

KIC 007947631

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})
007947631-01	OBS	6936.01	1.258277	132.702817	14014.8	1.888	1380.0	1094.5	0.59	4937	8.99	502.89
007947631-02	OBS	No	2.515618	131.928108	0.0	10.478	9.3	0.0	0.59	4937	0.00	199.67
007947631-03	OBS	No	149.749792	184.985374	230.6	13.557	7.4	4.1	0.59	4937	0.87	0.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007947631-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED
007947631-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
007947631-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

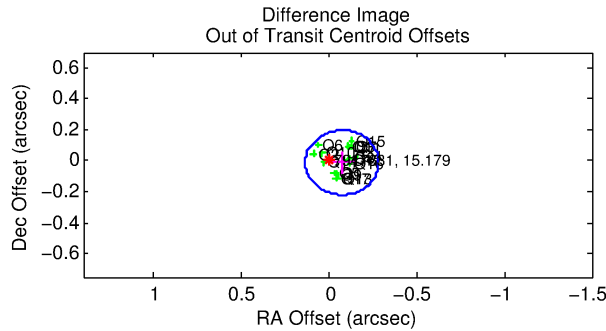
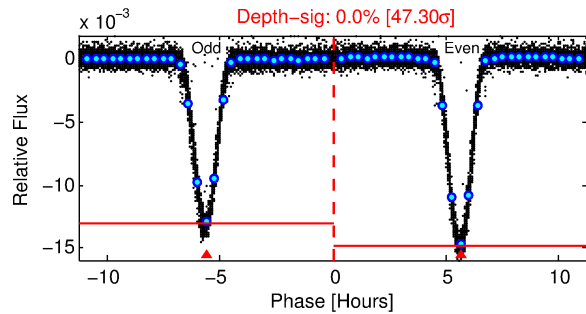
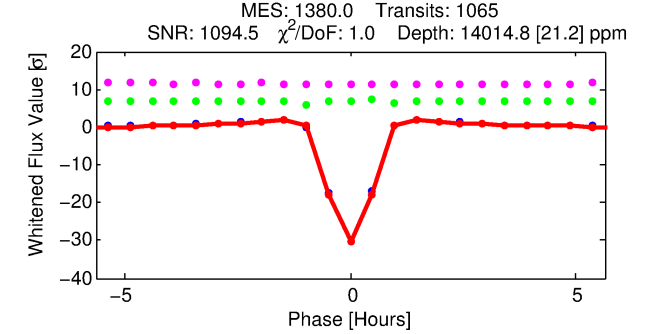
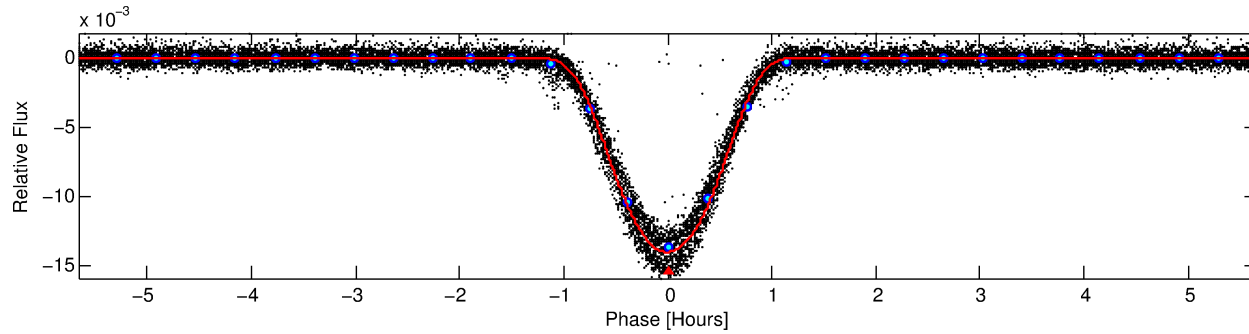
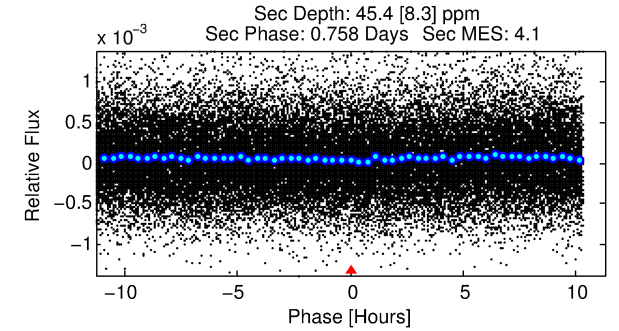
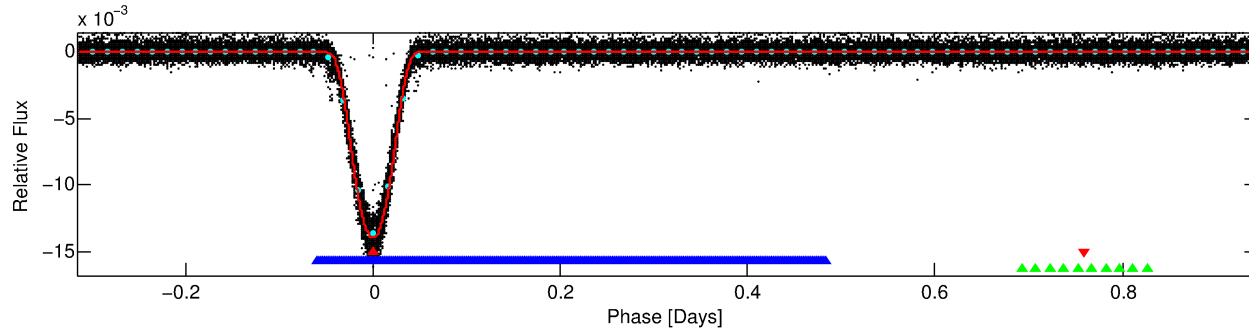
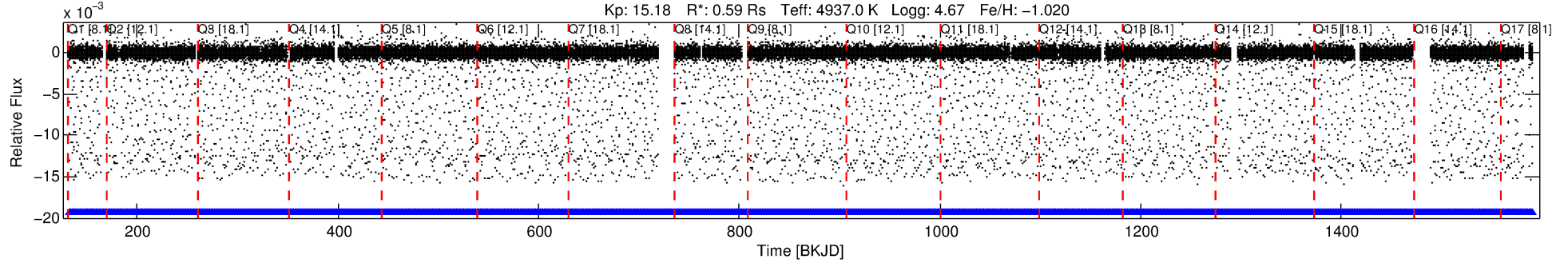
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007947631-01

No Significant Match Found

DV One-Page Summary

KIC: 7947631 Candidate: 1 of 3 Period: 1.258 d
KOI: K06936.01 Corr: 0.987



DV Fit Results:

Period = 1.25828 [0.00000] d
Epoch = 132.7028 [0.0000] BKJD
Rp/R* = 0.1403 [0.0016]
a/R* = 3.70 [0.02]
b = 0.90 [0.00]
Seff = 502.89 [85.61]
Teq = 1208 [51] K
Rp = 8.99 [0.64] Re
a = 0.0191 [0.0012] AU
Ag = 0.11 [0.02] [-37.65 σ]
Teffp = 1082 [63] K [-1.55 σ]

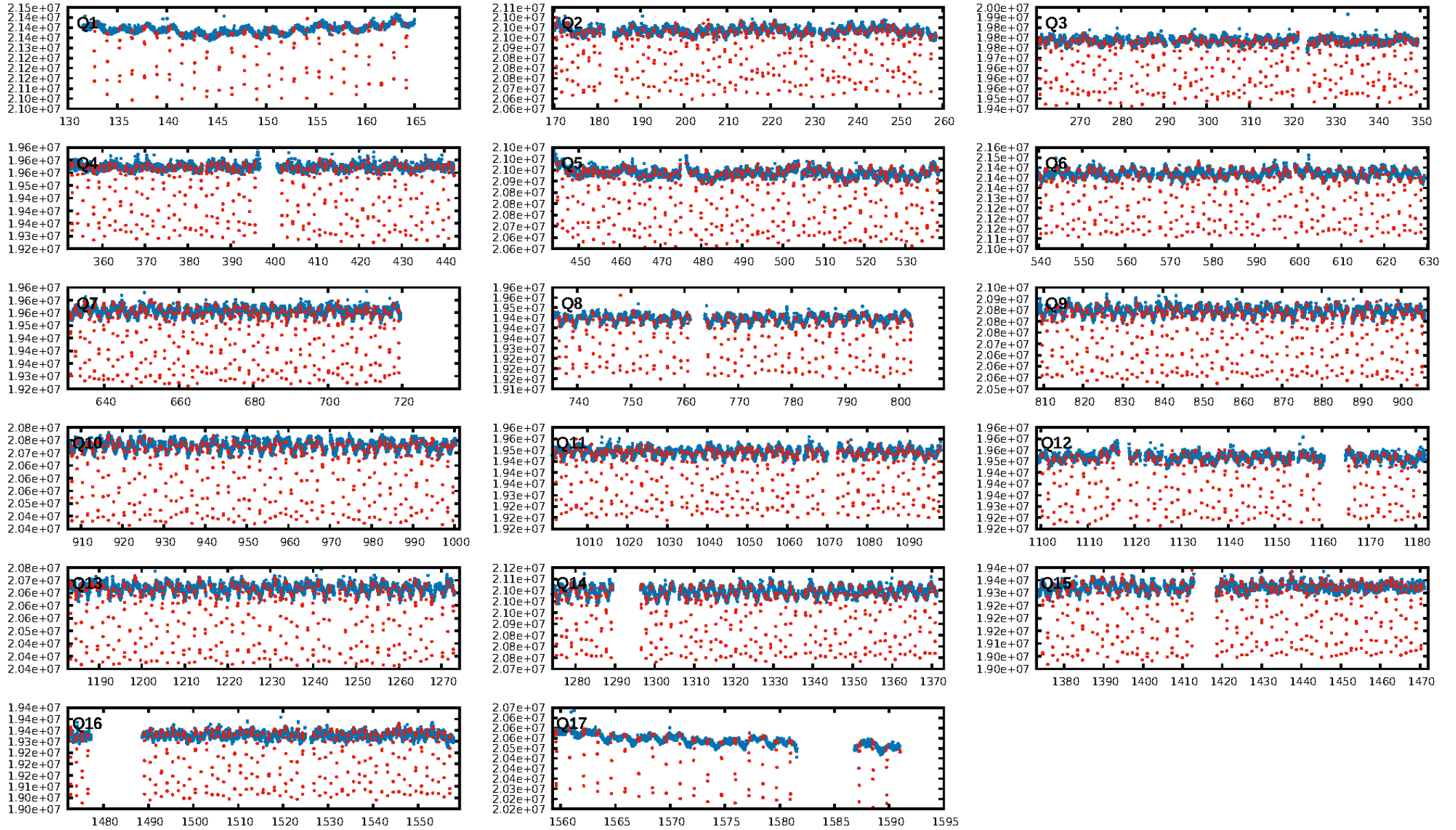
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.5% [2.83 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [1017/1017]
GhostDiagnostic-chr: 2.475
Centroid-sig: 0.0%
Centroid-so: 0.227 arcsec [26.15 σ]
OotOffset-rm: 0.075 arcsec [1.08 σ]
KicOffset-rm: 0.158 arcsec [2.22 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

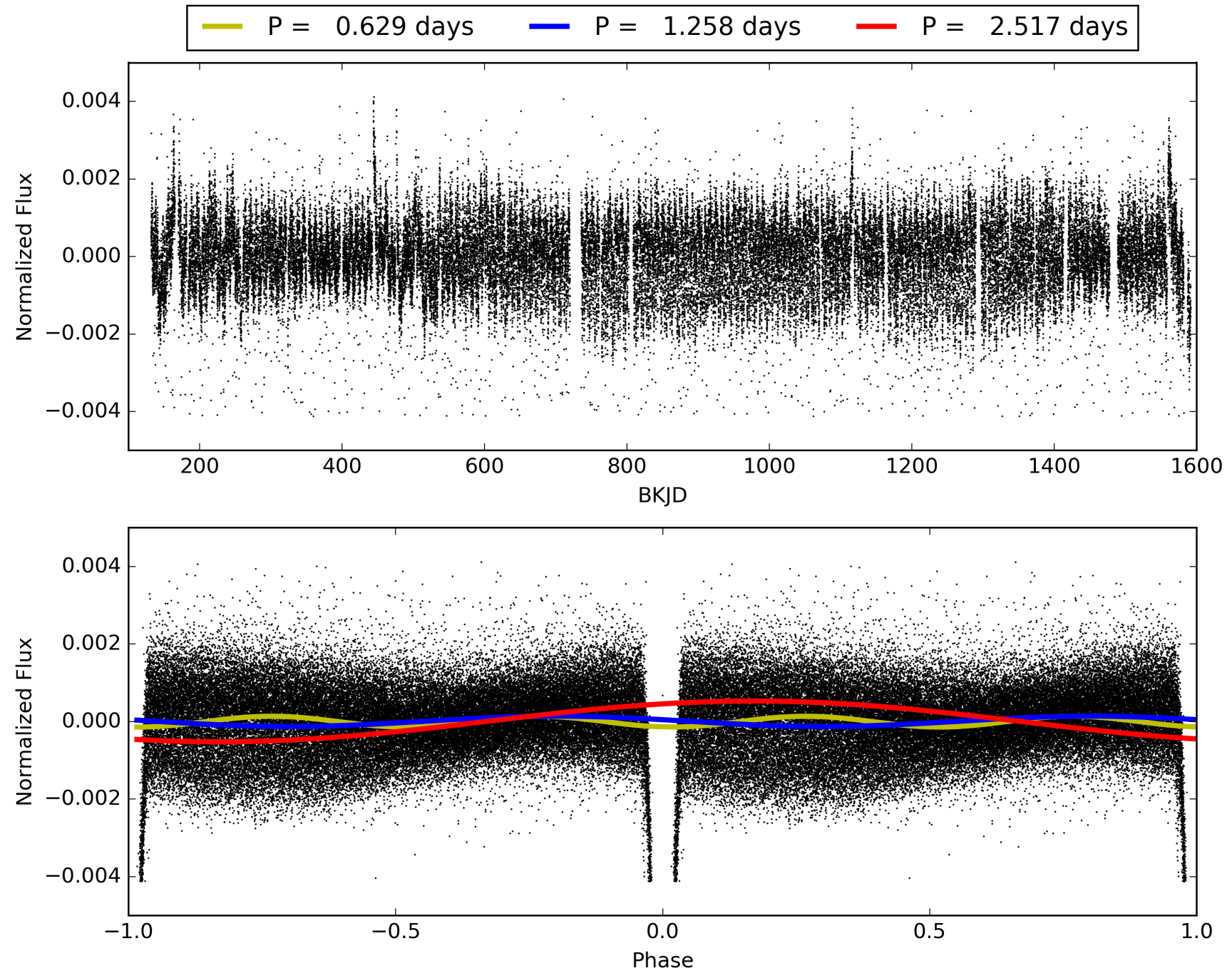
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 16:55:00 Z

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

TCE 007947631-01, PDC Light Curves

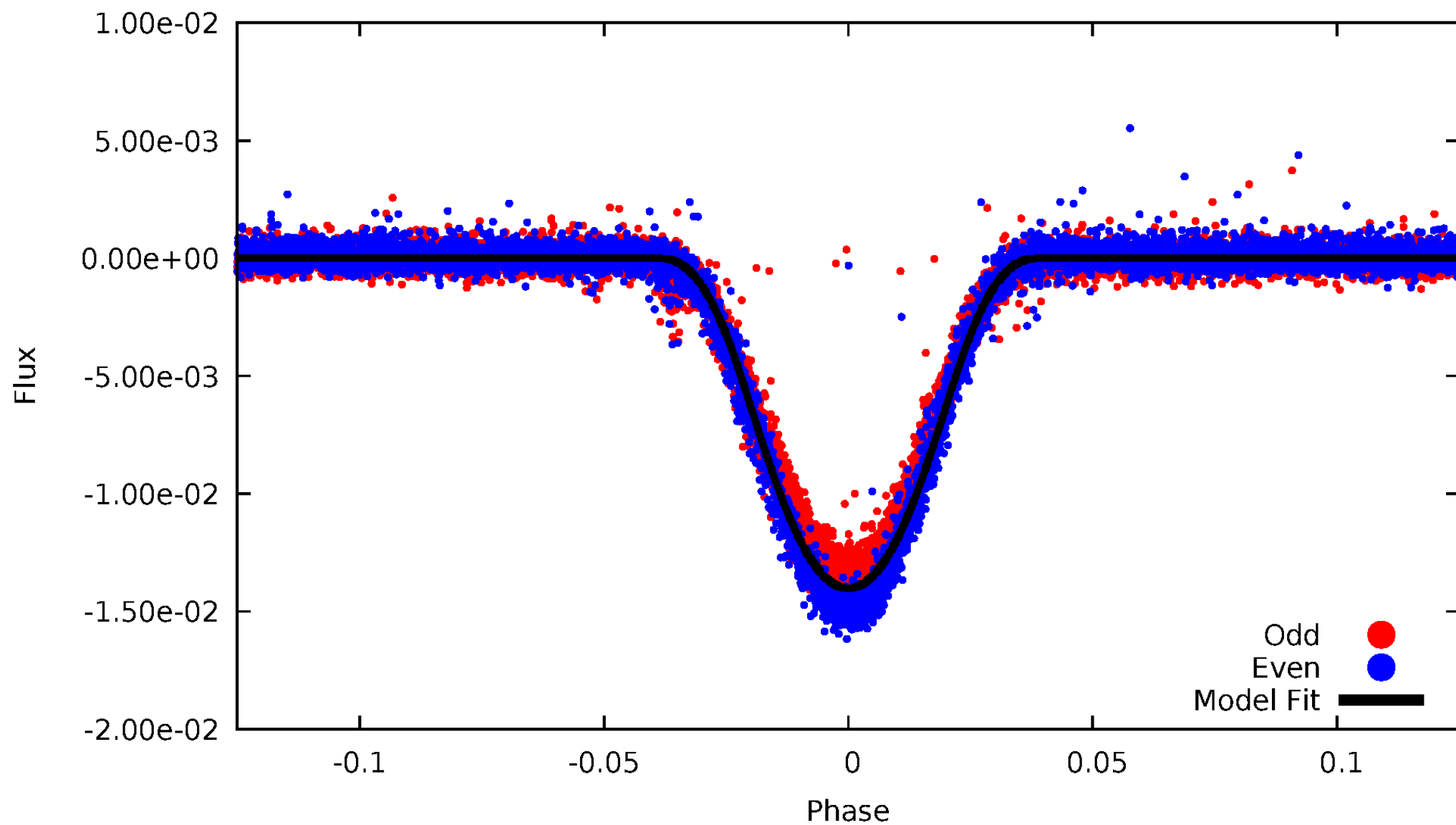


TCE 007947631-01



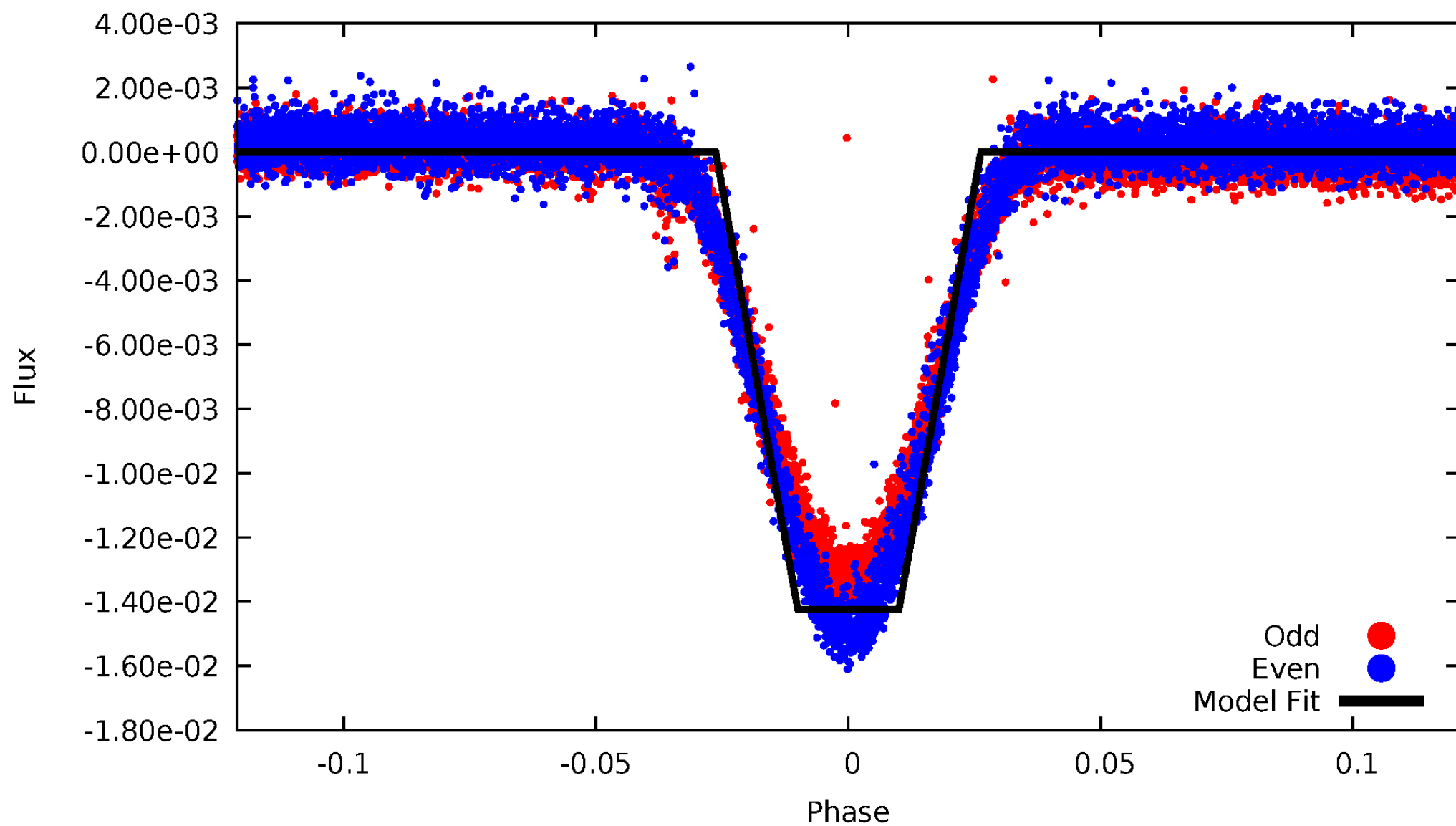
DV Odd/Even

TCE 007947631-01



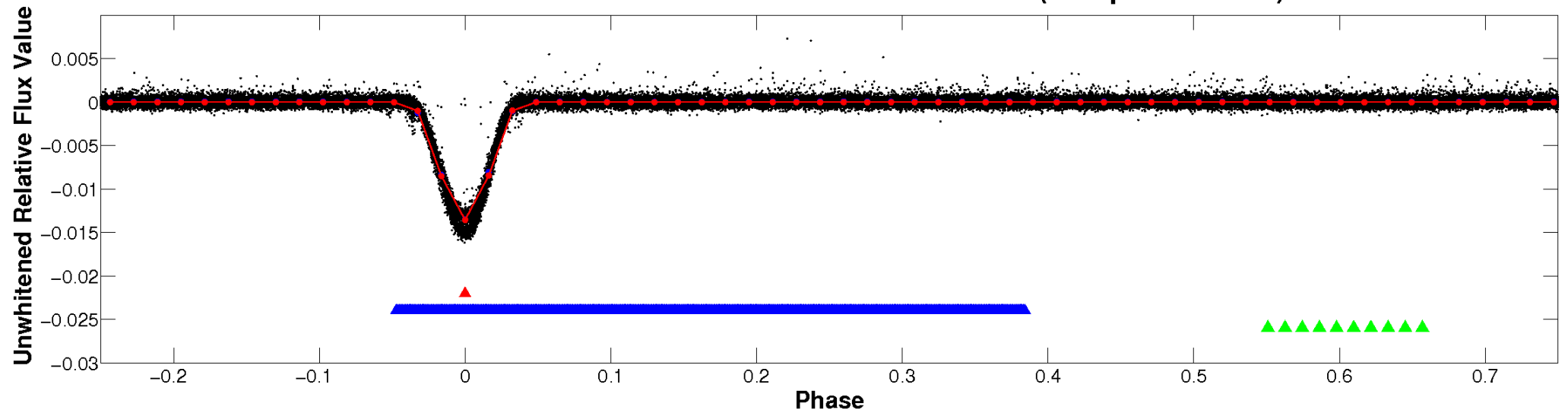
ALT Odd/Even

TCE 007947631-01

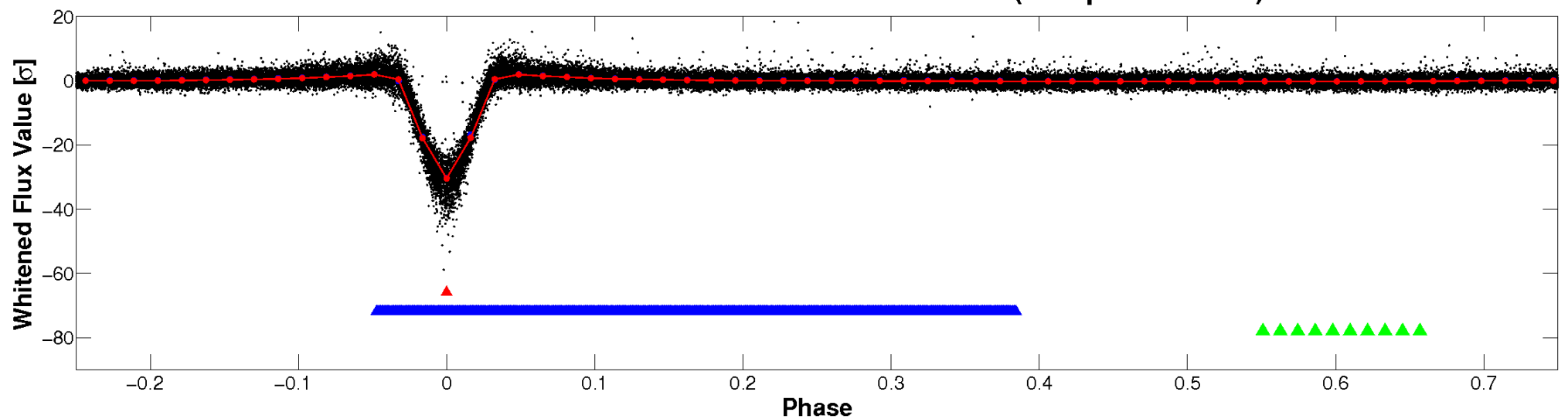


Non-Whitened Vs. Whitened Light Curve

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

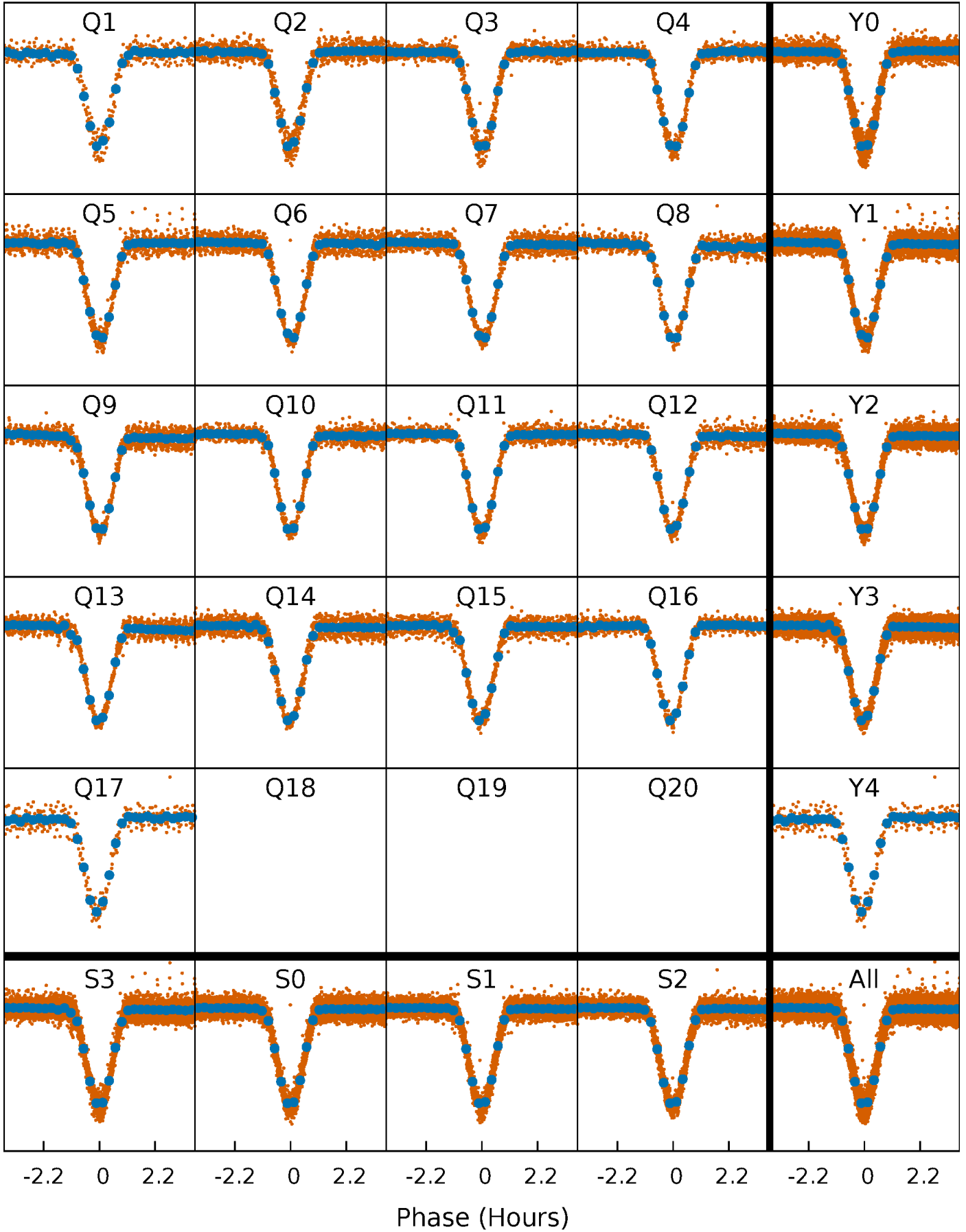


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



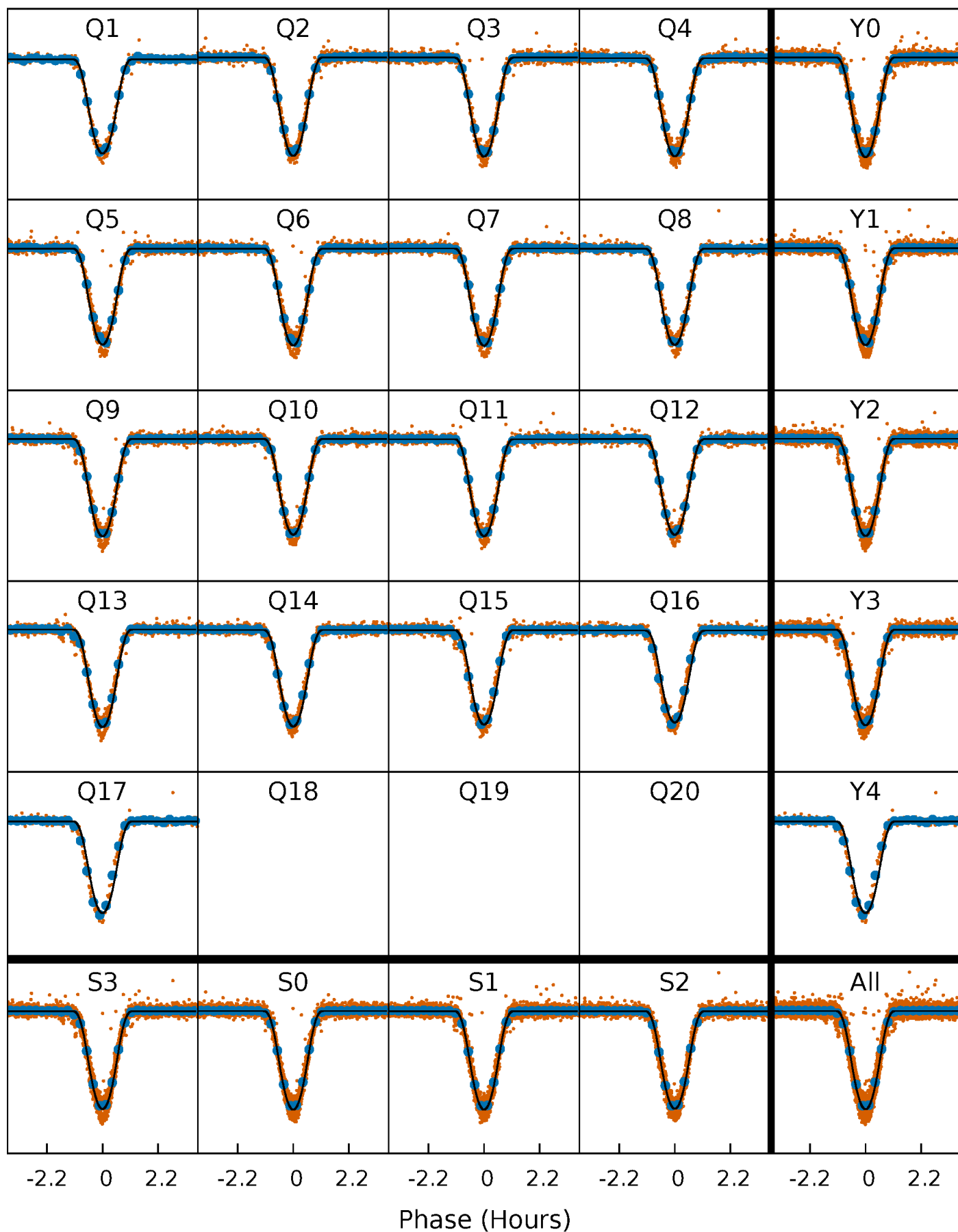
PDC Quarter-Phased Transit Curves

TCE 007947631-01 P= 1.258277 Days $T_0=132.702817$ (BKJD)



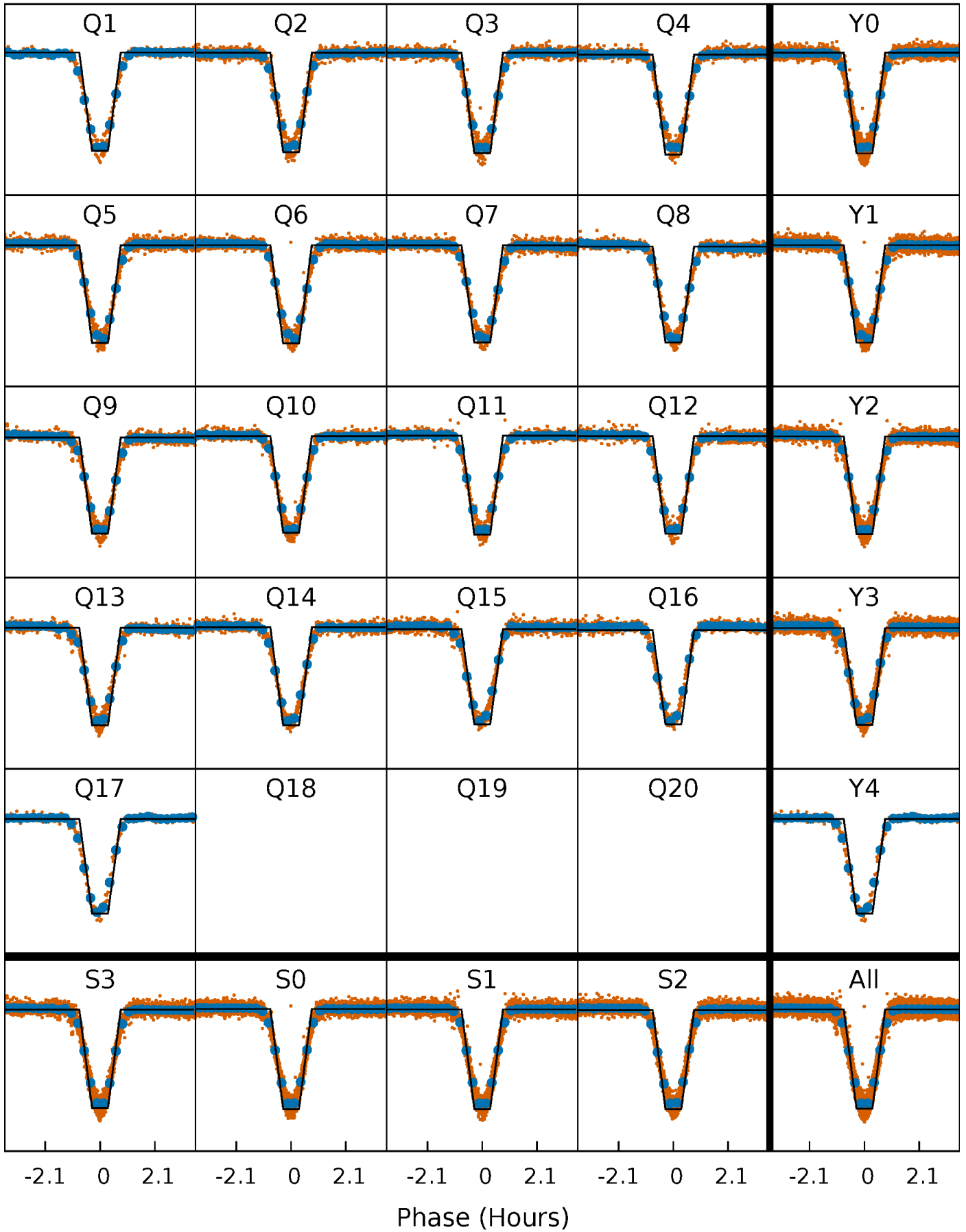
DV Quarter-Phased Transit Curves

TCE 007947631-01 P= 1.258277 Days $T_0=132.702817$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

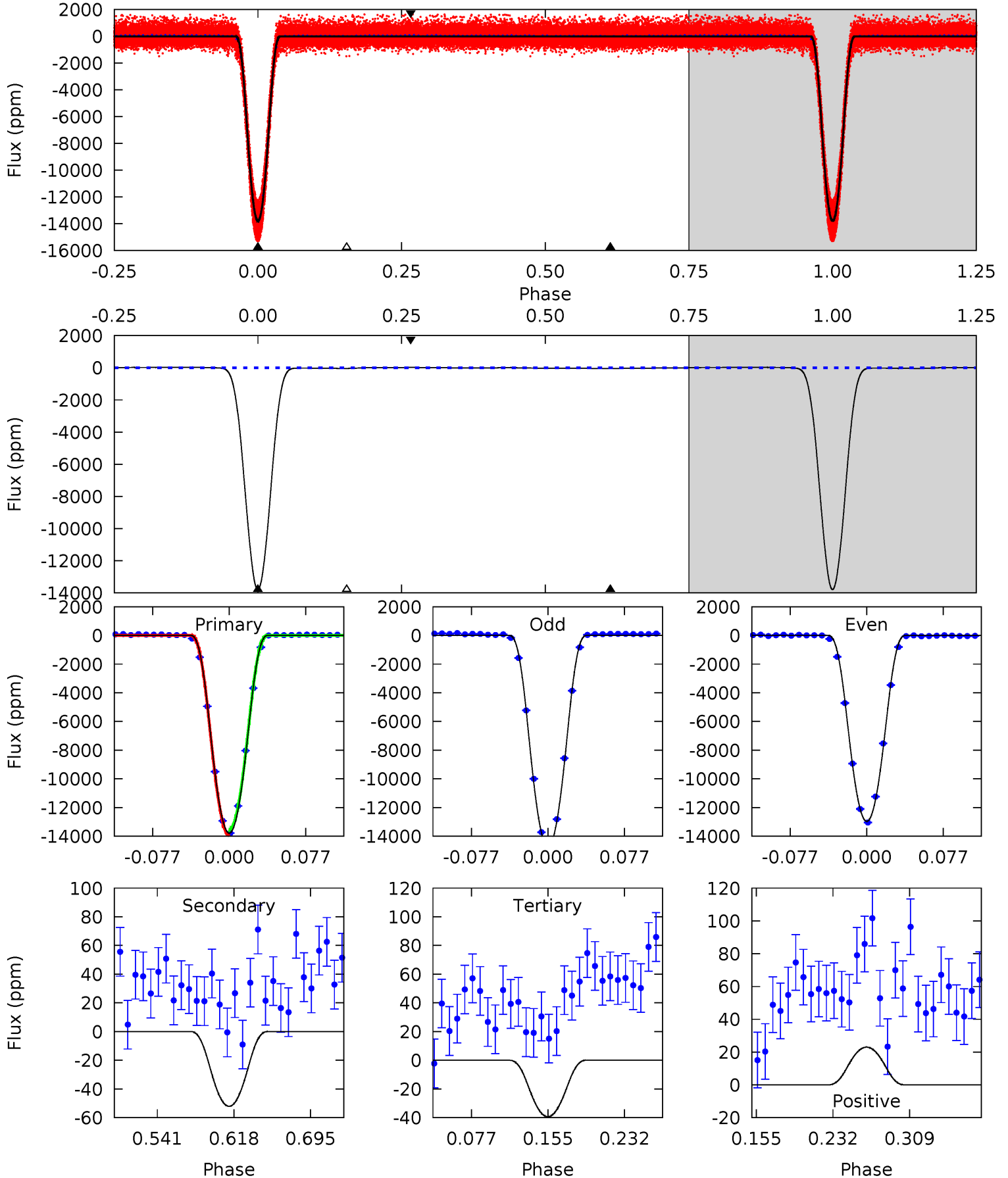
TCE 007947631-01 P= 1.258276 Days $T_0=132.702925$ (BKJD)



DV Model-Shift Uniqueness Test

007947631-01, P = 1.258277 Days, E = 131.444540 Days

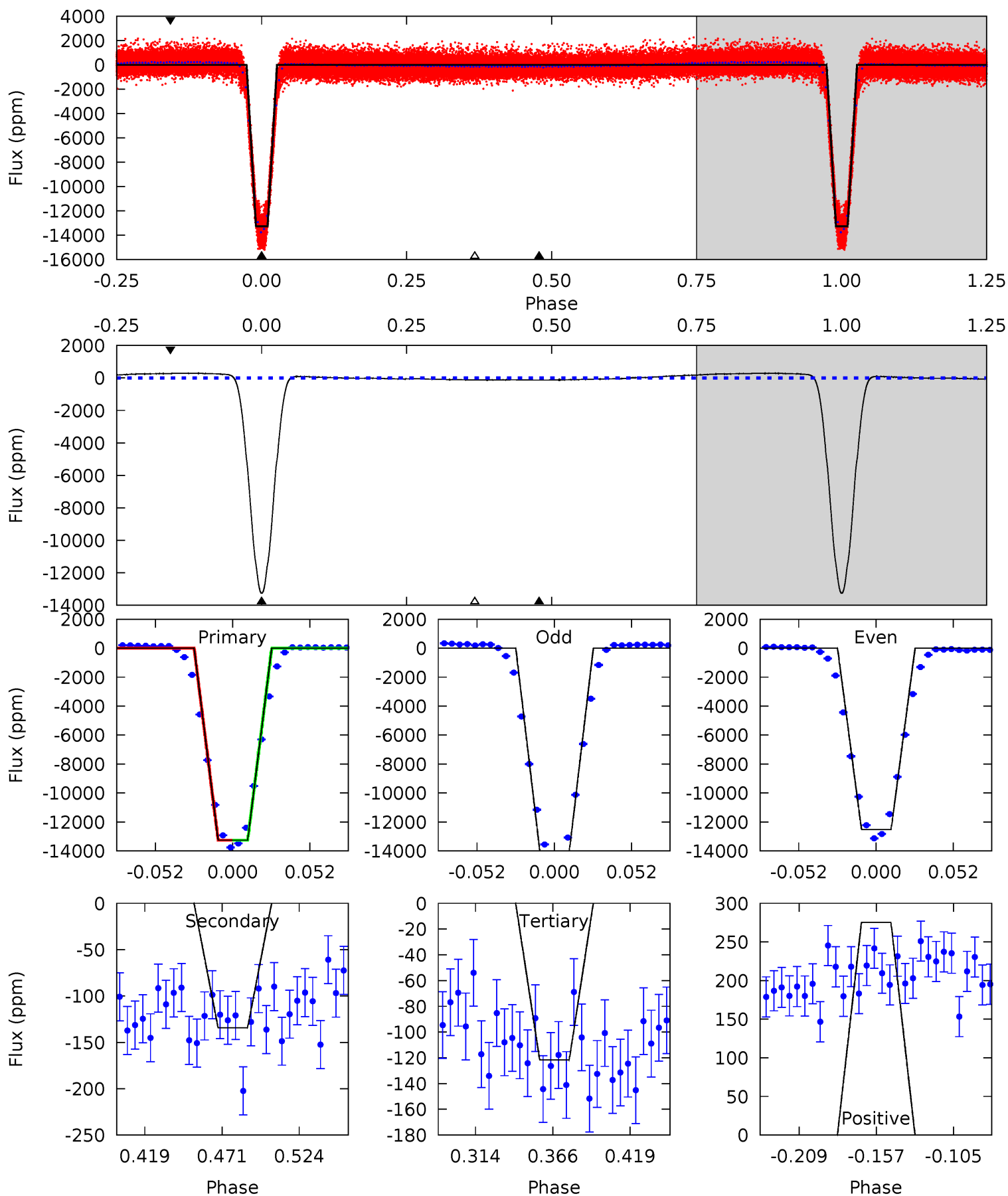
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2432	9.19	6.93	4.05	4.62	1.77	3.14	2425	2428	2.26	5.14	157.6	1.00	0.00	34.0



Alt Model-Shift Uniqueness Test

007947631-01, P = 1.258276 Days, E = 131.444649 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1472	14.9	13.5	30.6	4.70	1.94	15.3	1458	1441	1.39	-15.7	82.9	1.00	0.02	0.23



Stellar Parameters For KIC 007947631

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4937^{+172}_{-154}	$4.669^{+0.056}_{-0.032}$	$-1.020^{+0.300}_{-0.300}$	$0.587^{+0.041}_{-0.041}$	$0.585^{+0.050}_{-0.021}$	$4.082^{+0.855}_{-0.589}$
	+3%/-3%	+1%/-1%	+29%/-29%	+7%/-7%	+9%/-4%	+21%/-14%
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 007947631-01 / KOI 6936.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-52 ± 6	$8.97^{+0.39}_{-0.36}$	1682^{+64}_{-64}	-2141^{+53}_{-48}	$0.131^{+0.018}_{-0.016}$
Alt.	-134 ± 9	$7.62^{+0.31}_{-0.32}$	1682^{+69}_{-60}	2136^{+62}_{-67}	$0.465^{+0.051}_{-0.039}$

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 $A_{obs} \gg 1.0$

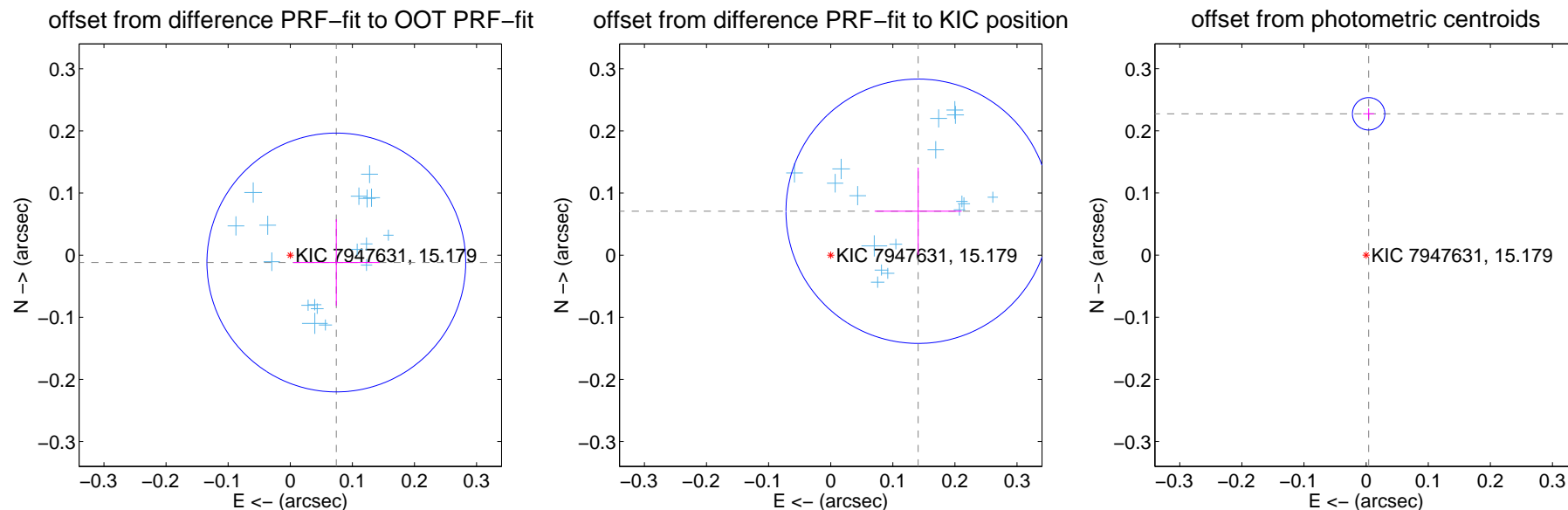
DV Centroid Data

Supplemental centroid analysis for 007947631-01. Kepler magnitude: 15.18. Transit SNR 1094.49

There are 17 quarters with good PRF difference image offsets

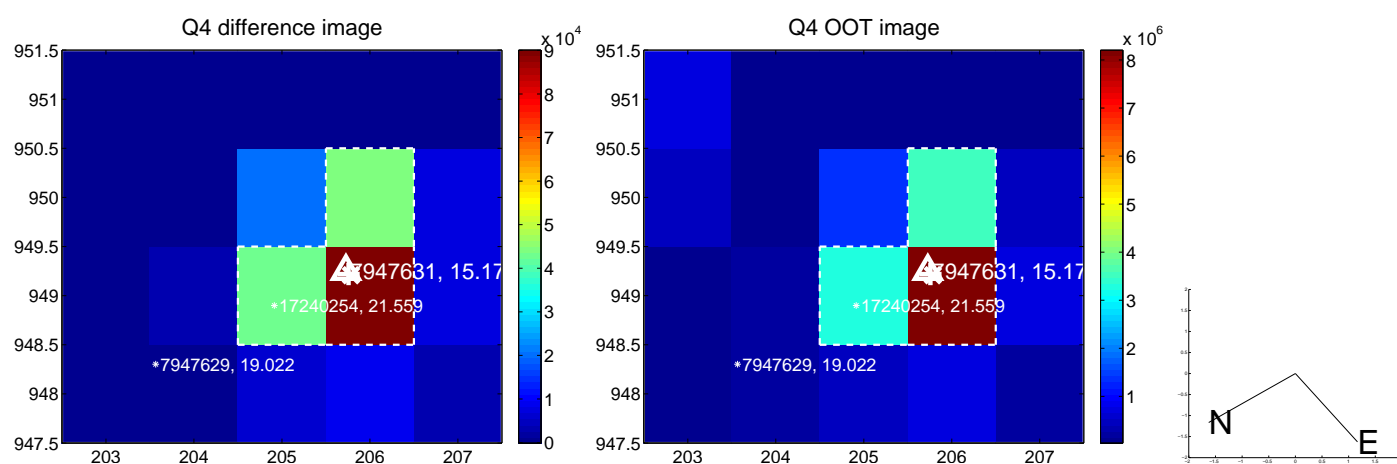
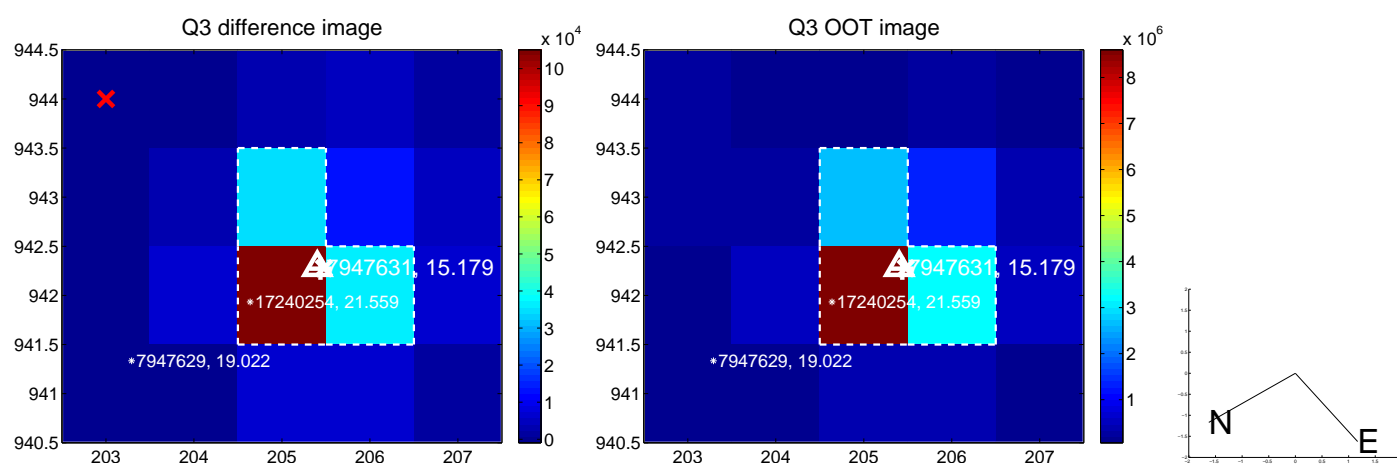
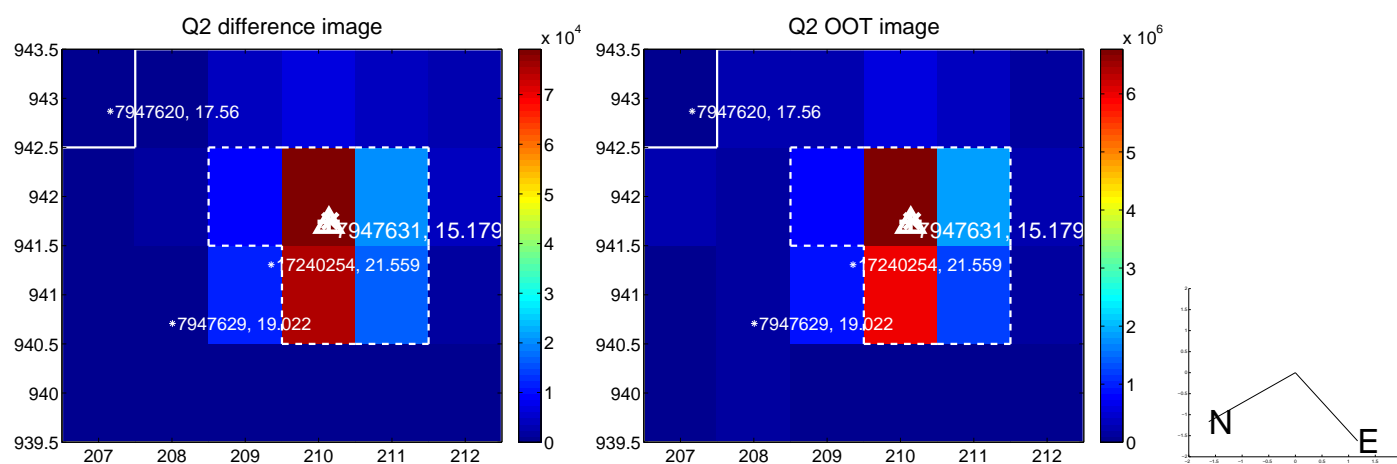
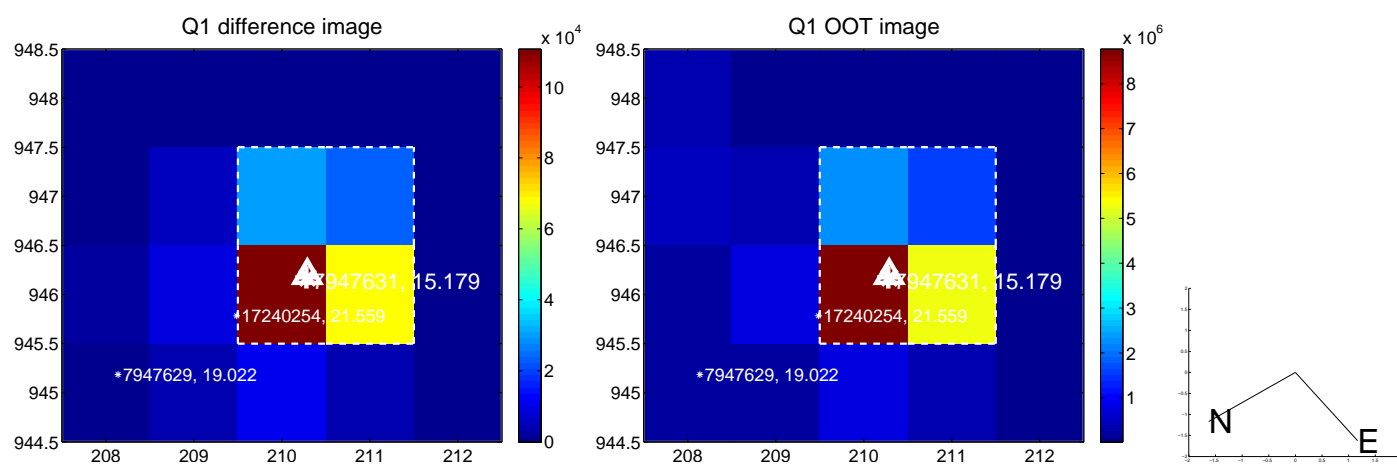
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.075 ± 0.069	1.08	-0.074 ± 0.069	-0.012 ± 0.069
PRF-fit source offset from KIC position	0.158 ± 0.071	2.22	-0.141 ± 0.070	0.071 ± 0.070
photometric centroid source offset	0.23 ± 0.01	26.15	-0.00 ± 0.01	0.23 ± 0.01

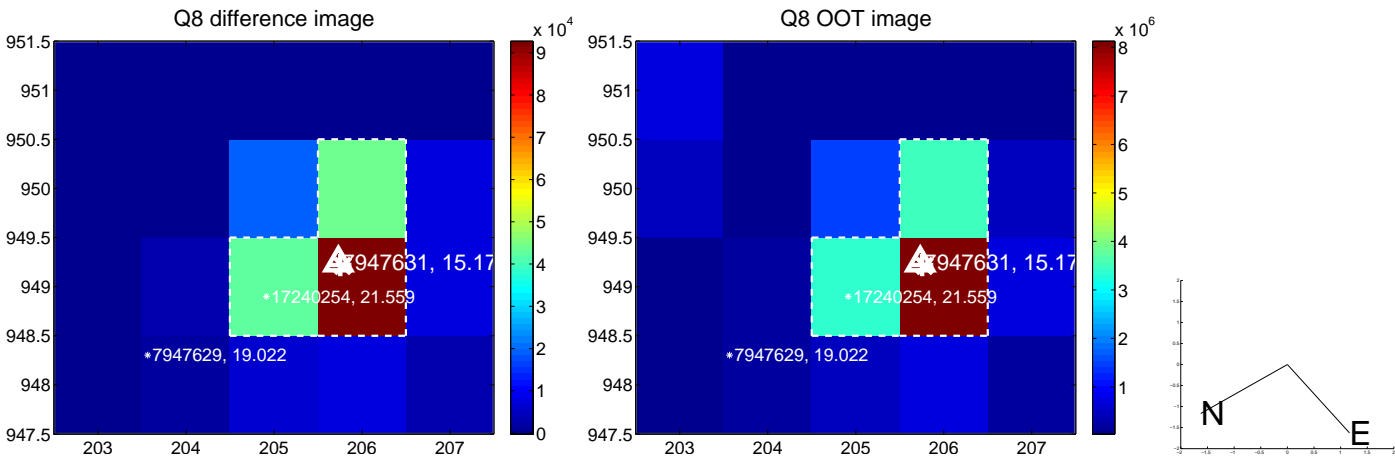
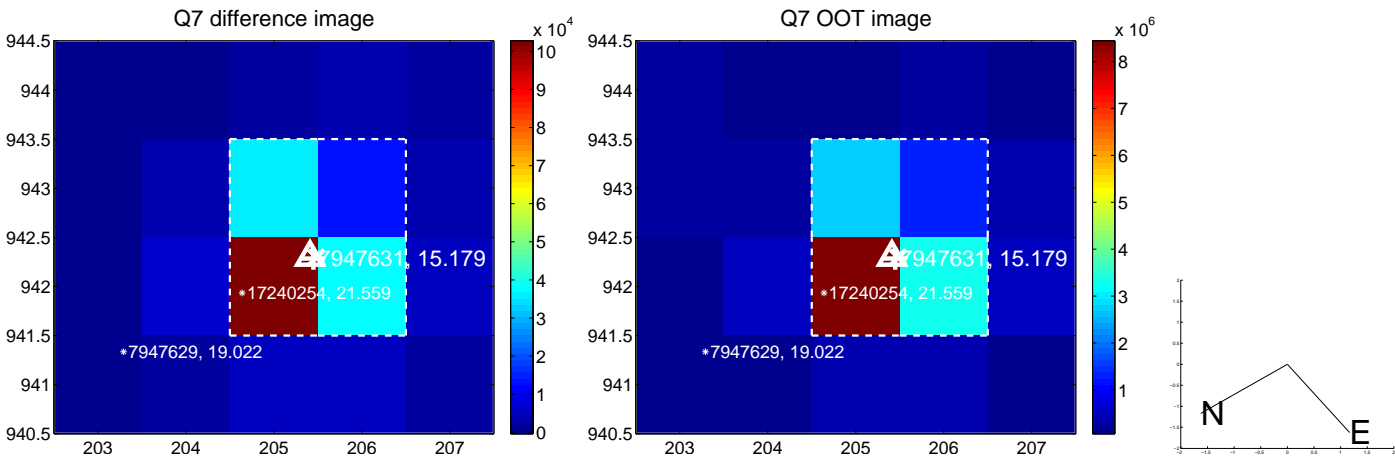
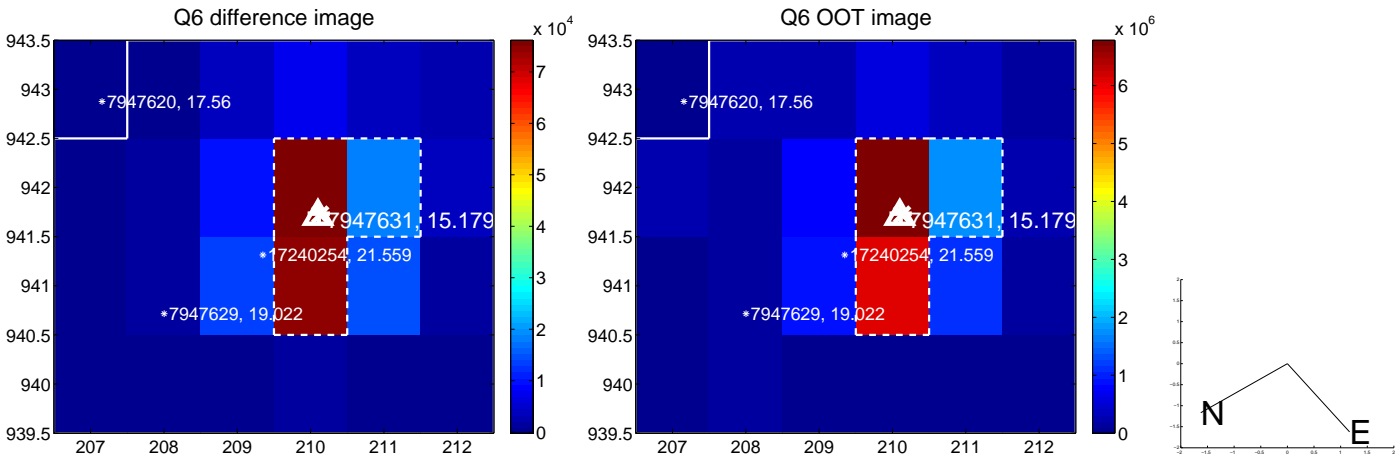
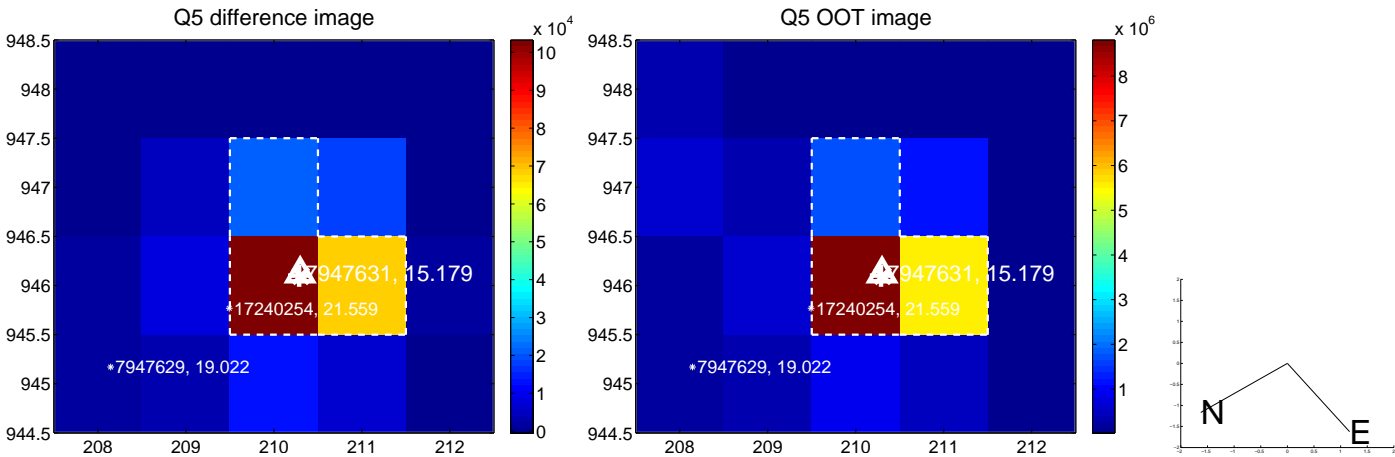


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

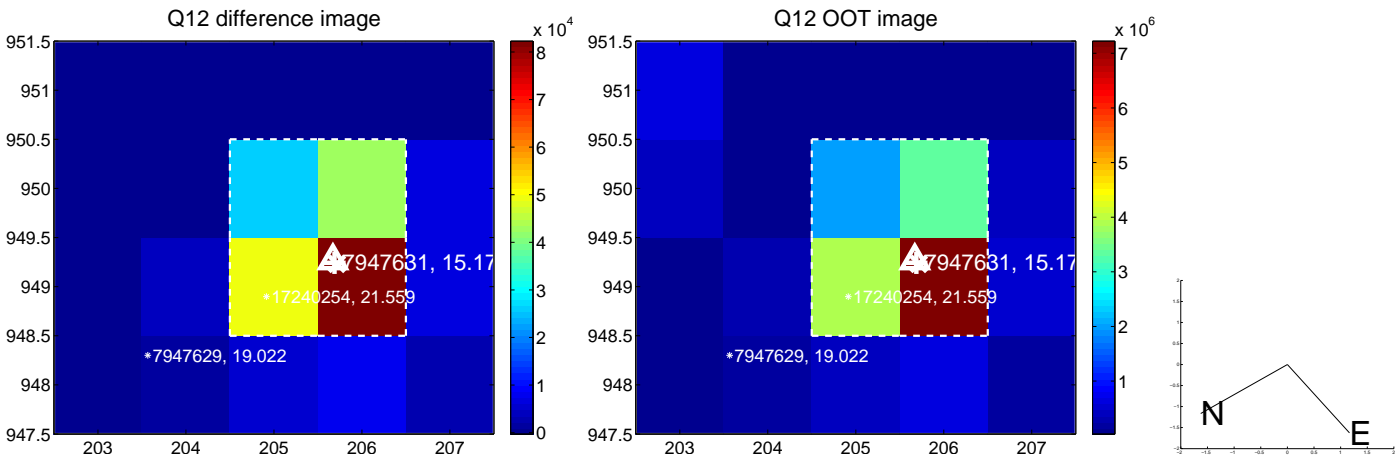
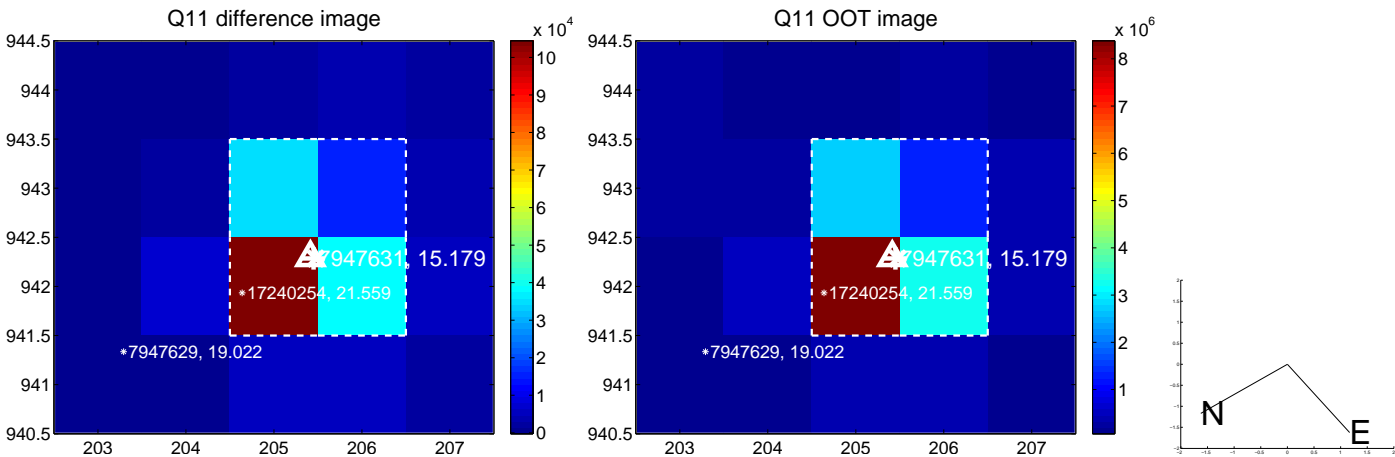
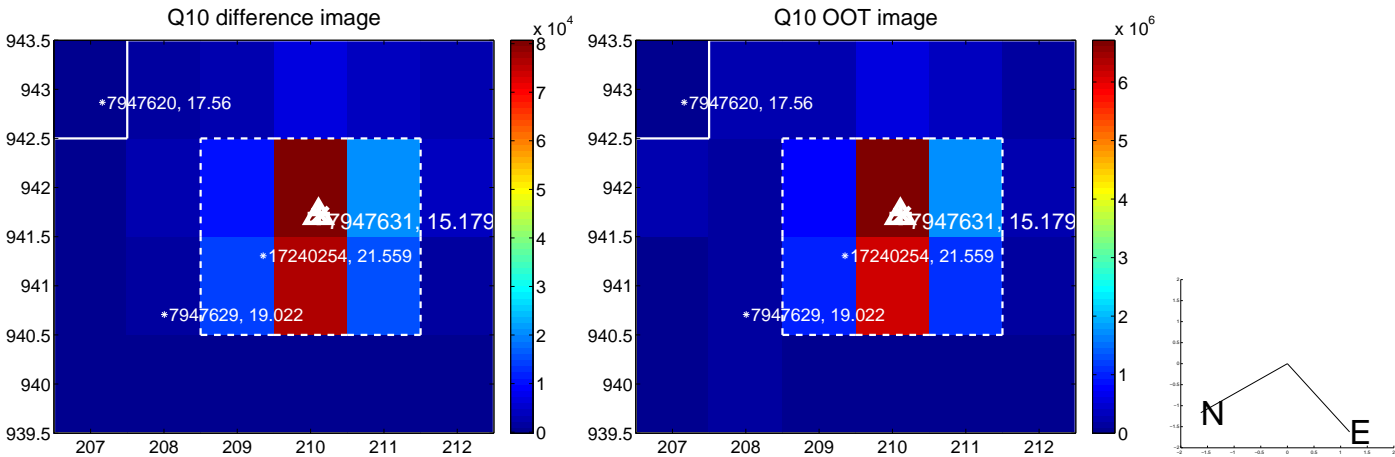
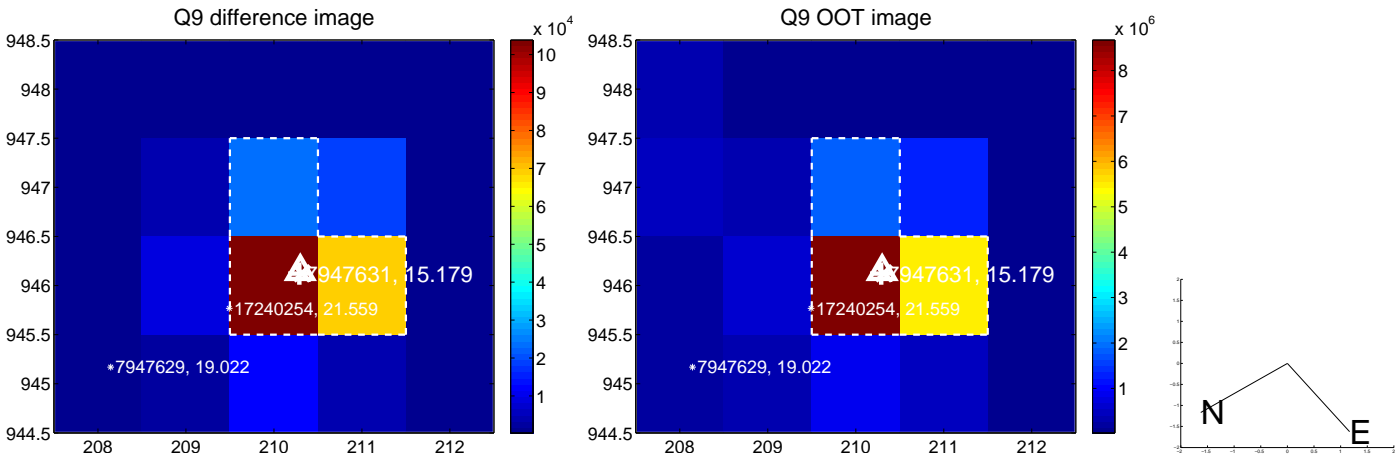
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



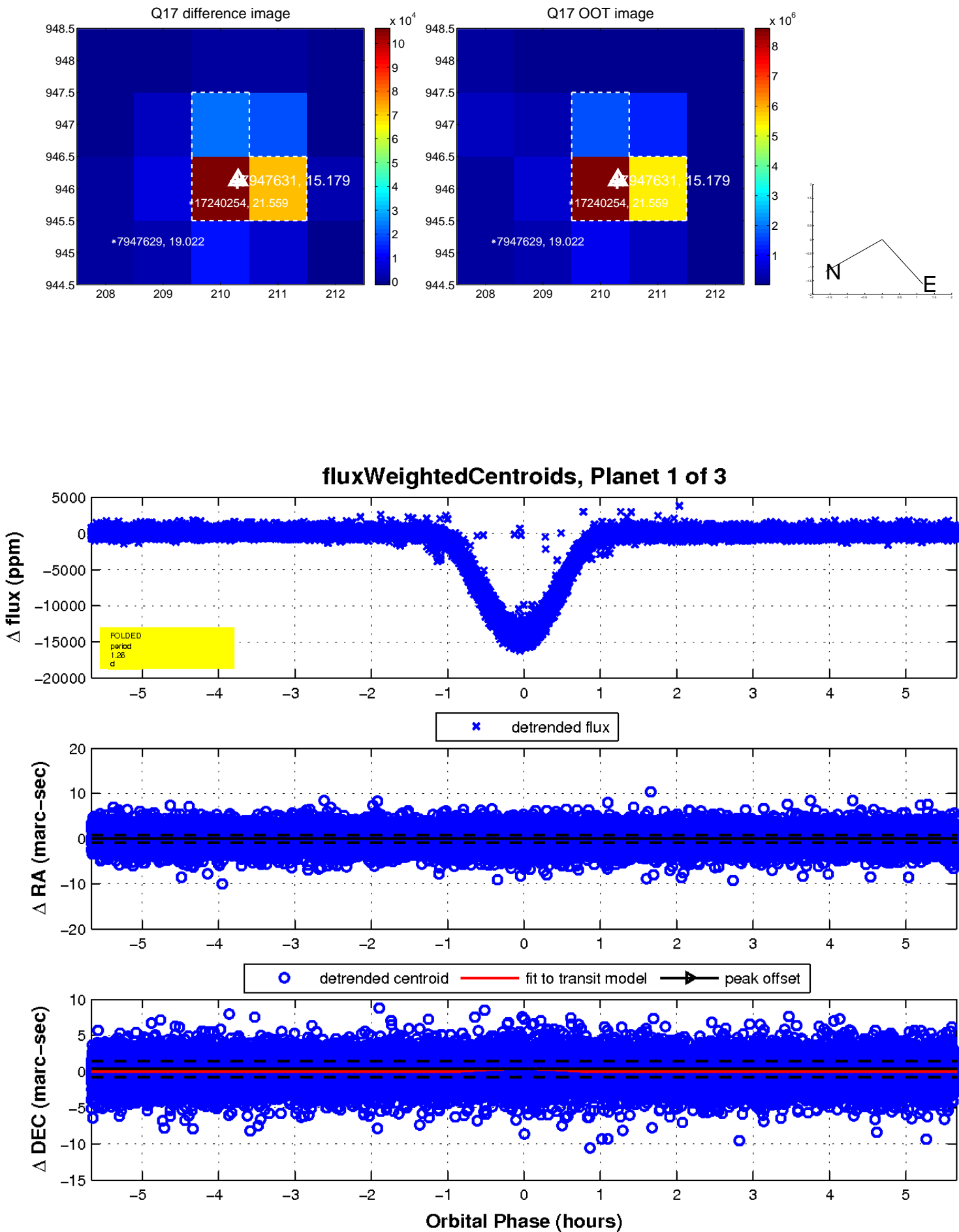
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

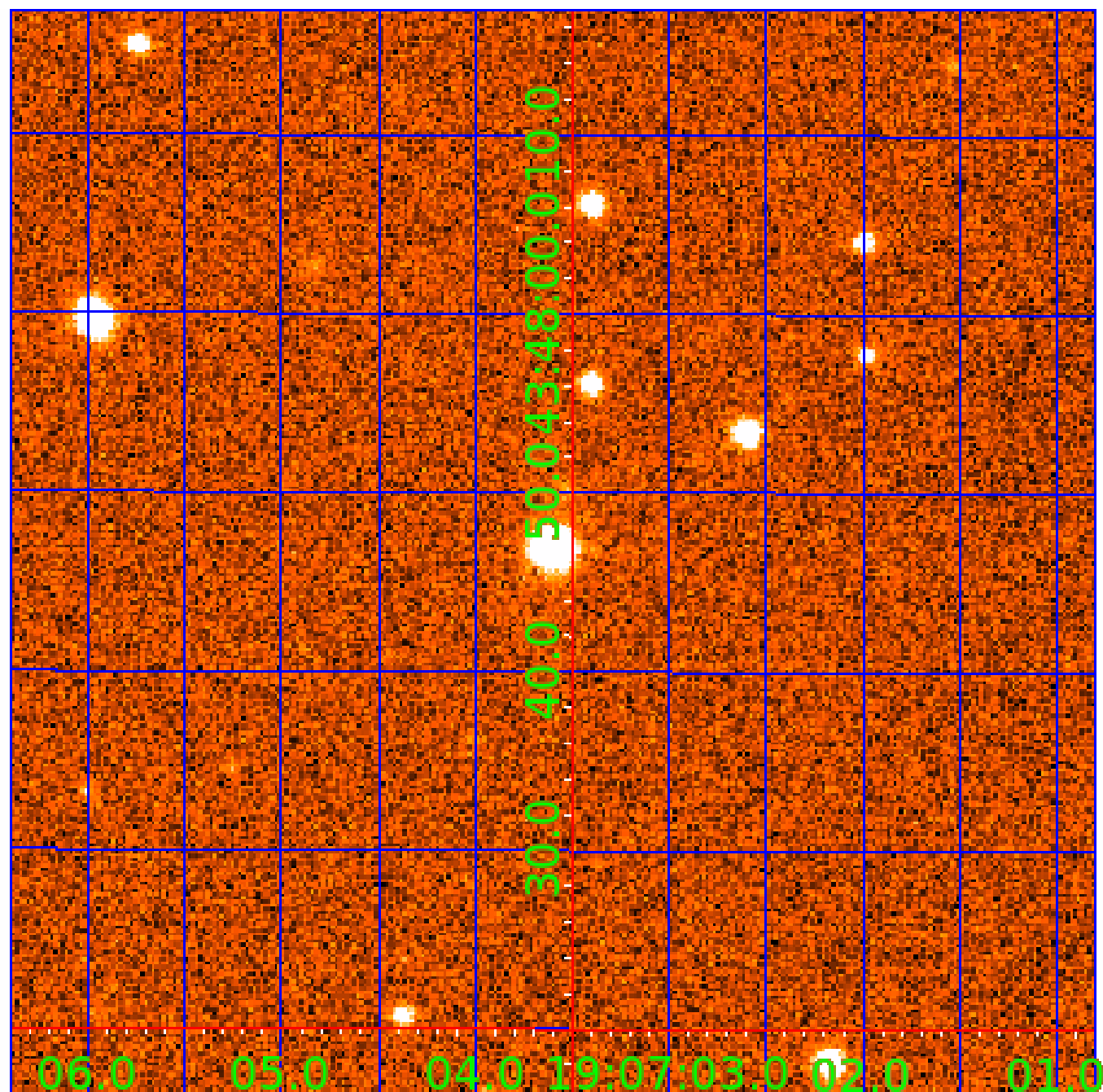


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007947631

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

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007947631-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED
007947631-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
007947631-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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 007947631-02

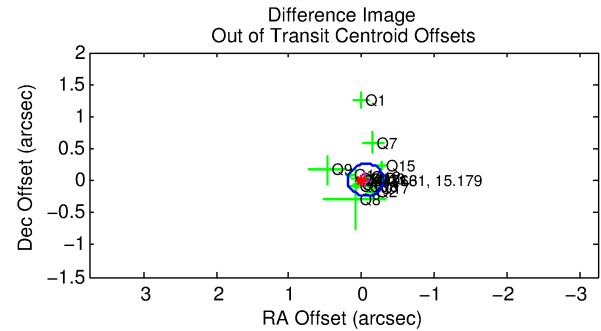
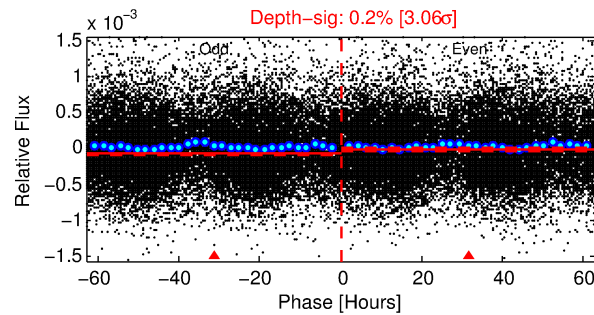
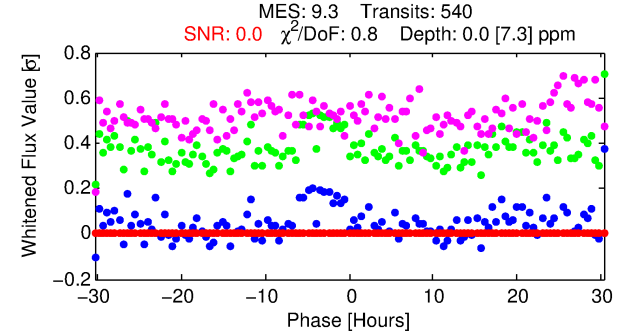
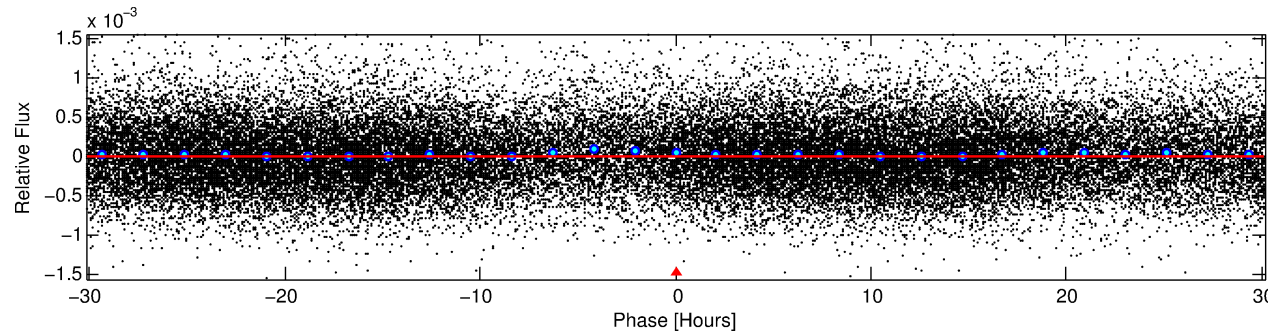
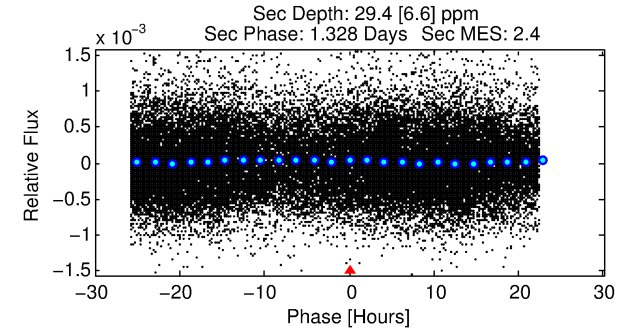
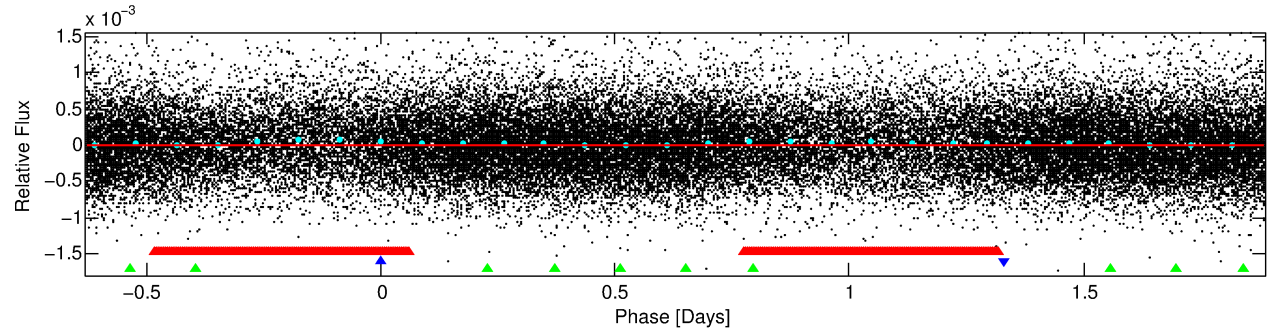
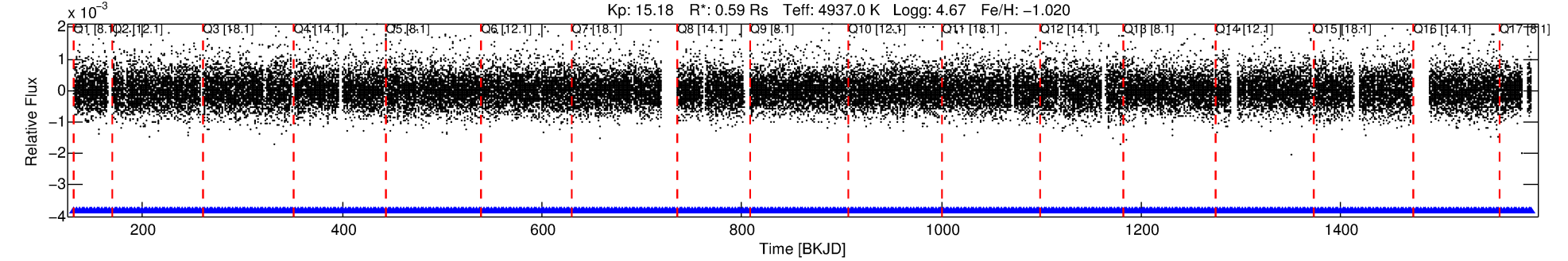
No Significant Match Found

DV One-Page Summary

KIC: 7947631 Candidate: 2 of 3 Period: 2.516 d

KOI: K06936 Corr: No Ephemeris Match

Kp: 15.18 R*: 0.59 Rs Teff: 4937.0 K Logg: 4.67 Fe/H: -1.020



DV Fit Results:

Period = 2.51562 [2.37817] d
Epoch = 131.9281 [559.2767] BKJD
Rp/R* = 0.0000 [0.1155]
a/R* = 1.47 [500.51]
b = 0.75 [720.56]
Seff = 199.67 [253.97]
Teq = 959 [305] K
Rp = 0.00 [7.40] Re
a = 0.0303 [0.0192] AU
Ag = 3538297.16 [25550784983.80] [0.00]
Teffp = 64275 [116038770] K [0.00σ]

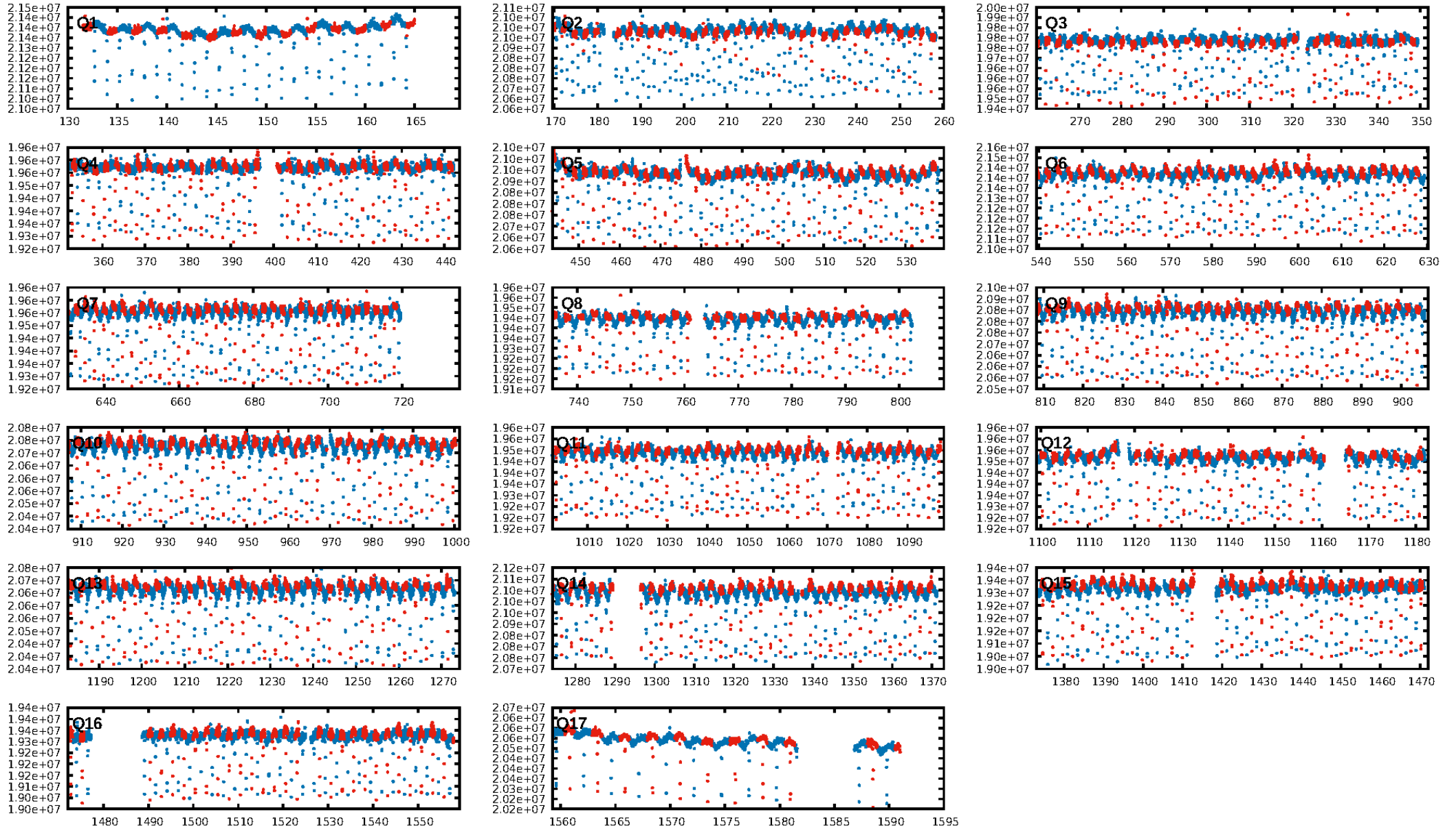
DV Diagnostic Results:

ShortPeriod-sig: 99.5% [2.83σ]
LongPeriod-sig: 100.0% [206.23σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.68e-14
RollingBand-fgt: 1.00 [515/515]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.055 arcsec [0.67σ]
KicOffset-rm: 0.152 arcsec [1.72σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.00 [0/17]

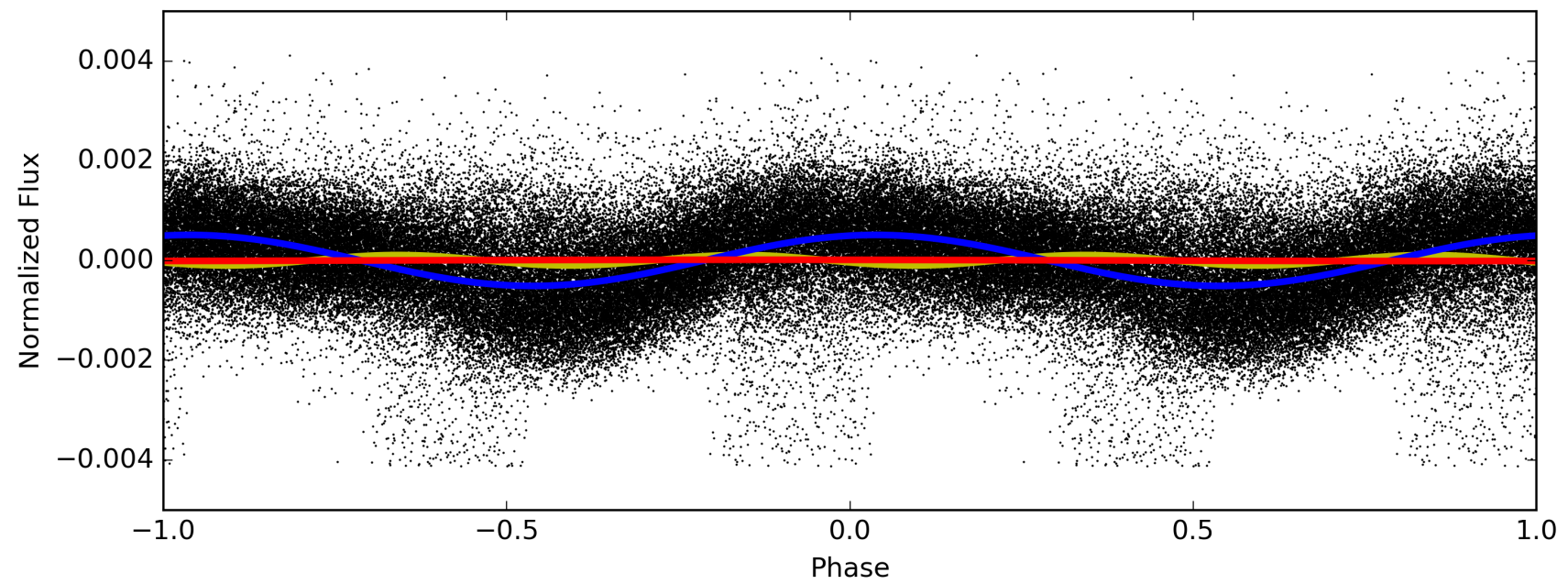
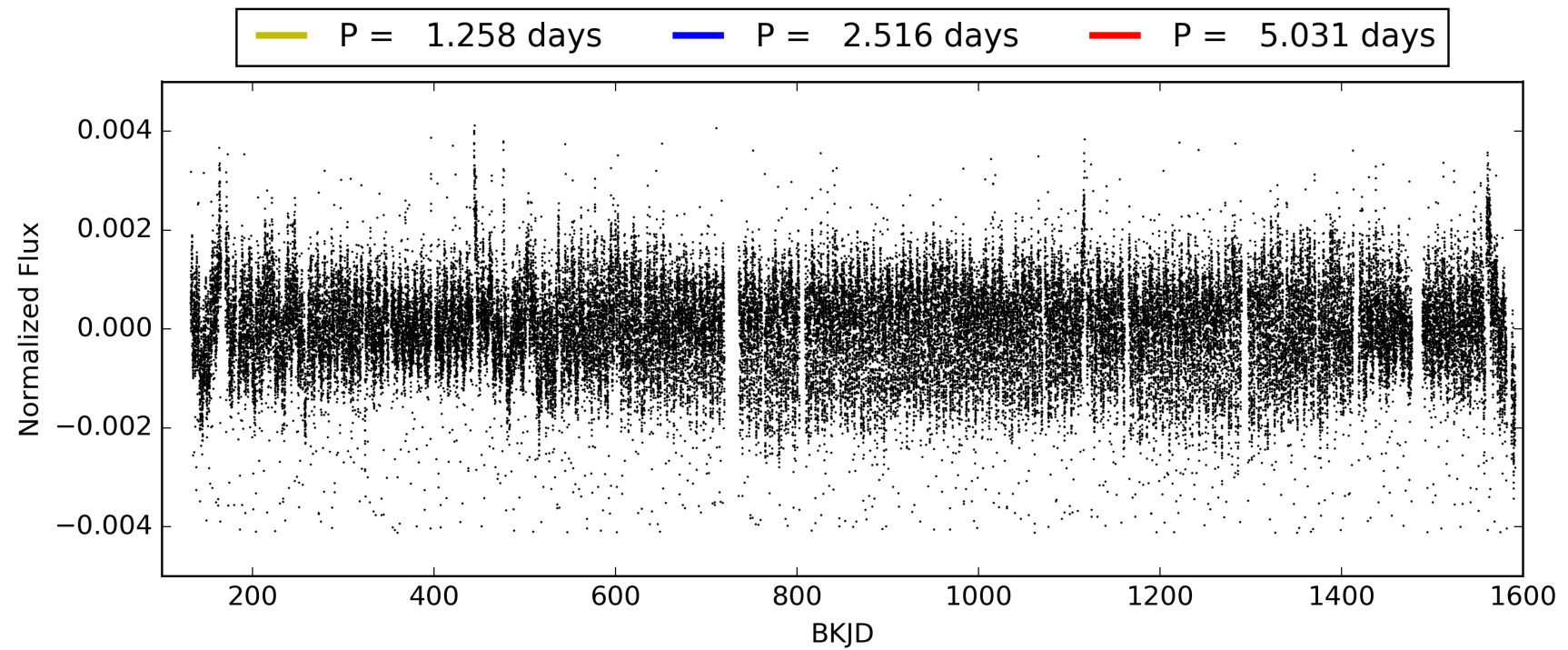
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 16:55:10 Z

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

TCE 007947631-02, PDC Light Curves

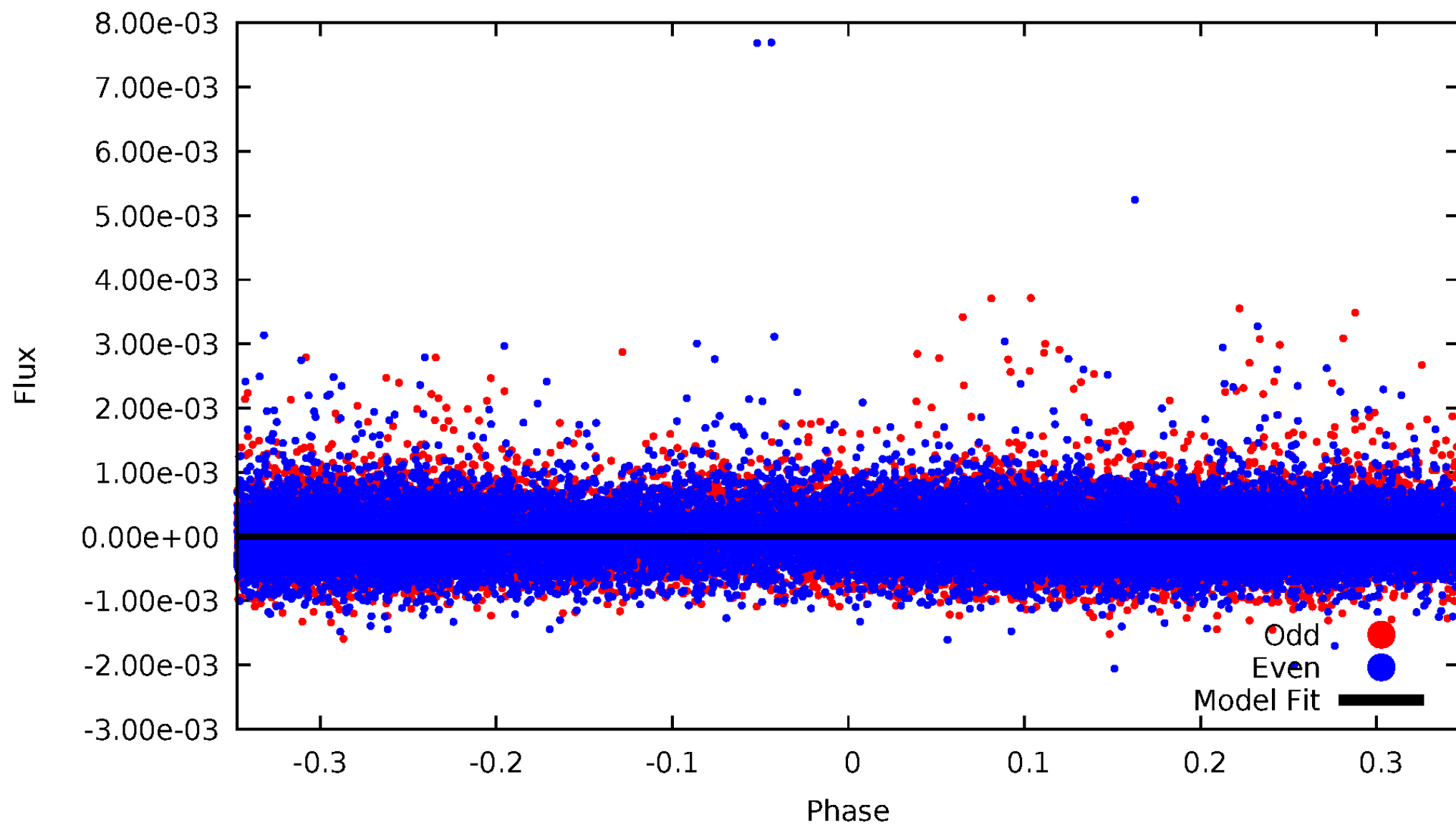


TCE 007947631-02



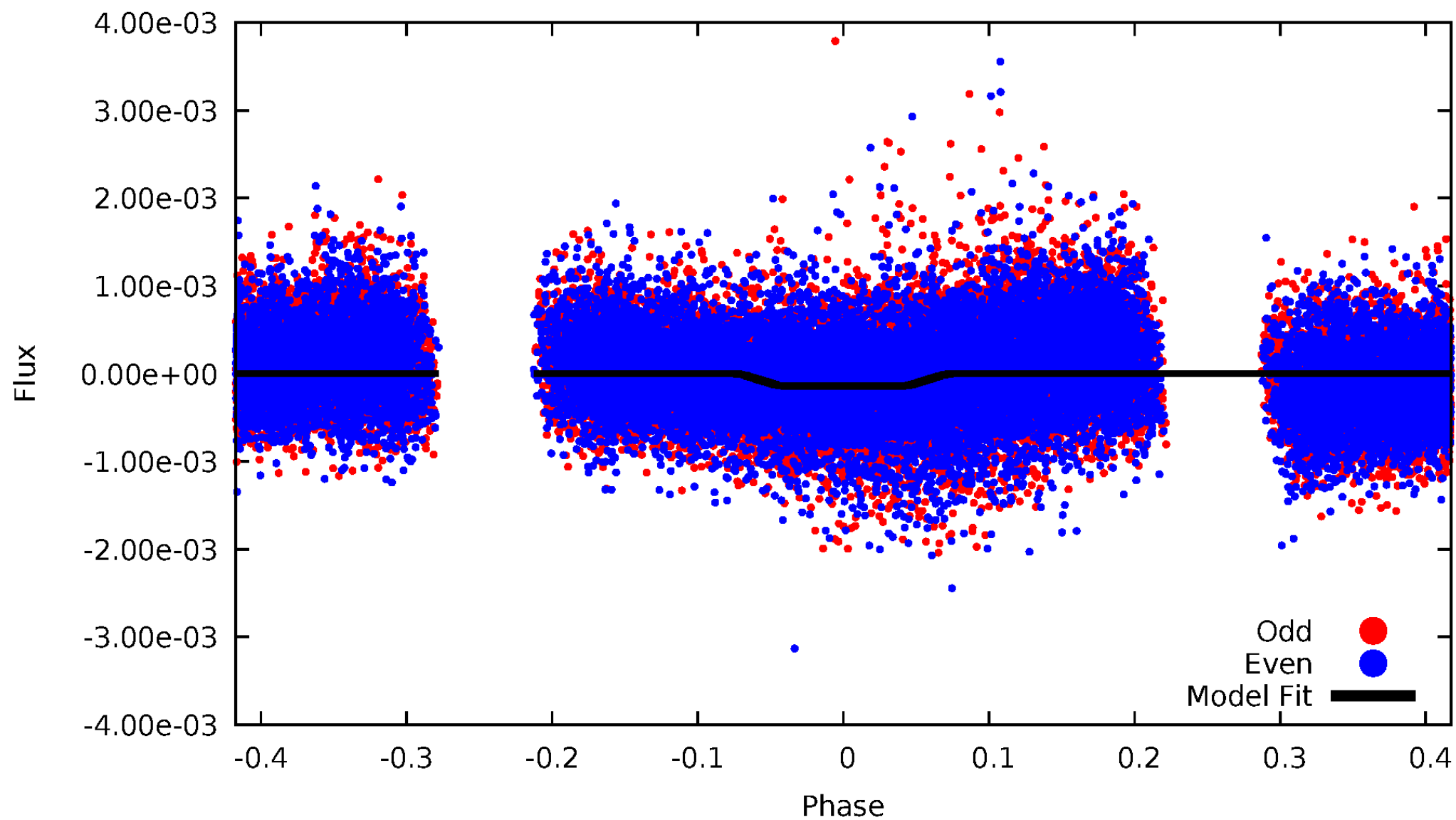
DV Odd/Even

TCE 007947631-02



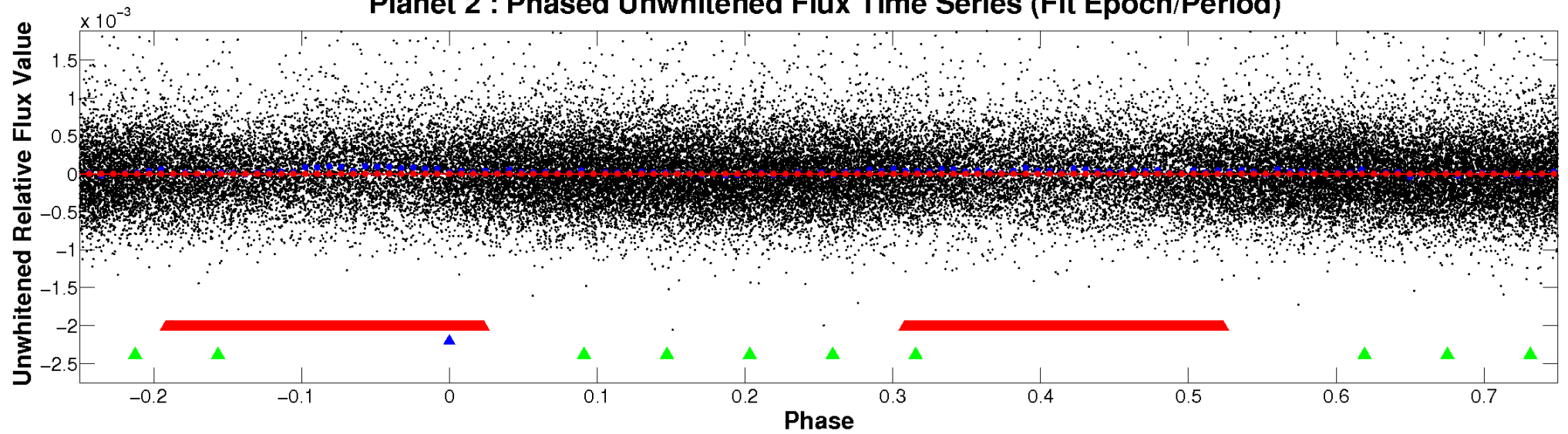
ALT Odd/Even

TCE 007947631-02

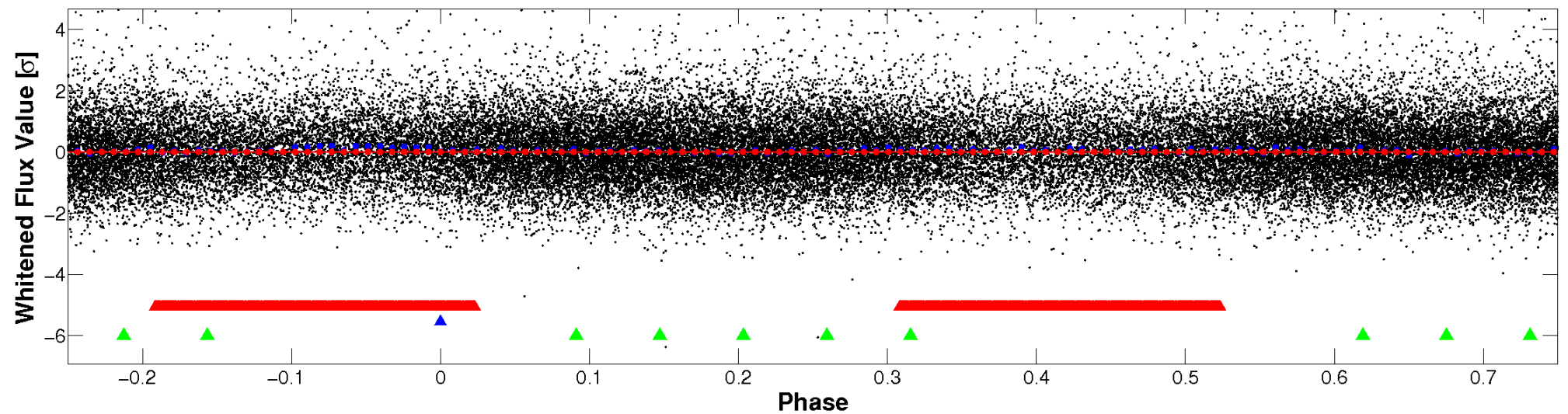


Non-Whitened Vs. Whitened Light Curve

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

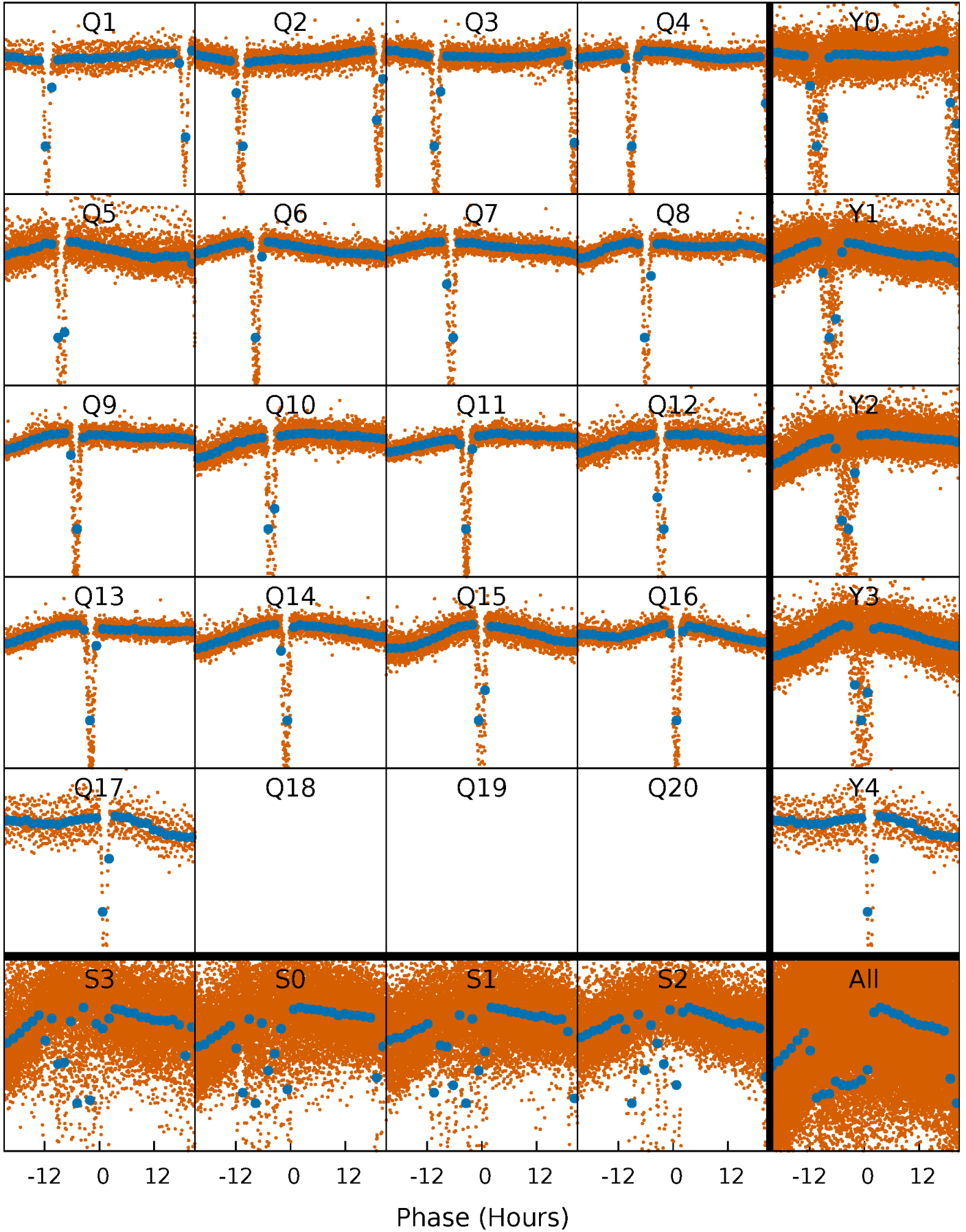


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



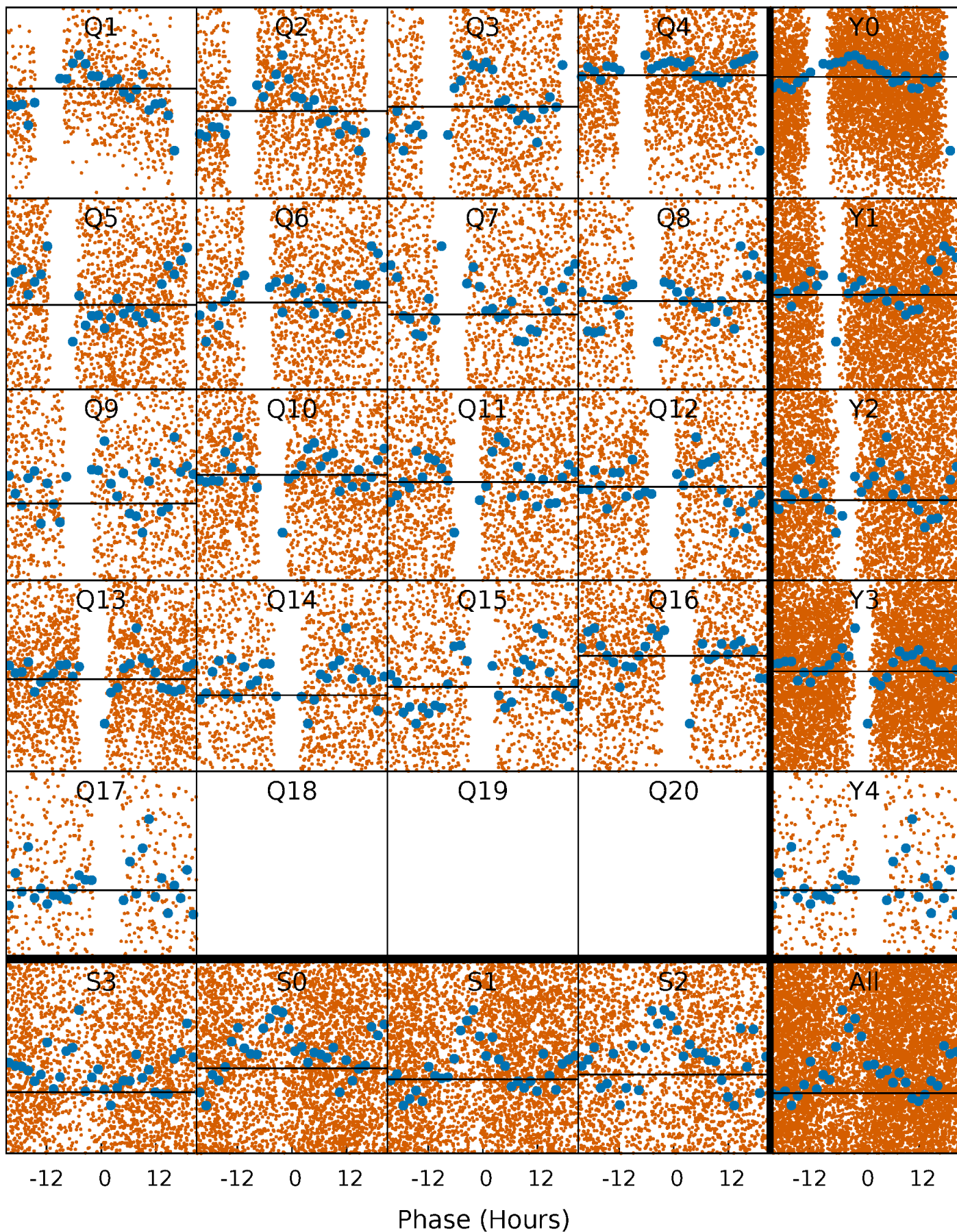
PDC Quarter-Phased Transit Curves

TCE 007947631-02 P= 2.515618 Days $T_0=131.928108$ (BKJD)



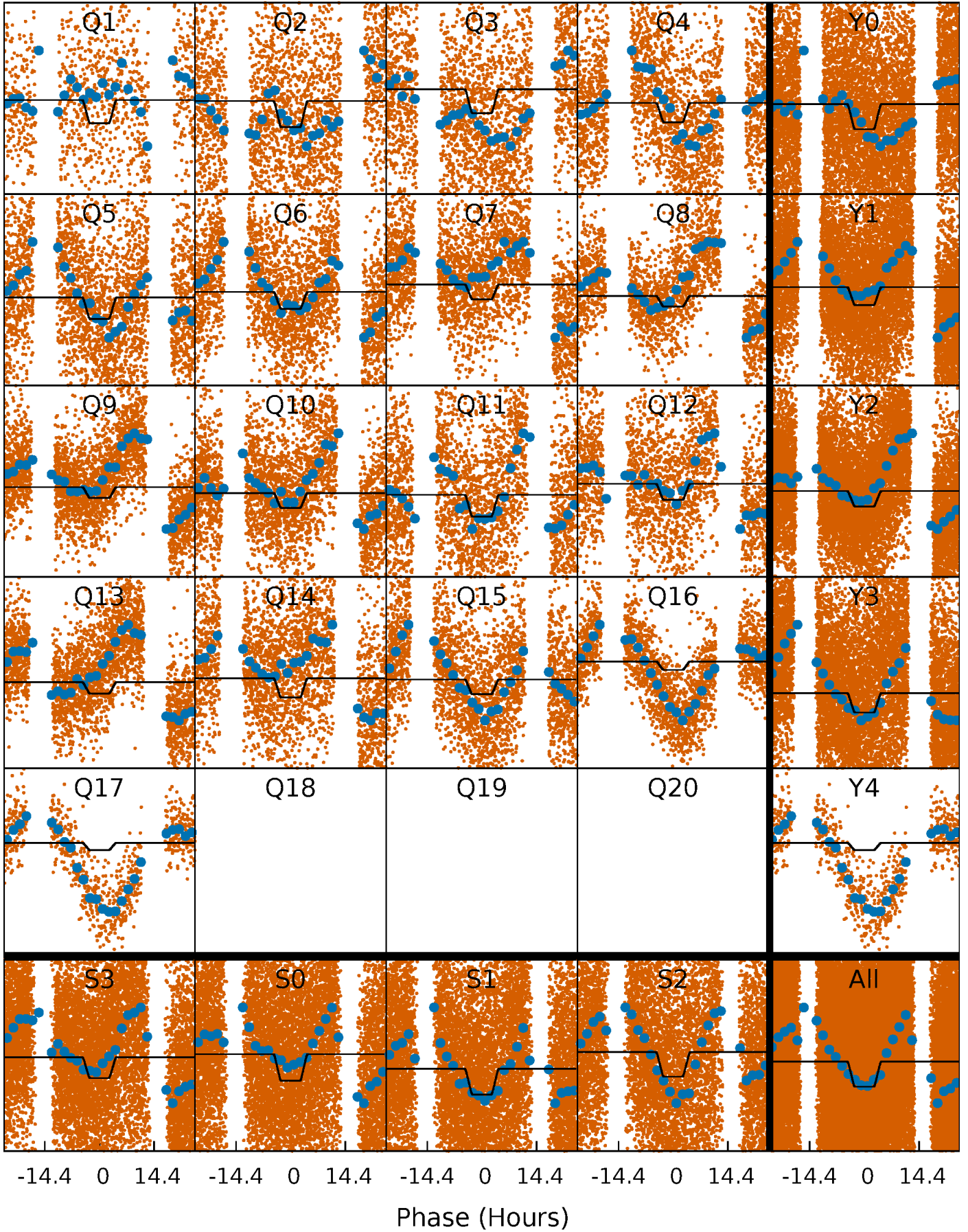
DV Quarter-Phased Transit Curves

TCE 007947631-02 P= 2.515618 Days $T_0=131.928108$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

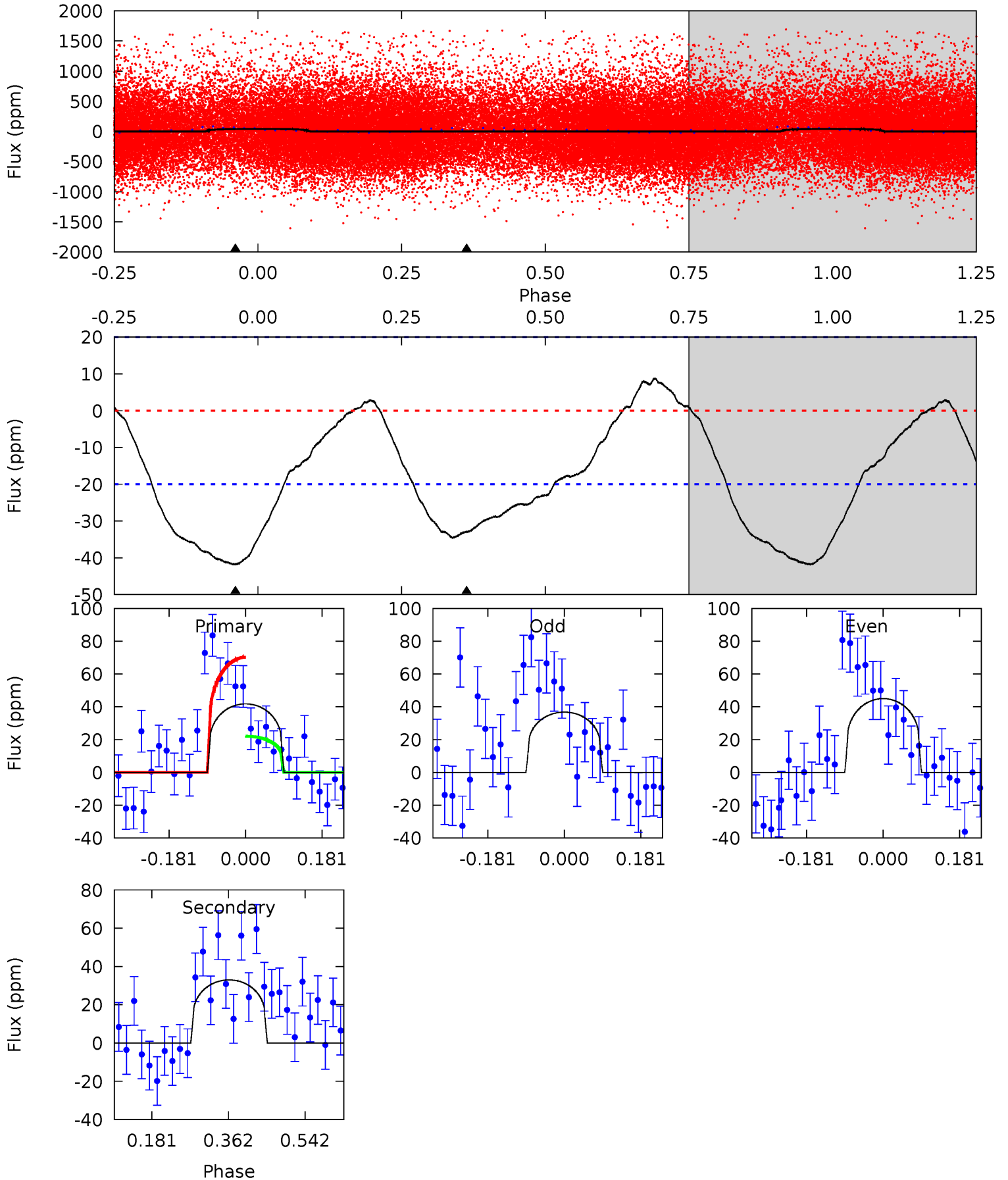
TCE 007947631-02 P= 2.516720 Days $T_0=132.014870$ (BKJD)



DV Model-Shift Uniqueness Test

007947631-02, P = 2.515618 Days, E = 129.412490 Days

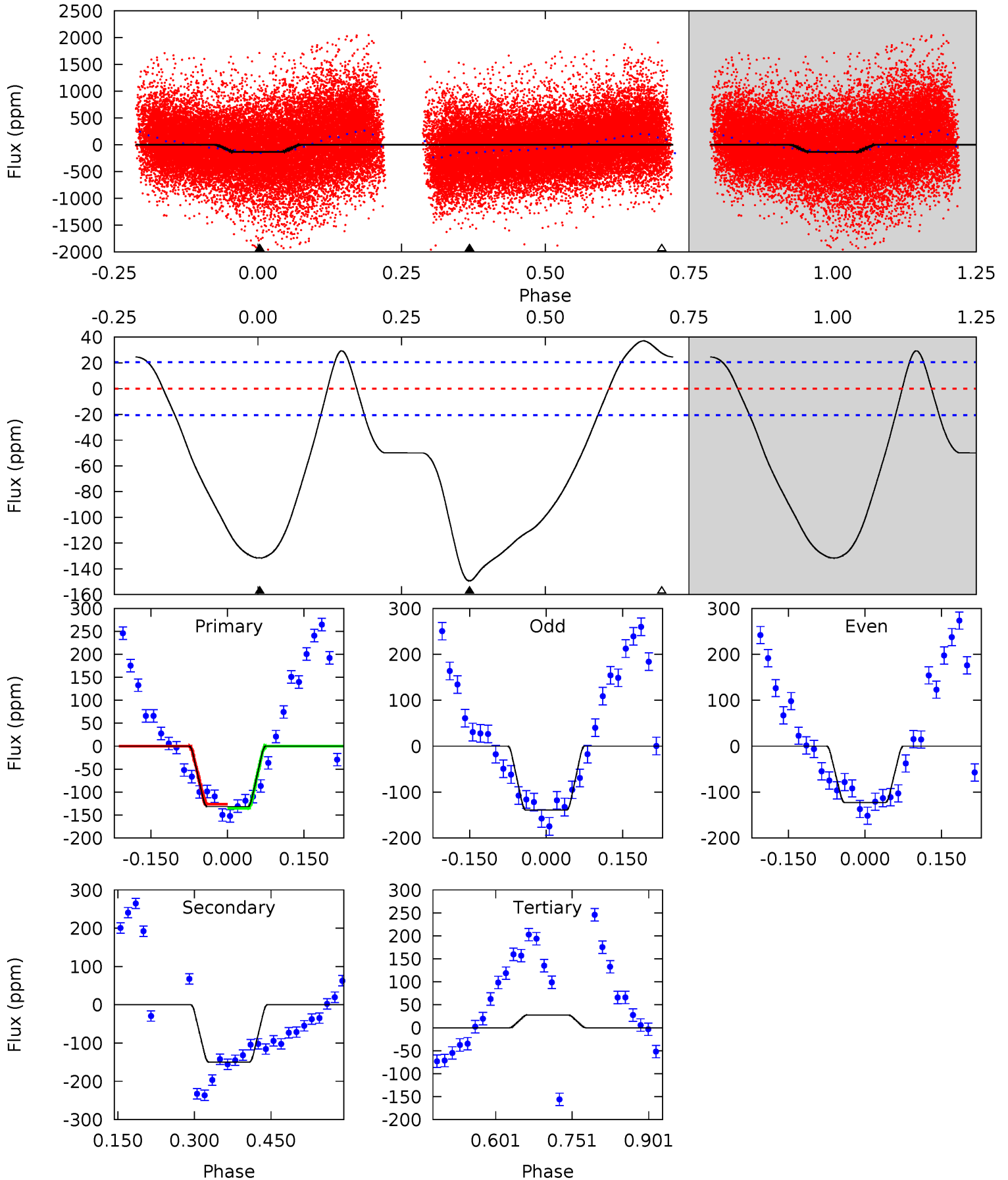
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.28	7.33	0	0	4.44	1.34	1.67	9.28	9.28	7.33	7.33	0.92	1.26	0.17	5.22



Alt Model-Shift Uniqueness Test

007947631-02, P = 2.516720 Days, E = 129.498150 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	32.5	-6.00	0	4.48	1.44	7.84	34.6	28.6	38.5	32.5	1.77	1.66	0.20	0.90



Stellar Parameters For KIC 007947631

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4937^{+172}_{-154}	$4.669^{+0.056}_{-0.032}$	$-1.020^{+0.300}_{-0.300}$	$0.587^{+0.041}_{-0.041}$	$0.585^{+0.050}_{-0.021}$	$4.082^{+0.855}_{-0.589}$
	+3%/-3%	+1%/-1%	+29%/-29%	+7%/-7%	+9%/-4%	+21%/-14%
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 007947631-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-33 ± 5	$5.00^{+5.54}_{-3.58}$	1299^{+449}_{-234}	2045^{+1033}_{-4130}	$0.682^{+10.029}_{-0.580}$
Alt.	-149 ± 5	$5.45^{+5.73}_{-3.98}$	1265^{+544}_{-219}	2574^{+1228}_{-695}	$3.103^{+31.867}_{-2.693}$

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

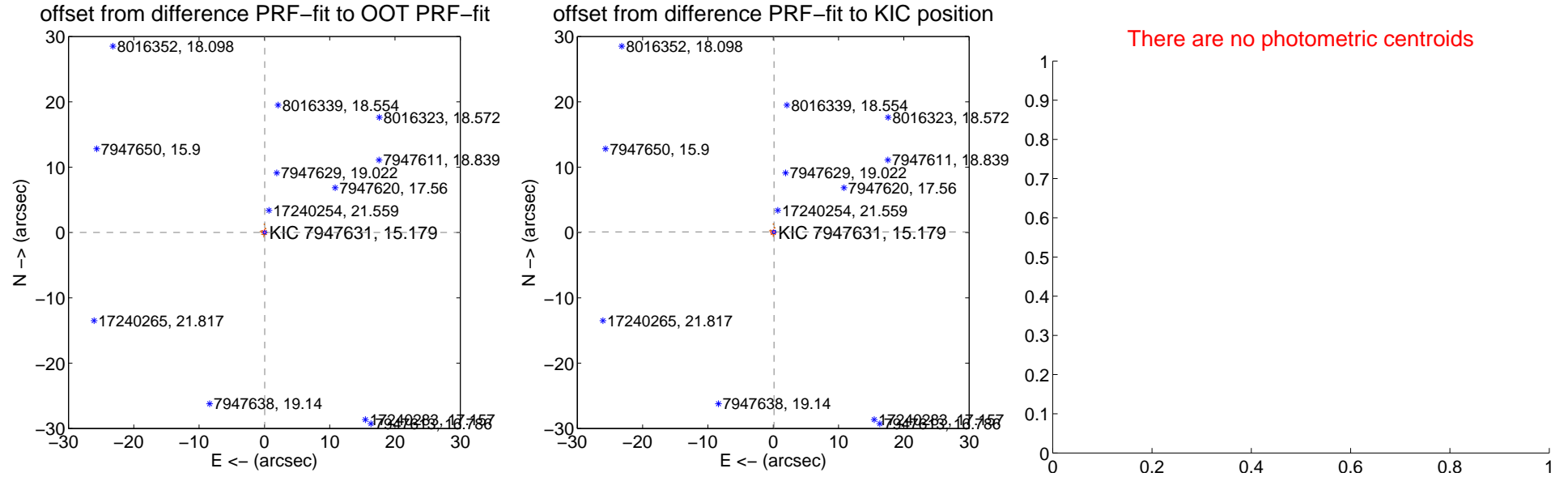
DV Centroid Data

Supplemental centroid analysis for 007947631-02. Kepler magnitude: 15.18. Transit SNR 0.00

There are 8 quarters with good PRF difference image offsets

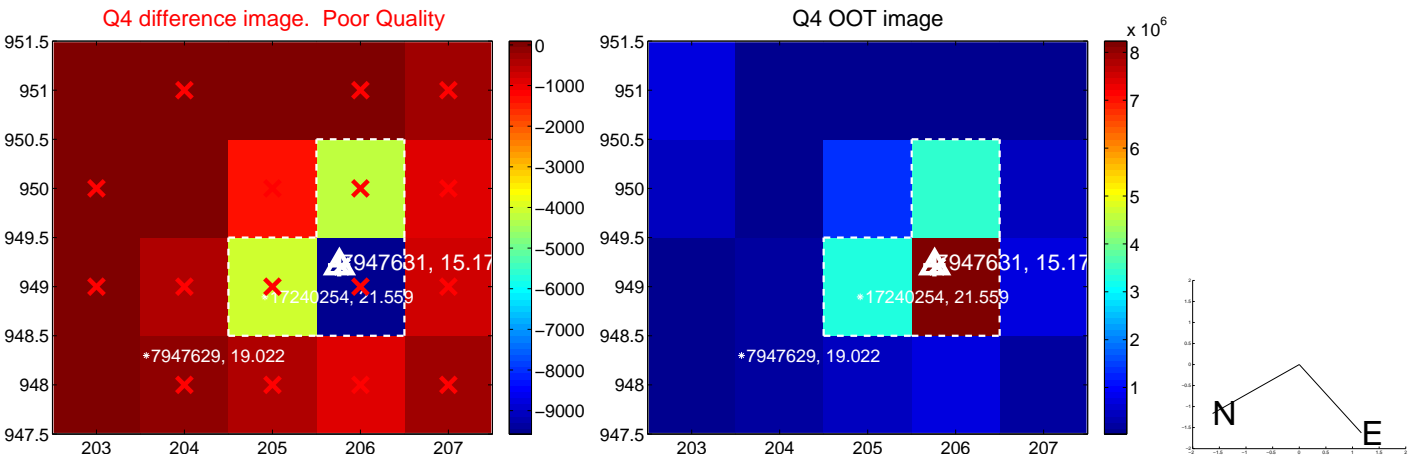
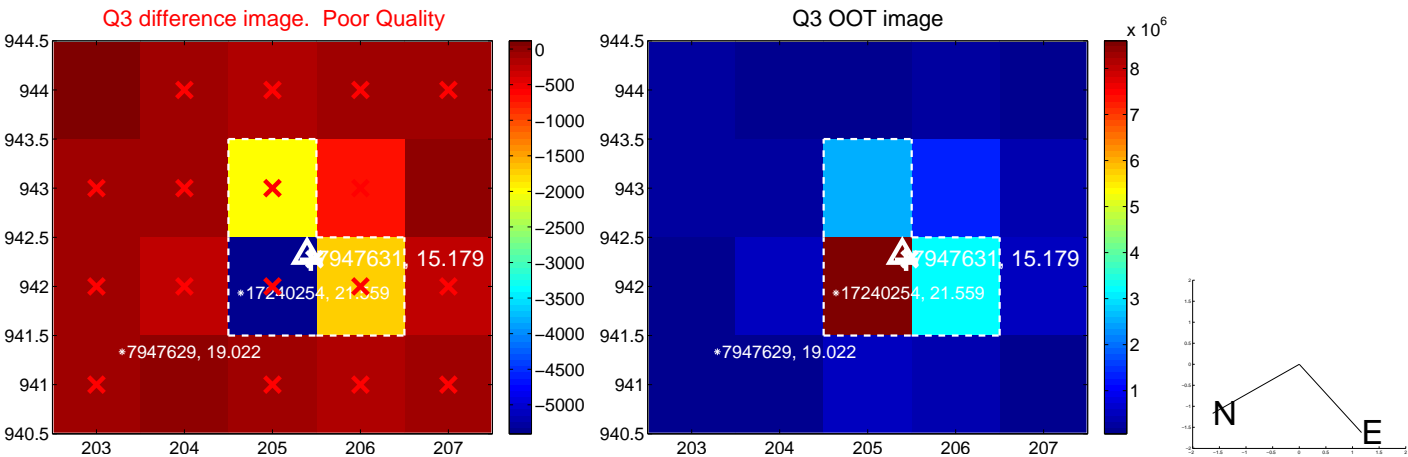
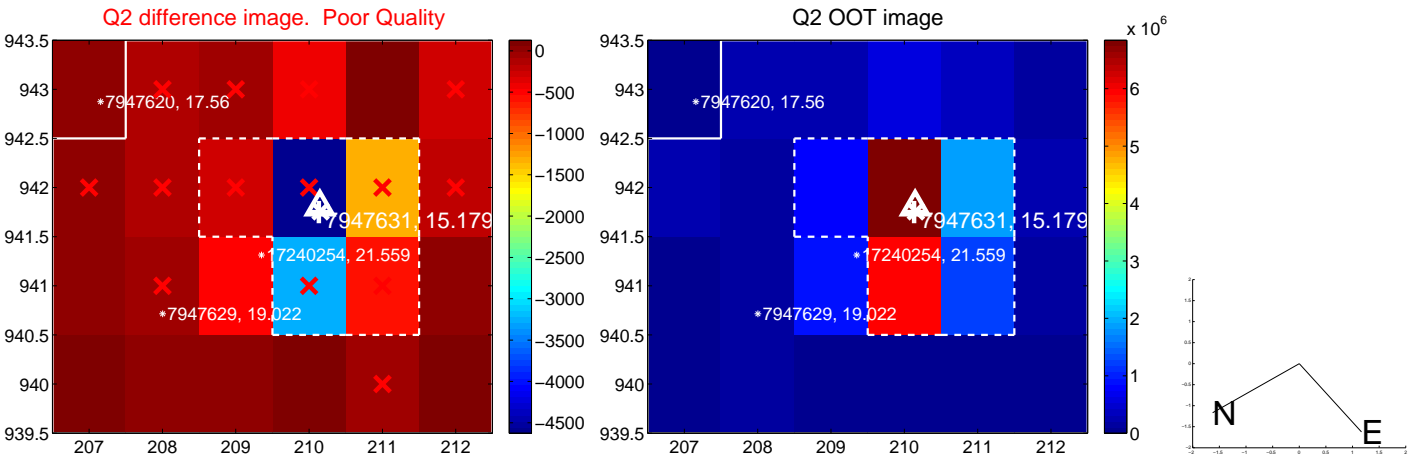
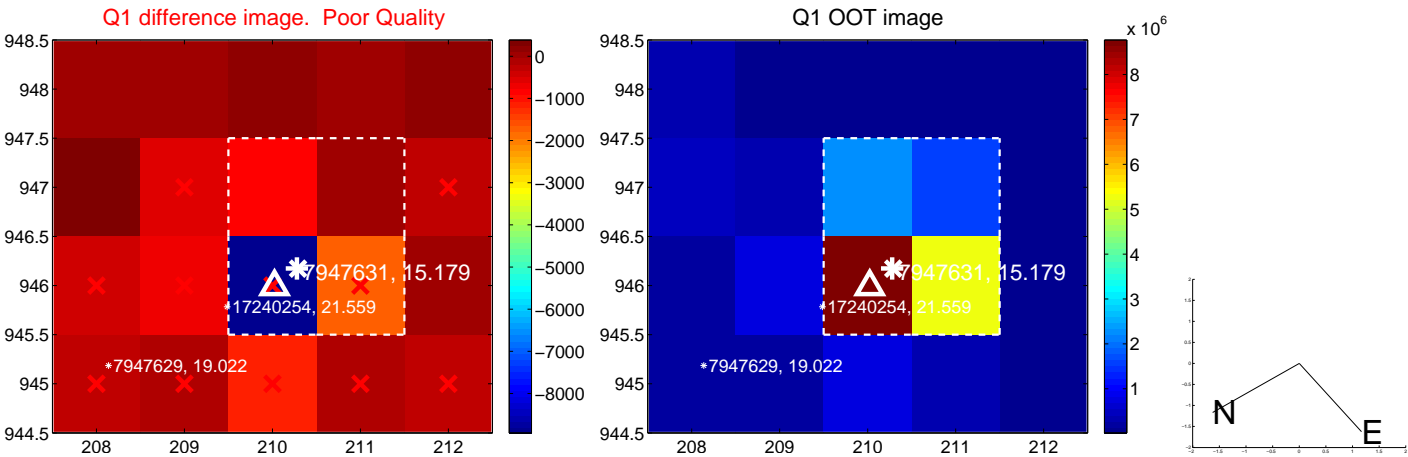
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.055 ± 0.083	0.67	-0.054 ± 0.081	0.012 ± 0.110
PRF-fit source offset from KIC position	0.152 ± 0.089	1.72	-0.125 ± 0.081	0.087 ± 0.105
photometric centroid source offset	—	—	—	—

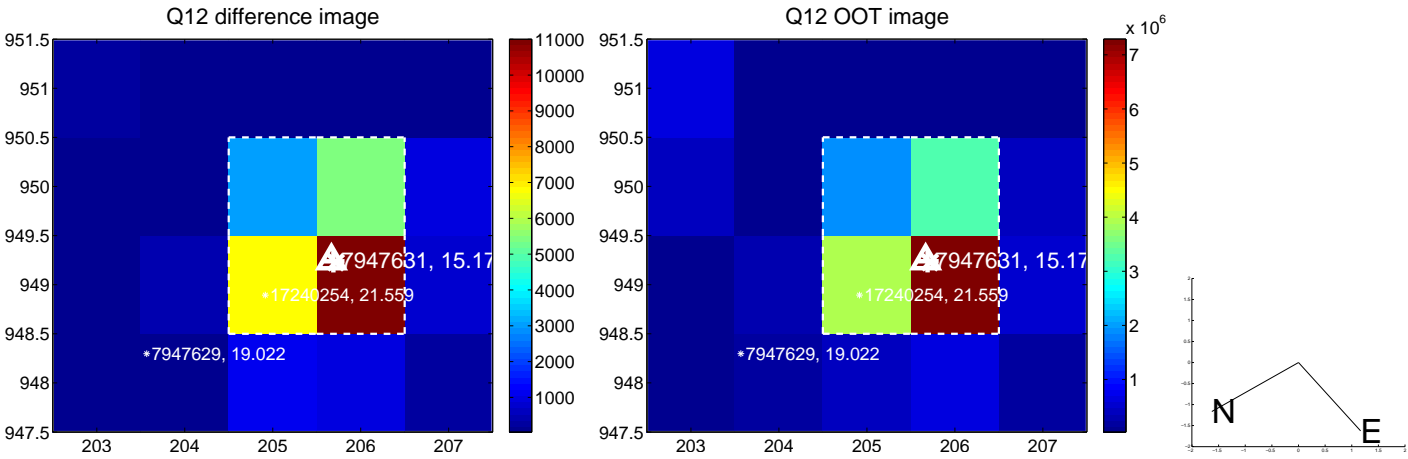
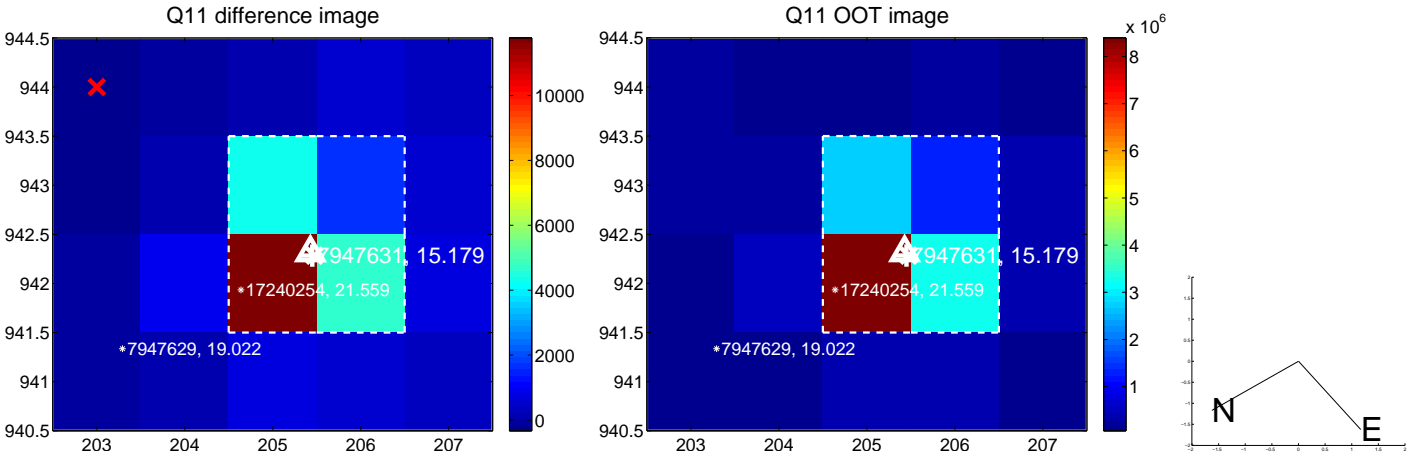
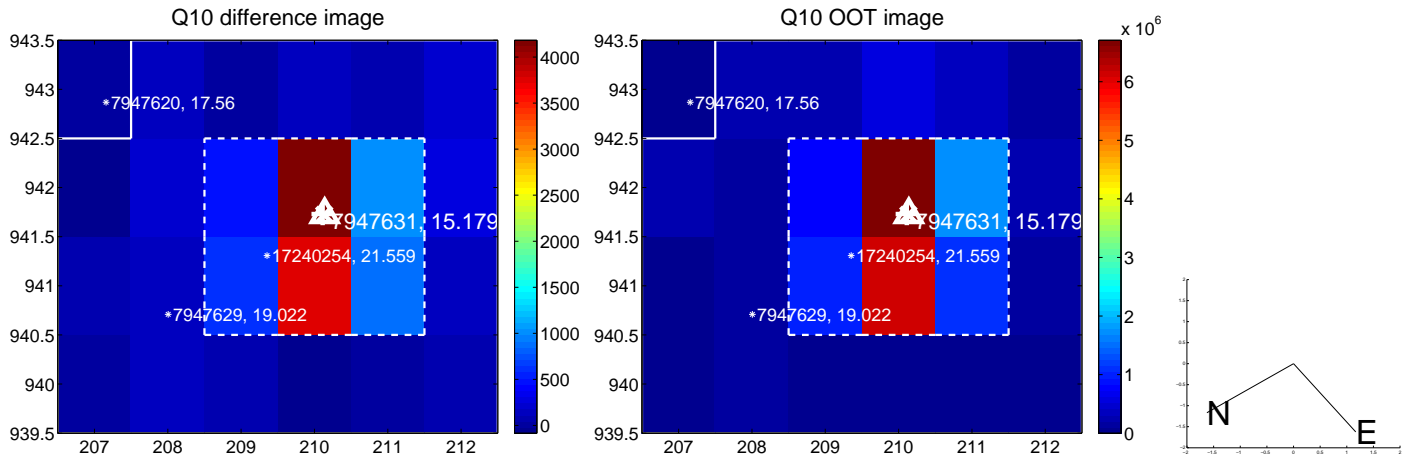
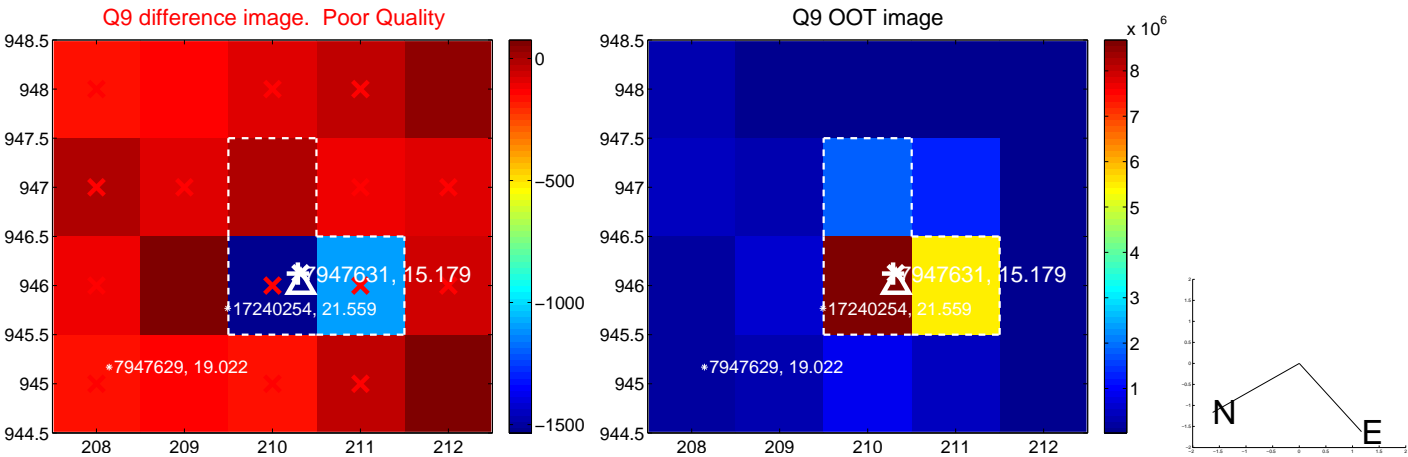


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

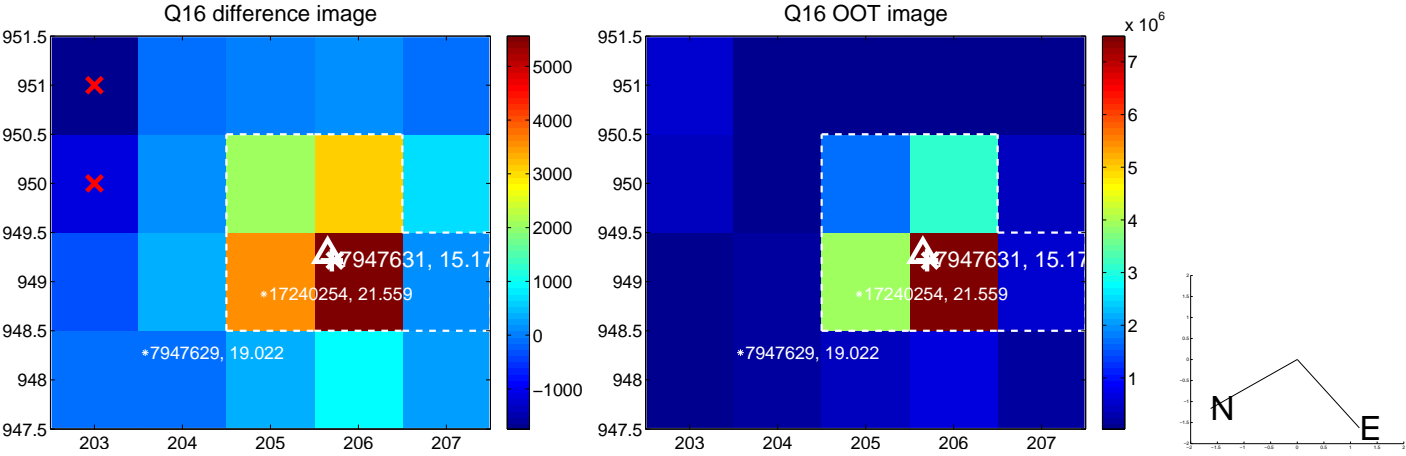
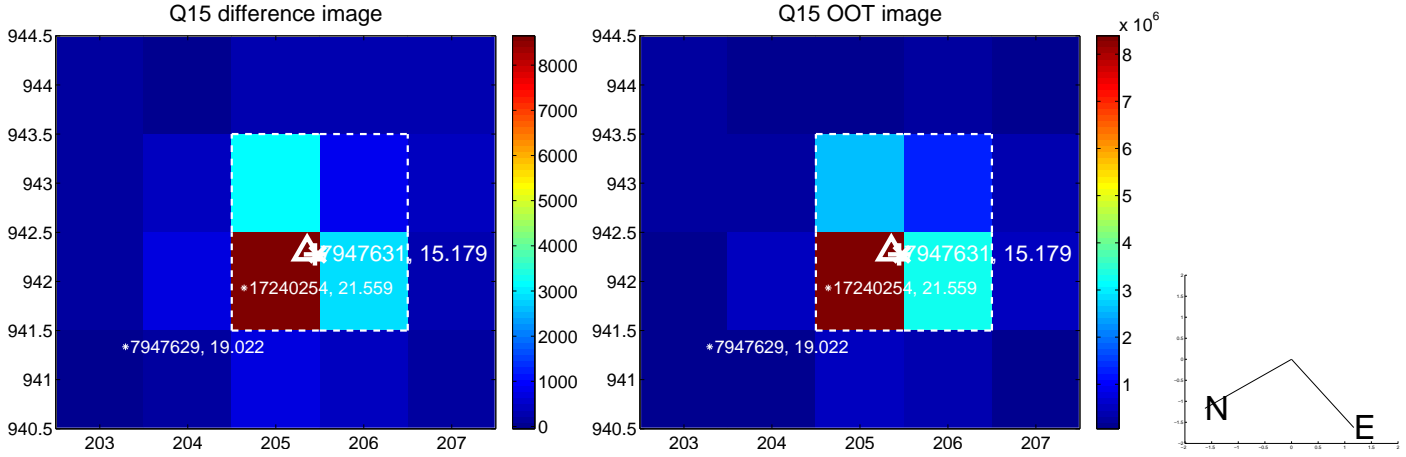
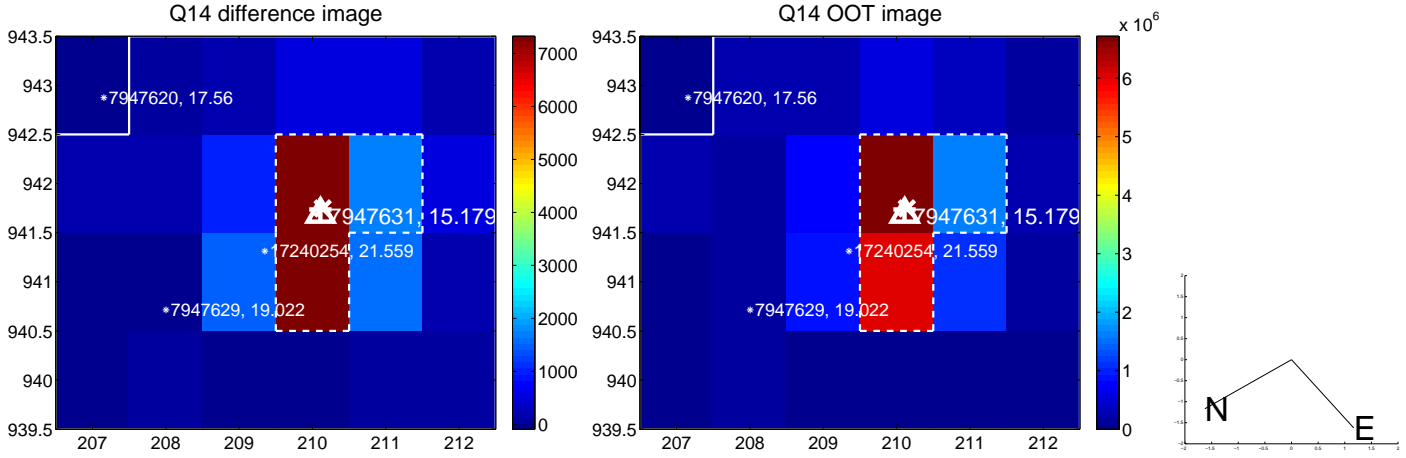
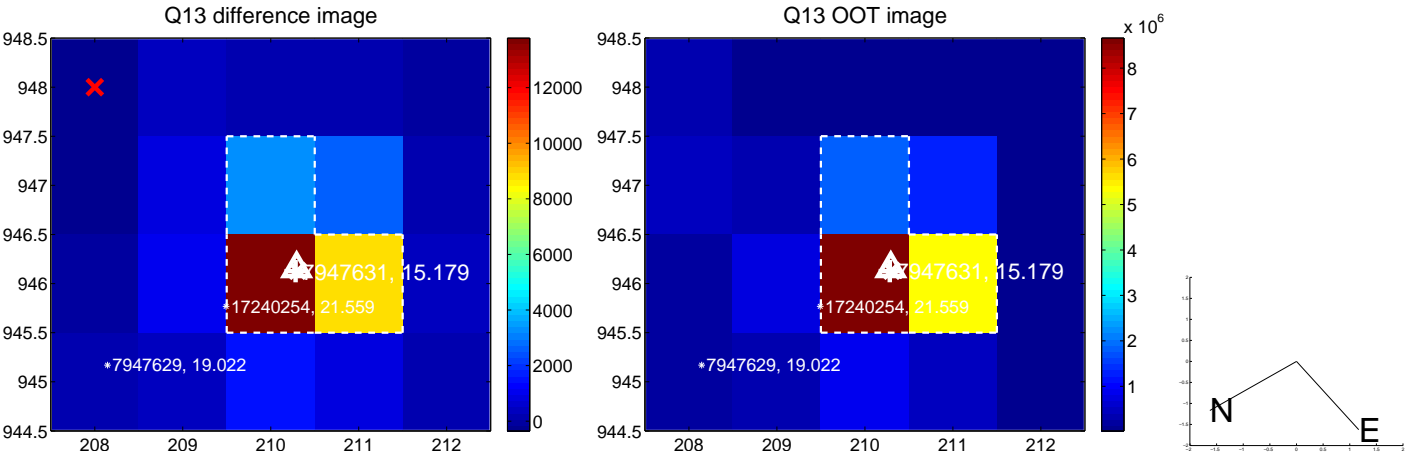
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



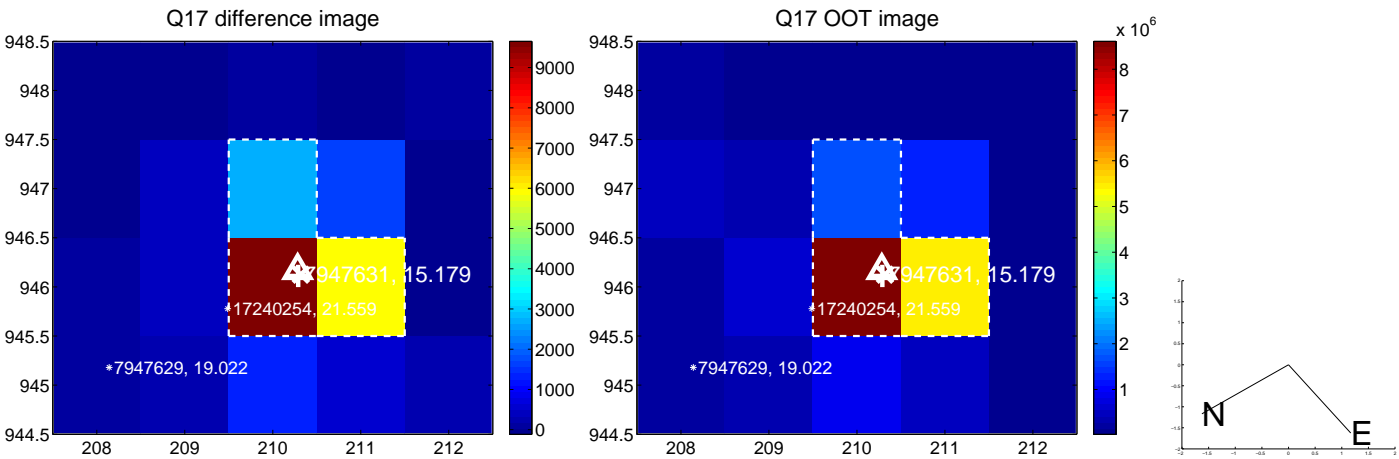
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



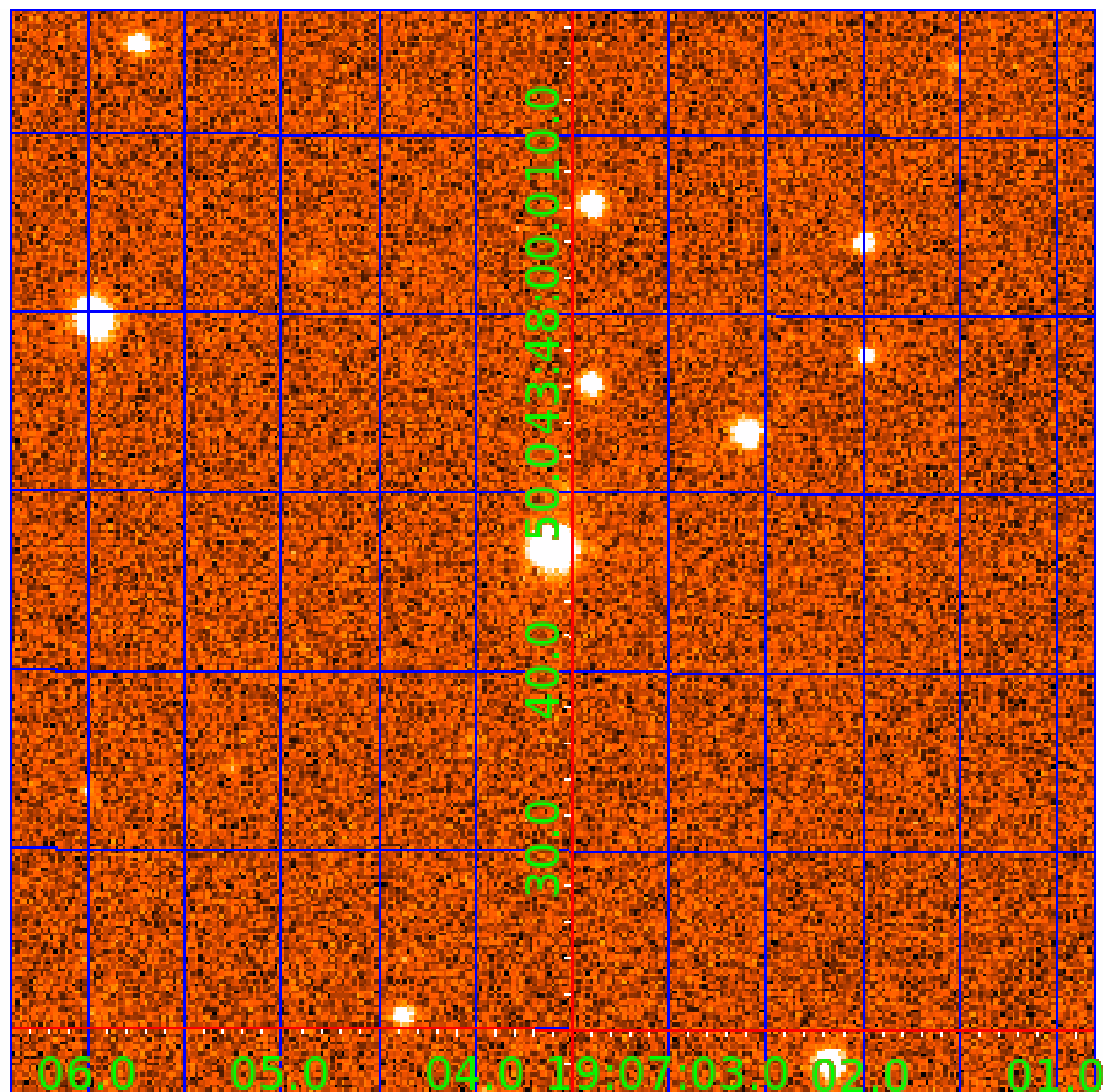
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007947631

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})
007947631-01	OBS	6936.01	1.258277	132.702817	14014.8	1.888	1380.0	1094.5	0.59	4937	8.99	502.89
007947631-02	OBS	No	2.515618	131.928108	0.0	10.478	9.3	0.0	0.59	4937	0.00	199.67
007947631-03	OBS	No	149.749792	184.985374	230.6	13.557	7.4	4.1	0.59	4937	0.87	0.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007947631-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED
007947631-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
007947631-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

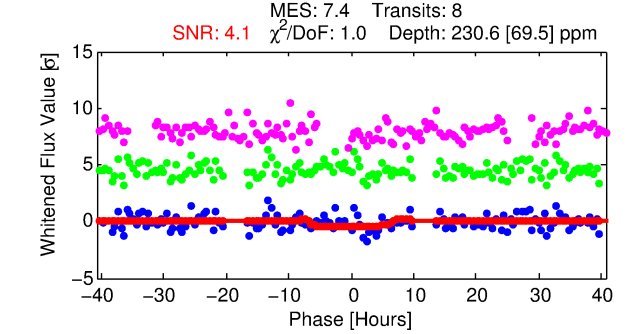
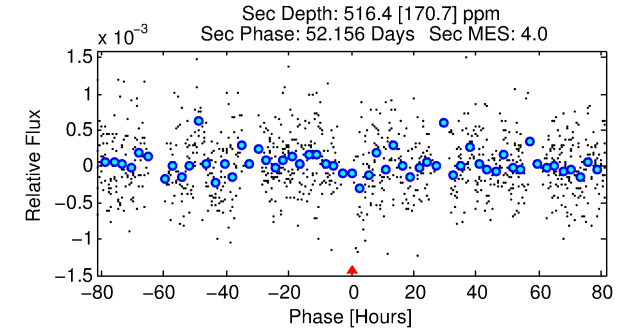
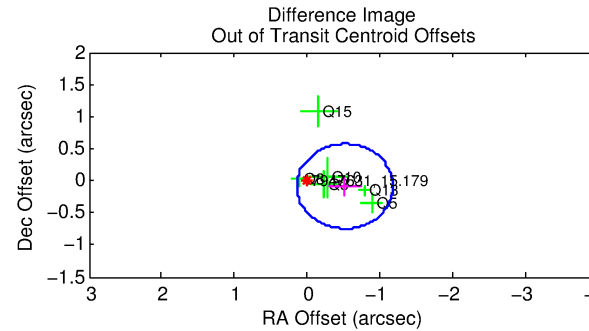
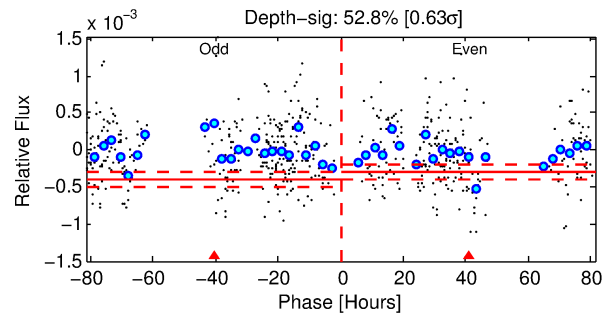
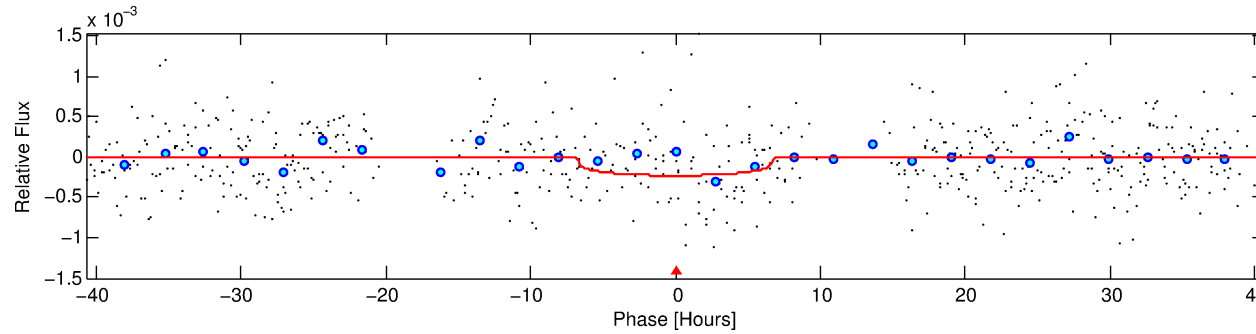
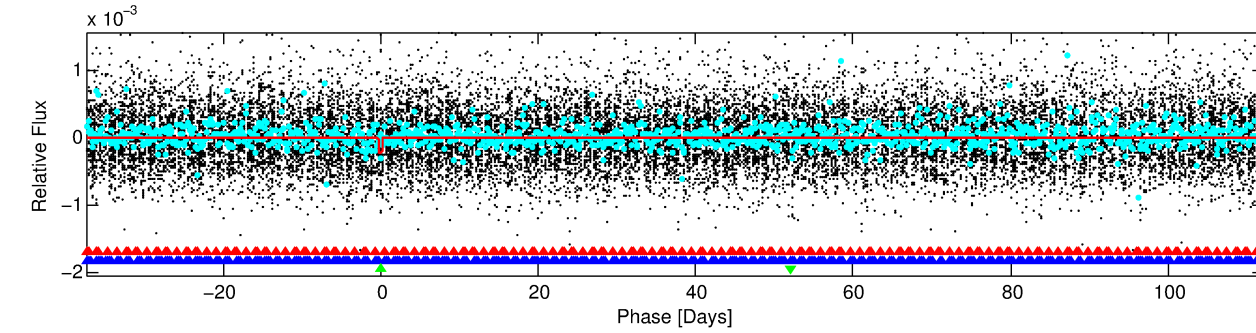
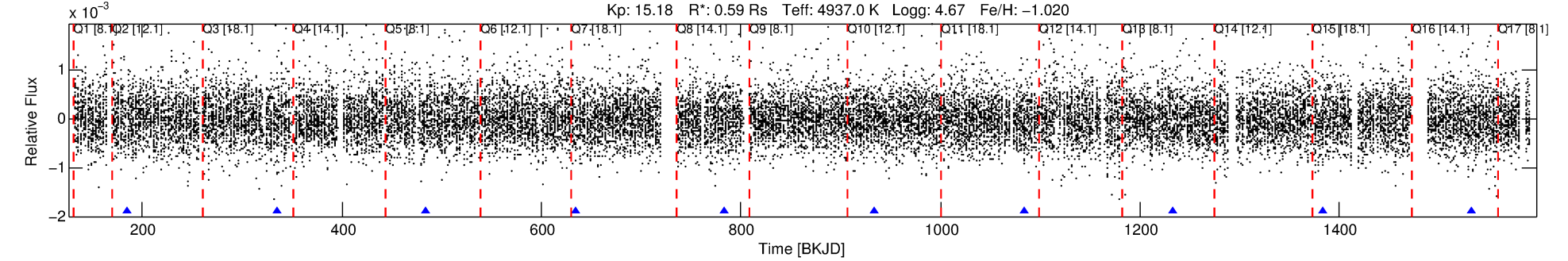
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007947631-03

No Significant Match Found

DV One-Page Summary

KIC: 7947631 Candidate: 3 of 3 Period: 149.750 d
KOI: K06936 Corr: No Ephemeris Match



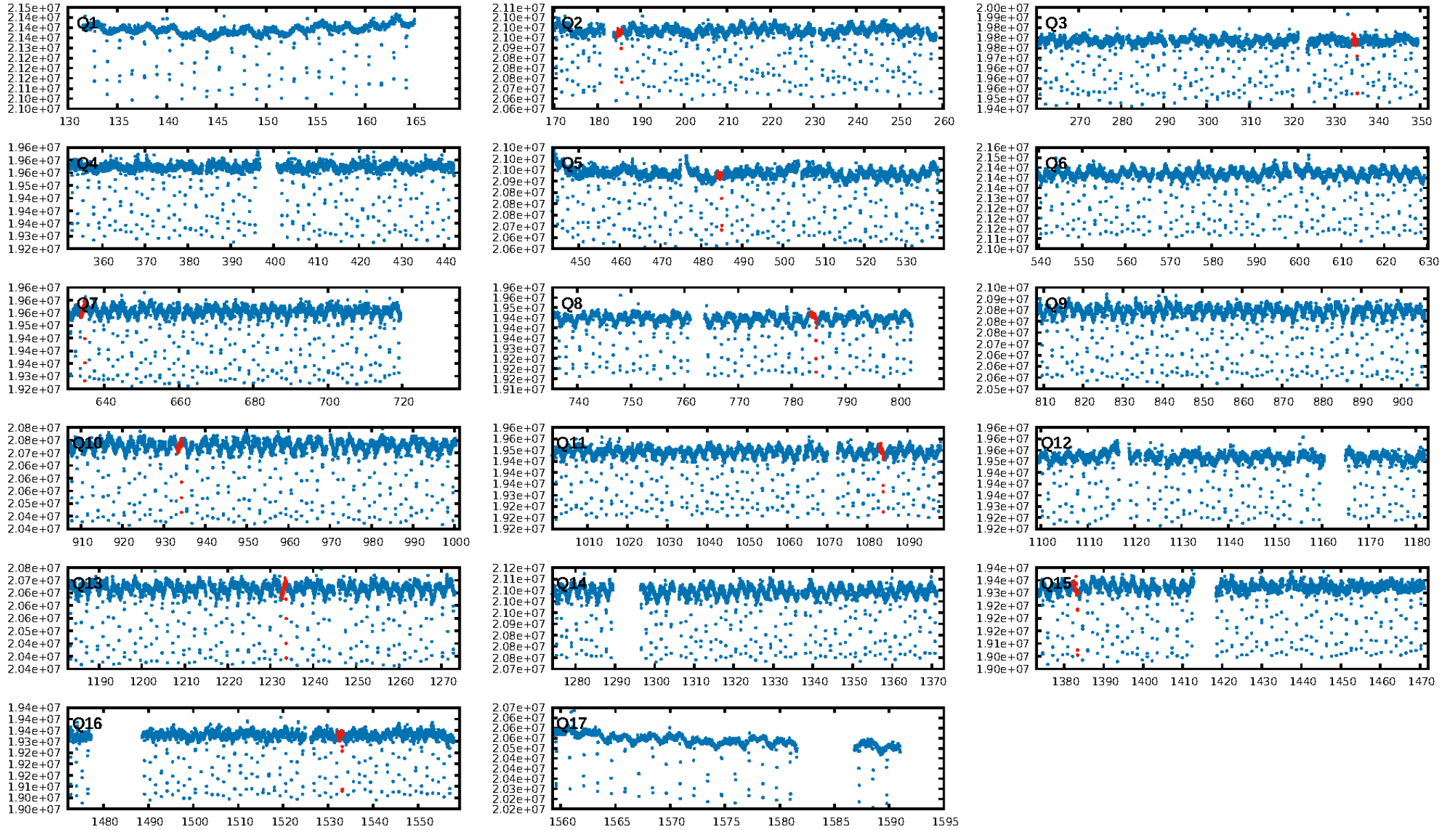
DV Fit Results:

Period = 149.74979 [0.00809] d
Epoch = 184.9854 [0.0466] BKJD
Rp/R* = 0.0136 [0.0752]
a/R* = 85.50 [1887.91]
b = 0.03 [789.84]
Seff = 0.86 [0.15]
Teq = 245 [10] K
Rp = 0.87 [4.82] Re
a = 0.4621 [0.0293] AU
Ag = 79550.09 [878057.16] [0.09 σ]
Teffp = 6374 [17590] K [0.35 σ]

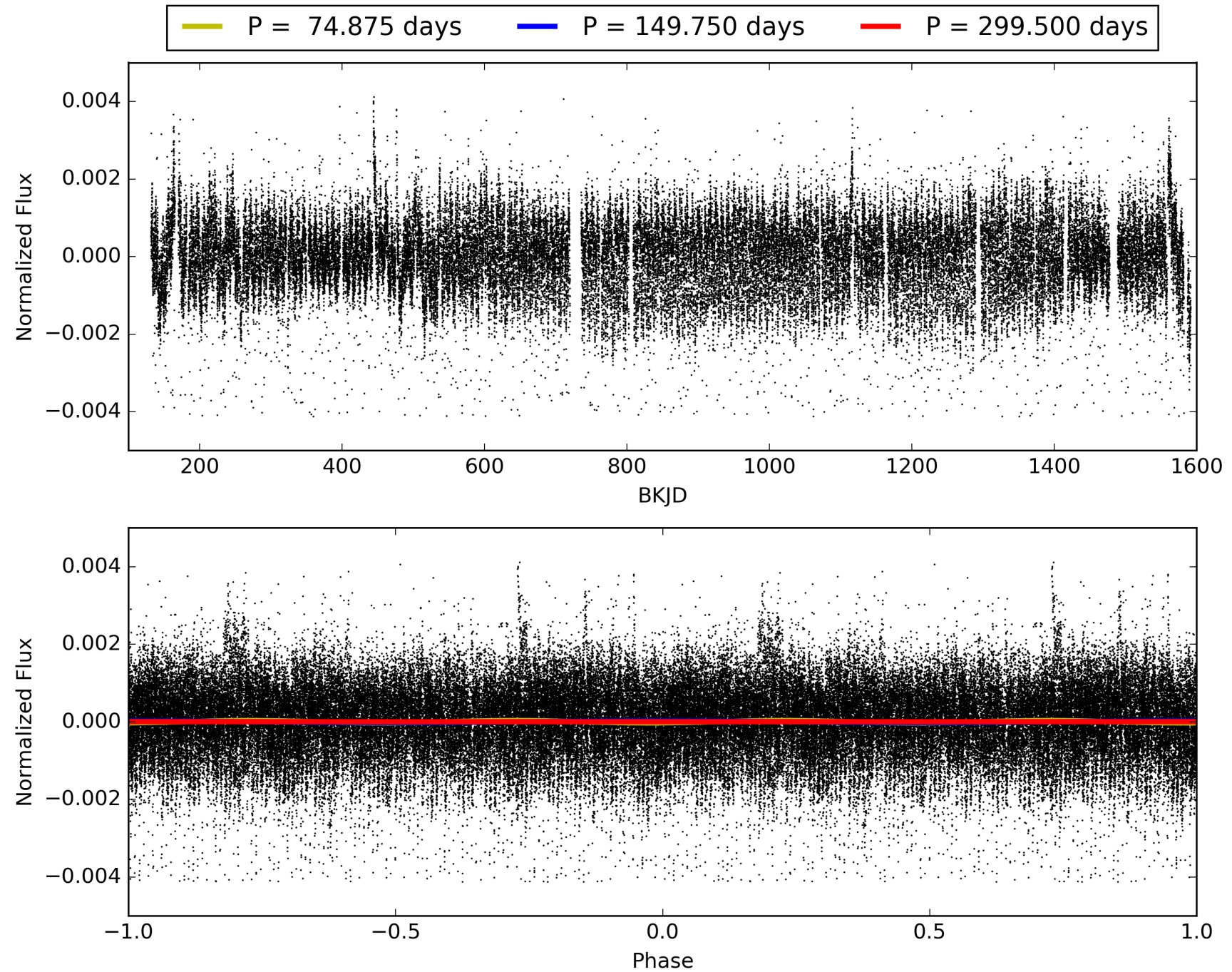
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [206.23 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 48.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.92e-09
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 0.4863
Centroid-sig: 21.9%
Centroid-so: 1.394 arcsec [0.82 σ]
OotOffset-rm: 0.525 arcsec [2.38 σ]
KicOffset-rm: 0.571 arcsec [2.77 σ]
OotOffset-st: 1/2/1/2 [6]
KicOffset-st: 1/2/1/2 [6]
DiffImageQuality-fgm: 0.00 [0/6]
DiffImageOverlap-fno: 0.00 [0/6]

TCE 007947631-03, PDC Light Curves

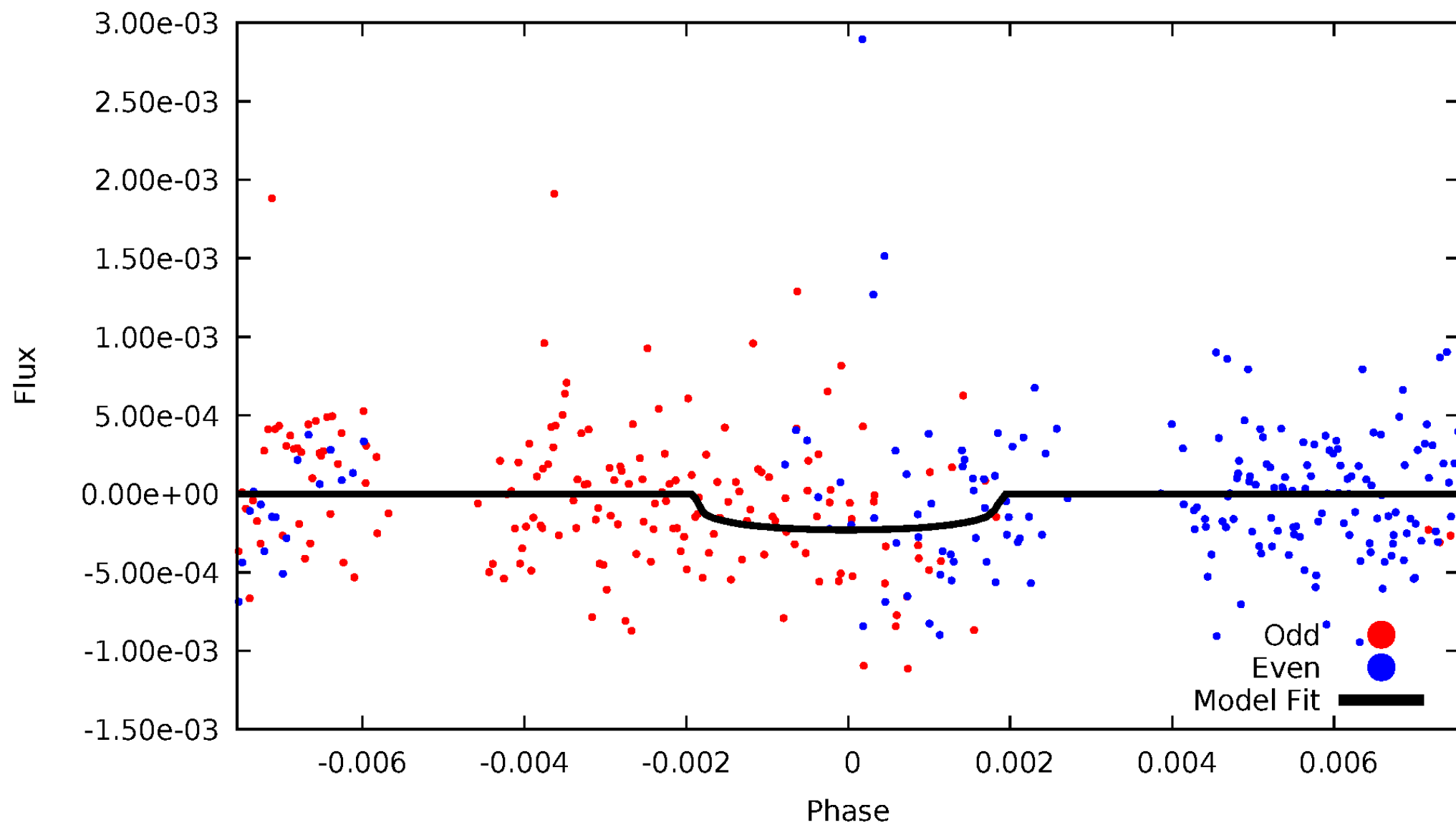


TCE 007947631-03



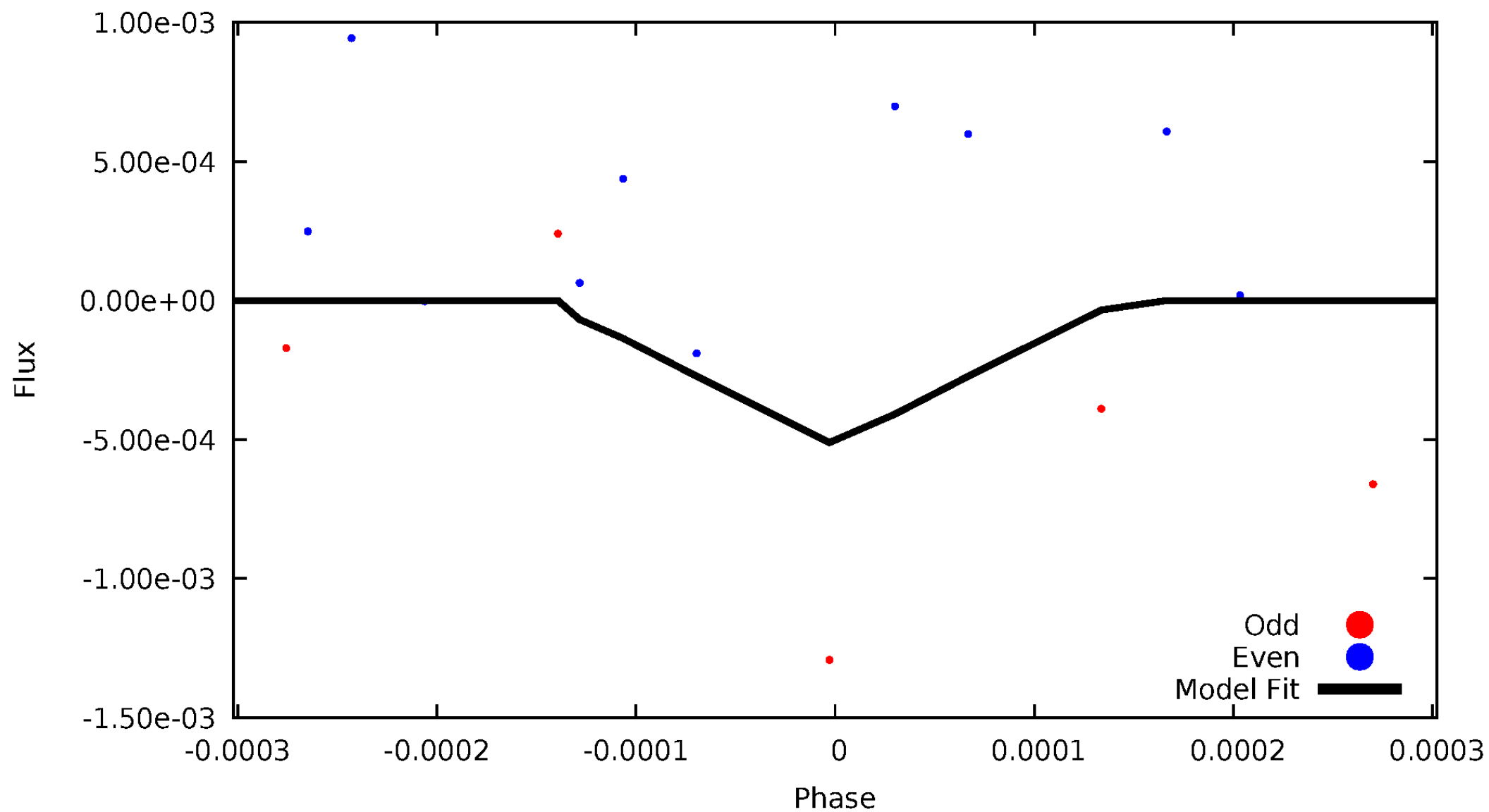
DV Odd/Even

TCE 007947631-03



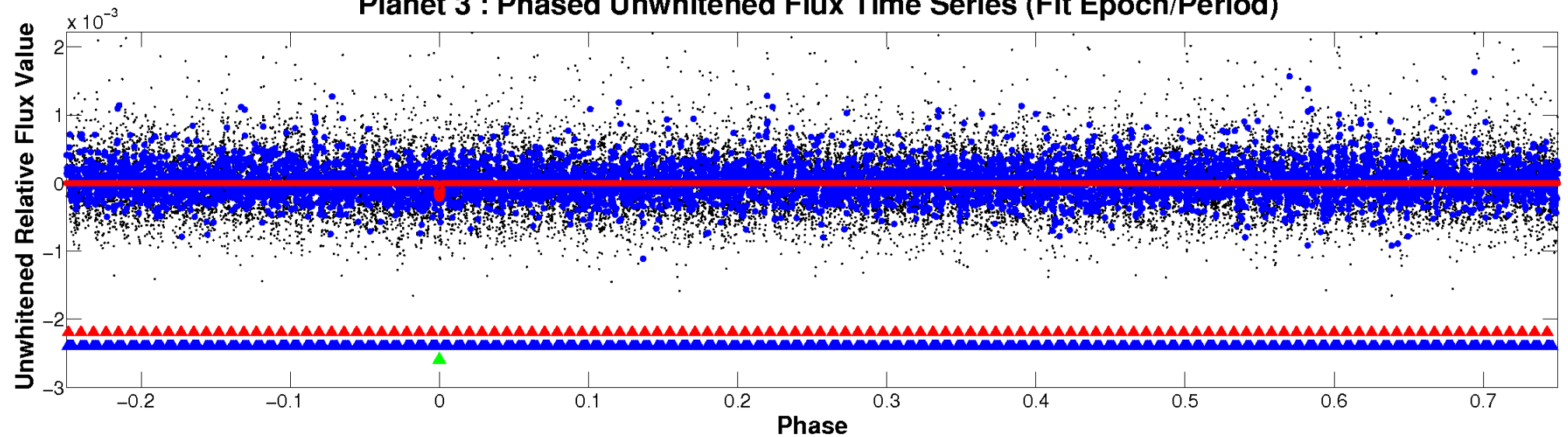
ALT Odd/Even

TCE 007947631-03

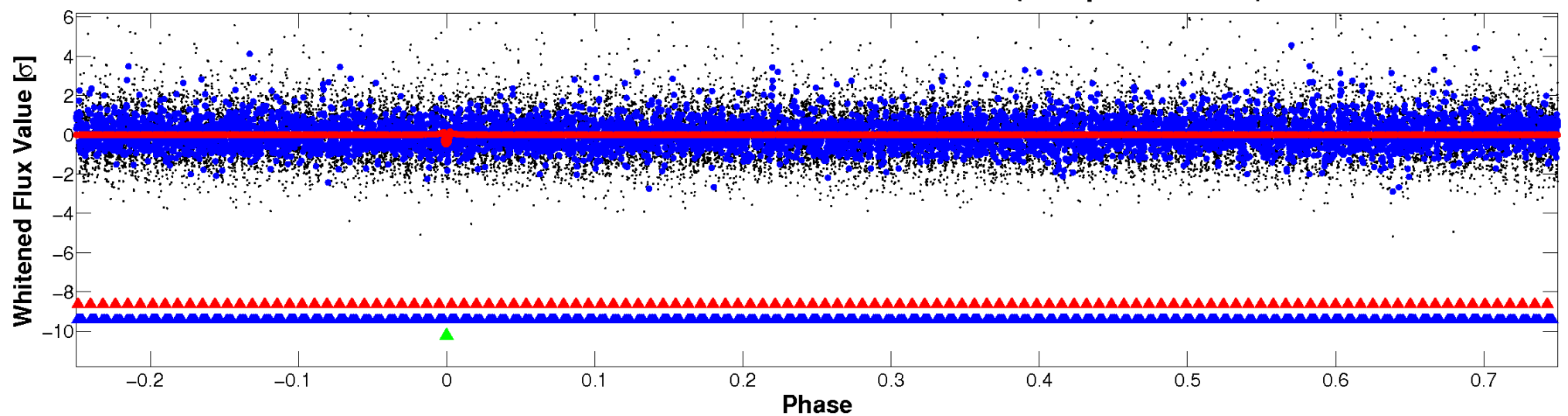


Non-Whitened Vs. Whitened Light Curve

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

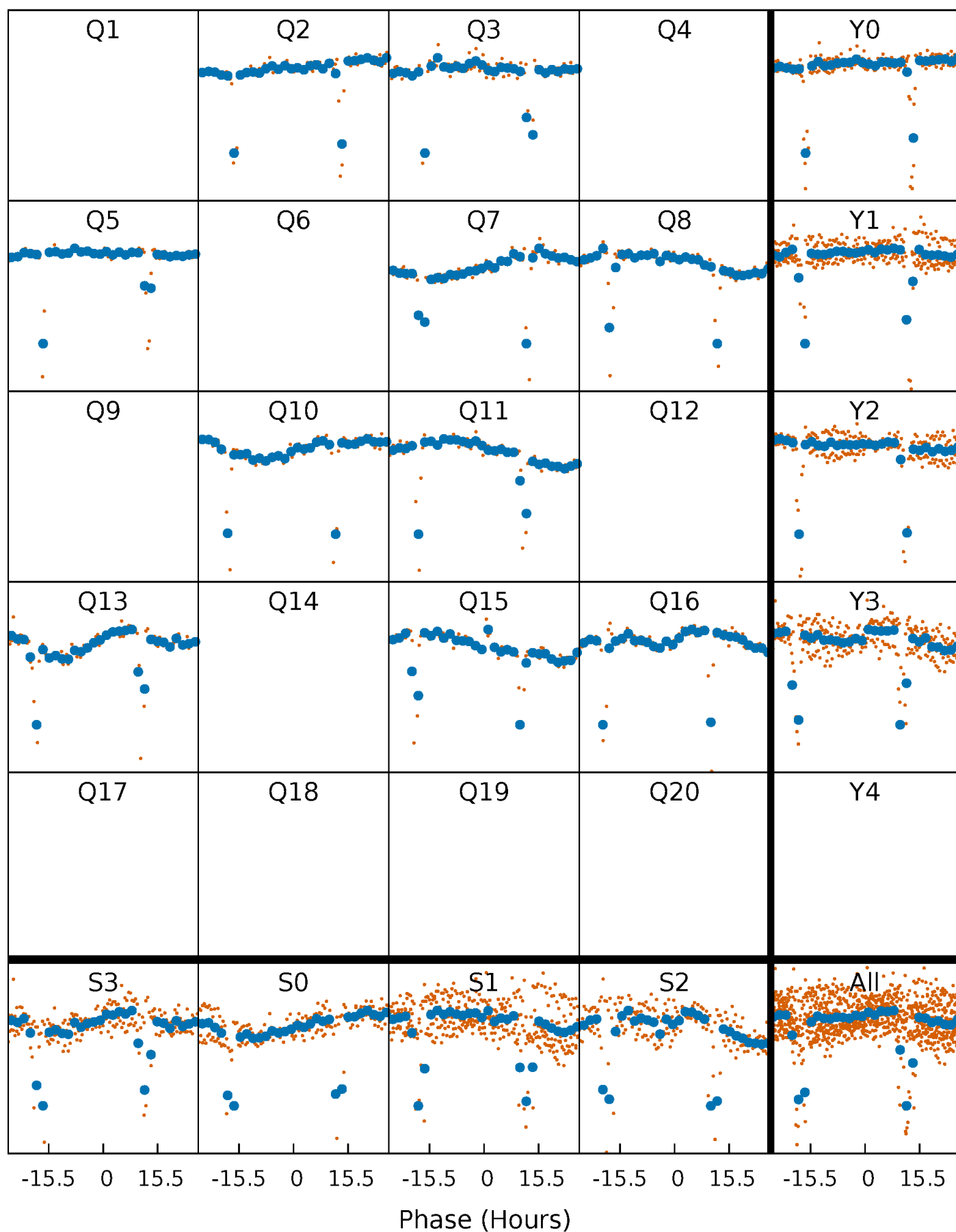


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



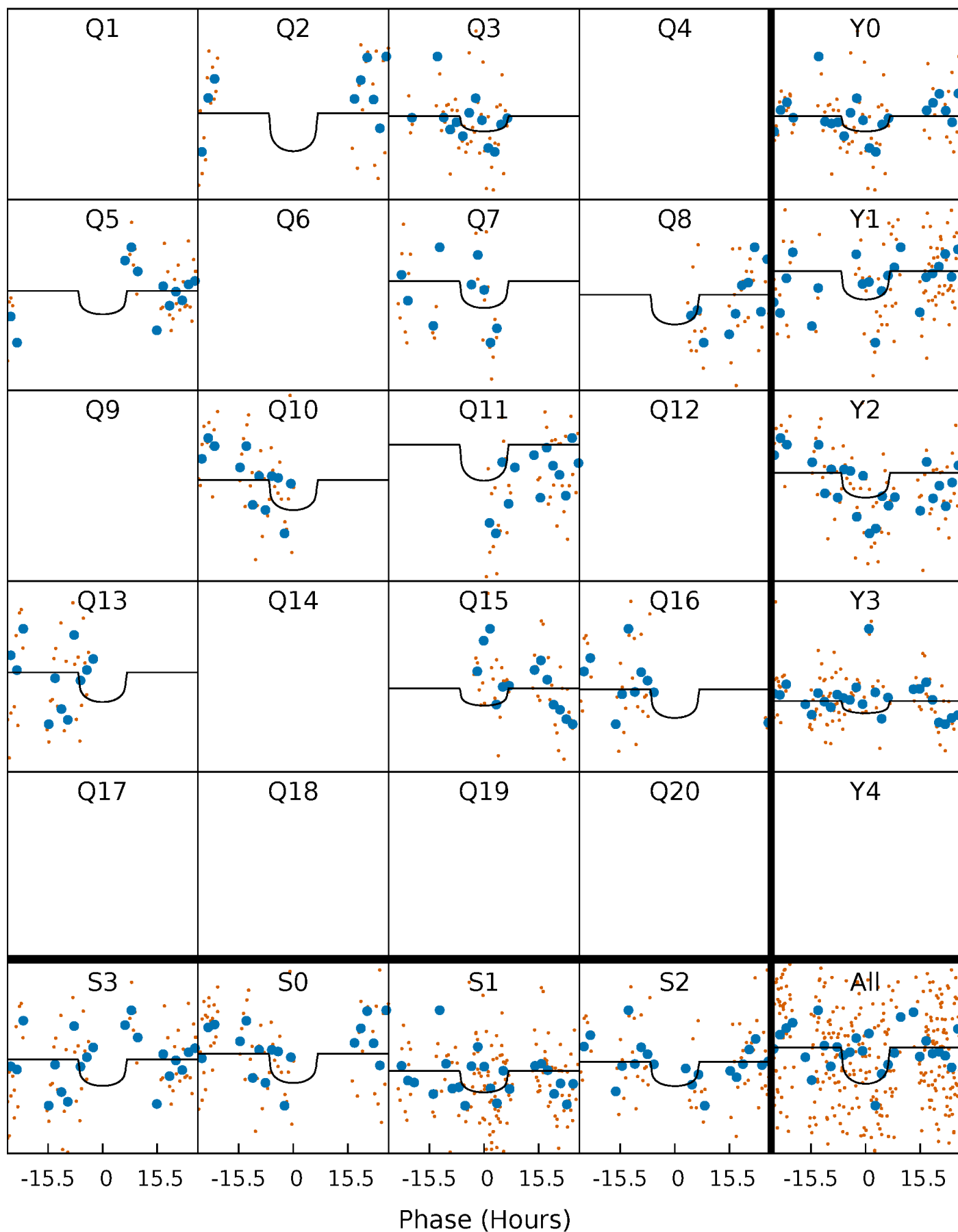
PDC Quarter-Phased Transit Curves

TCE 007947631-03 P=149.749792 Days $T_0=184.985374$ (BKJD)



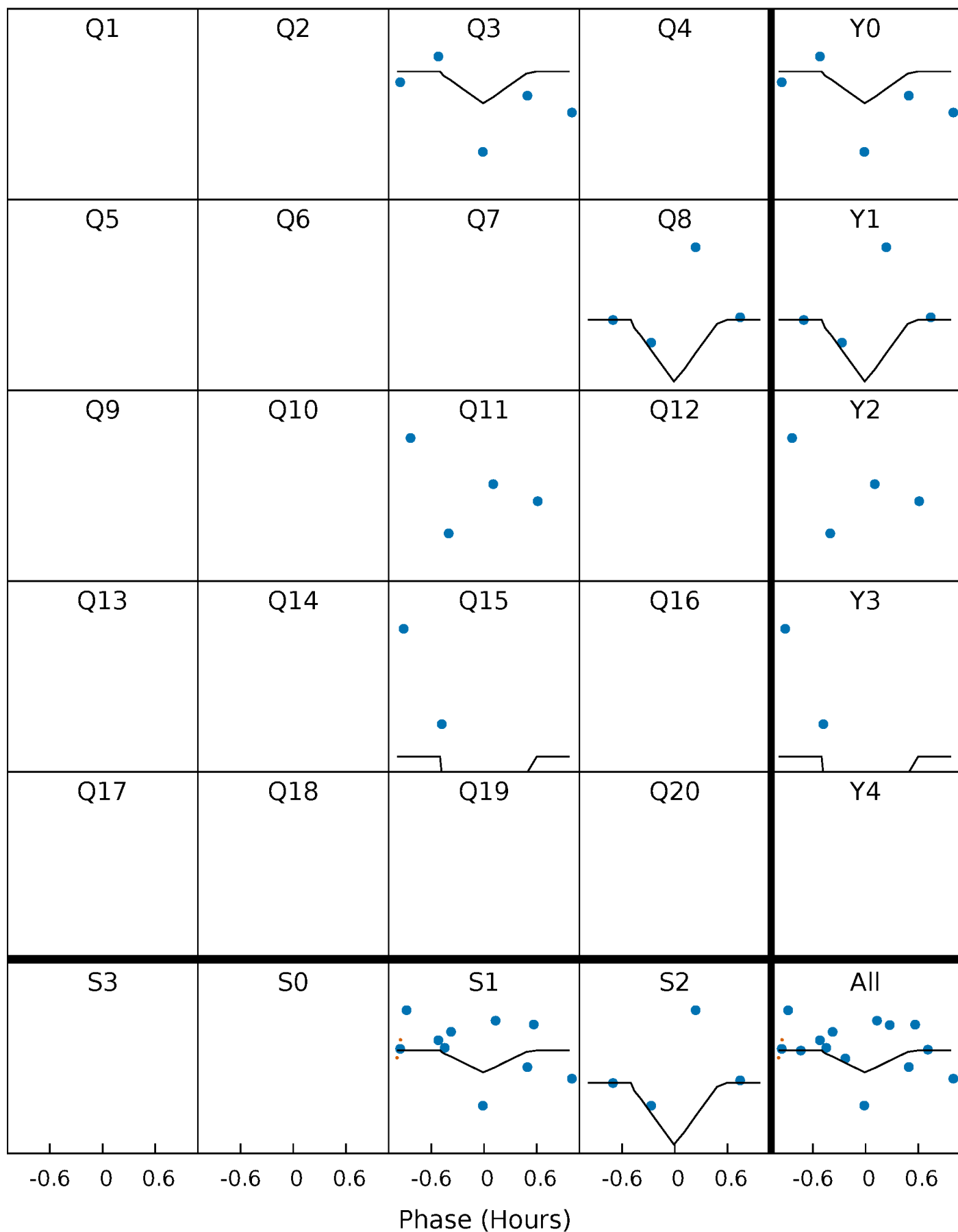
DV Quarter-Phased Transit Curves

TCE 007947631-03 P=149.749792 Days $T_0=184.985374$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

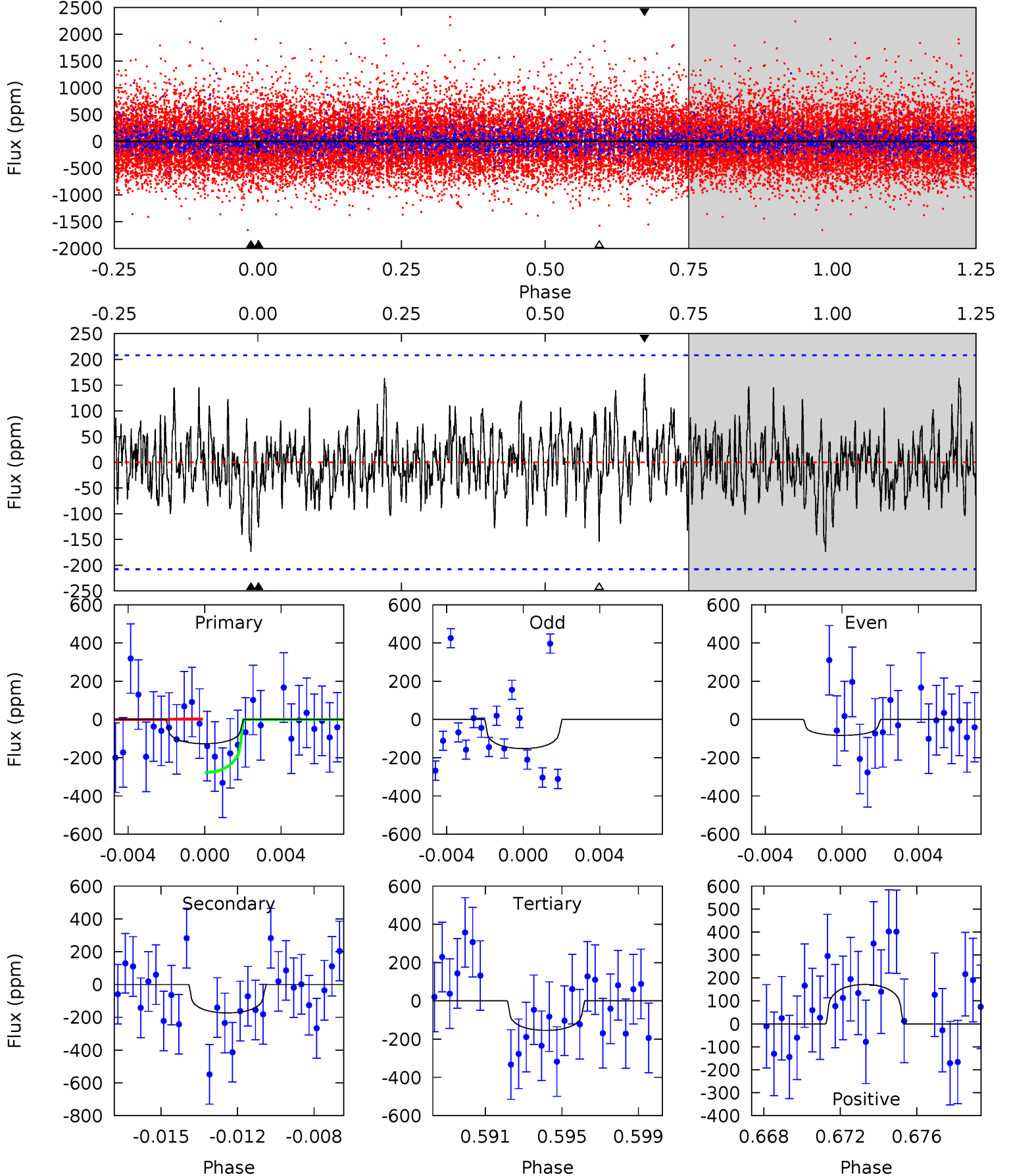
TCE 007947631-03 P=149.760913 Days $T_0=185.207204$ (BKJD)



DV Model-Shift Uniqueness Test

007947631-03, $P = 149.749792$ Days, $E = 35.235582$ Days

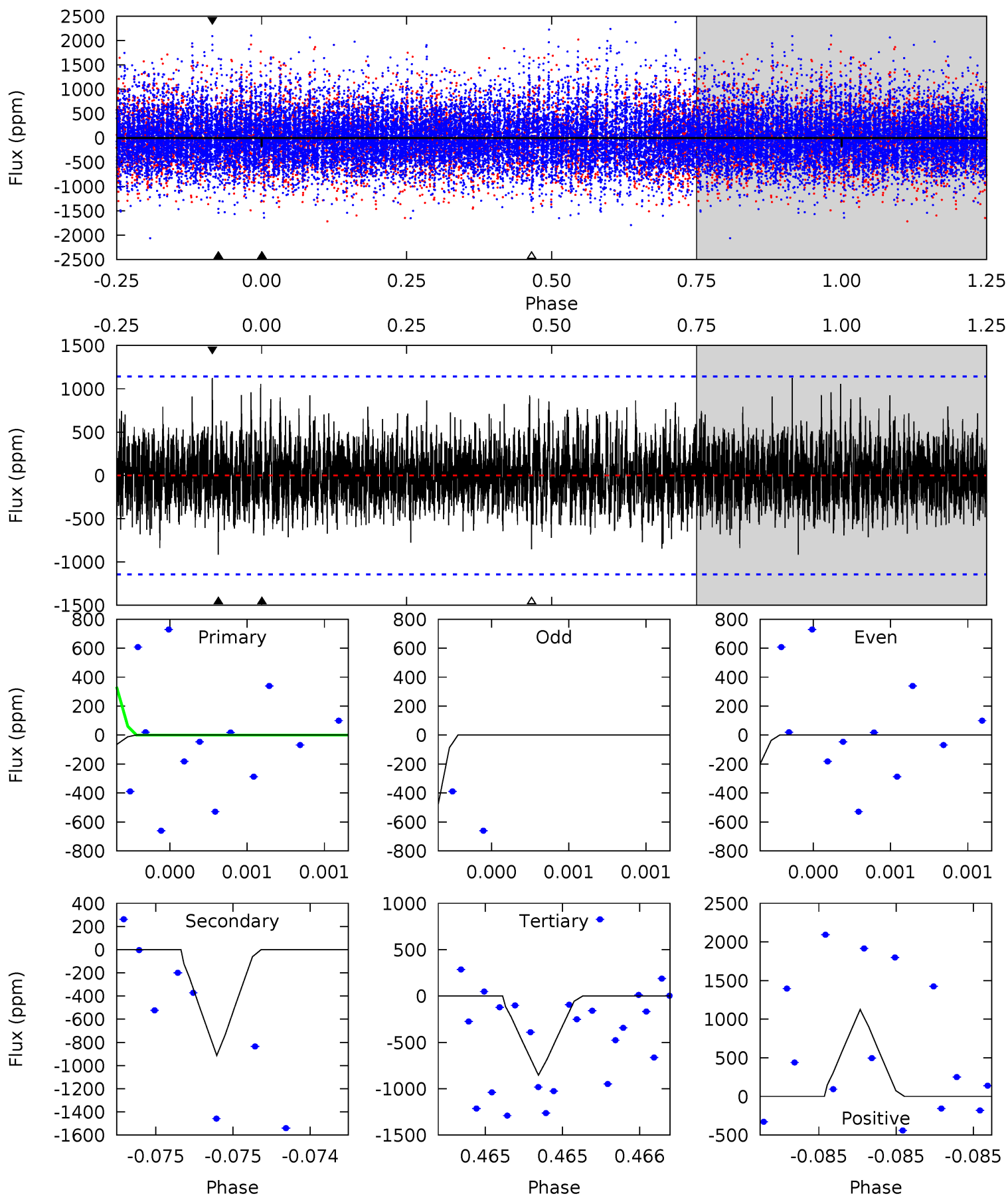
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.17	4.35	3.86	4.30	5.21	2.89	1.20	-0.69	-1.12	0.48	0.05	0.84	0.68	0.50	3.44



Alt Model-Shift Uniqueness Test

007947631-03, P = 149.760913 Days, E = 35.446291 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.90	4.53	4.23	5.58	5.66	3.62	1.21	-3.33	-4.68	0.30	-1.05	1.79	0.02	0.55	0.47



Stellar Parameters For KIC 007947631

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4937^{+172}_{-154}	$4.669^{+0.056}_{-0.032}$	$-1.020^{+0.300}_{-0.300}$	$0.587^{+0.041}_{-0.041}$	$0.585^{+0.050}_{-0.021}$	$4.082^{+0.855}_{-0.589}$
	+3%/-3%	+1%/-1%	+29%/-29%	+7%/-7%	+9%/-4%	+21%/-14%
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 007947631-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-174 ± 40	$3.66^{+3.34}_{-2.52}$	342^{+13}_{-12}	2995^{+1415}_{-497}	1545^{+14396}_{-1168}
Alt.	-913 ± 202	$3.72^{+3.69}_{-2.55}$	341^{+13}_{-11}	3837^{+2299}_{-770}	7588^{+70343}_{-5689}

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

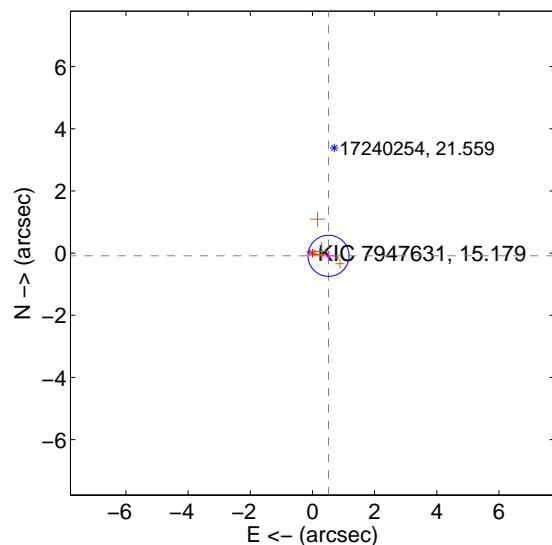
Supplemental centroid analysis for 007947631-03. Kepler magnitude: 15.18. Transit SNR 4.12

There are 0 quarters with good PRF difference image offsets

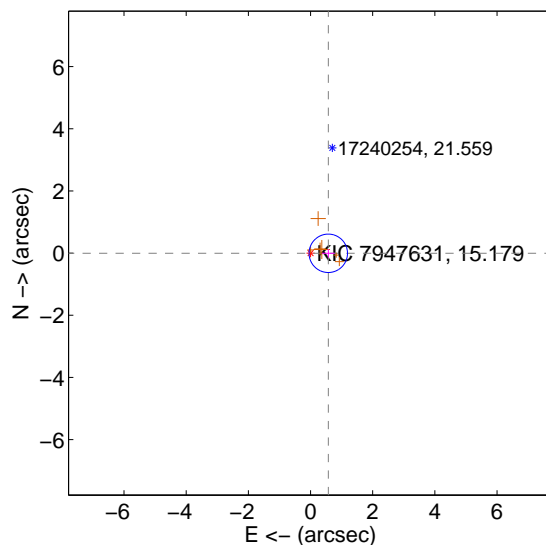
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.525 ± 0.220	2.38	-0.518 ± 0.222	-0.087 ± 0.139
PRF-fit source offset from KIC position	0.571 ± 0.206	2.77	-0.571 ± 0.206	-0.007 ± 0.137
photometric centroid source offset	1.39 ± 1.70	0.82	0.68 ± 1.93	-1.21 ± 1.62

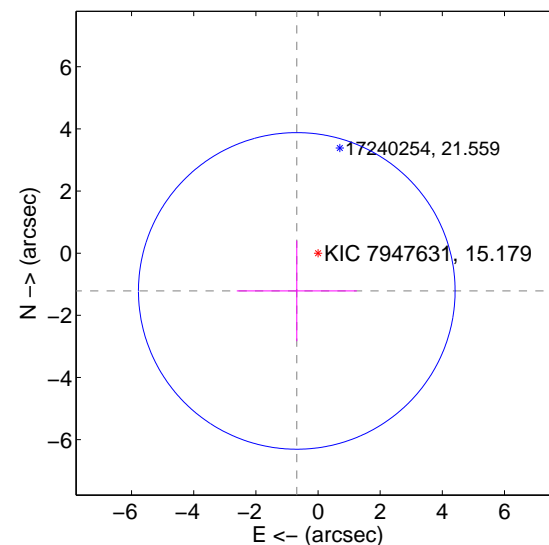
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

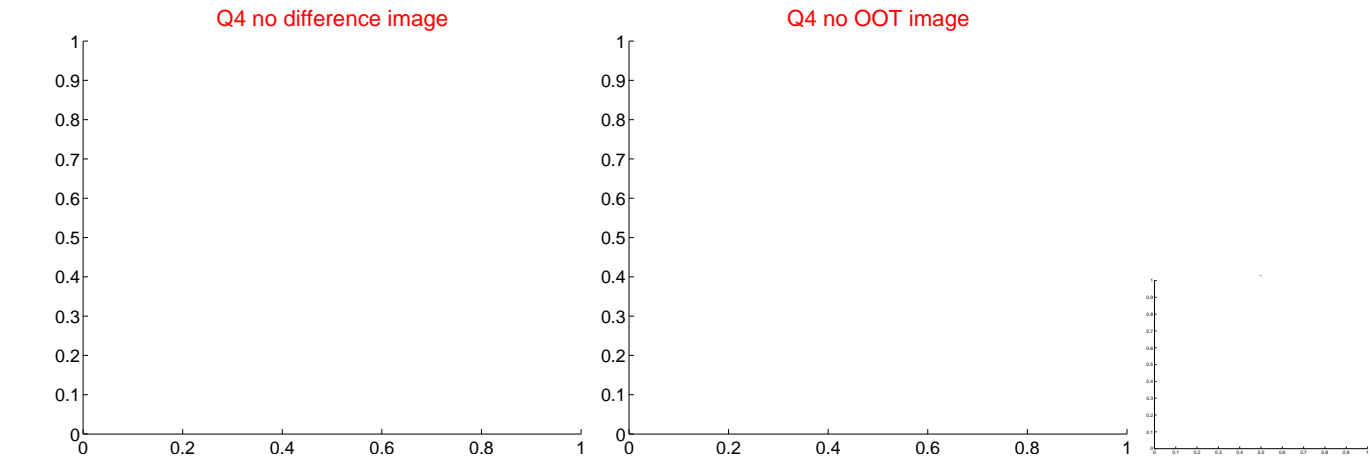
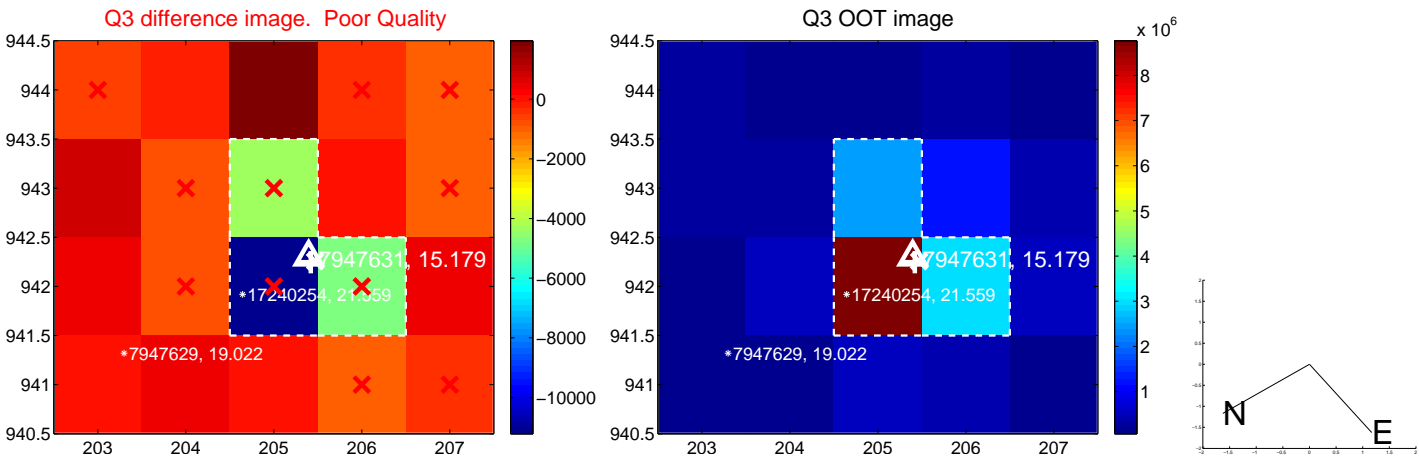
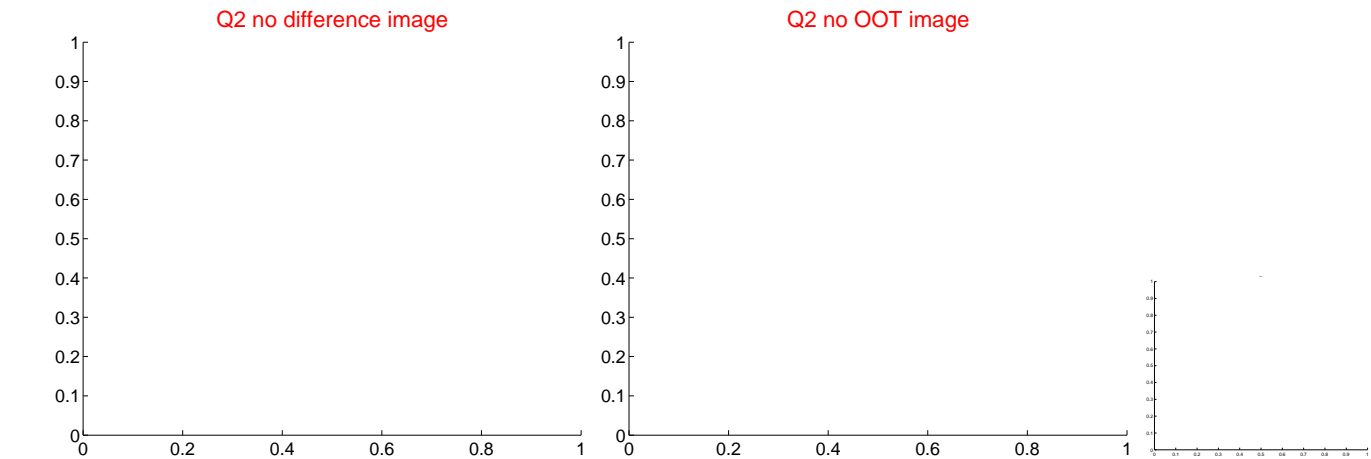
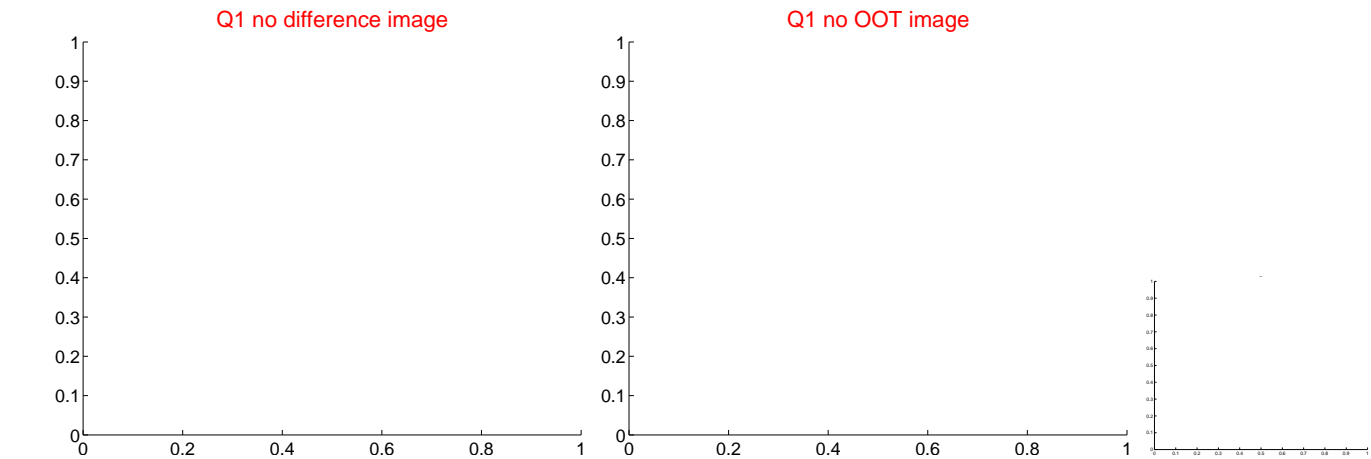


offset from photometric centroids

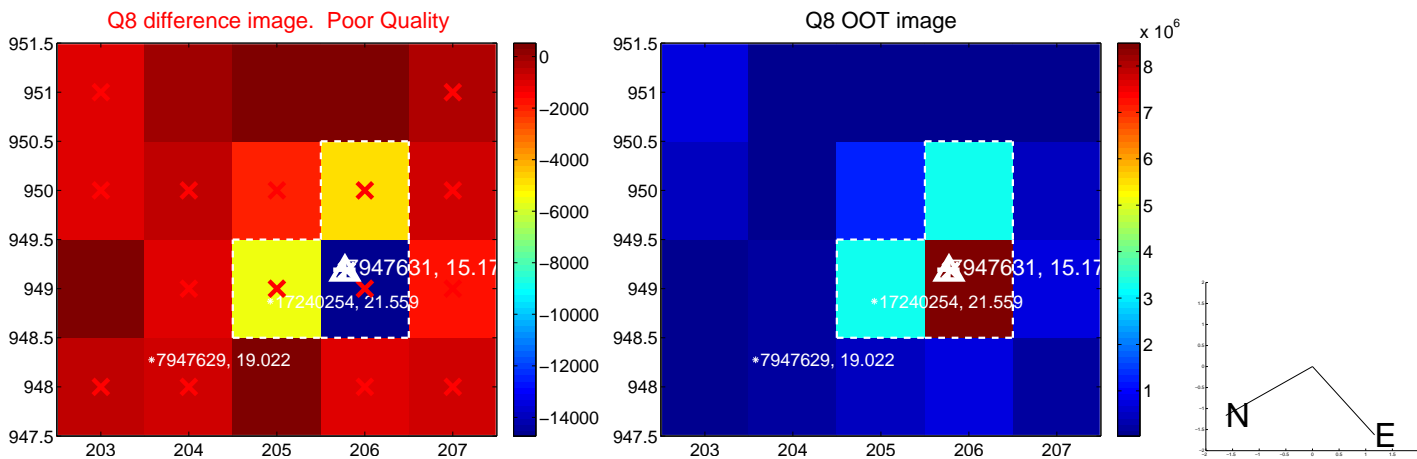
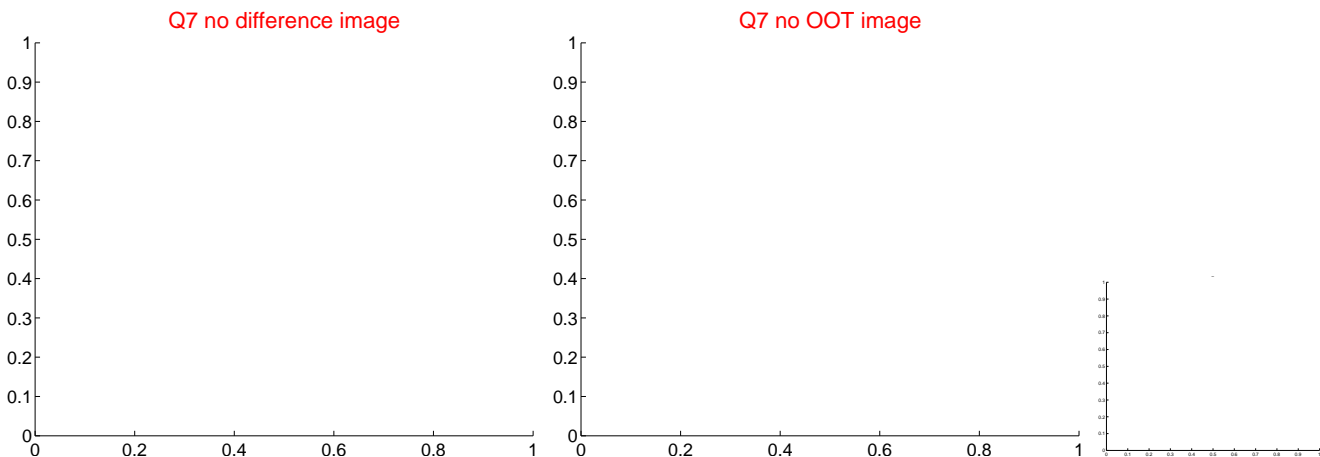
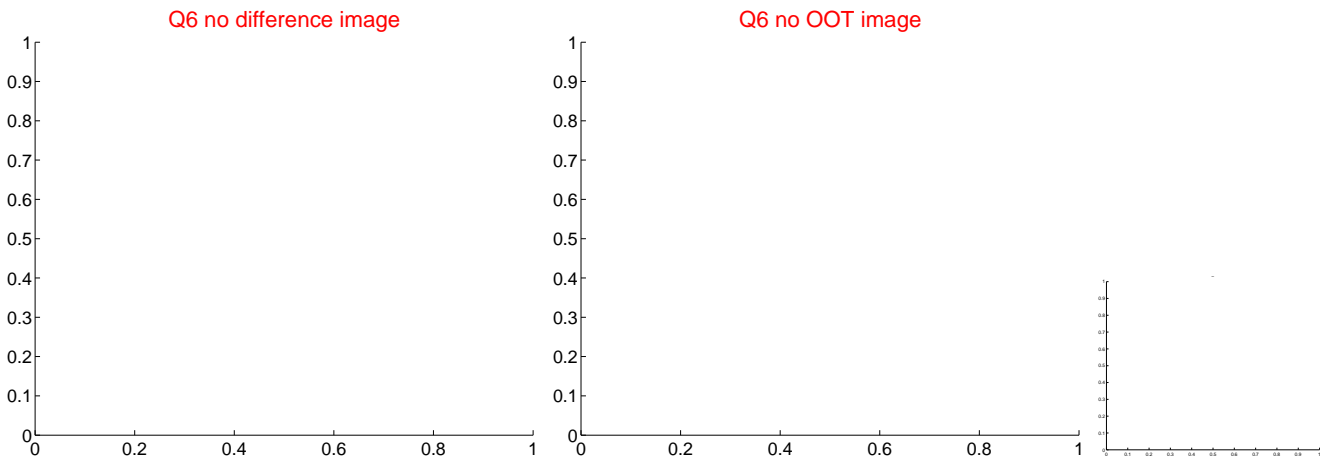
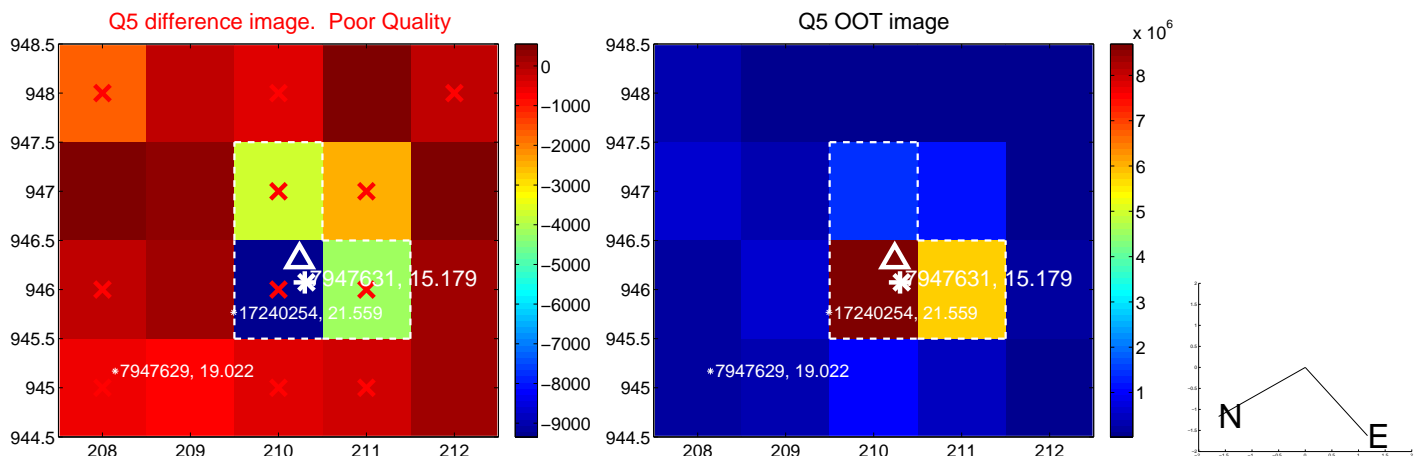


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

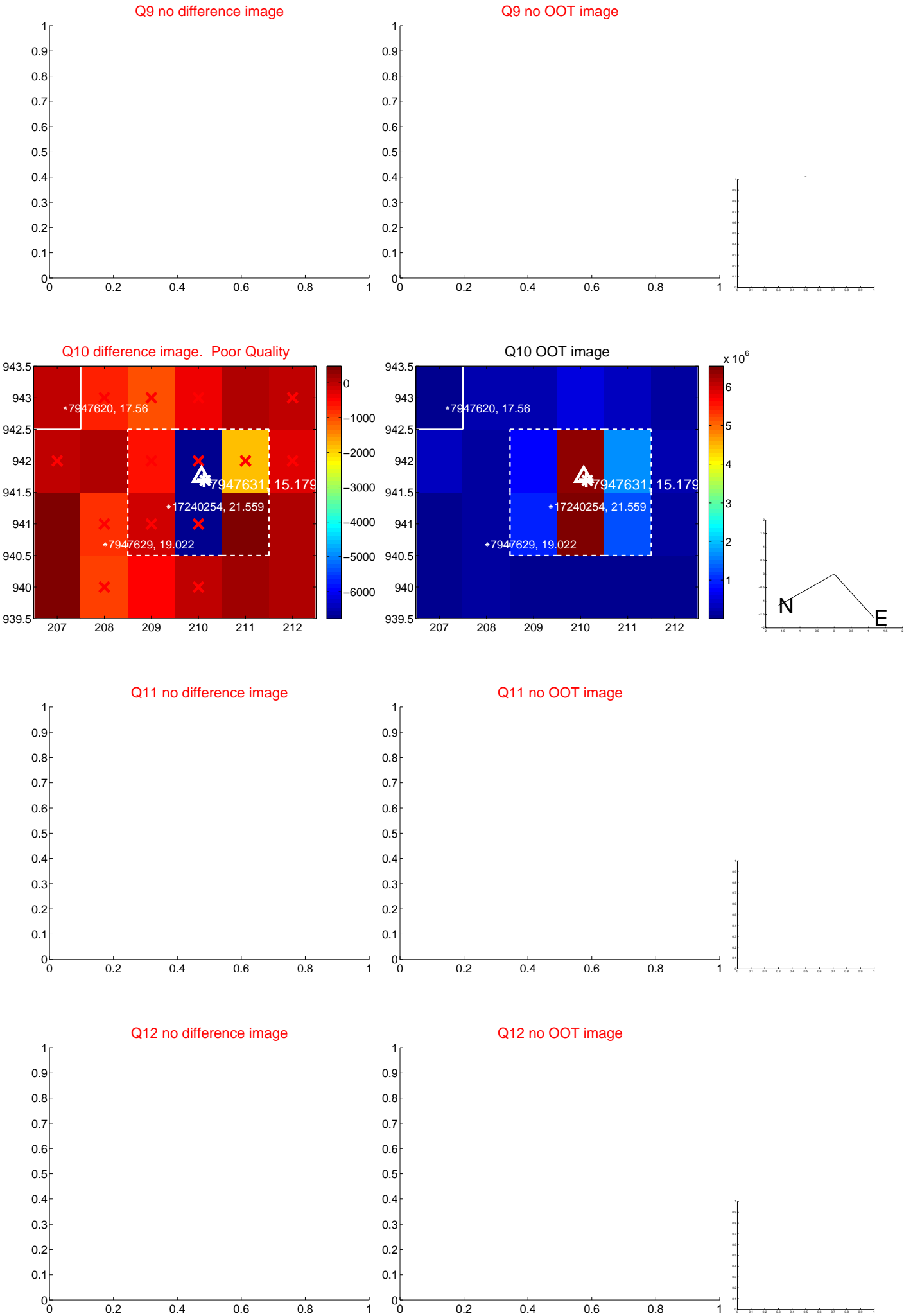
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



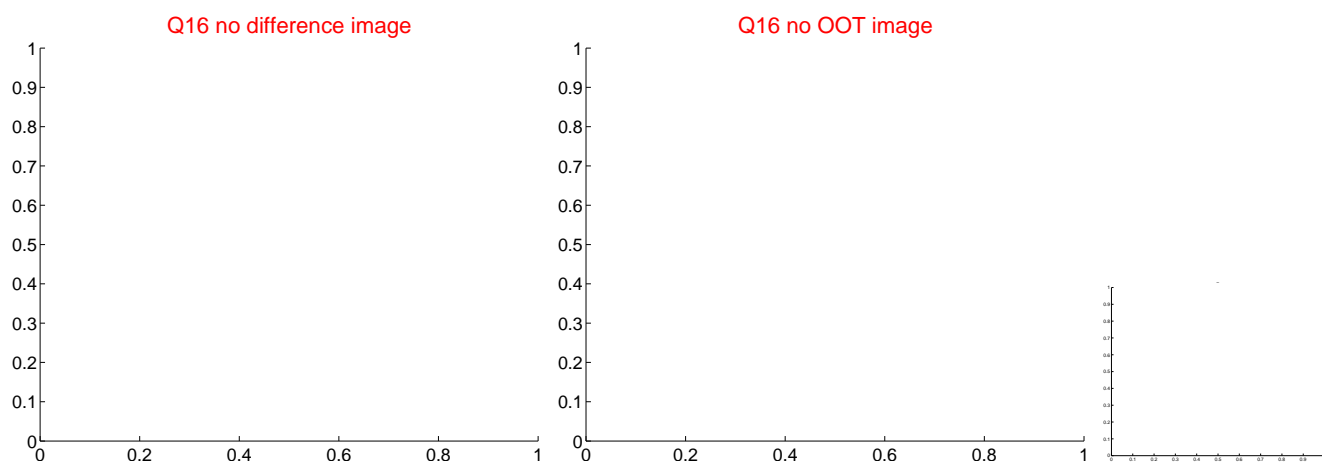
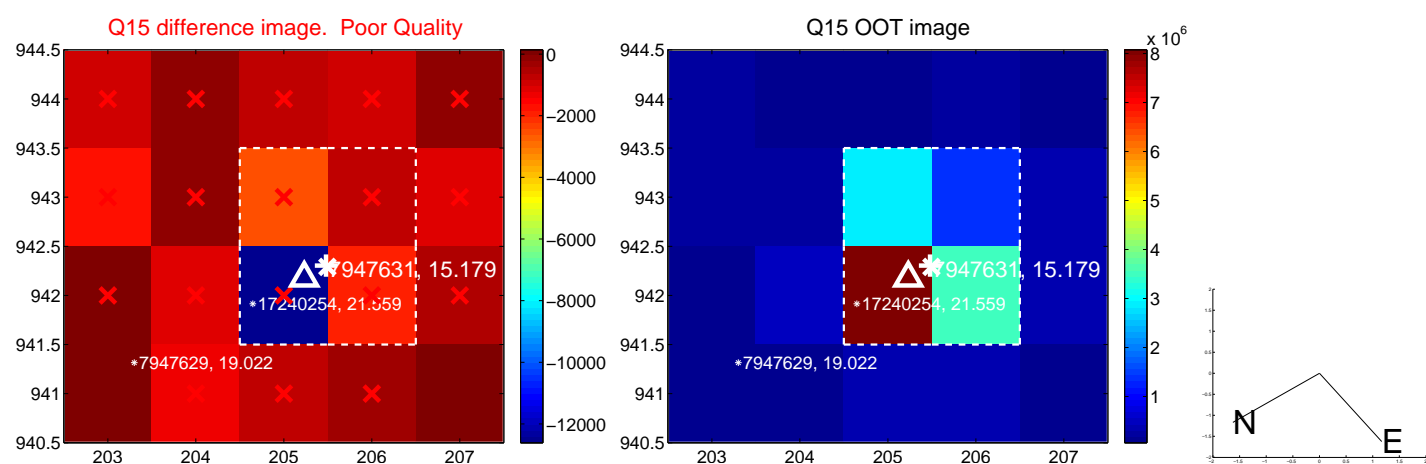
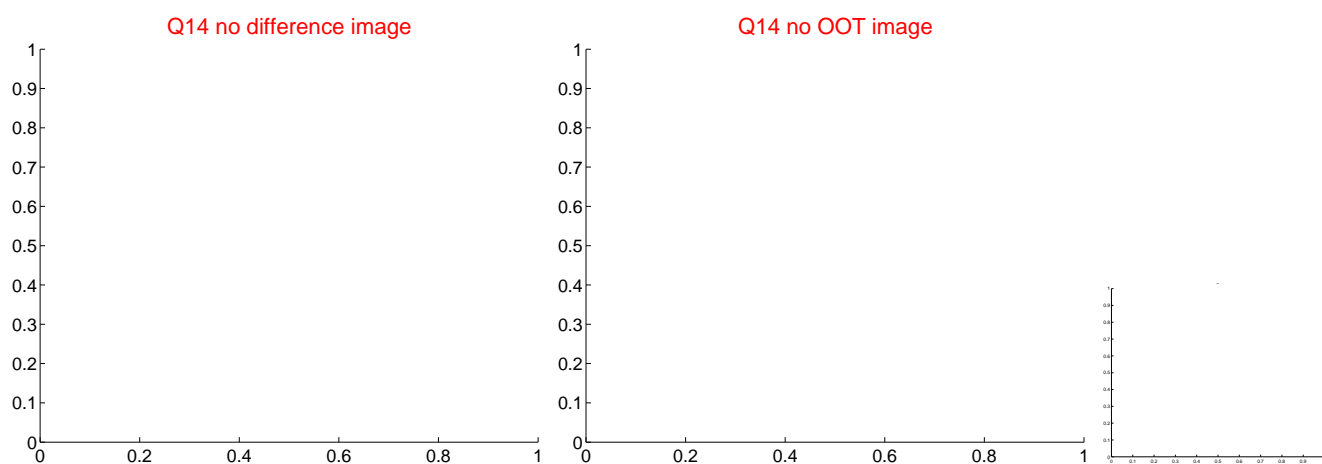
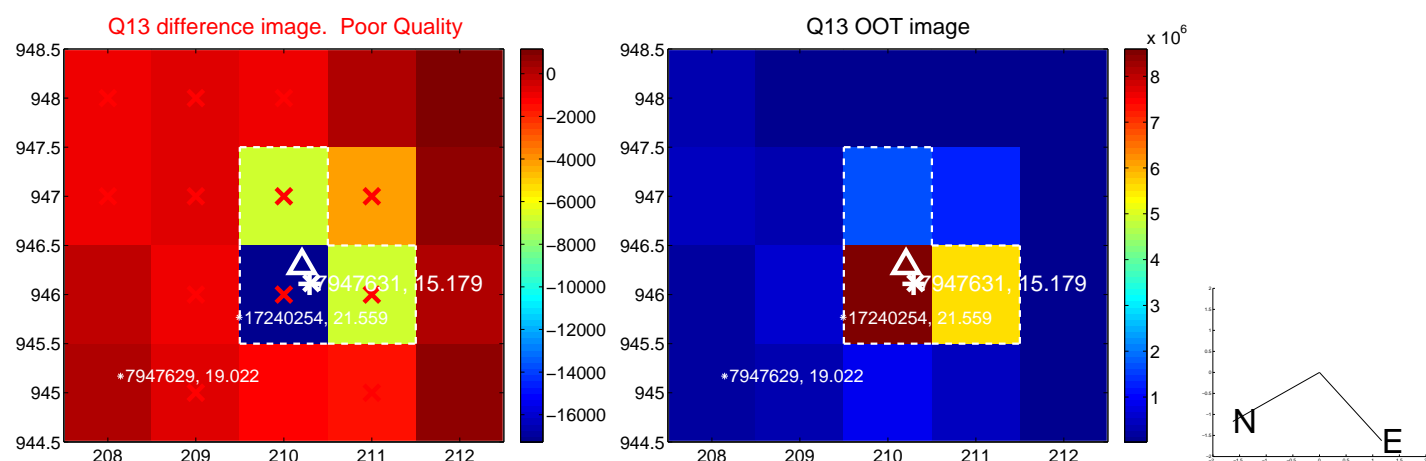
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



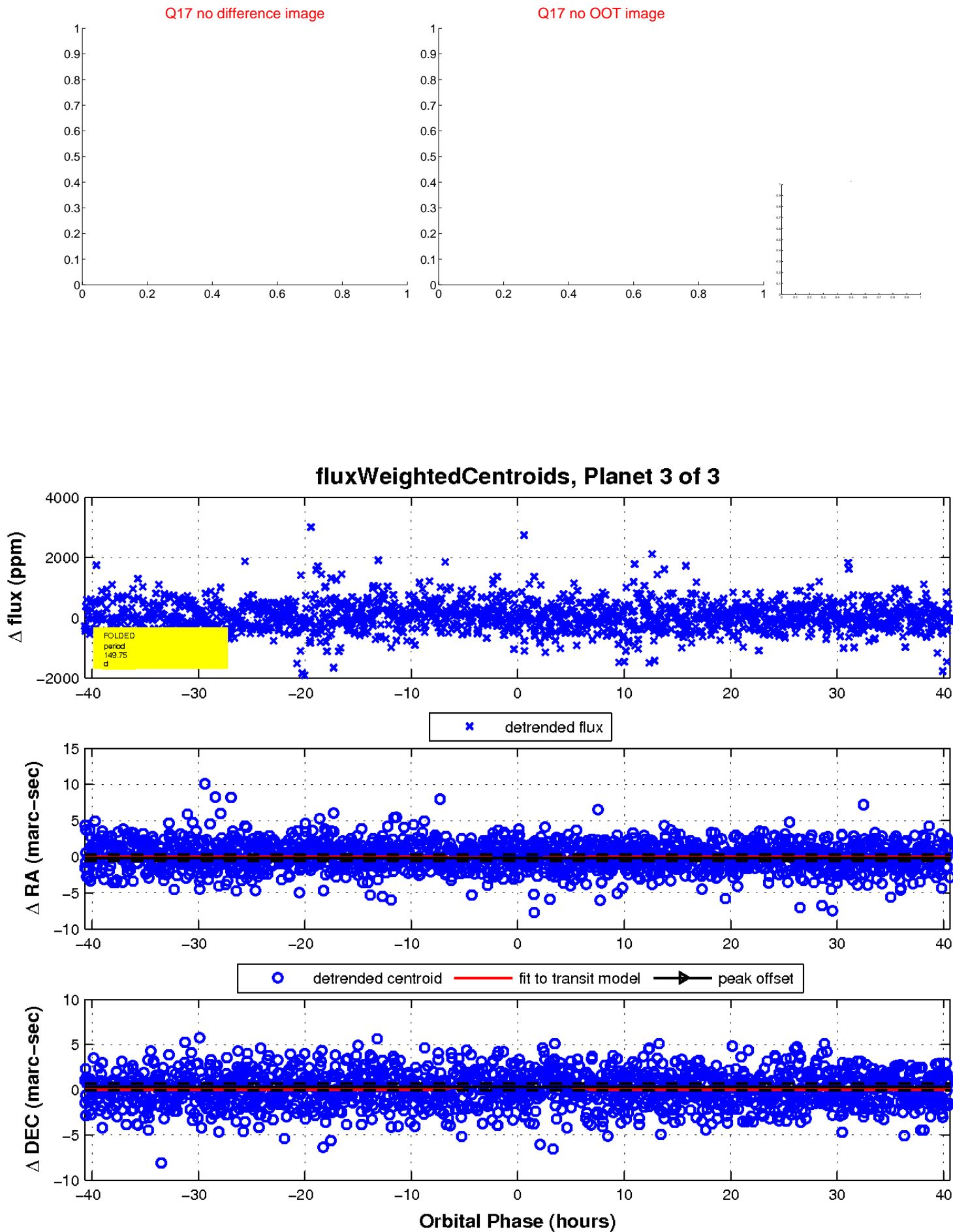
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

