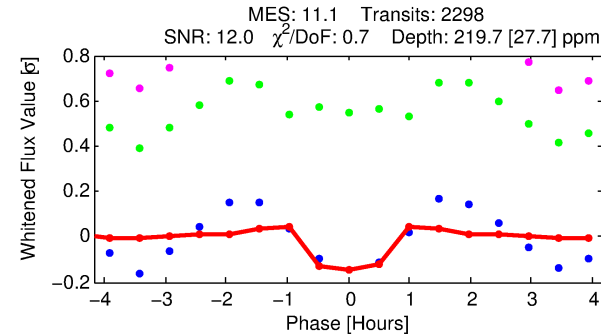
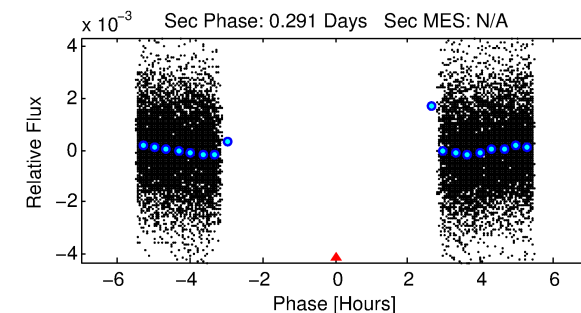
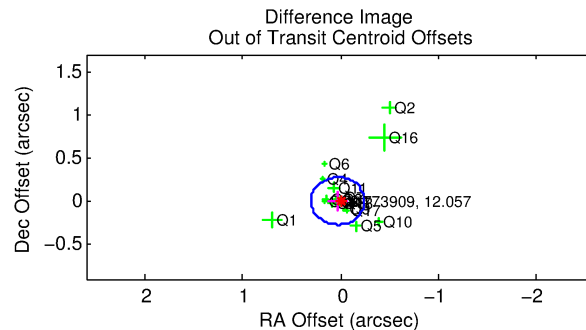
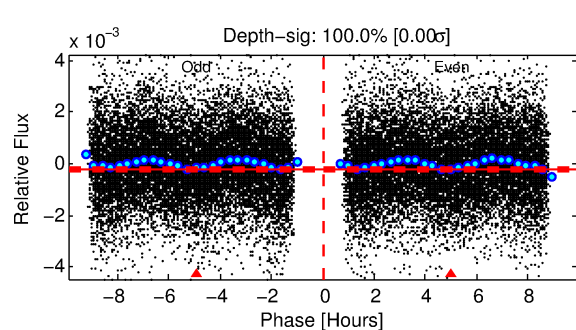
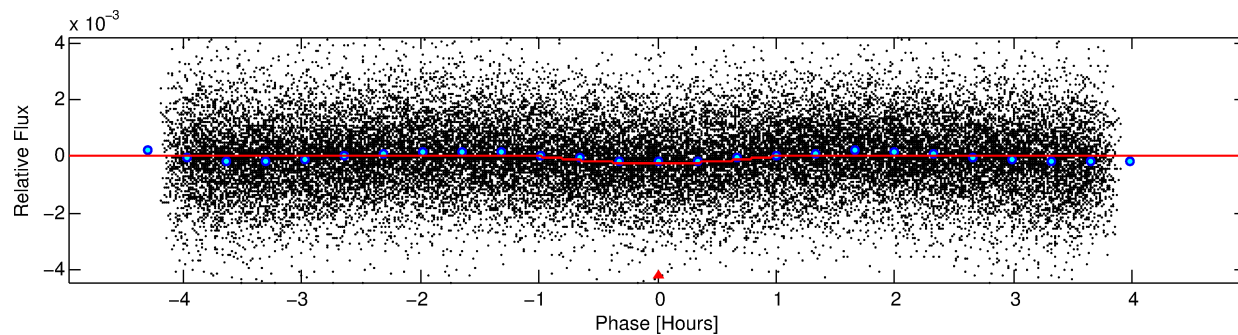
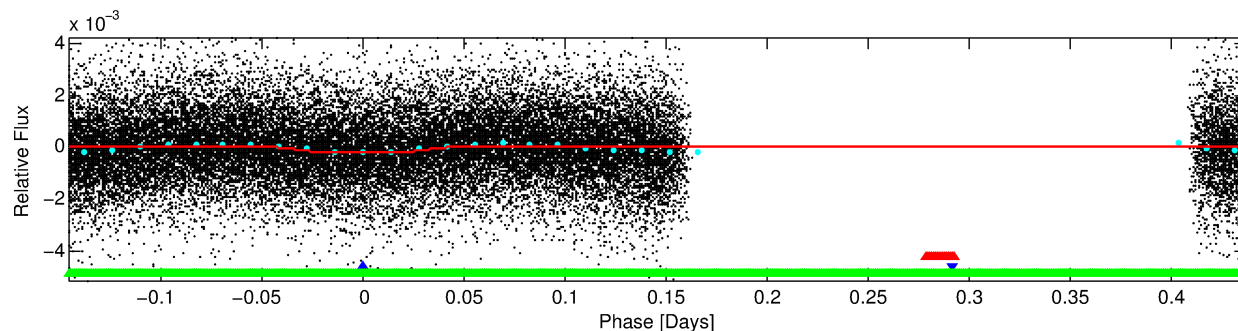
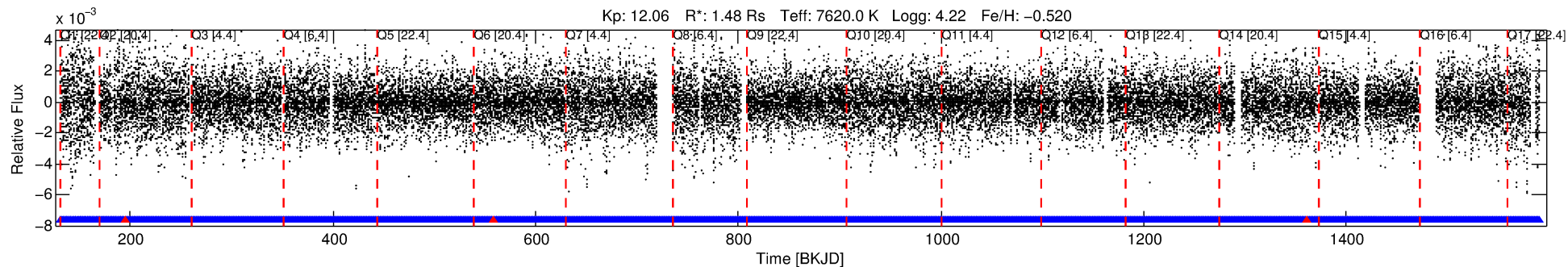
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011773909-02

No Significant Match Found

DV One-Page Summary

KIC: 11773909 Candidate: 2 of 3 Period: 0.583 d



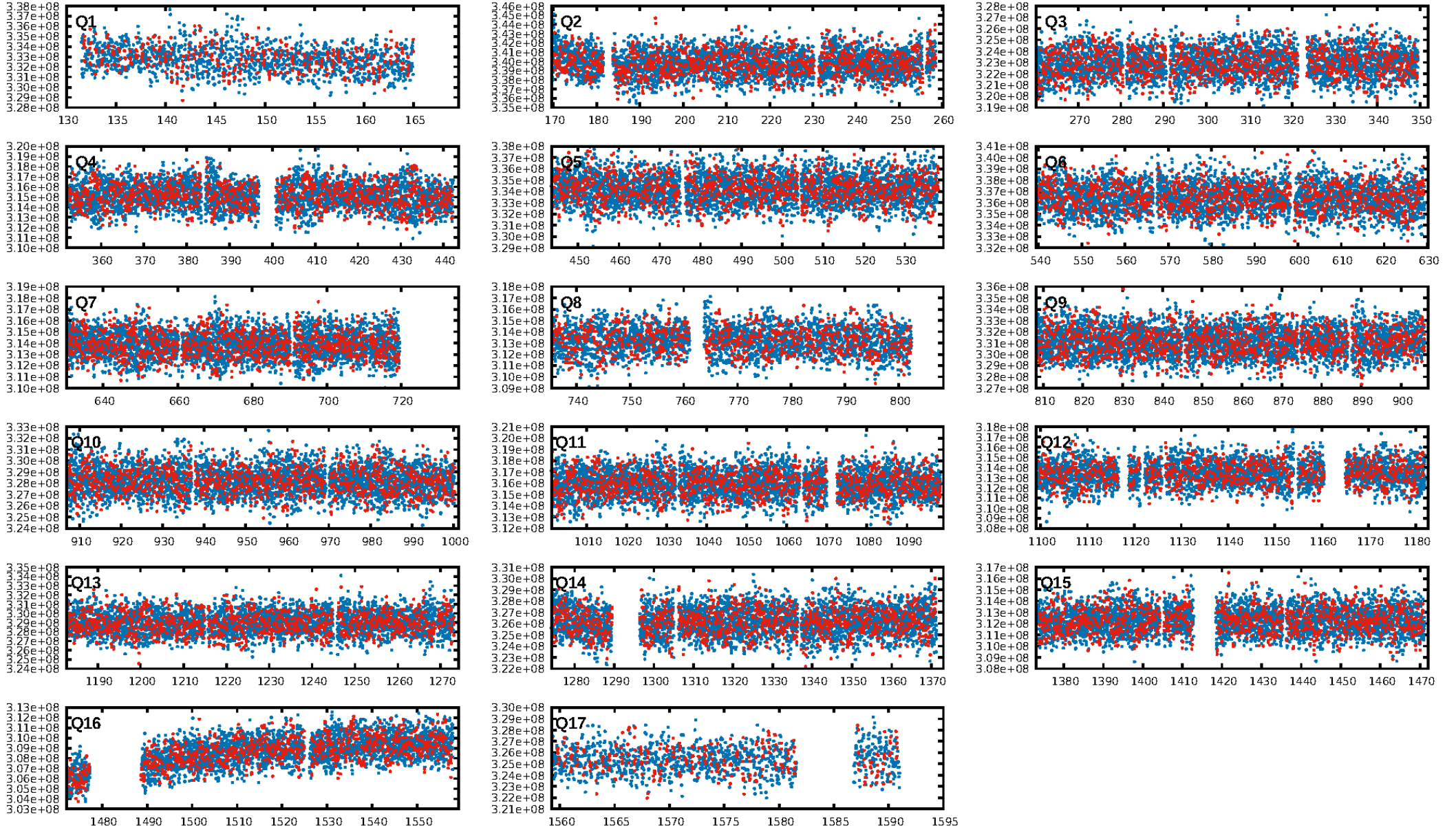
DV Fit Results:

Period = 0.58287 [0.00001] d
Epoch = 131.8004 [0.0013] BKJD
Rp/R* = 0.0158 [0.0040]
a/R* = 1.58 [1.45]
b = 0.90 [0.33]
Seff = 29308.04 [11319.54]
Teq = 3336 [322] K
Rp = 2.55 [1.00] Re
a = 0.0150 [0.0037] AU

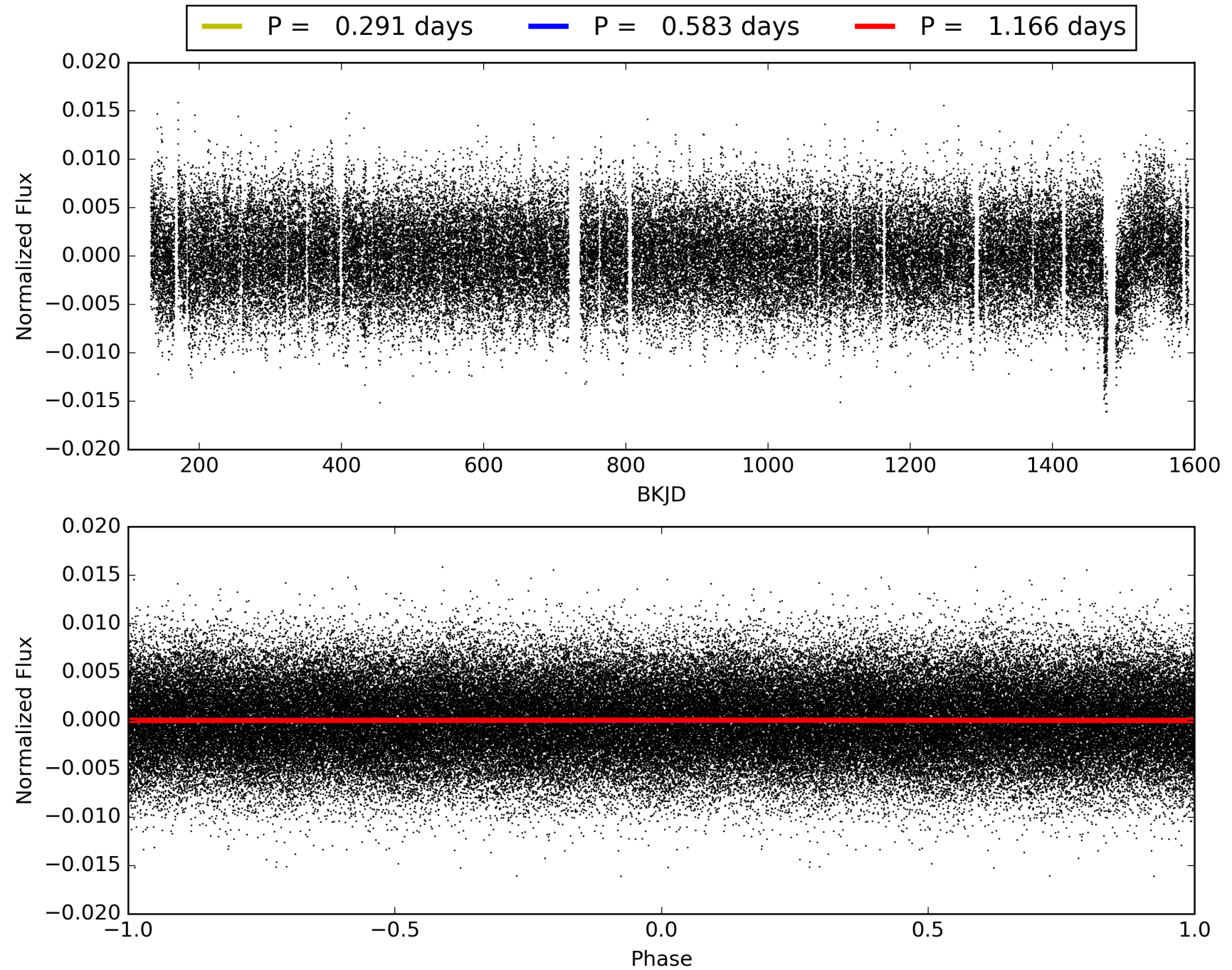
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2191/2194]
GhostDiagnostic-chr: -0.6856
Centroid-sig: 73.9%
Centroid-so: 0.119 arcsec [1.77σ]
OotOffset-rm: 0.029 arcsec [0.32σ]
KicOffset-rm: 0.032 arcsec [0.31σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011773909-02, PDC Light Curves

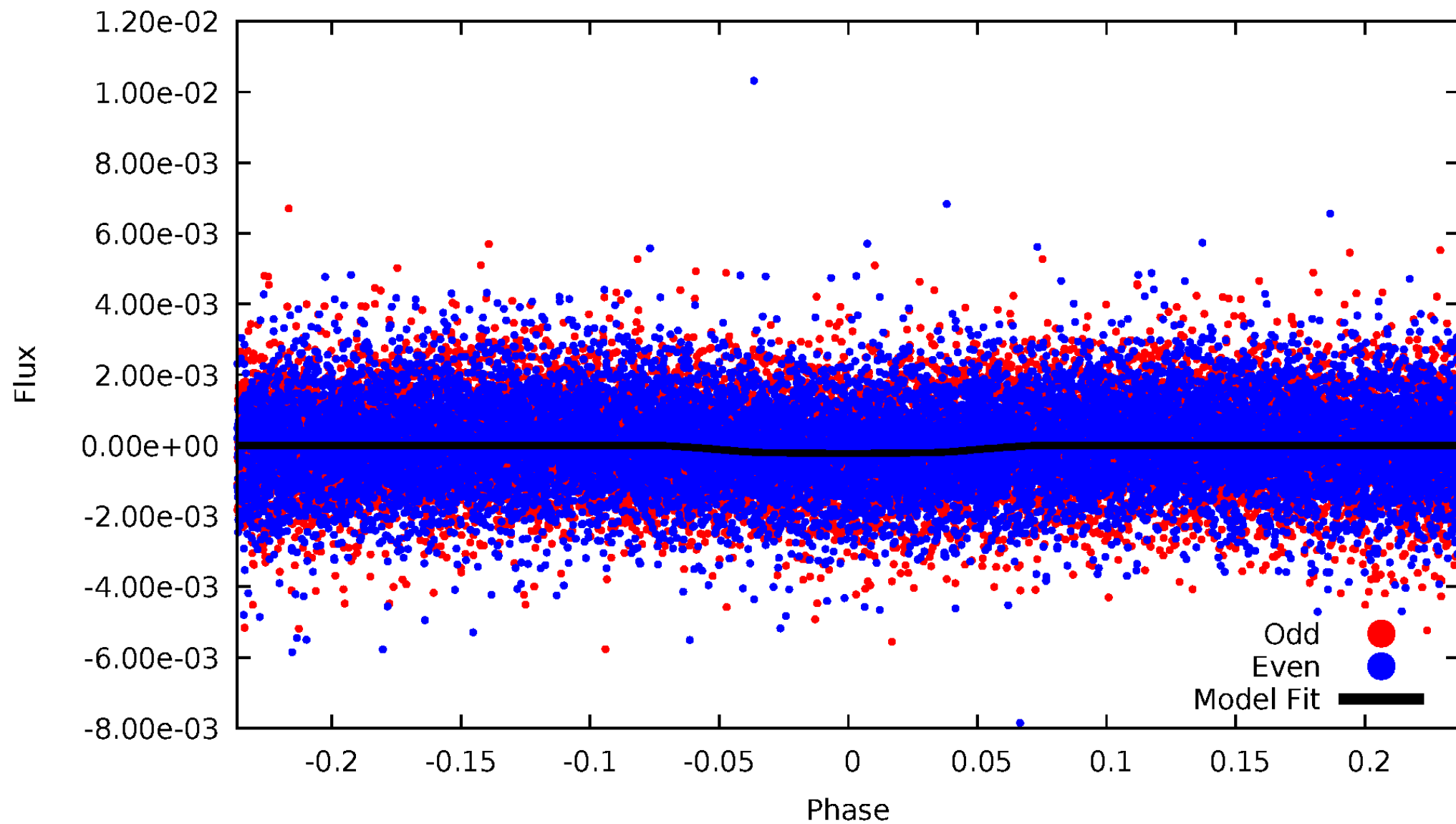


TCE 011773909-02



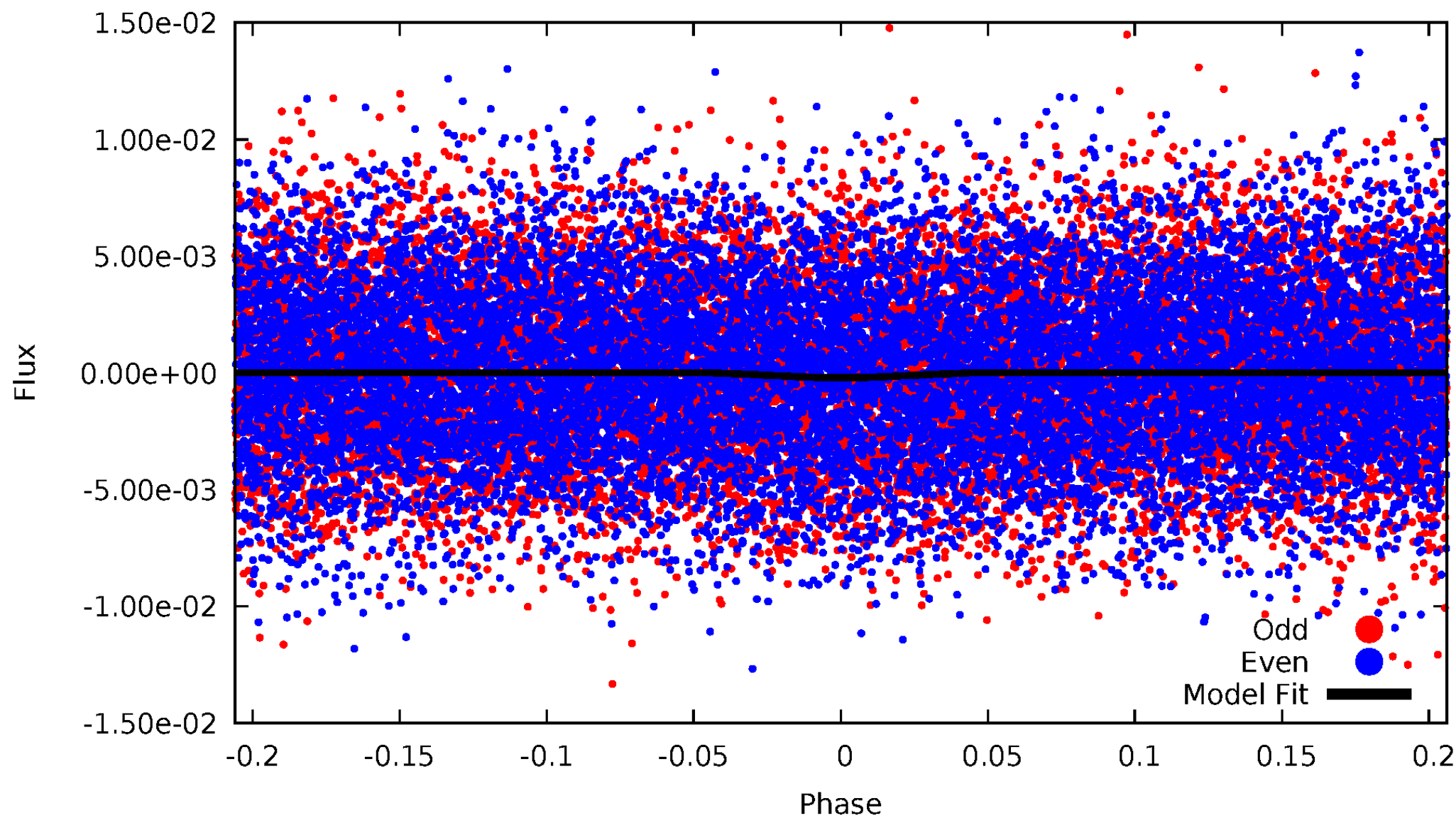
DV Odd/Even

TCE 011773909-02



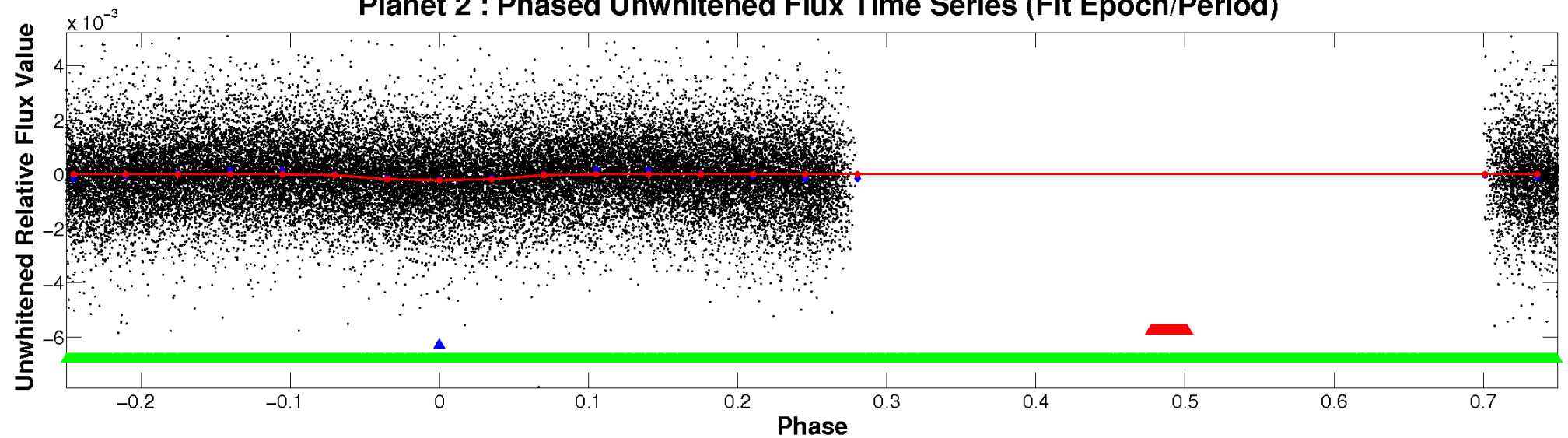
ALT Odd/Even

TCE 011773909-02

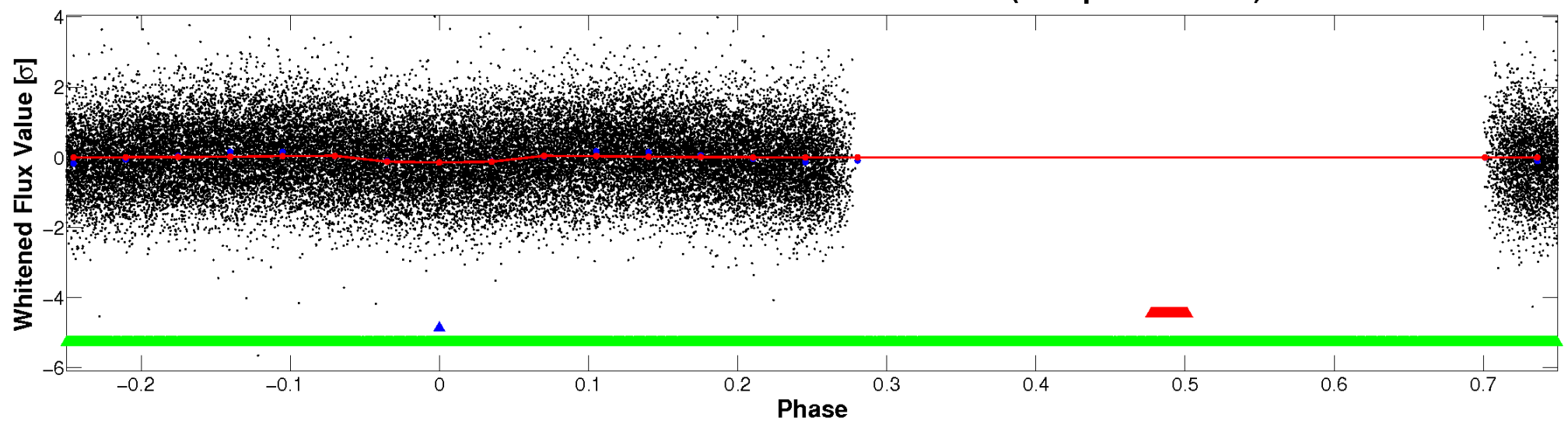


Non-Whitened Vs. Whitened Light Curve

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

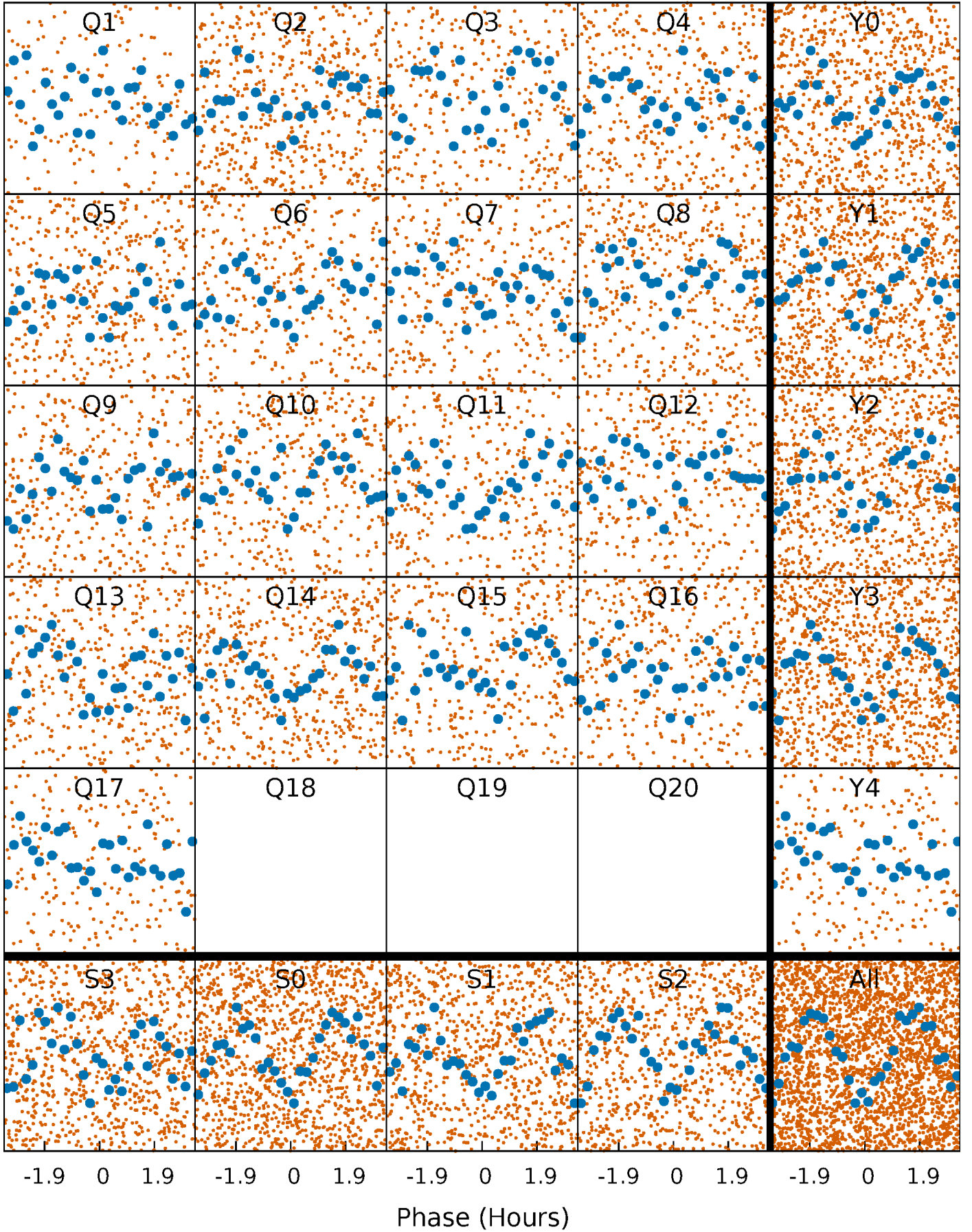


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



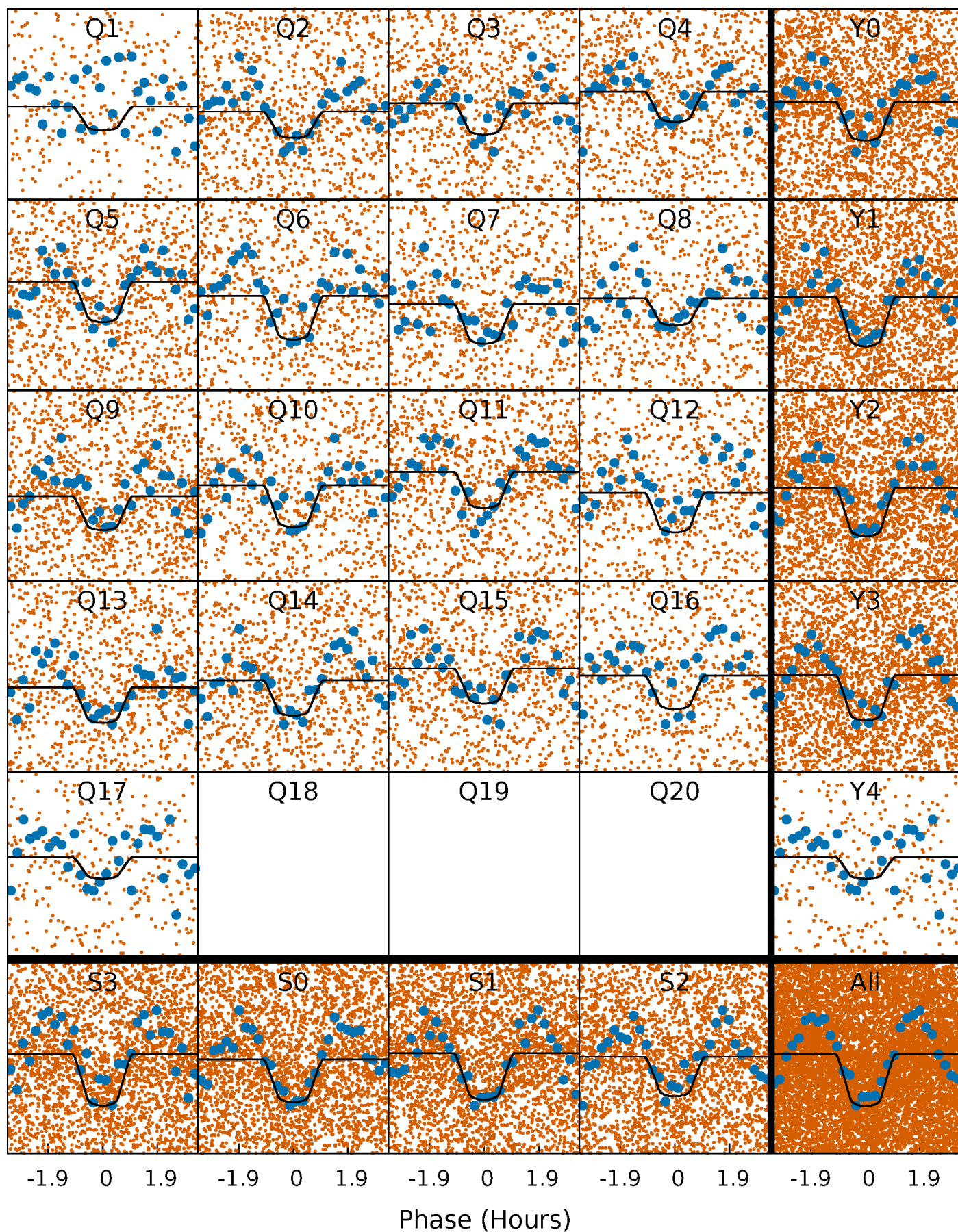
PDC Quarter-Phased Transit Curves

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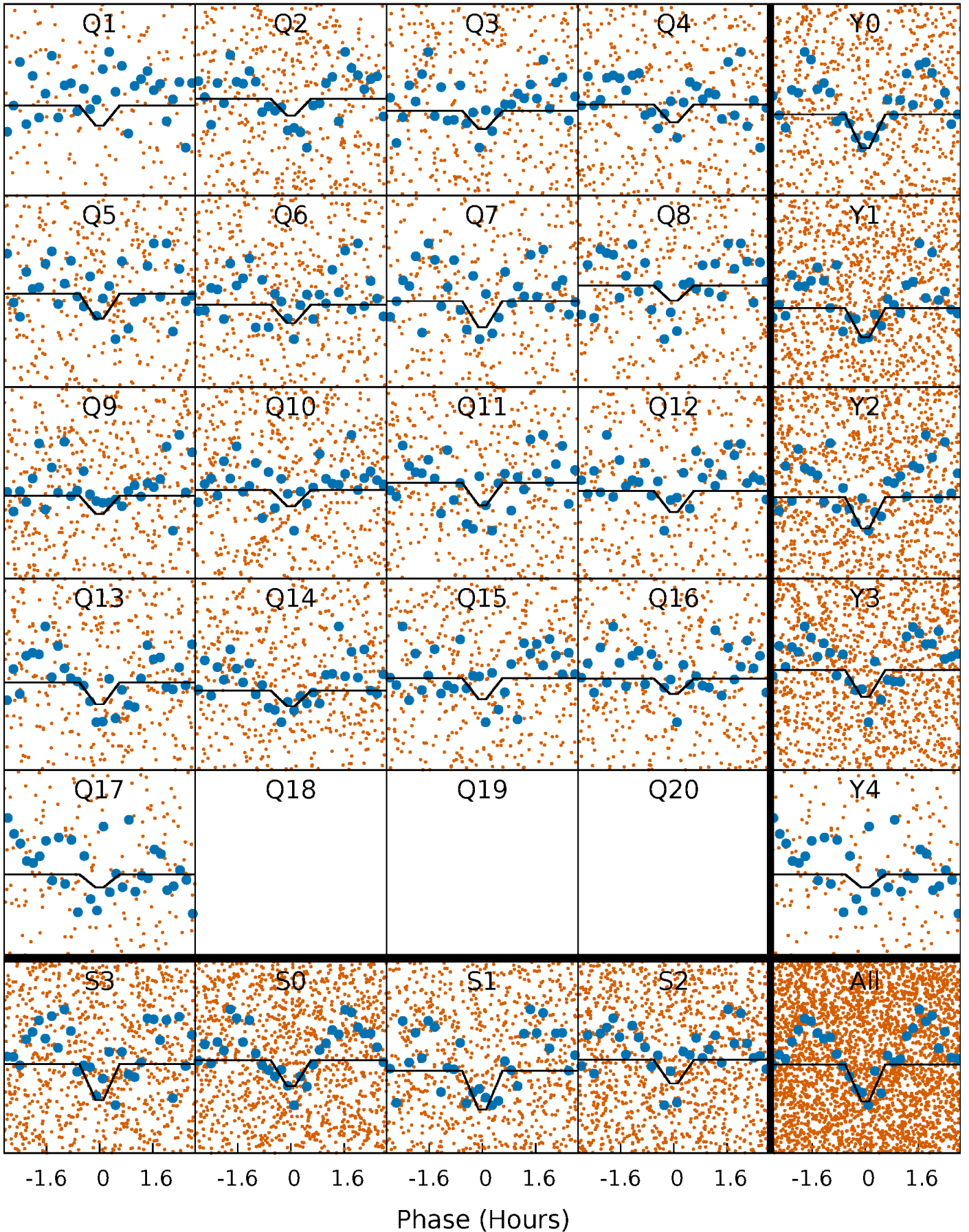
DV Quarter-Phased Transit Curves

TCE 011773909-02 P= 0.582872 Days $T_0=131.800425$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

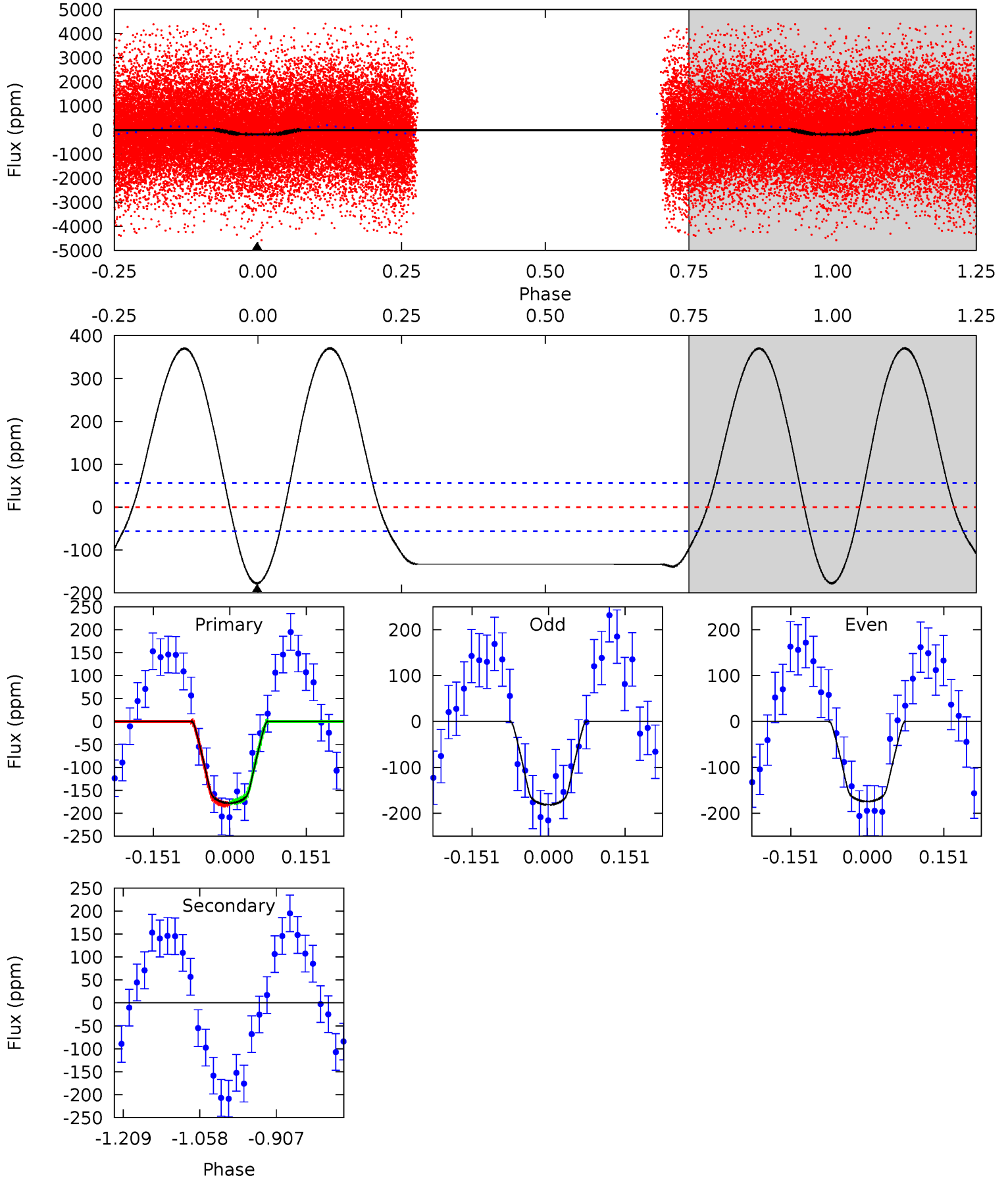
TCE 011773909-02 P= 0.582873 Days $T_0=131.796657$ (BKJD)



DV Model-Shift Uniqueness Test

011773909-02, P = 0.582872 Days, E = 131.217553 Days

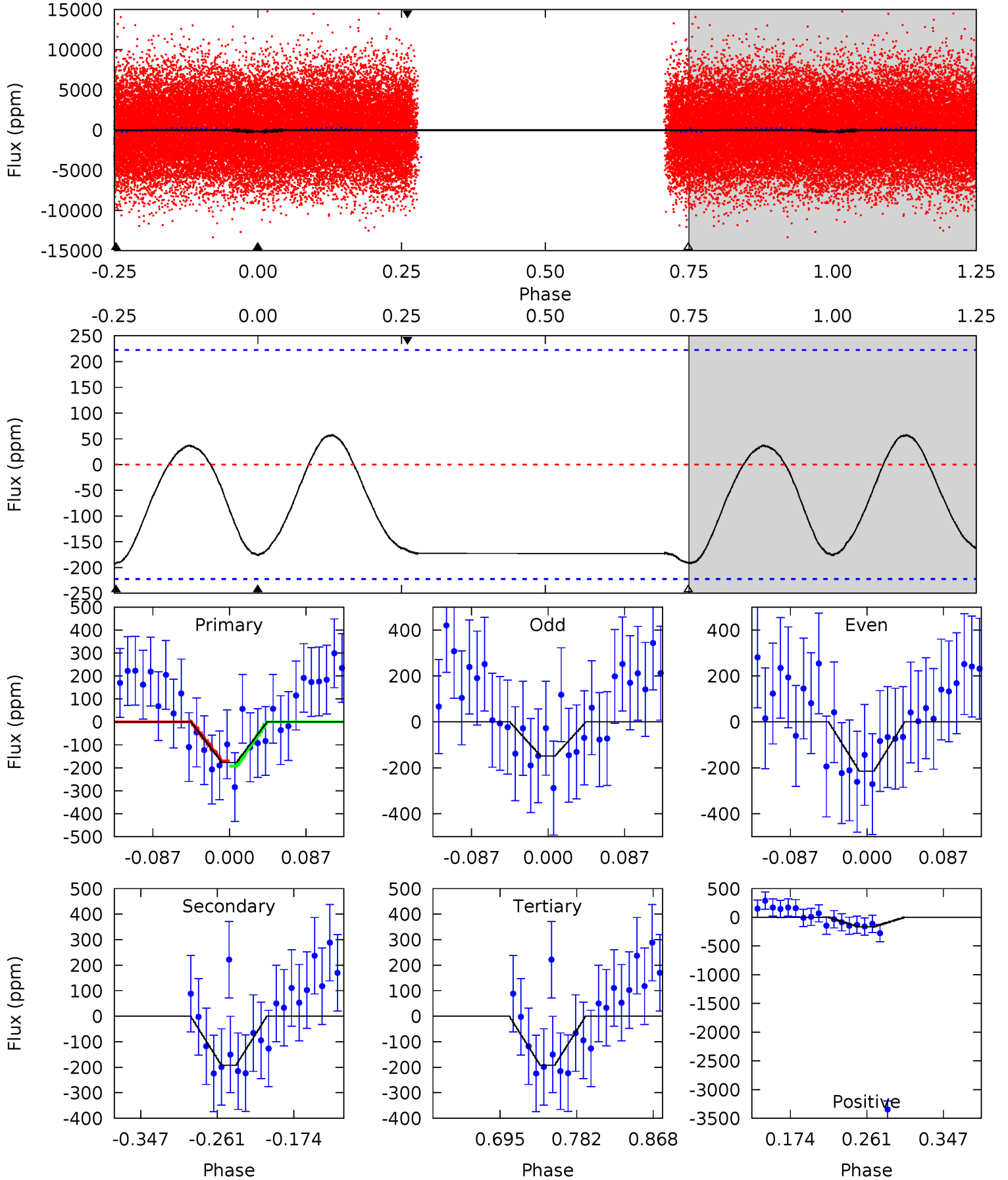
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	0	0	0	4.48	1.44	11.8	14.2	14.2	0	0	0.29	0.91	0.68	0.22



Alt Model-Shift Uniqueness Test

011773909-02, P = 0.582873 Days, E = 131.213784 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.65	3.98	3.97	-3.43	4.59	1.71	1.83	-0.31	7.08	0.01	7.40	0.69	0.71	0.23	0.23



Stellar Parameters For KIC 011773909

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7620^{+236}_{-315}	$4.222^{+0.124}_{-0.186}$	$-0.520^{+0.250}_{-0.300}$	$1.481^{+0.446}_{-0.275}$	$1.334^{+0.203}_{-0.185}$	$0.579^{+0.382}_{-0.264}$
	+3%/-4%	+3%/-4%	+48%/-58%	+30%/-19%	+15%/-14%	+66%/-46%
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 011773909-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 13	$2.60^{+0.74}_{-0.74}$	4693^{+340}_{-286}	-4108^{+1032}_{-521}	$0.003^{+0.243}_{-0.262}$
Alt.	-192 ± 48	$2.34^{+0.81}_{-0.68}$	4695^{+372}_{-291}	7272^{+1965}_{-1154}	$4.299^{+4.783}_{-2.031}$

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

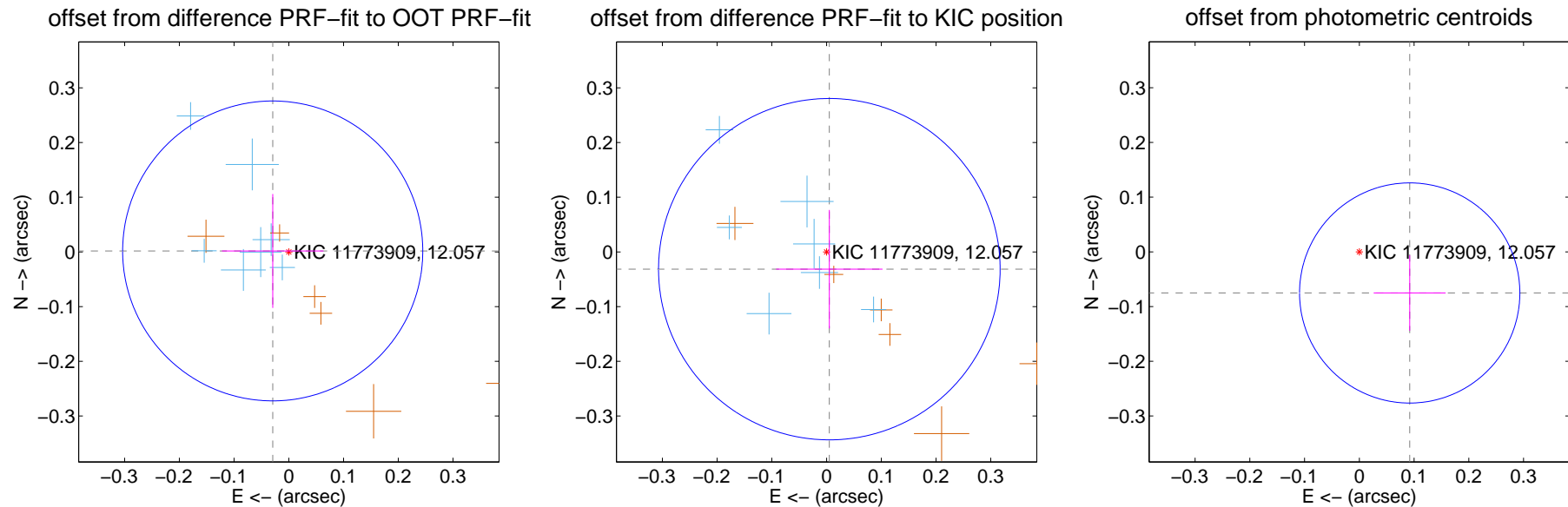
DV Centroid Data

Supplemental centroid analysis for 011773909-02. Kepler magnitude: 12.06. Transit SNR 11.99

There are 10 quarters with good PRF difference image offsets

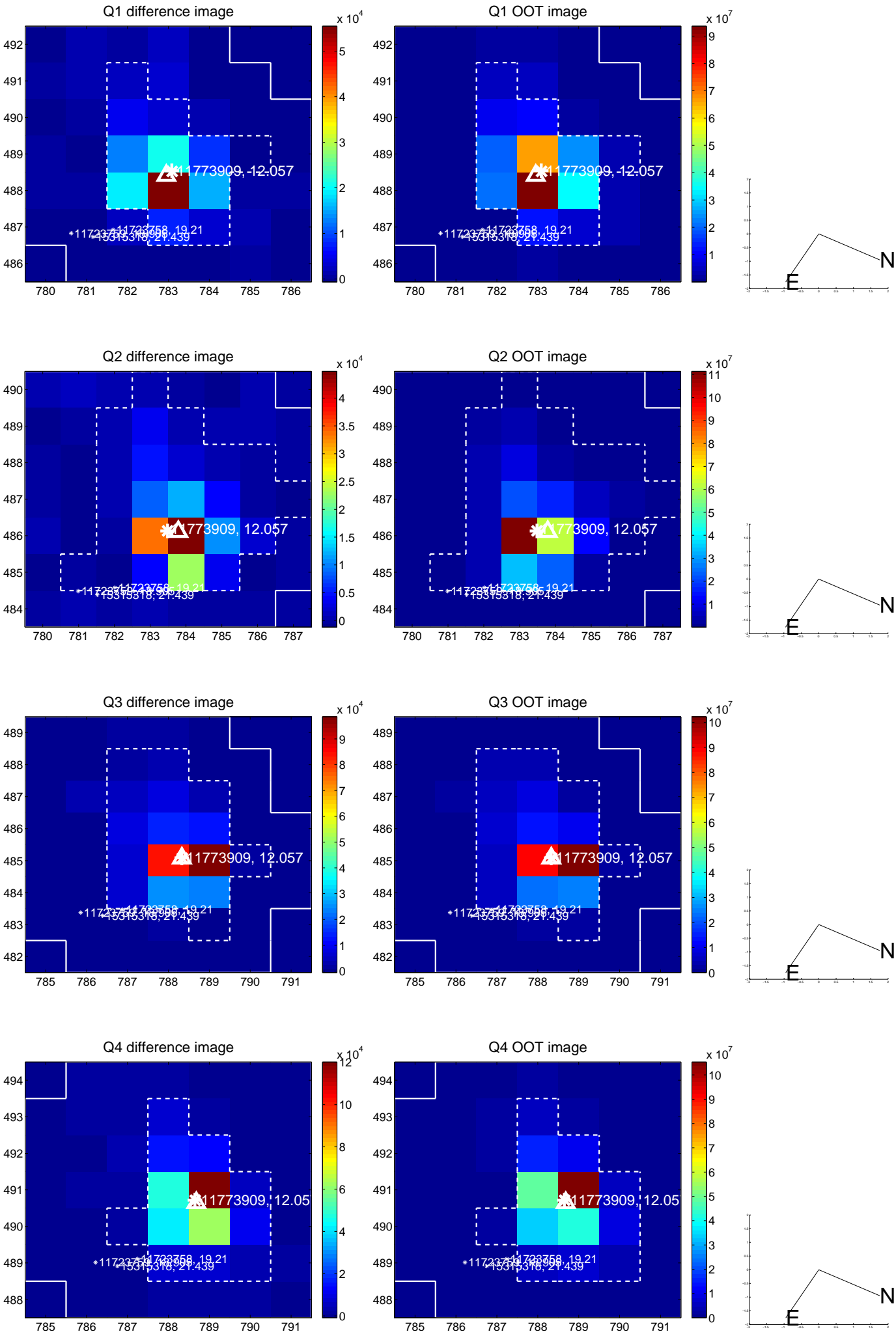
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.029 ± 0.091	0.32	0.029 ± 0.093	0.002 ± 0.104
PRF-fit source offset from KIC position	0.032 ± 0.104	0.31	-0.005 ± 0.097	-0.032 ± 0.108
photometric centroid source offset	0.12 ± 0.07	1.77	-0.09 ± 0.07	-0.08 ± 0.07

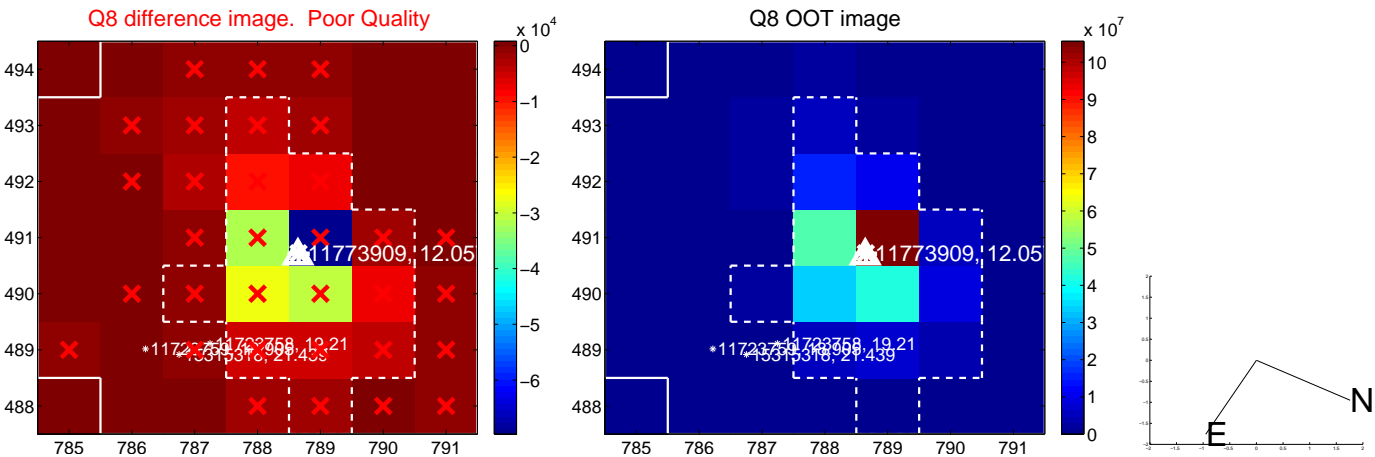
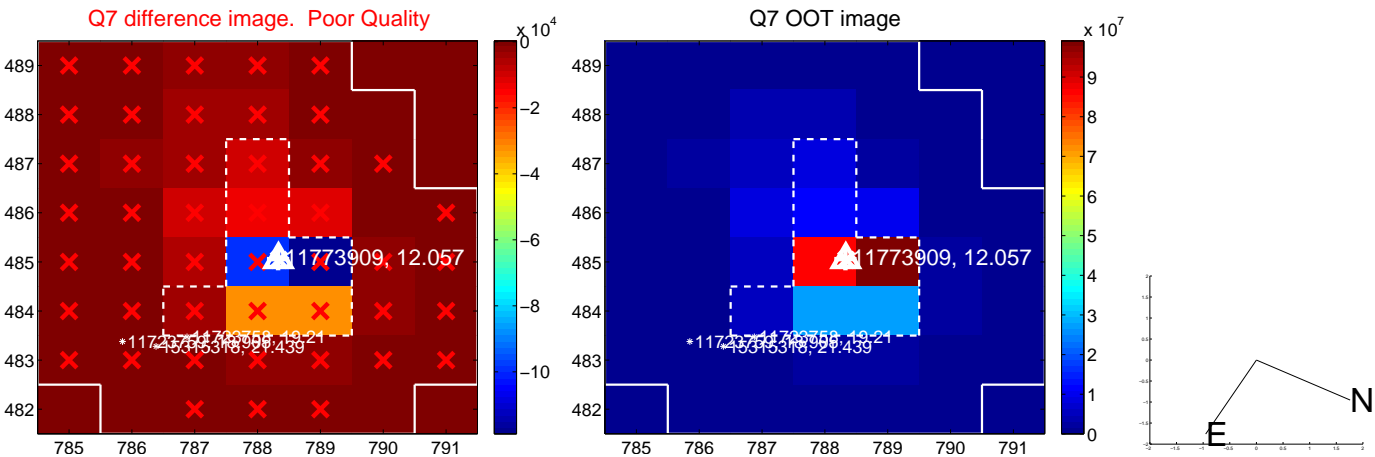
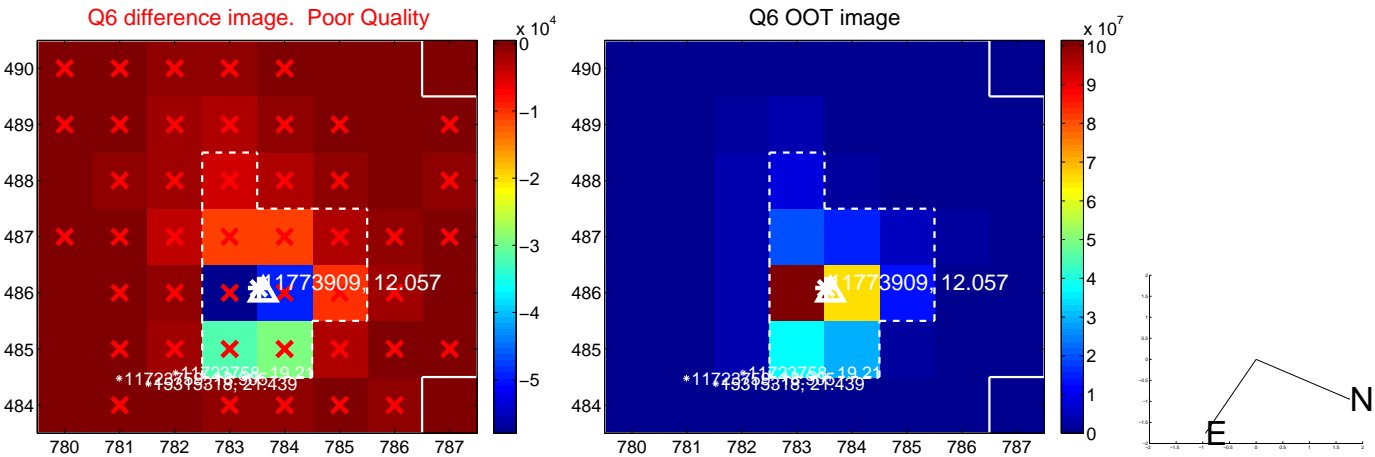
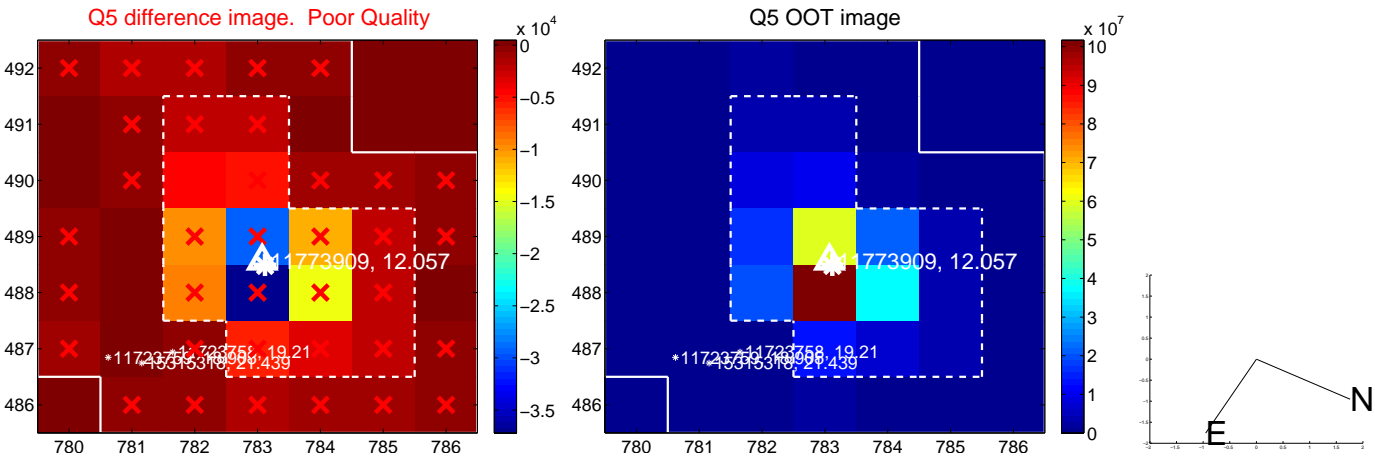


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

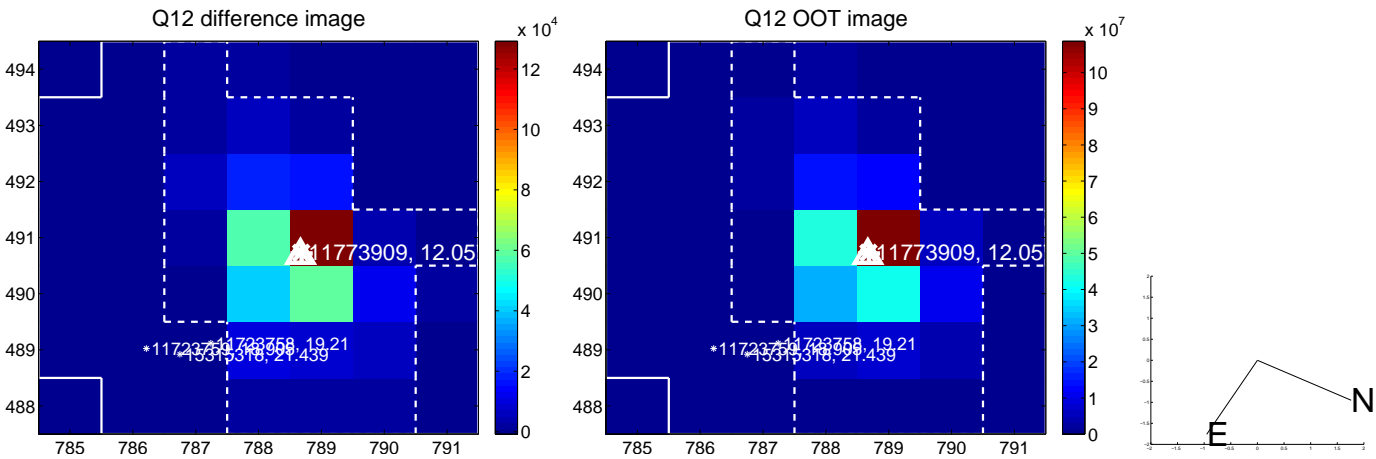
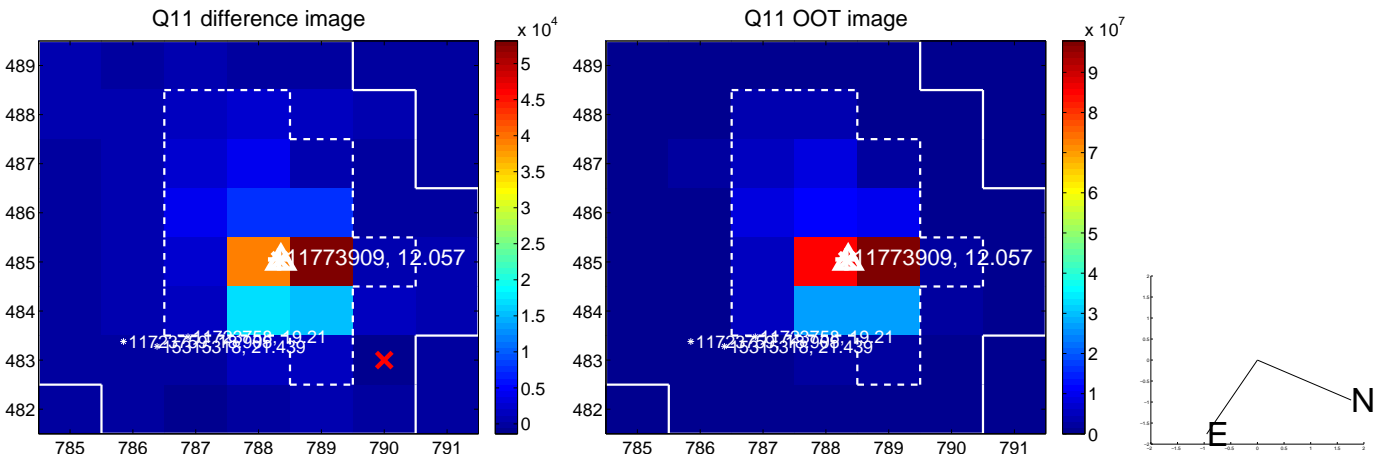
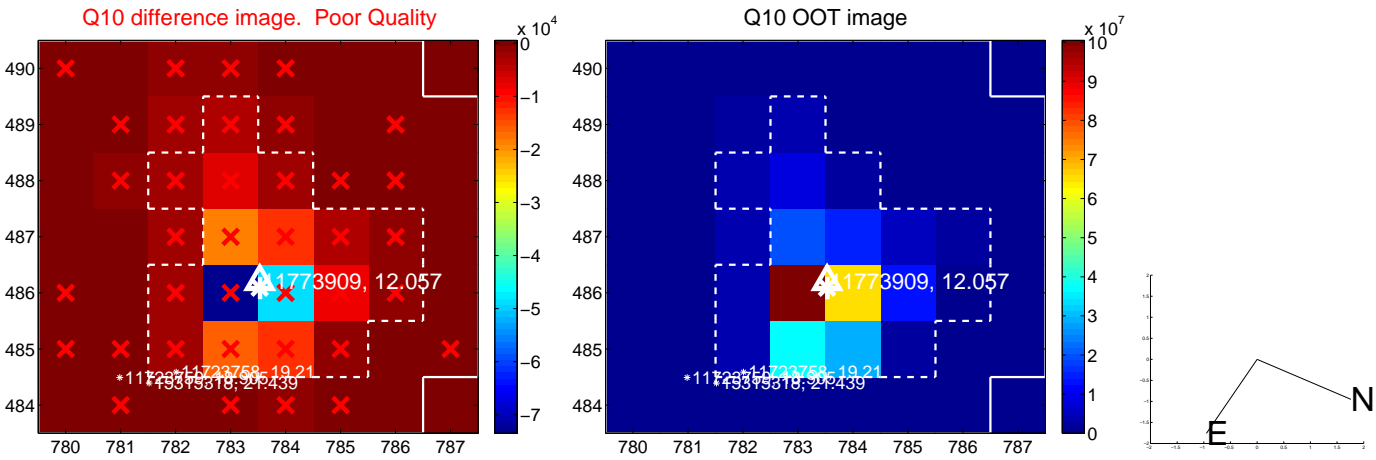
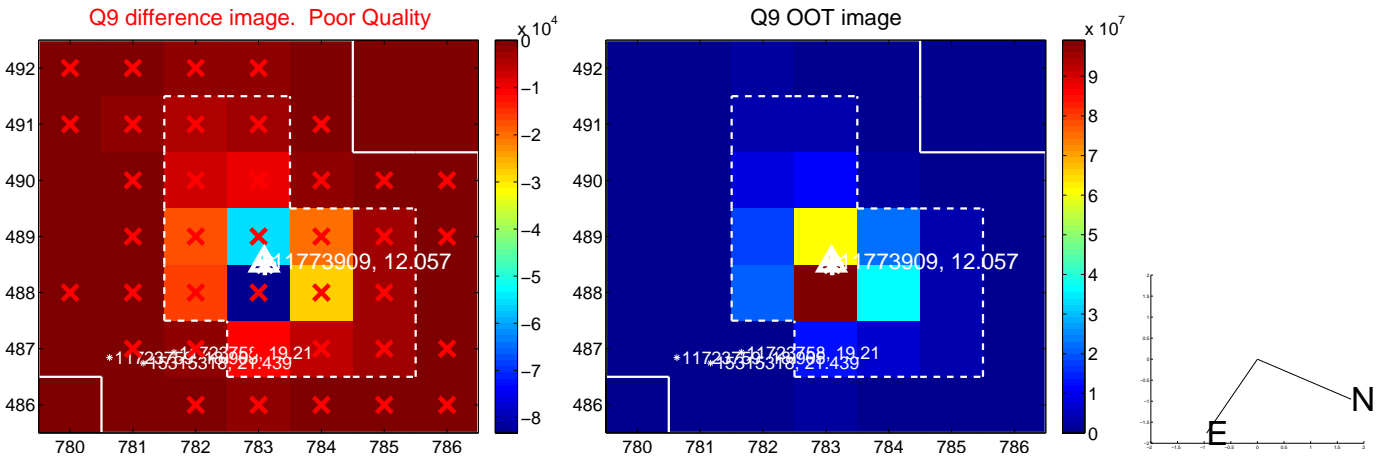
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



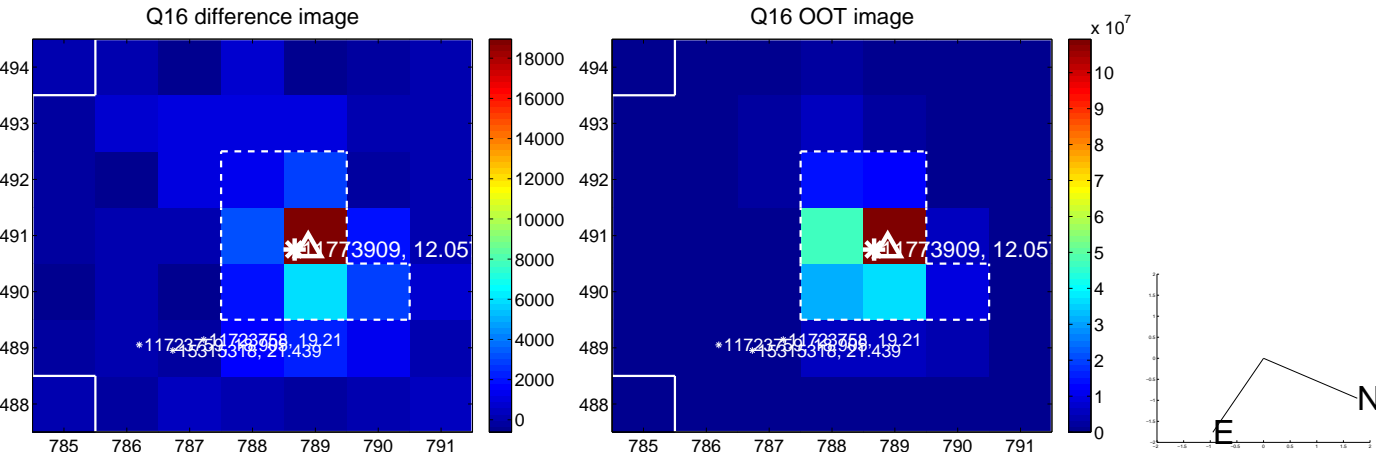
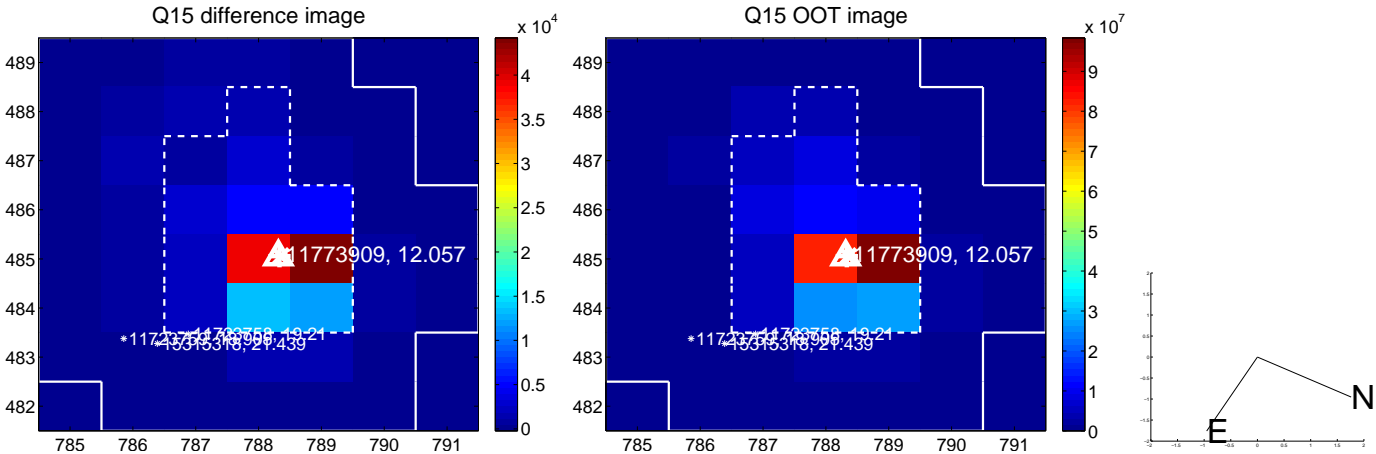
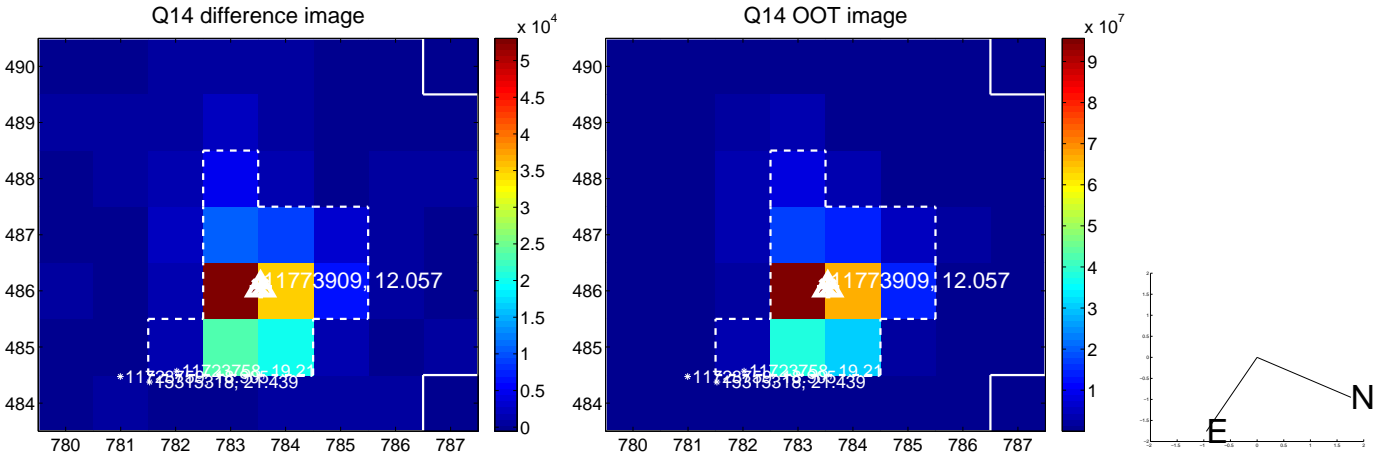
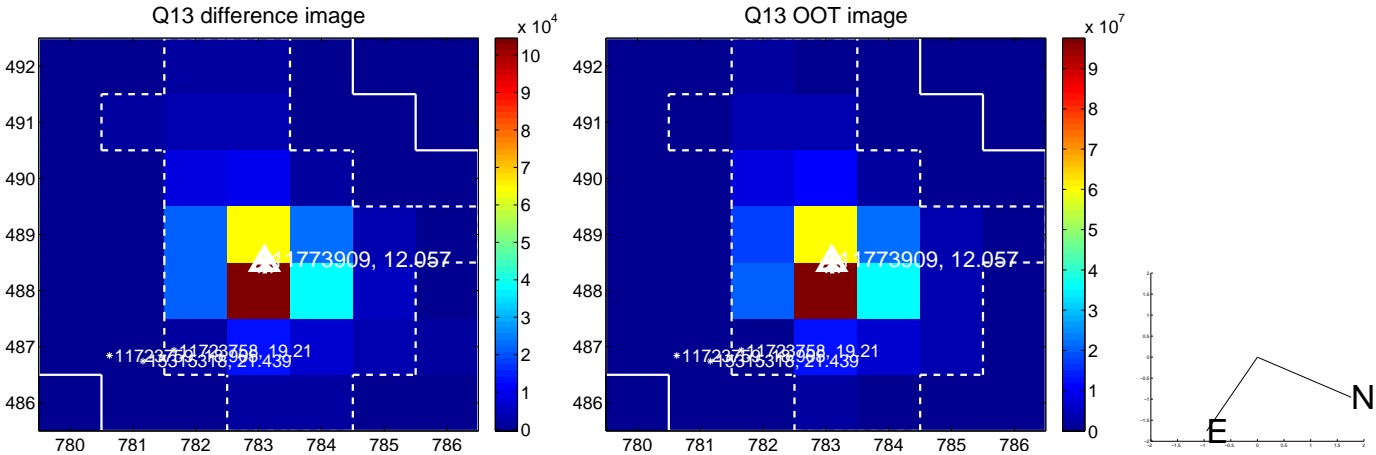
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



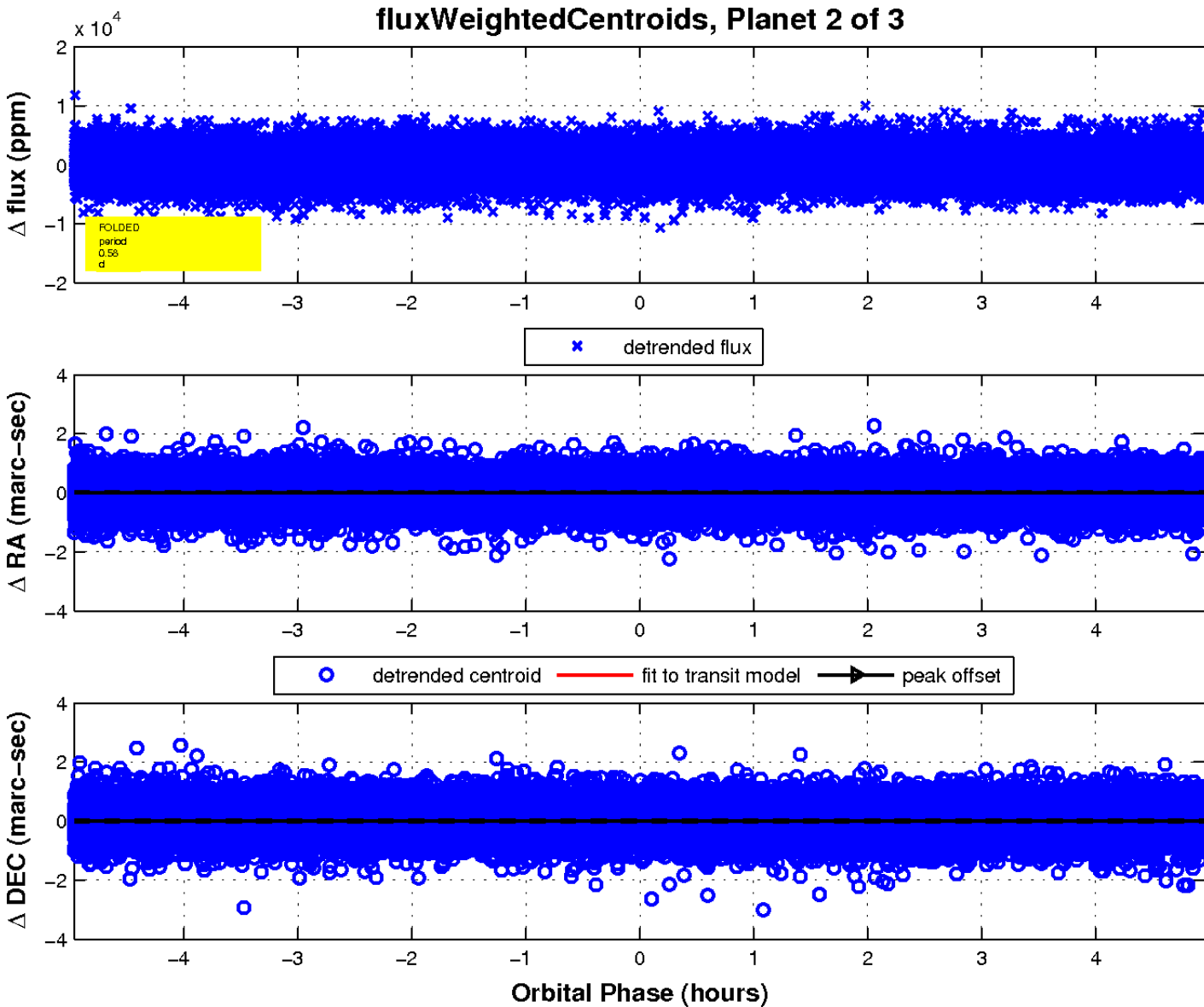
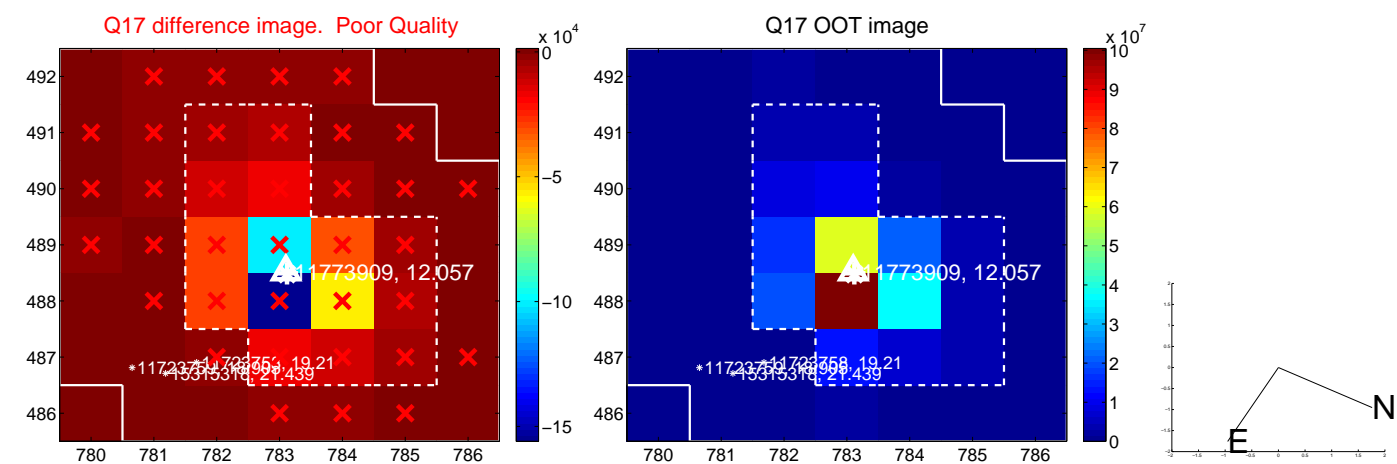
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

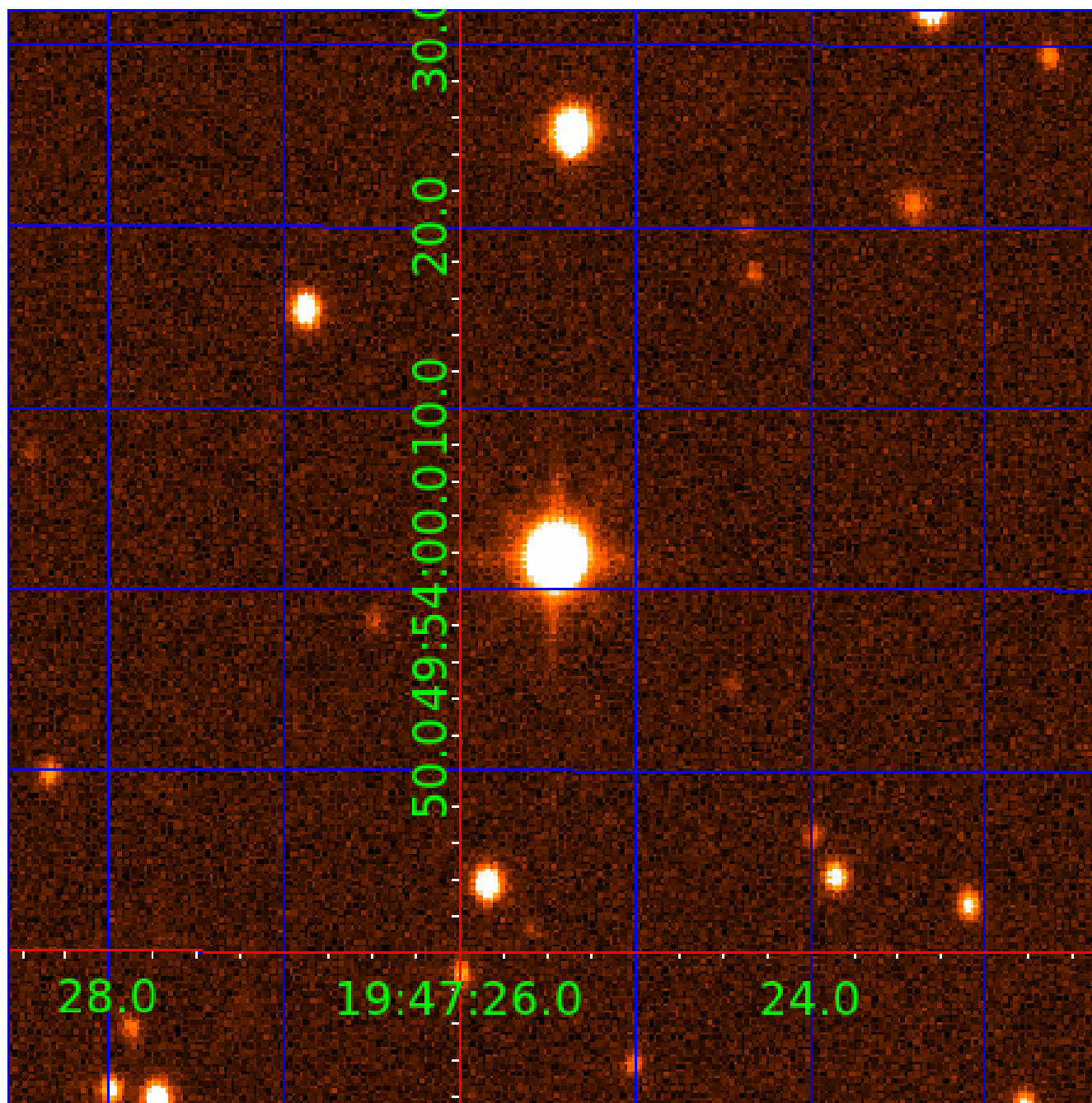


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011773909

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})
011773909-01	OBS	No	0.582877	132.078658	208.5	1.909	13.0	11.8	1.48	7620	2.30	29307.67
011773909-02	OBS	No	0.582872	131.800425	219.7	1.655	11.1	12.0	1.48	7620	2.55	29308.04
011773909-03	OBS	No	0.679939	131.963627	550.9	1.363	10.8	11.5	1.48	7620	4.04	23866.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011773909-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
011773909-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
011773909-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

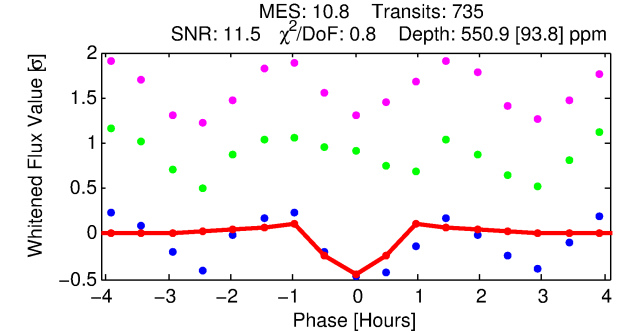
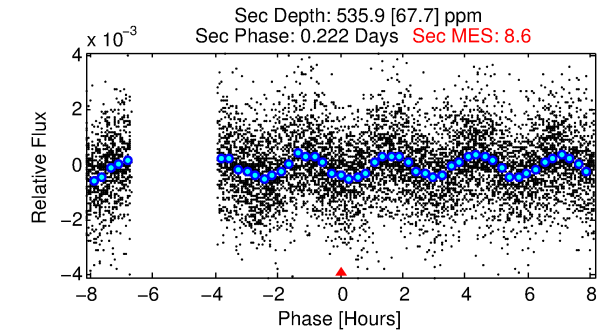
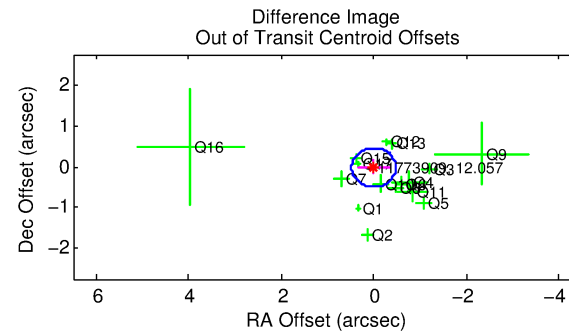
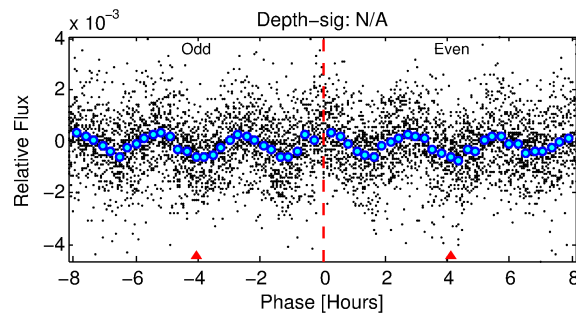
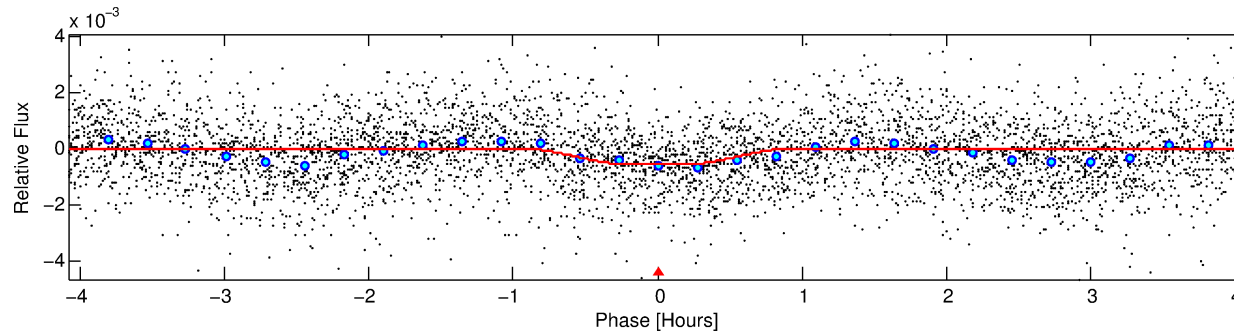
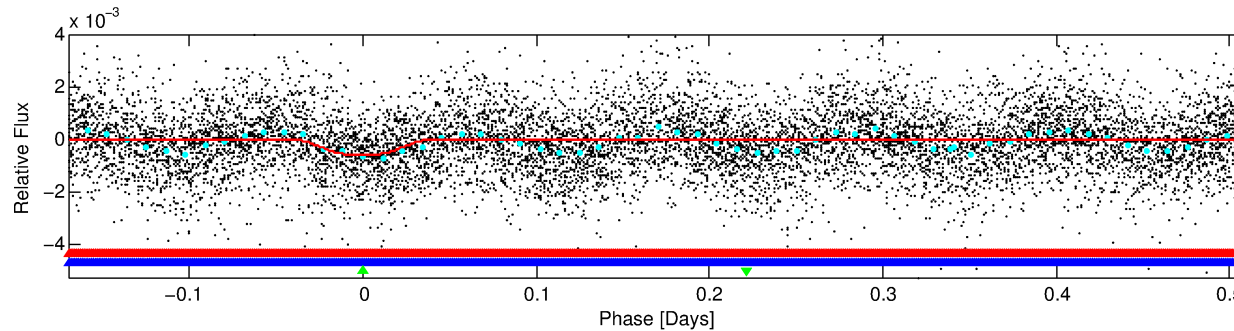
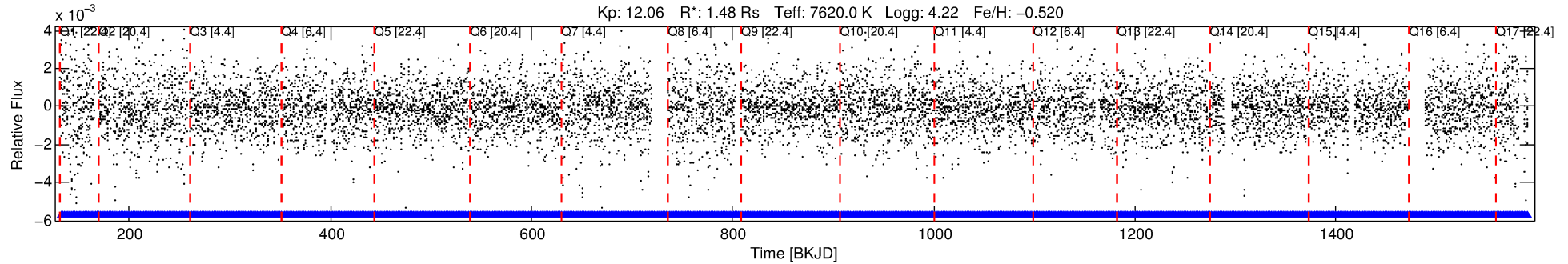
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011773909-03

No Significant Match Found

DV One-Page Summary

KIC: 11773909 Candidate: 3 of 3 Period: 0.680 d



DV Fit Results:

Period = 0.67994 [0.00001] d
Epoch = 131.9636 [0.0016] BKJD
Rp/R* = 0.0250 [0.0080]
a/R* = 2.09 [3.08]
b = 0.90 [0.41]
Seff = 23866.60 [9217.91]
Teq = 3169 [306] K
Rp = 4.04 [1.78] Re
a = 0.0167 [0.0041] AU
Ag = 5.01 [3.72] [1.08σ]
Teffp = 7332 [1237] K [3.27σ]

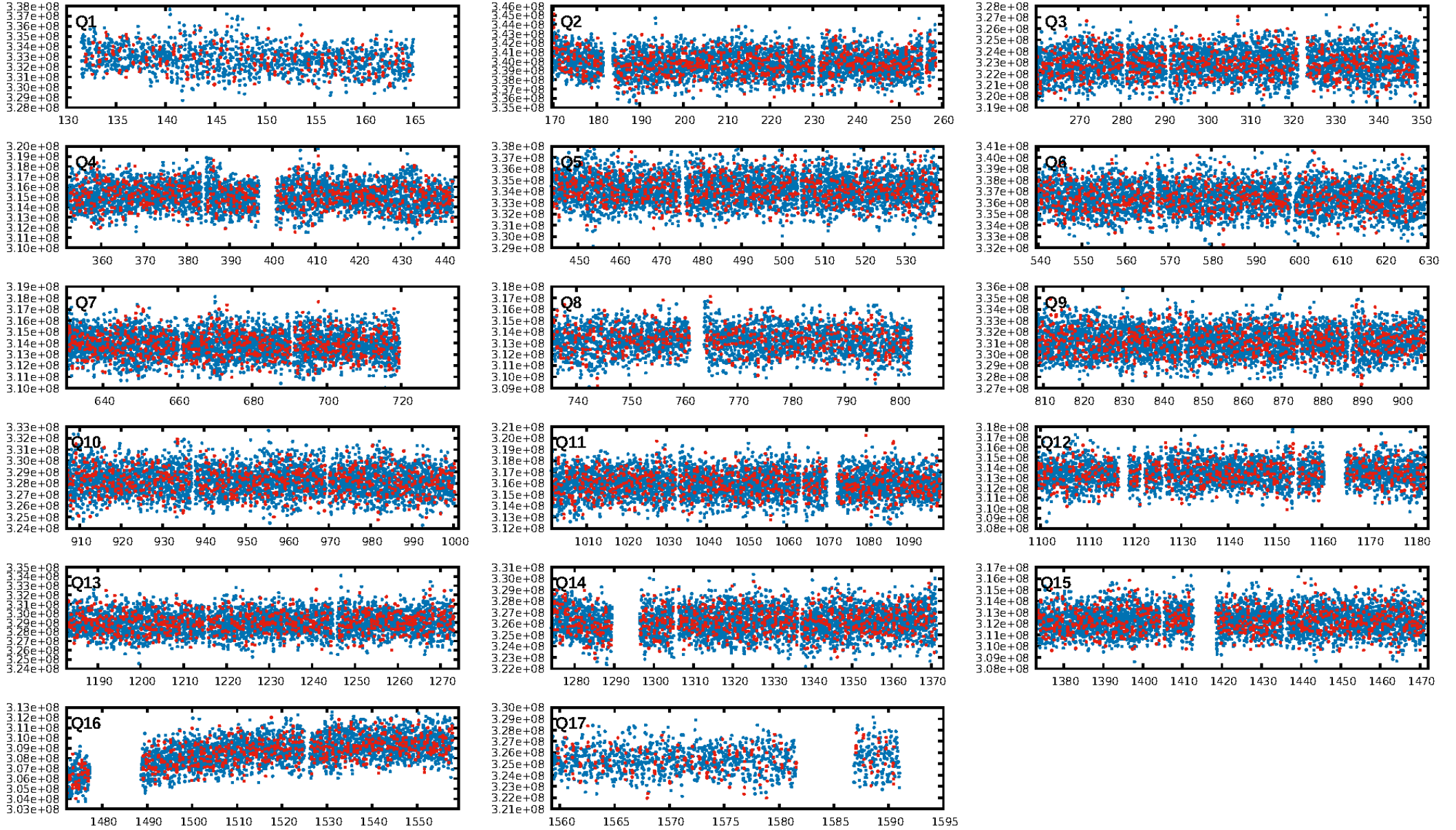
DV Diagnostic Results:

ShortPeriod-sig: 67.9% [0.99σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [700/700]
GhostDiagnostic-chr: 0.648
Centroid-sig: 97.0%
Centroid-so: 0.101 arcsec [3.05σ]
OotOffset-rm: 0.022 arcsec [0.14σ]
KicOffset-rm: 0.092 arcsec [0.48σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 0.00 [0/17]

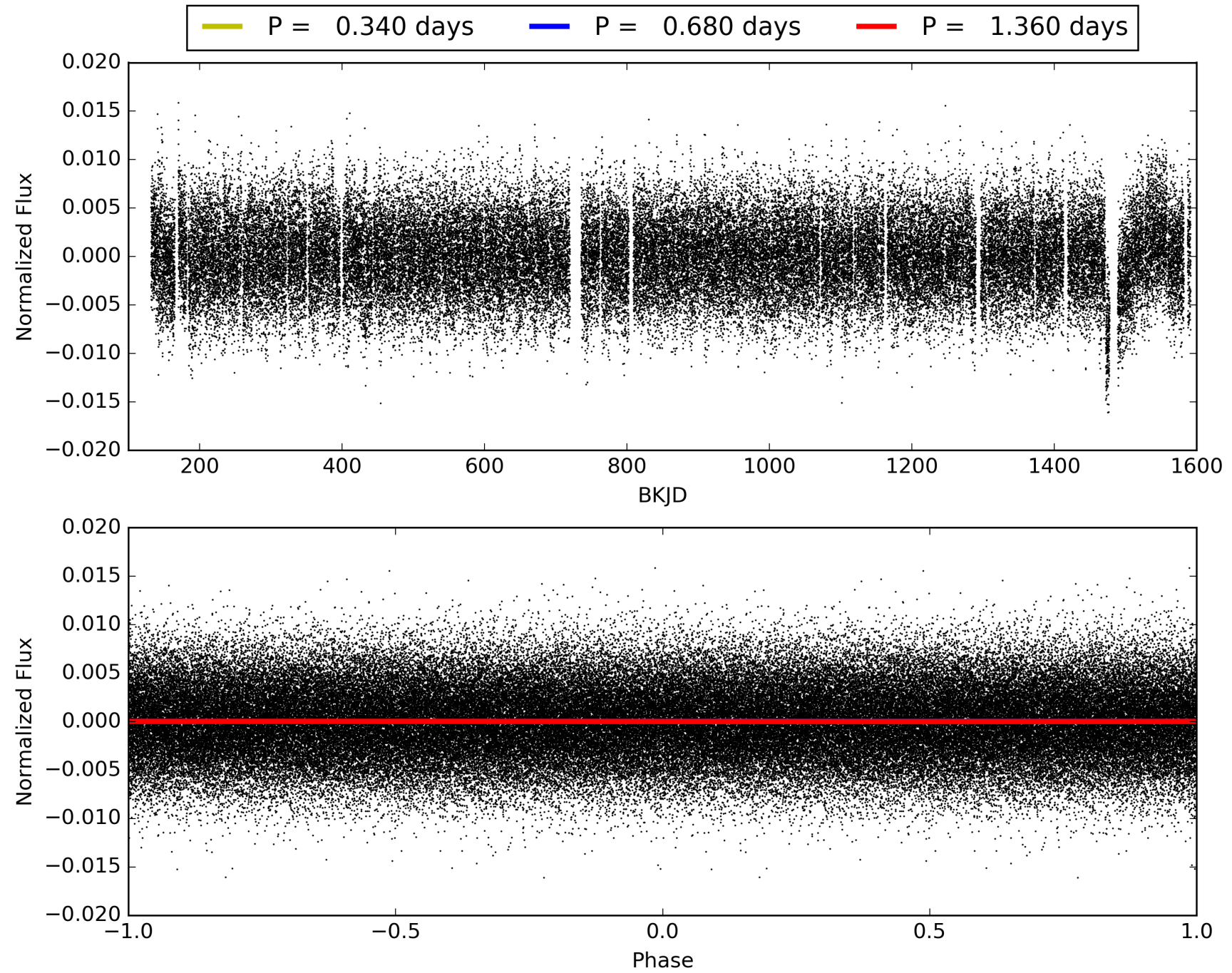
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:00:07 Z

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

TCE 011773909-03, PDC Light Curves

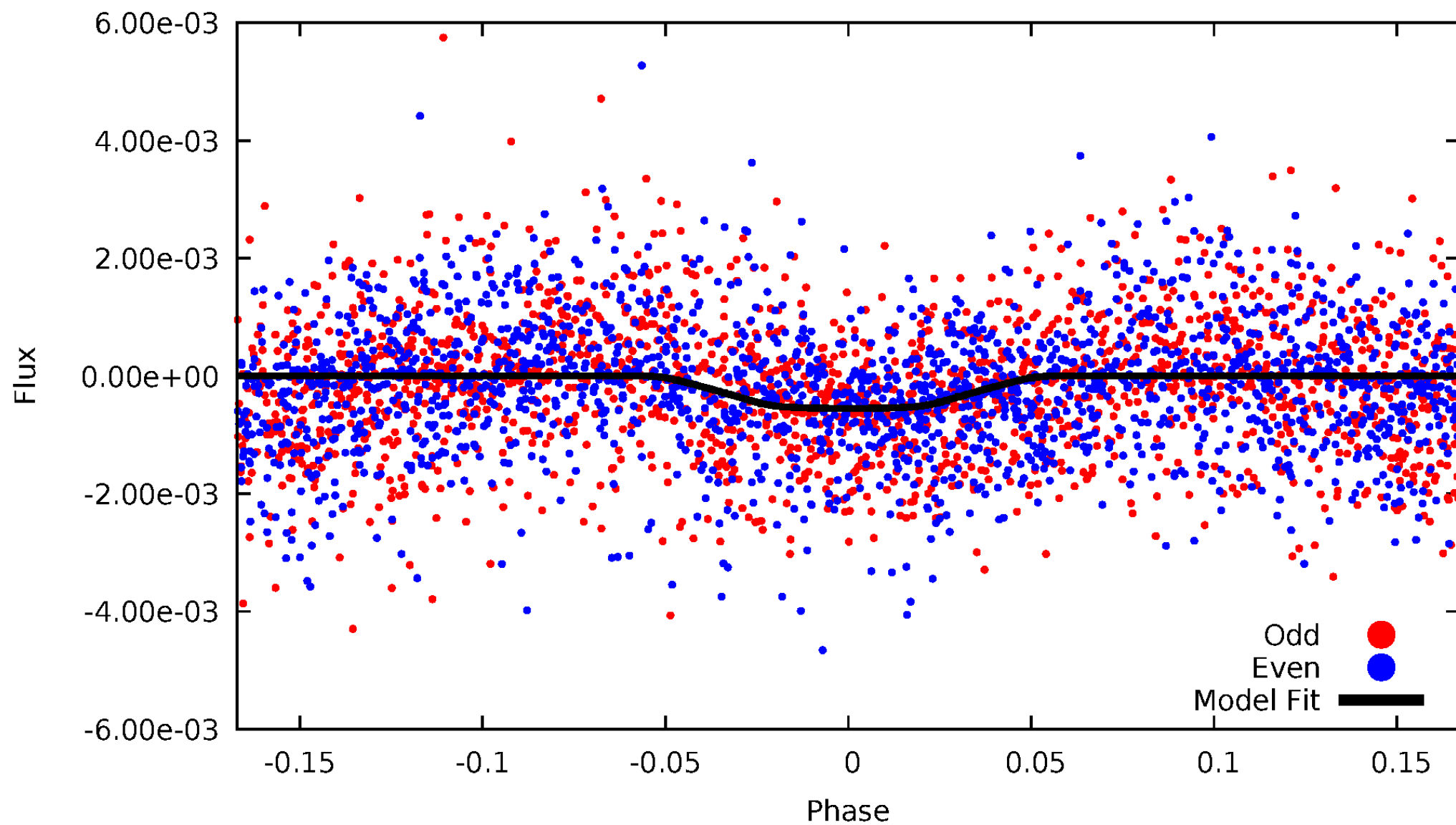


TCE 011773909-03



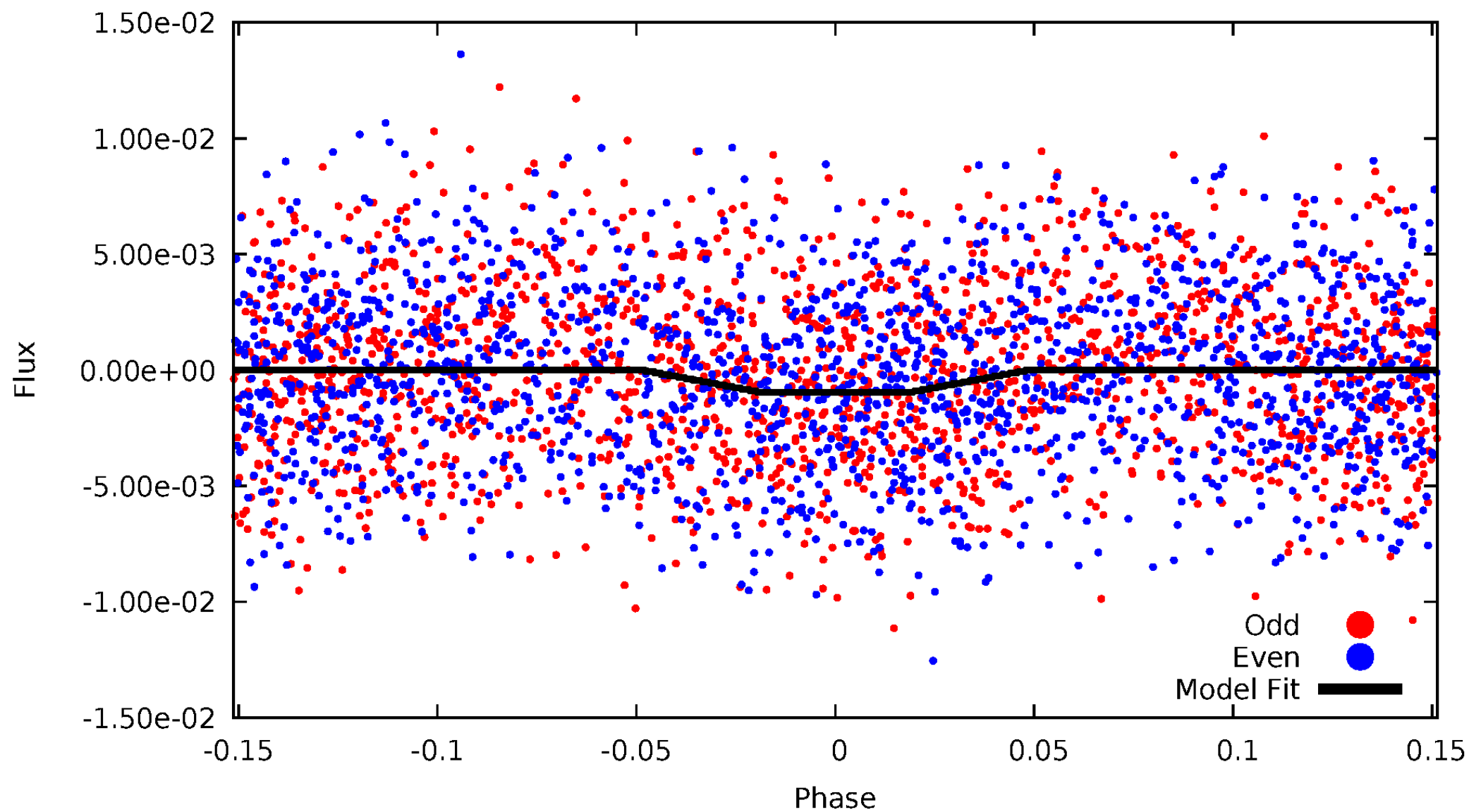
DV Odd/Even

TCE 011773909-03



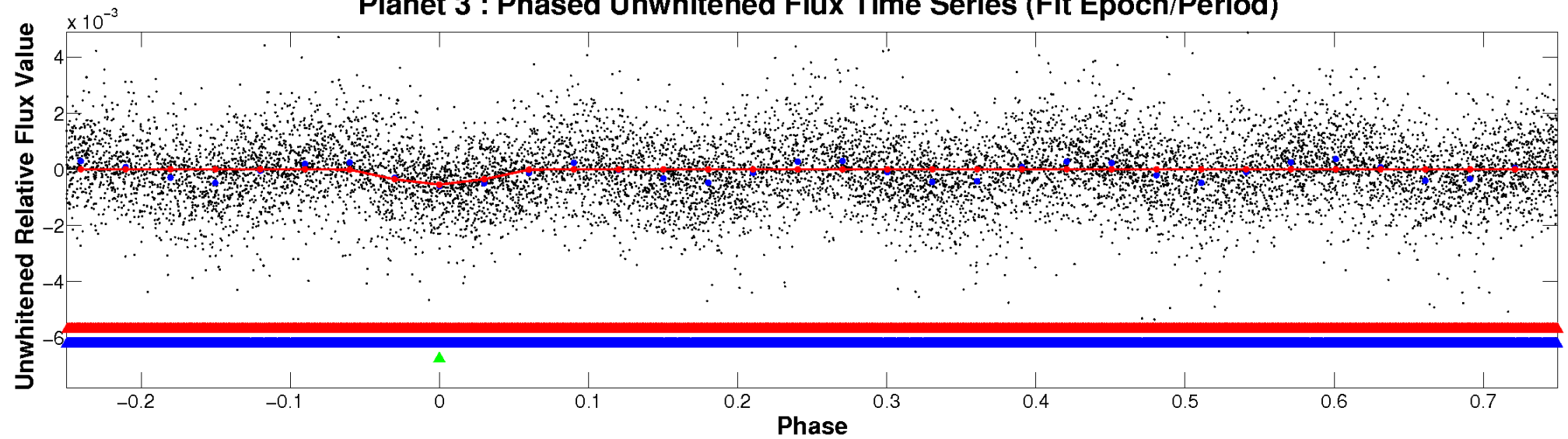
ALT Odd/Even

TCE 011773909-03

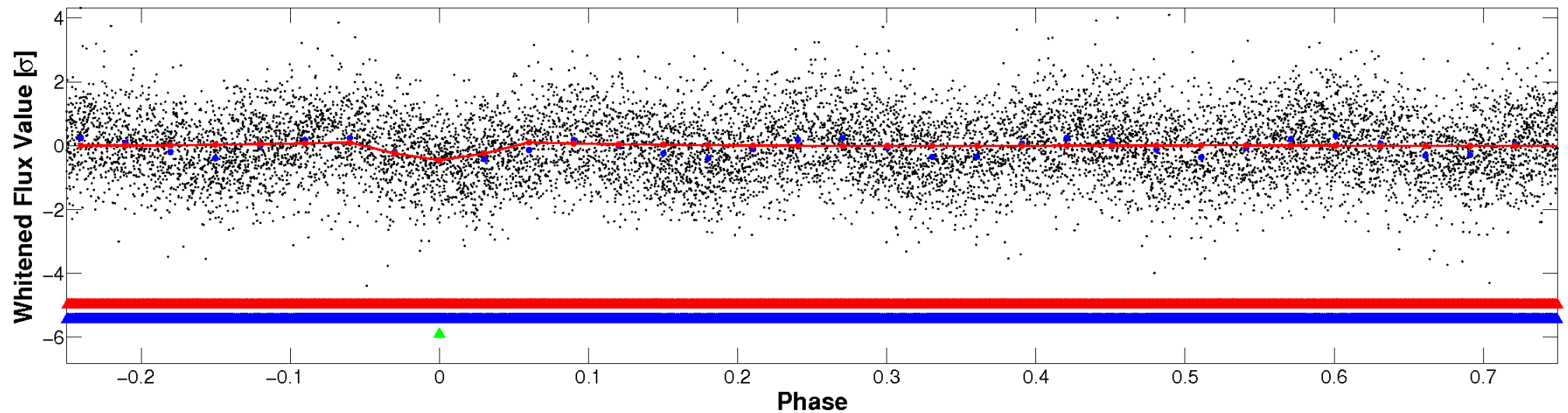


Non-Whitened Vs. Whitened Light Curve

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

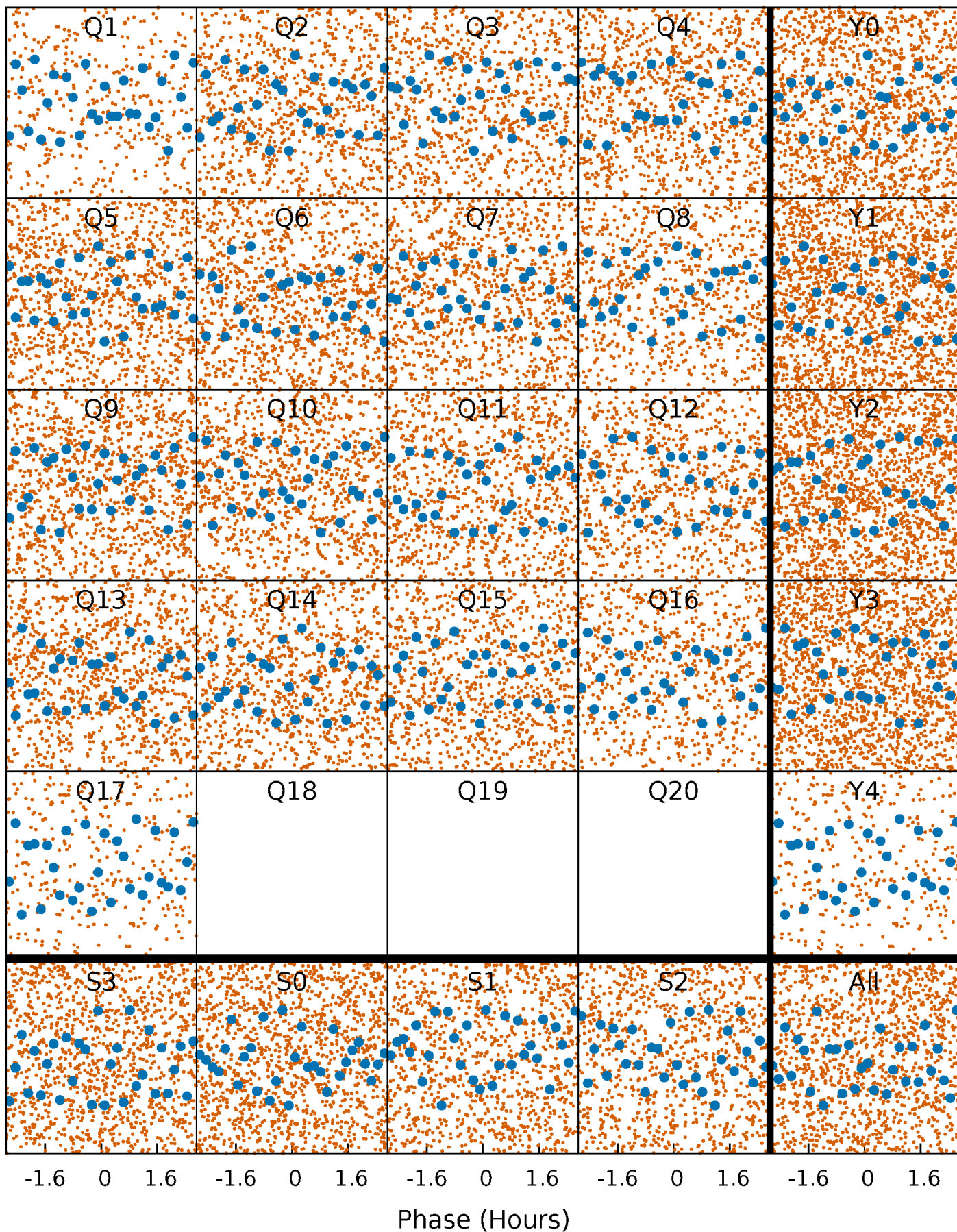


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



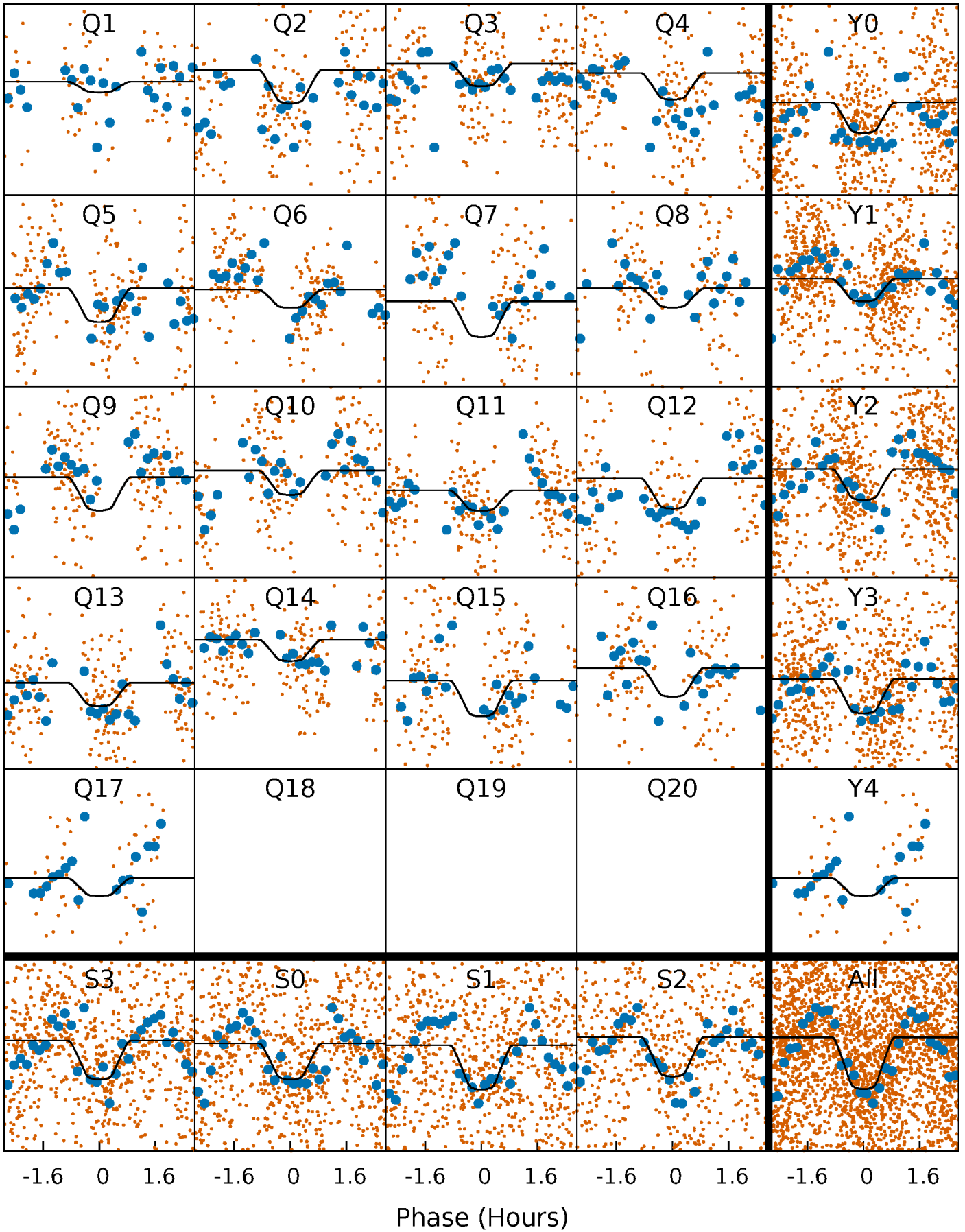
PDC Quarter-Phased Transit Curves

TCE 011773909-03 P= 0.679939 Days $T_0=131.963627$ (BKJD)



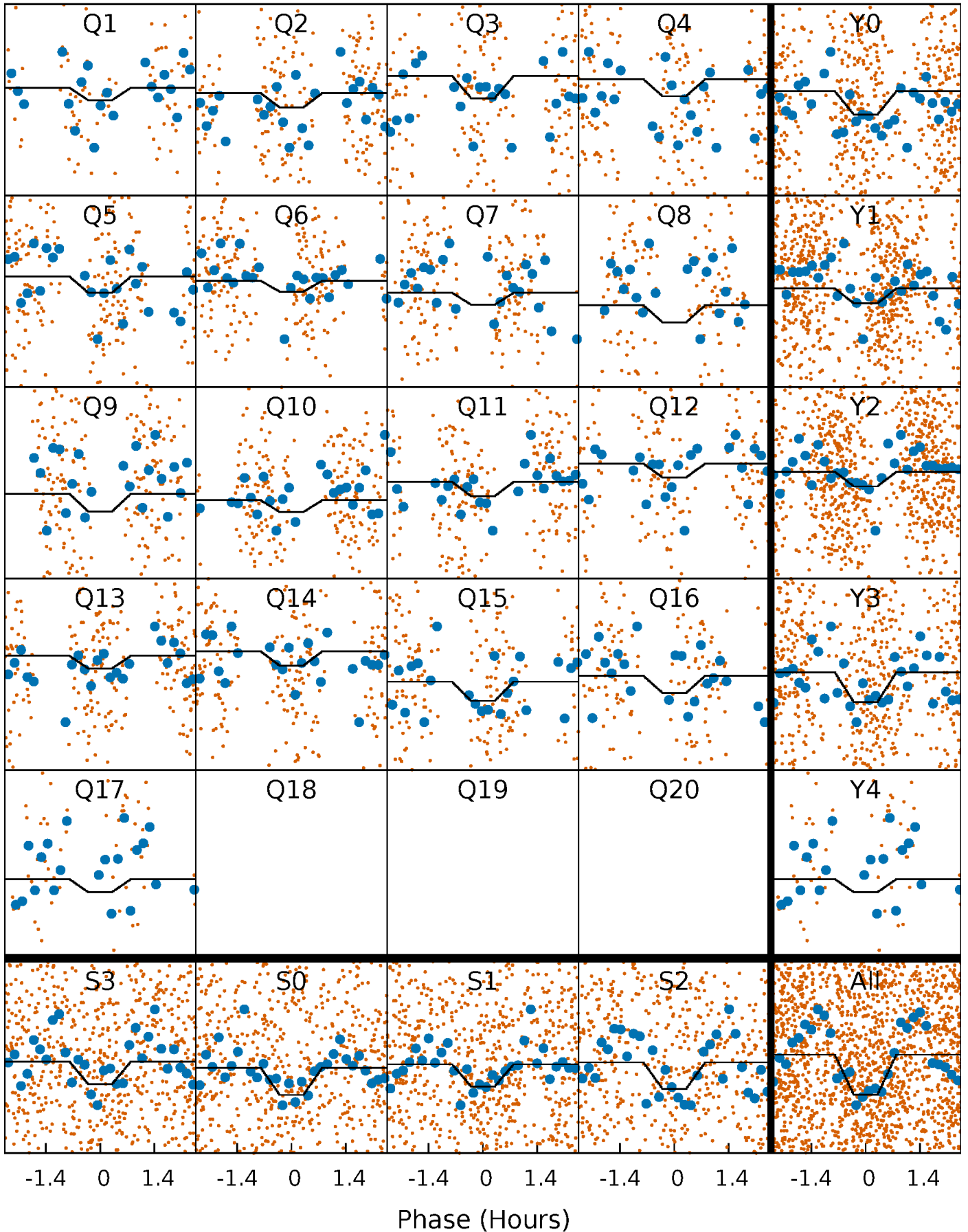
DV Quarter-Phased Transit Curves

TCE 011773909-03 P= 0.679939 Days $T_0=131.963627$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

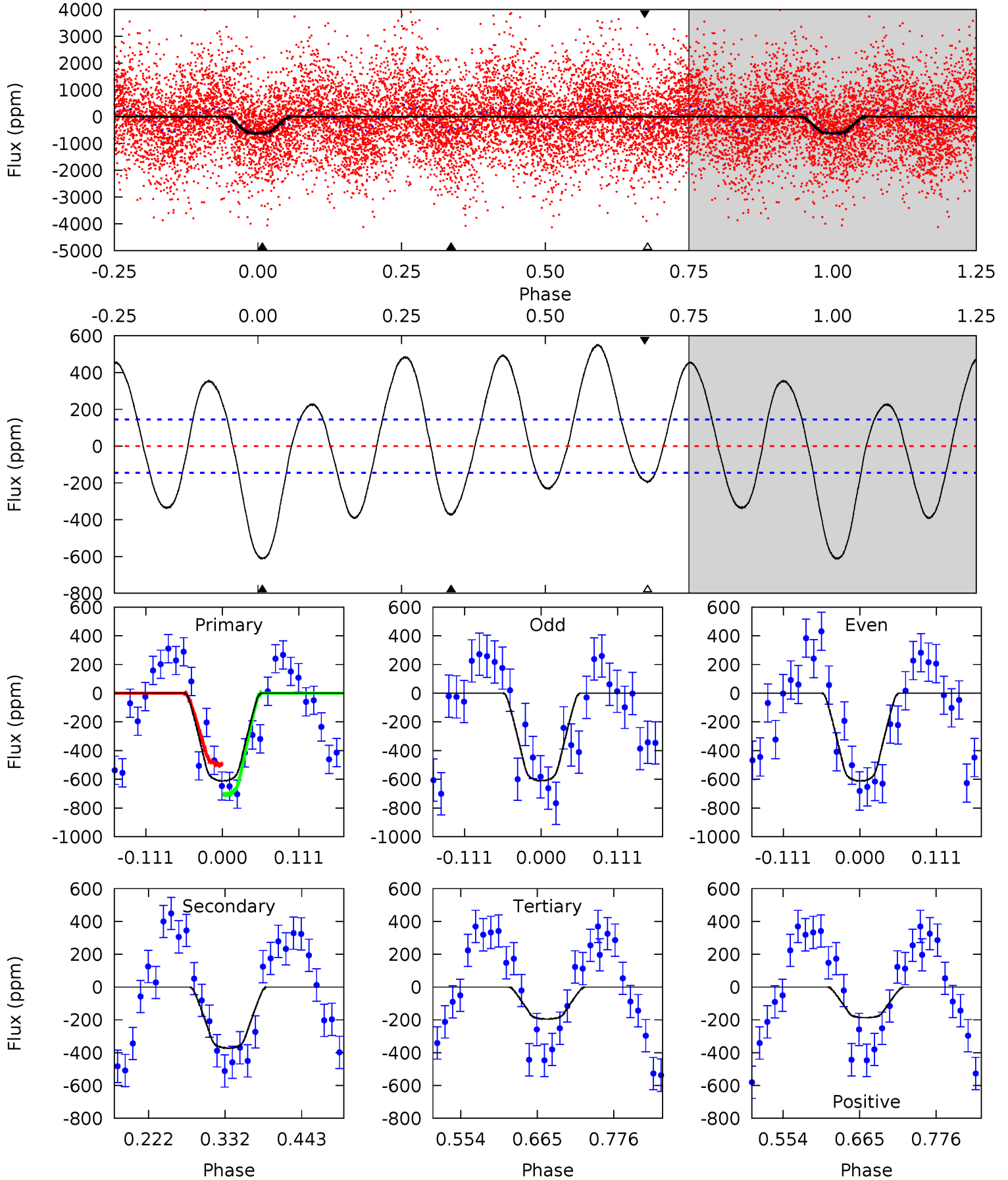
TCE 011773909-03 P= 0.679948 Days $T_0=131.963106$ (BKJD)



DV Model-Shift Uniqueness Test

011773909-03, P = 0.679939 Days, E = 131.283688 Days

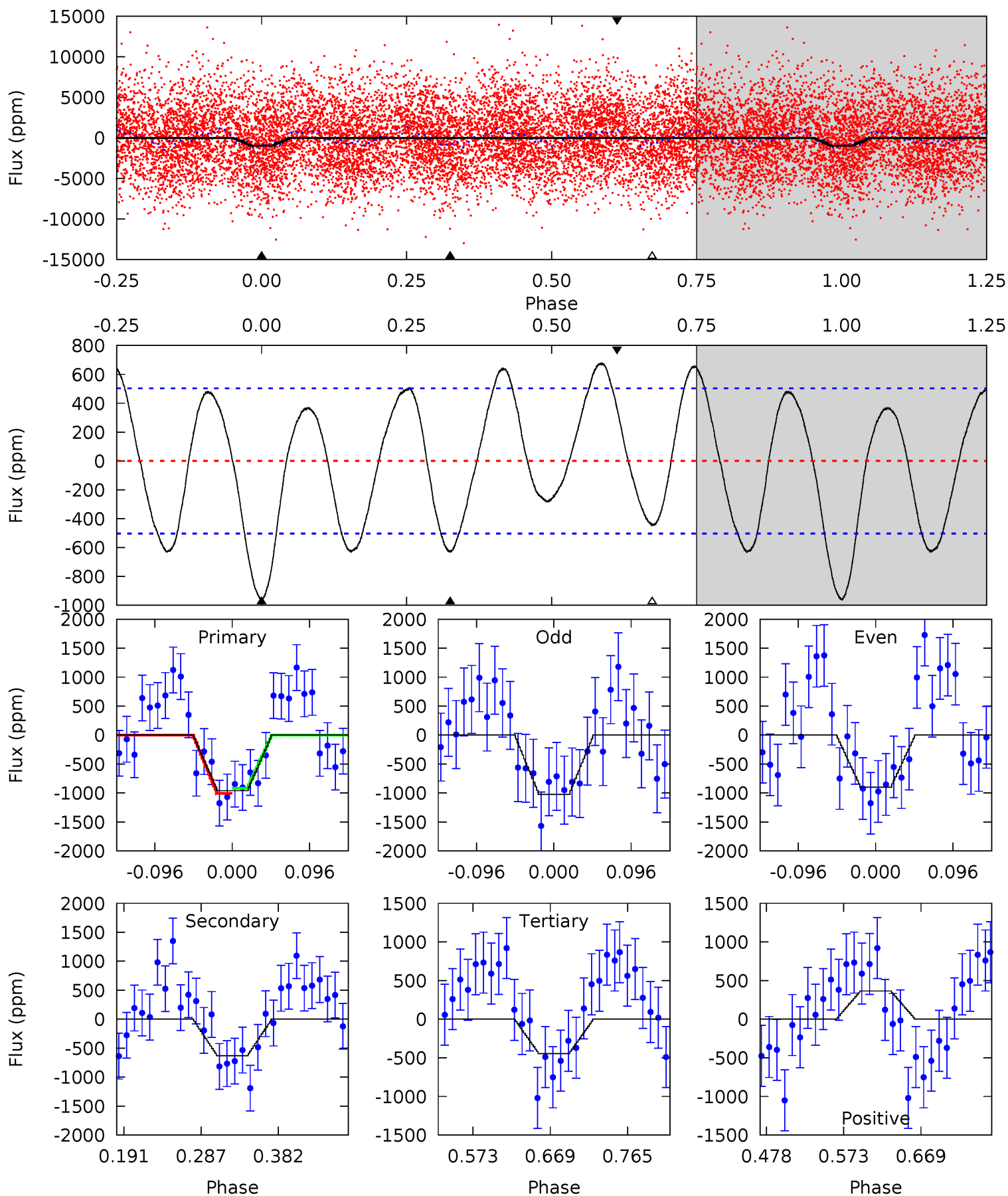
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	11.7	6.11	-5.86	4.54	1.59	8.51	13.1	25.0	5.58	17.6	0.02	1.11	0.47	3.35



Alt Model-Shift Uniqueness Test

011773909-03, P = 0.679948 Days, E = 131.283158 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.73	5.74	4.06	3.32	4.57	1.67	3.64	4.67	5.41	1.67	2.42	0.56	0.88	0.41	0.41



Stellar Parameters For KIC 011773909

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7620^{+236}_{-315}	$4.222^{+0.124}_{-0.186}$	$-0.520^{+0.250}_{-0.300}$	$1.481^{+0.446}_{-0.275}$	$1.334^{+0.203}_{-0.185}$	$0.579^{+0.382}_{-0.264}$
	+3%/-4%	+3%/-4%	+48%/-58%	+30%/-19%	+15%/-14%	+66%/-46%
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 011773909-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-372 ± 32	$4.07^{+1.48}_{-1.31}$	4456^{+323}_{-291}	6412^{+1661}_{-916}	$3.365^{+4.140}_{-1.516}$
Alt.	-631 ± 110	$5.18^{+1.43}_{-1.42}$	4469^{+329}_{-291}	6527^{+1194}_{-865}	$3.528^{+3.332}_{-1.448}$

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

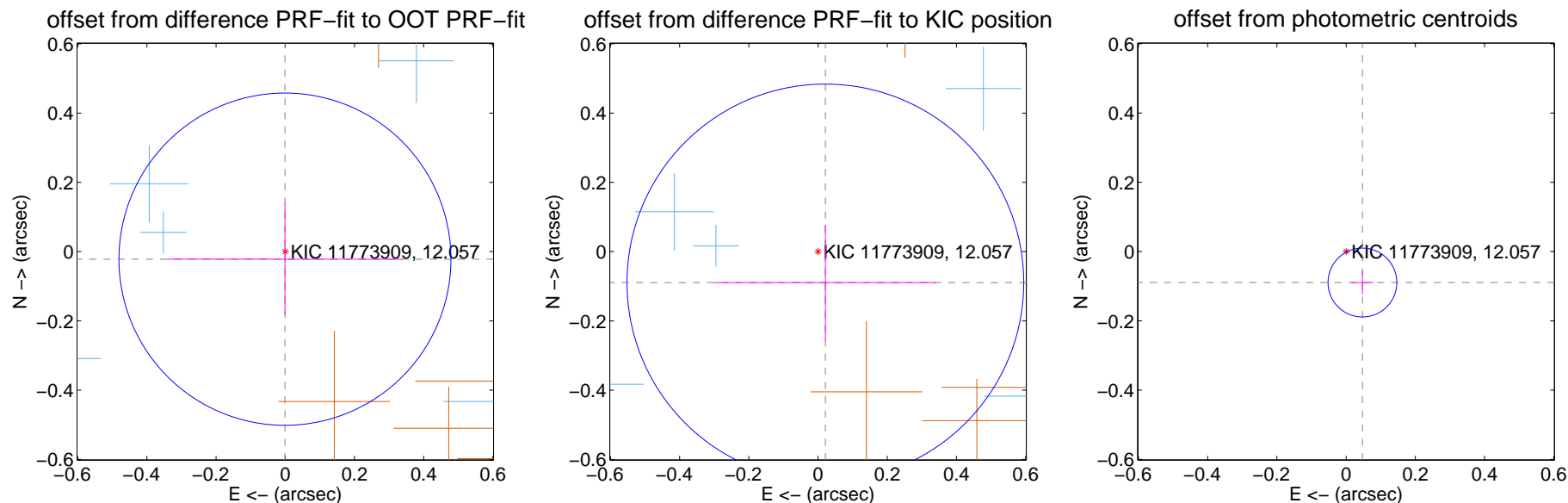
DV Centroid Data

Supplemental centroid analysis for 011773909-03. Kepler magnitude: 12.06. Transit SNR 11.49

There are 7 quarters with good PRF difference image offsets

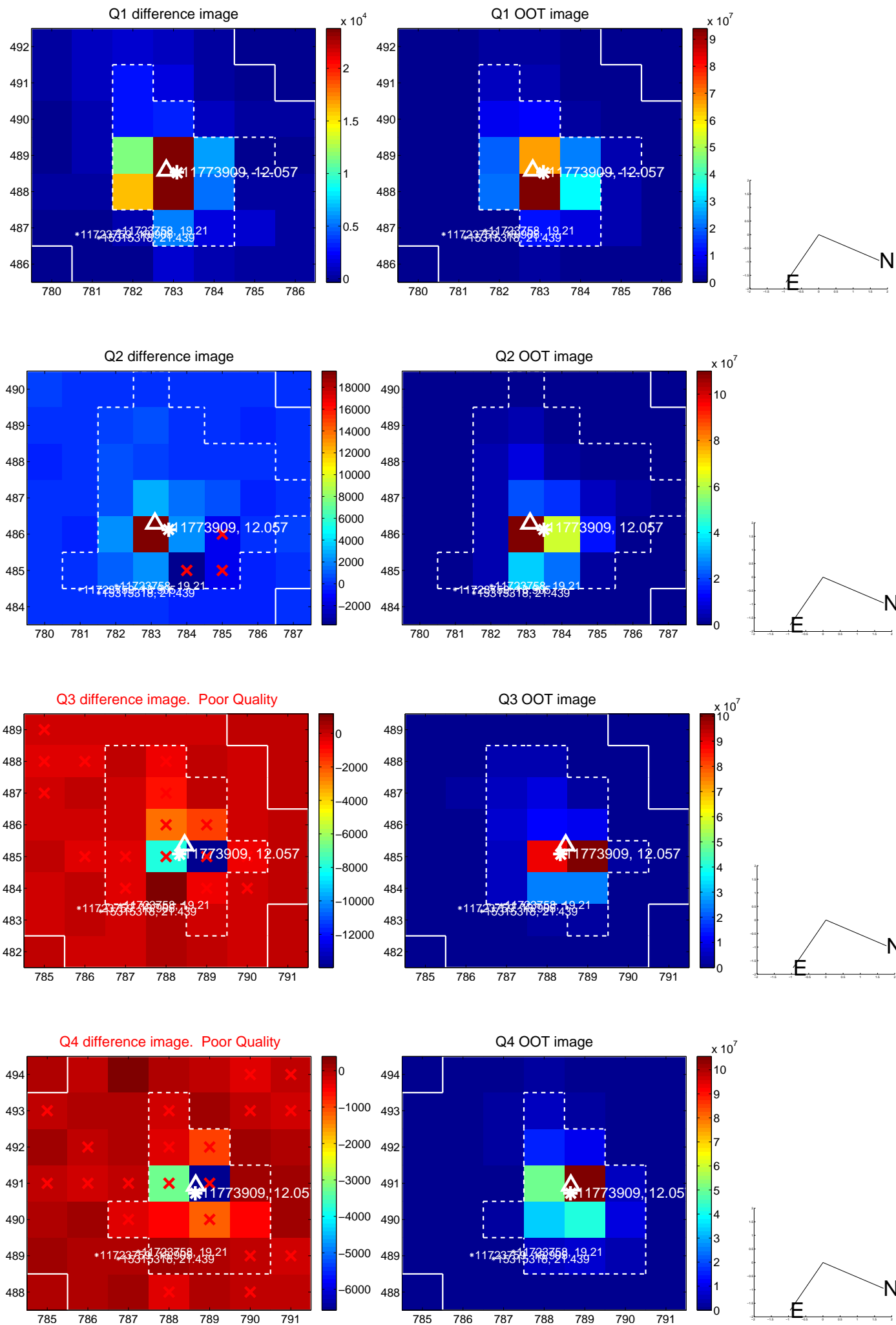
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.022 ± 0.160	0.14	0.001 ± 0.341	-0.022 ± 0.161
PRF-fit source offset from KIC position	0.092 ± 0.191	0.48	-0.021 ± 0.321	-0.089 ± 0.167
photometric centroid source offset	0.10 ± 0.03	3.05	-0.05 ± 0.03	-0.09 ± 0.03

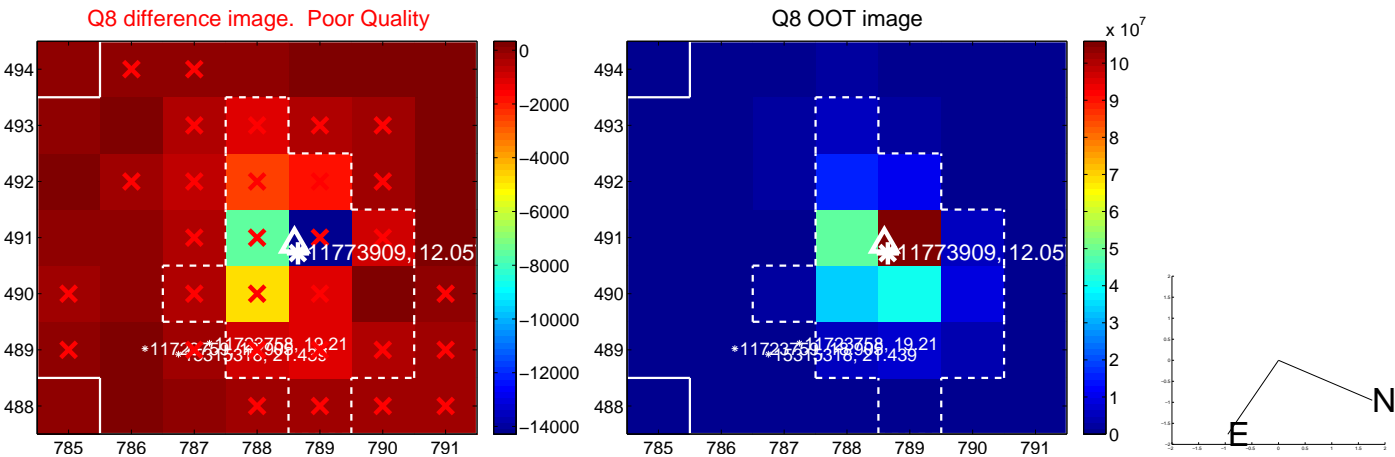
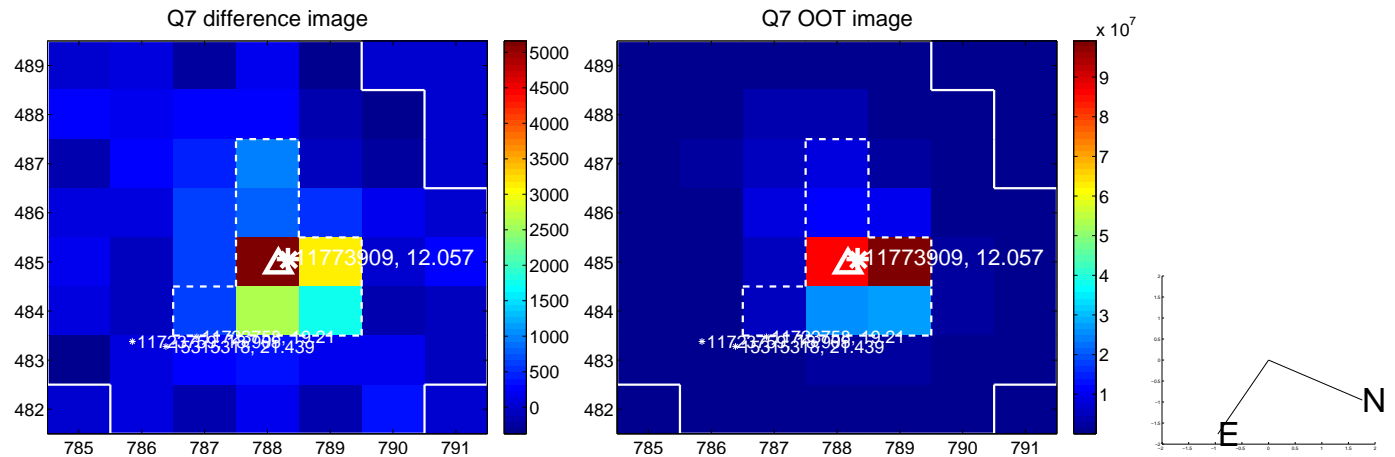
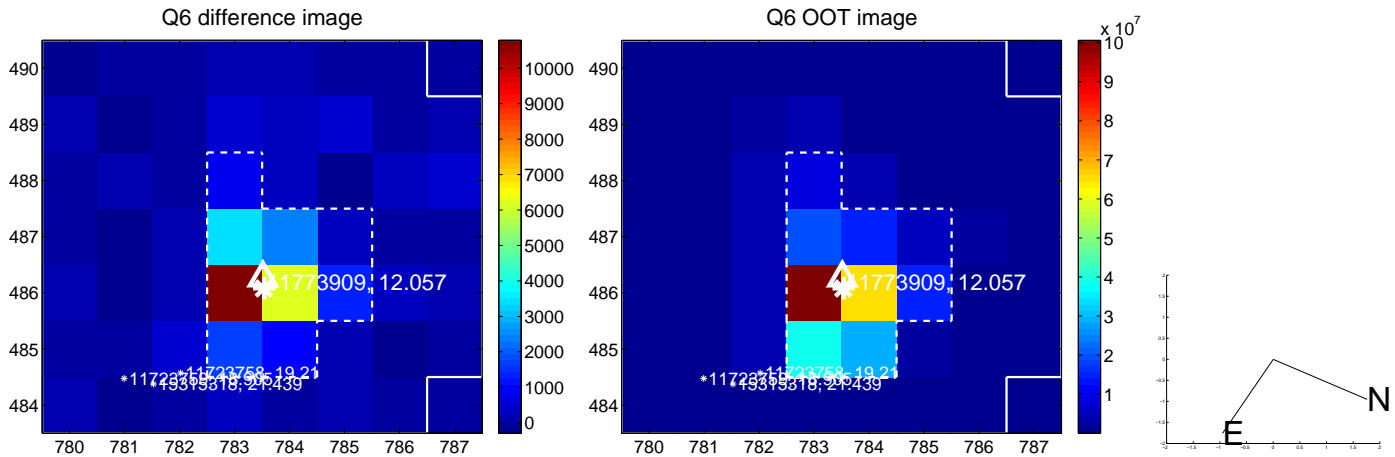
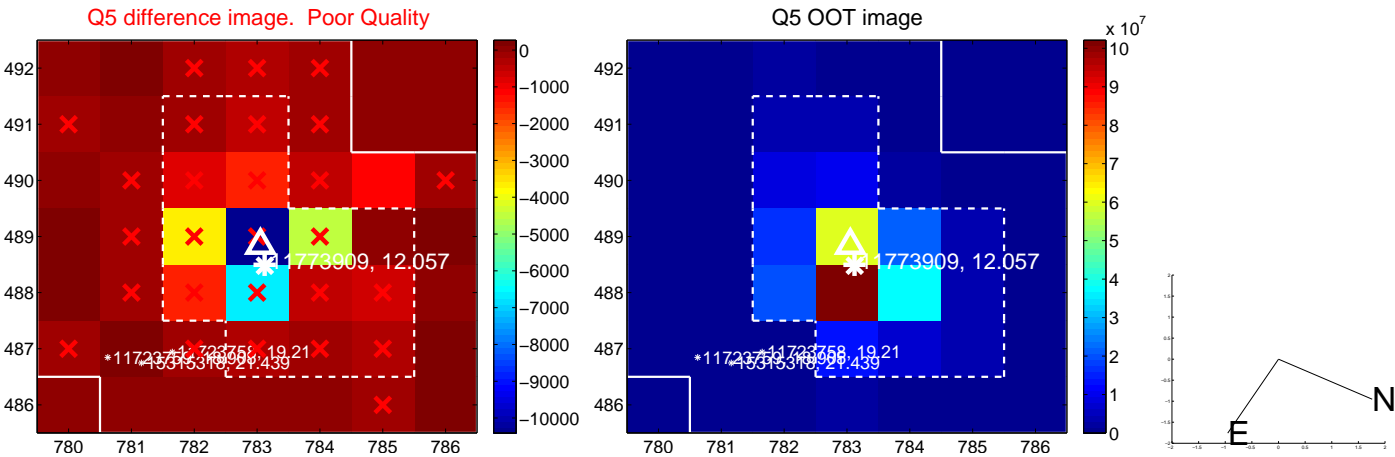


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

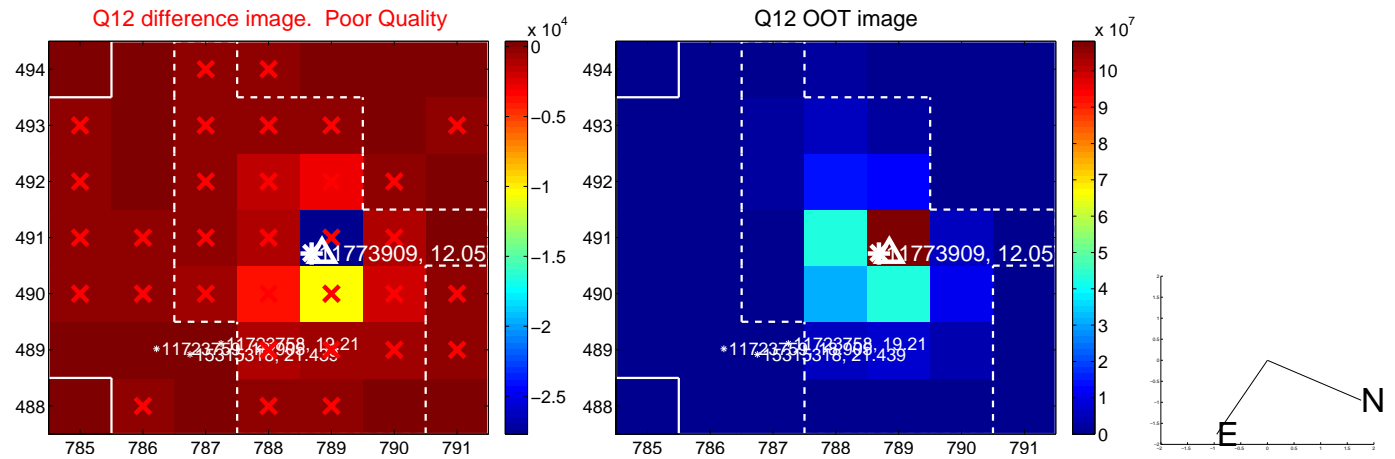
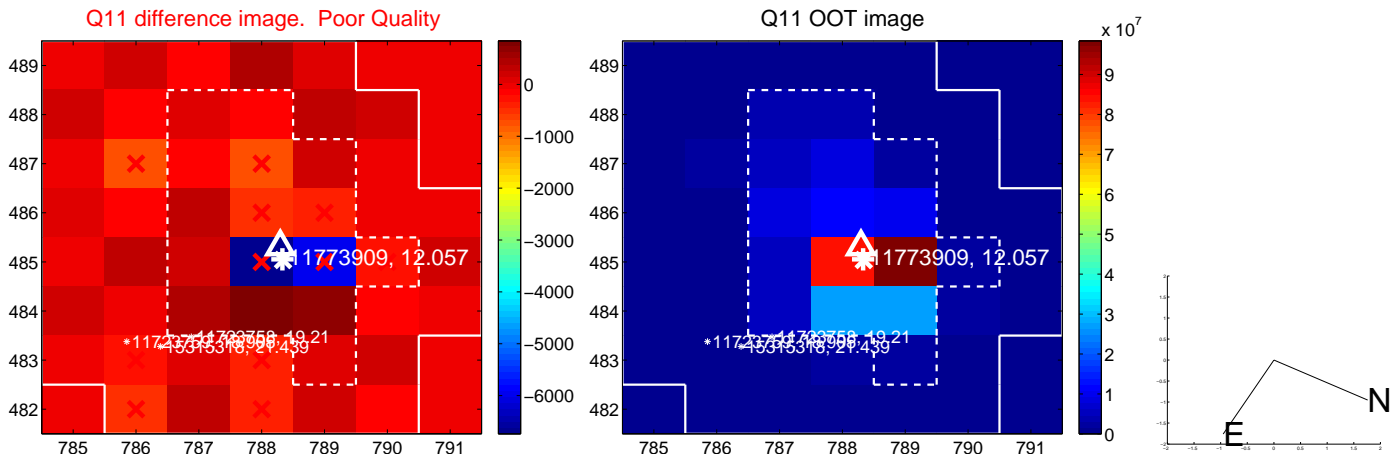
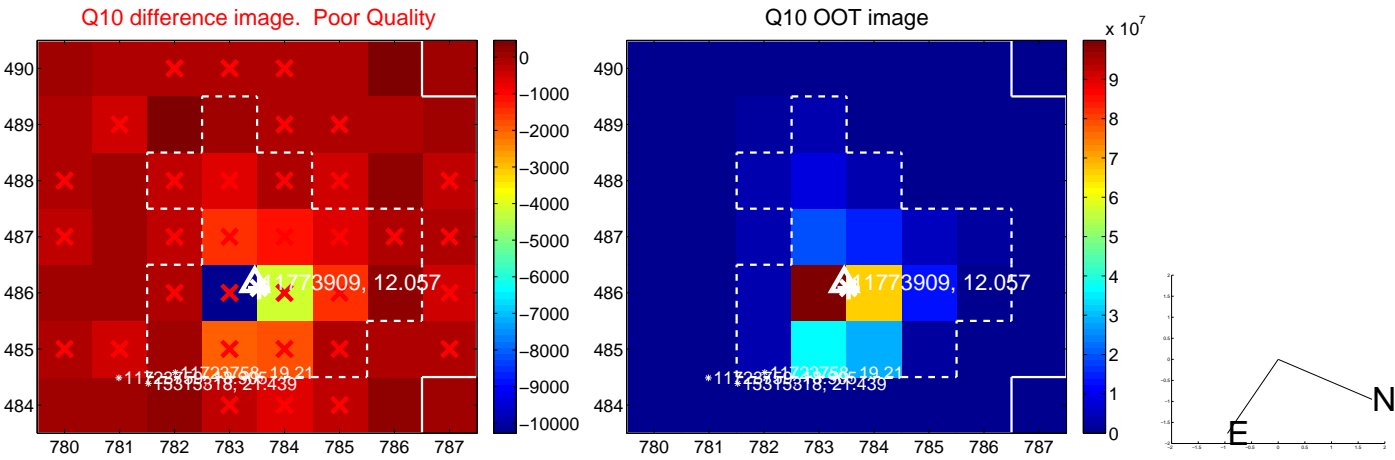
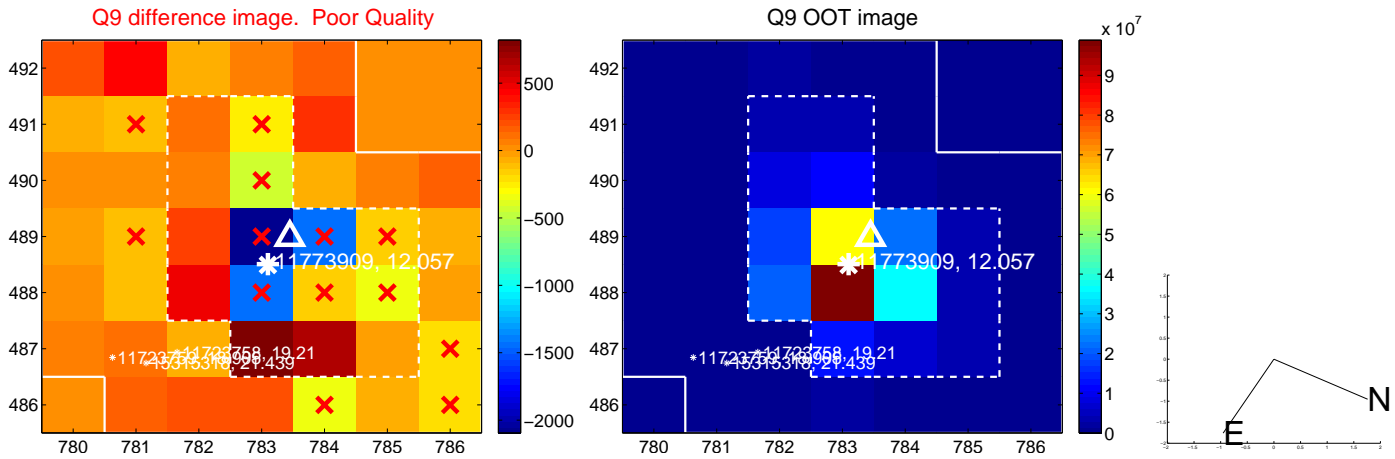
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



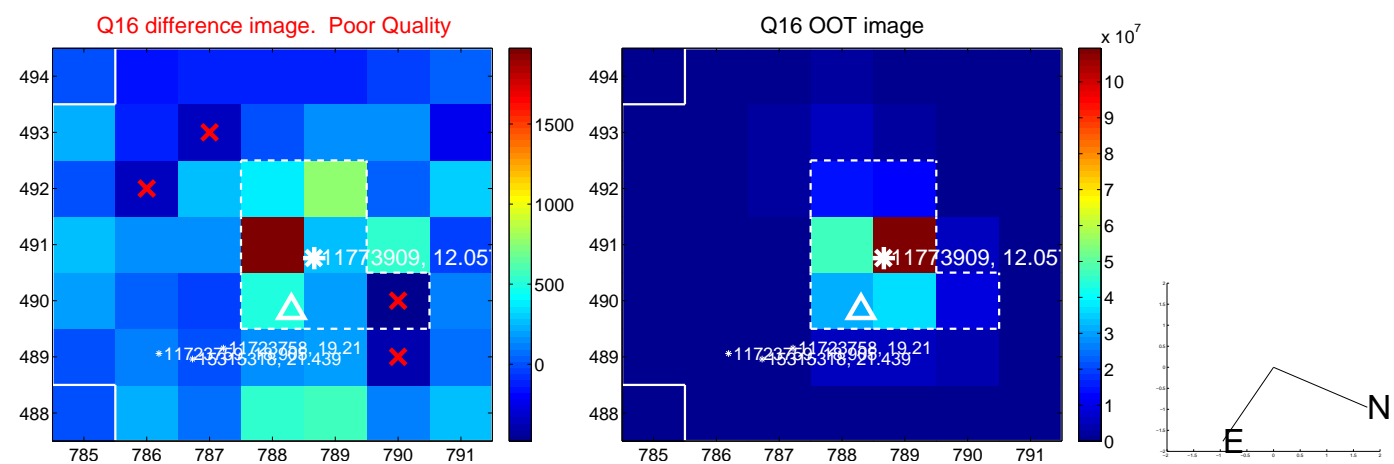
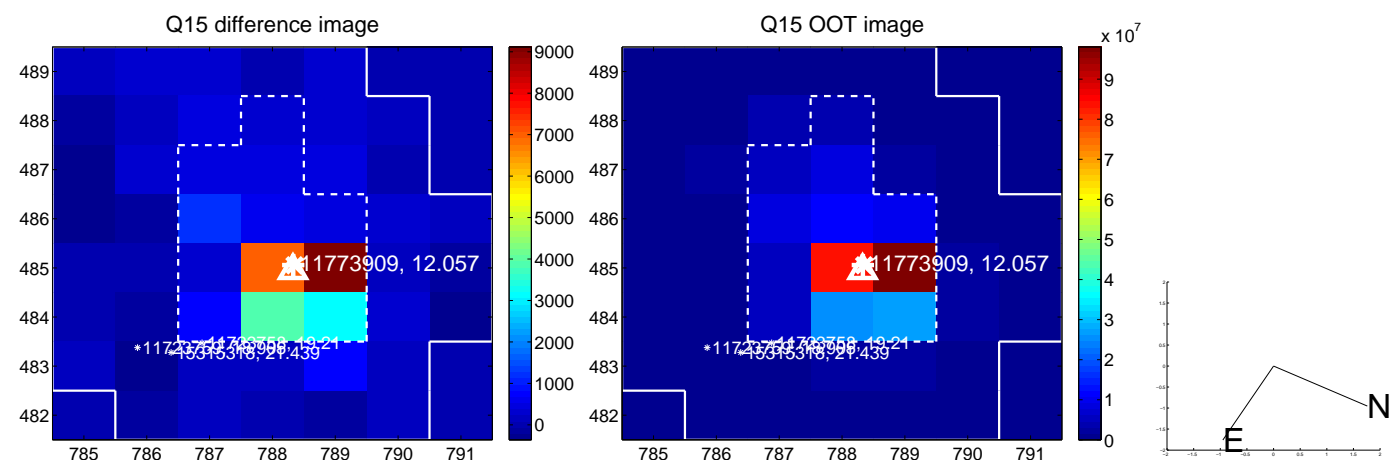
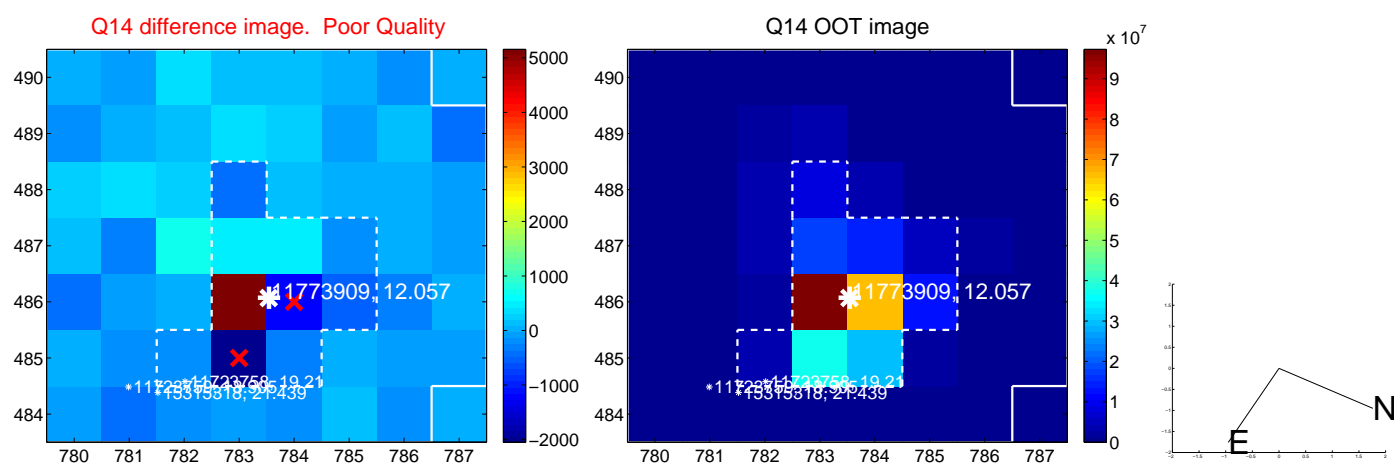
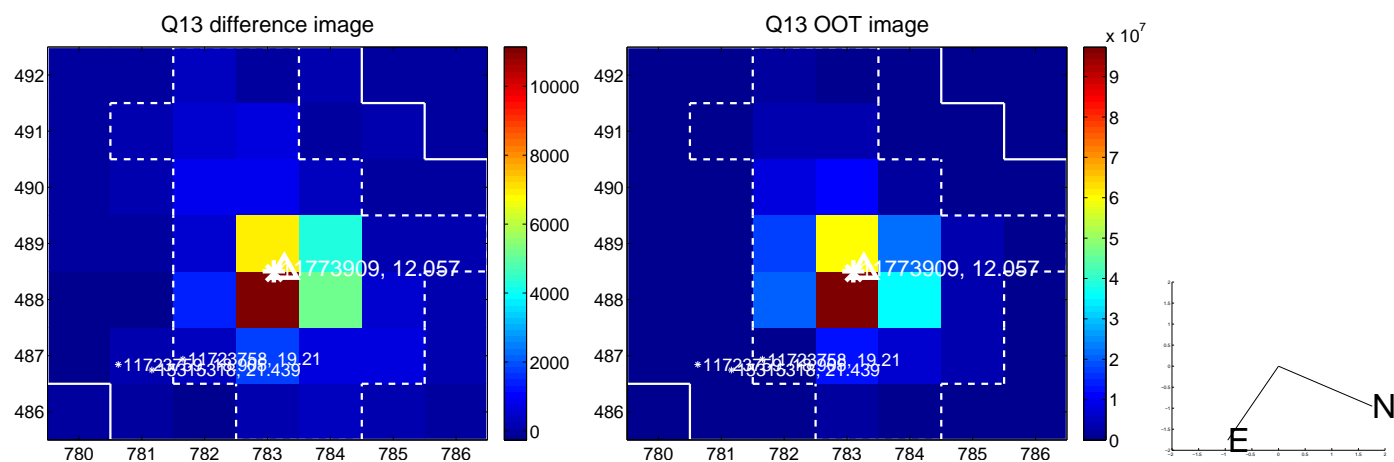
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



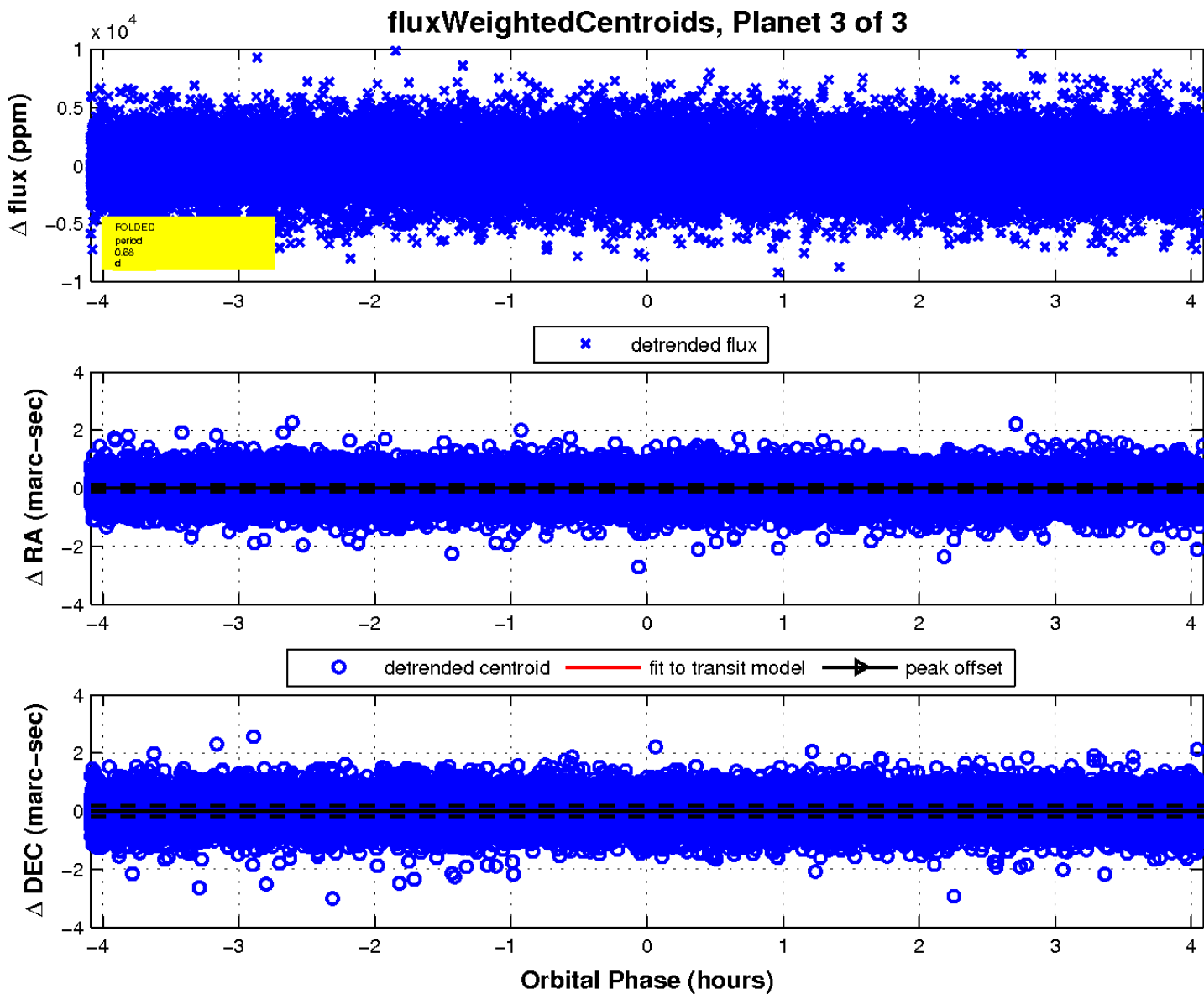
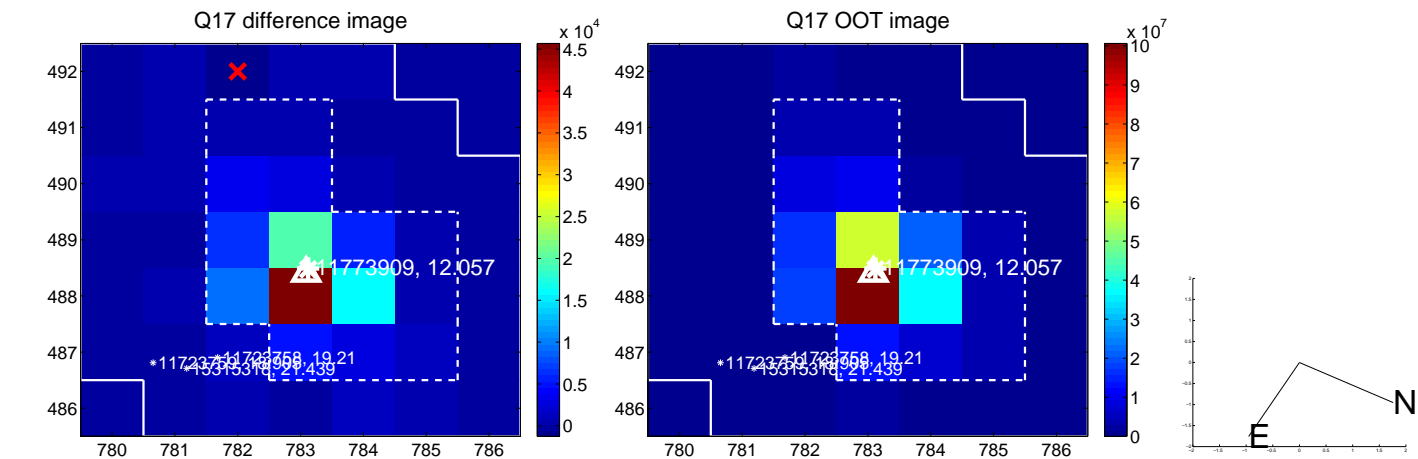
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

