

KIC 007631194

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})
007631194-01	OBS	6896.01	0.811399	131.873759	63.9	1.153	11.3	16.5	12.49	4994	12.38	0.00
007631194-02	OBS	No	0.811379	132.289729	59.0	1.087	10.9	15.5	12.49	4994	11.81	0.00
007631194-03	OBS	No	88.068390	172.797555	719.5	6.193	8.5	9.0	12.49	4994	68.91	295.96
007631194-04	OBS	No	120.573159	216.463461	630.8	4.094	7.3	7.8	12.49	4994	42.27	194.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007631194-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
007631194-02	OBS	FP	0.00	1	0	1	0	LPP_DV—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
007631194-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—HALO_GHOST
007631194-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE

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.

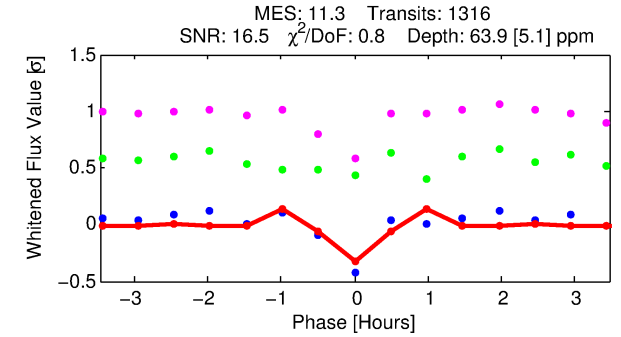
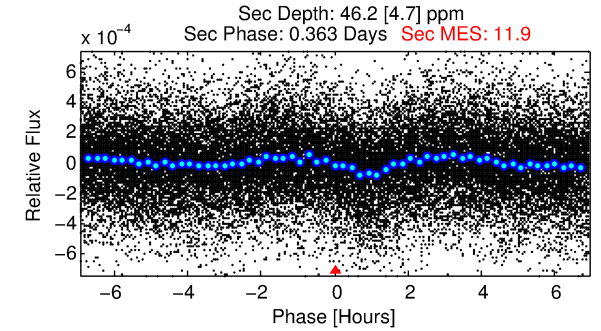
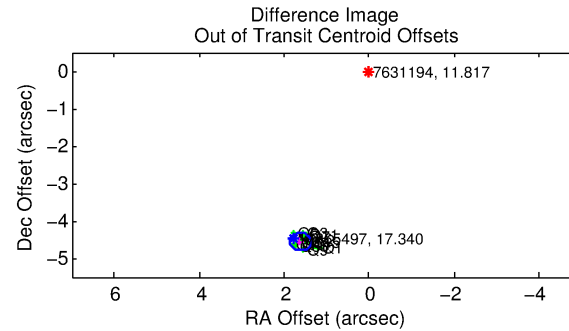
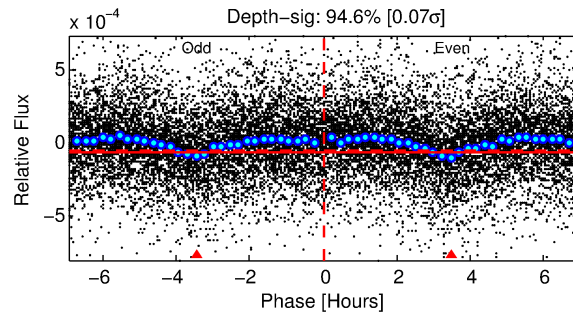
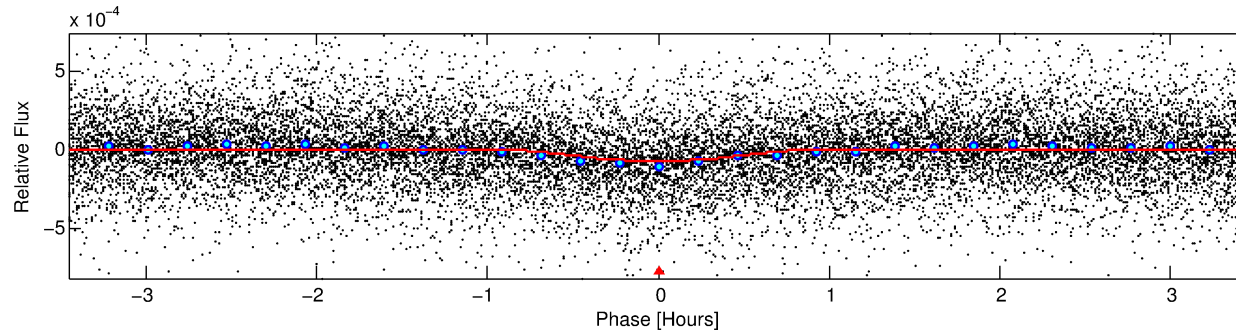
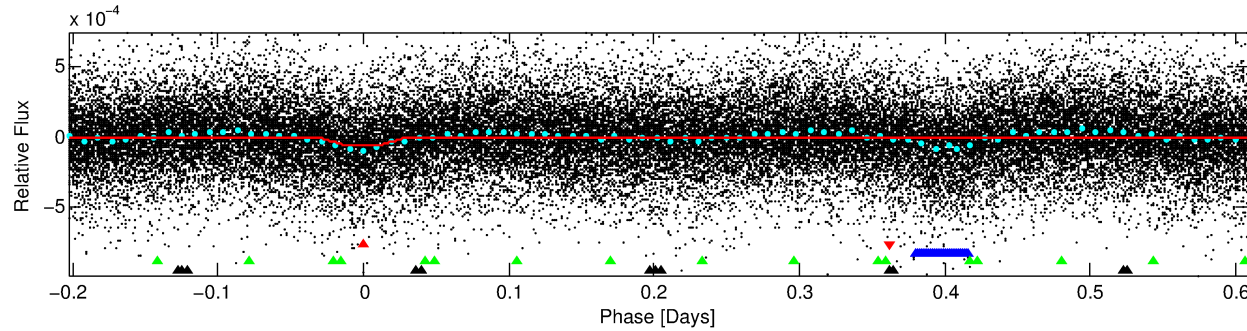
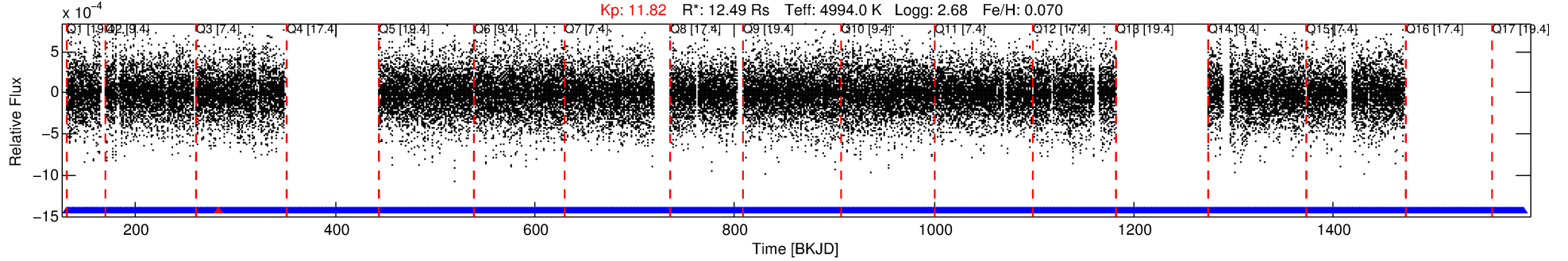
Ephemeris Match Information For 007631194-01

No Significant Match Found

DV One-Page Summary

KIC: 7631194 Candidate: 1 of 4 Period: 0.811 d
KOI: K06896.01 Corr: 0.845

Kp: 11.82 R*: 12.49 Rs Teff: 4994.0 K Logg: 2.68 Fe/H: 0.070



DV Fit Results:

Period = 0.81140 [0.00001] d
Epoch = 131.8738 [0.0007] BKJD
Rp/R* = 0.0091 [0.0024]
a/R* = 2.52 [2.27]
b = 0.91 [0.21]
Seff = N/A
Teq = N/A
Rp = 12.38 [4.65] Re
a = N/A
Ag = N/A
Teffp = N/A

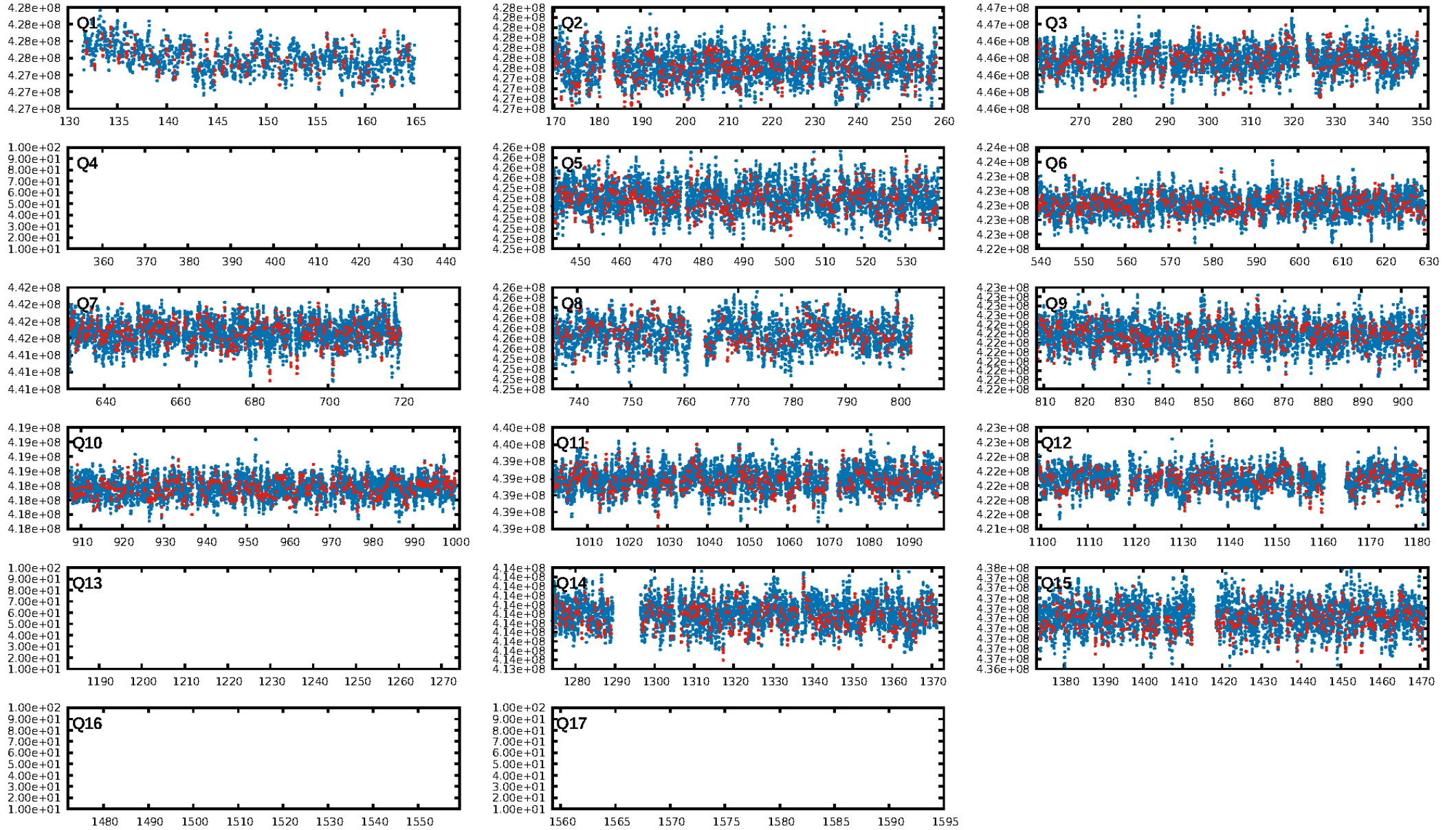
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [332.43σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.56e-20
RollingBand-fgt: 1.00 [1274/1275]
GhostDiagnostic-chr: 1.386
Centroid-sig: 0.0%
Centroid-so: 1.195 arcsec [4.77σ]
OotOffset-rm: 4.836 arcsec [60.41σ]
KicOffset-rm: 4.837 arcsec [59.13σ]
OotOffset-st: 4/4/2/3 [13]
KicOffset-st: 4/4/2/3 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

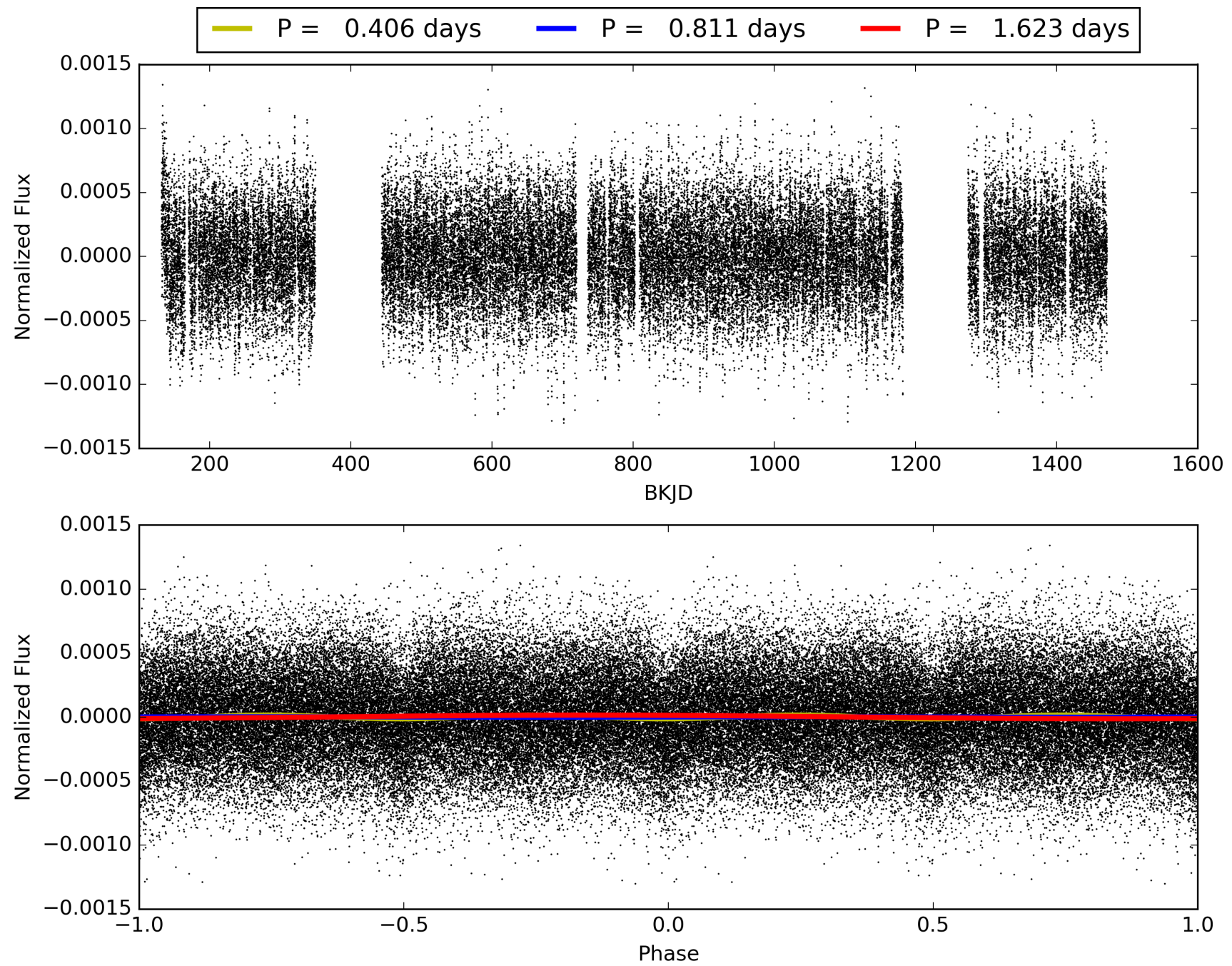
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007631194-01, PDC Light Curves

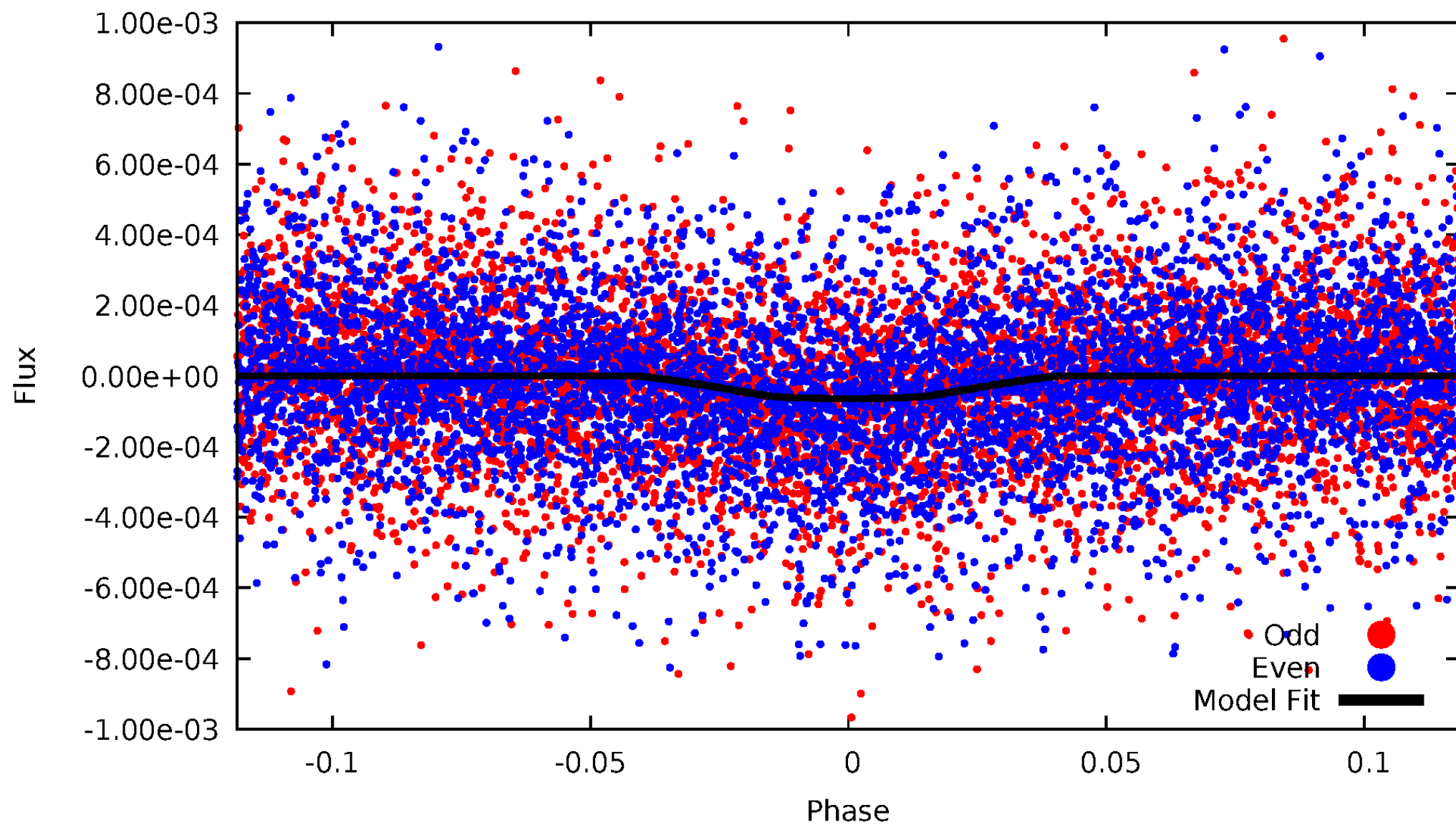


TCE 007631194-01



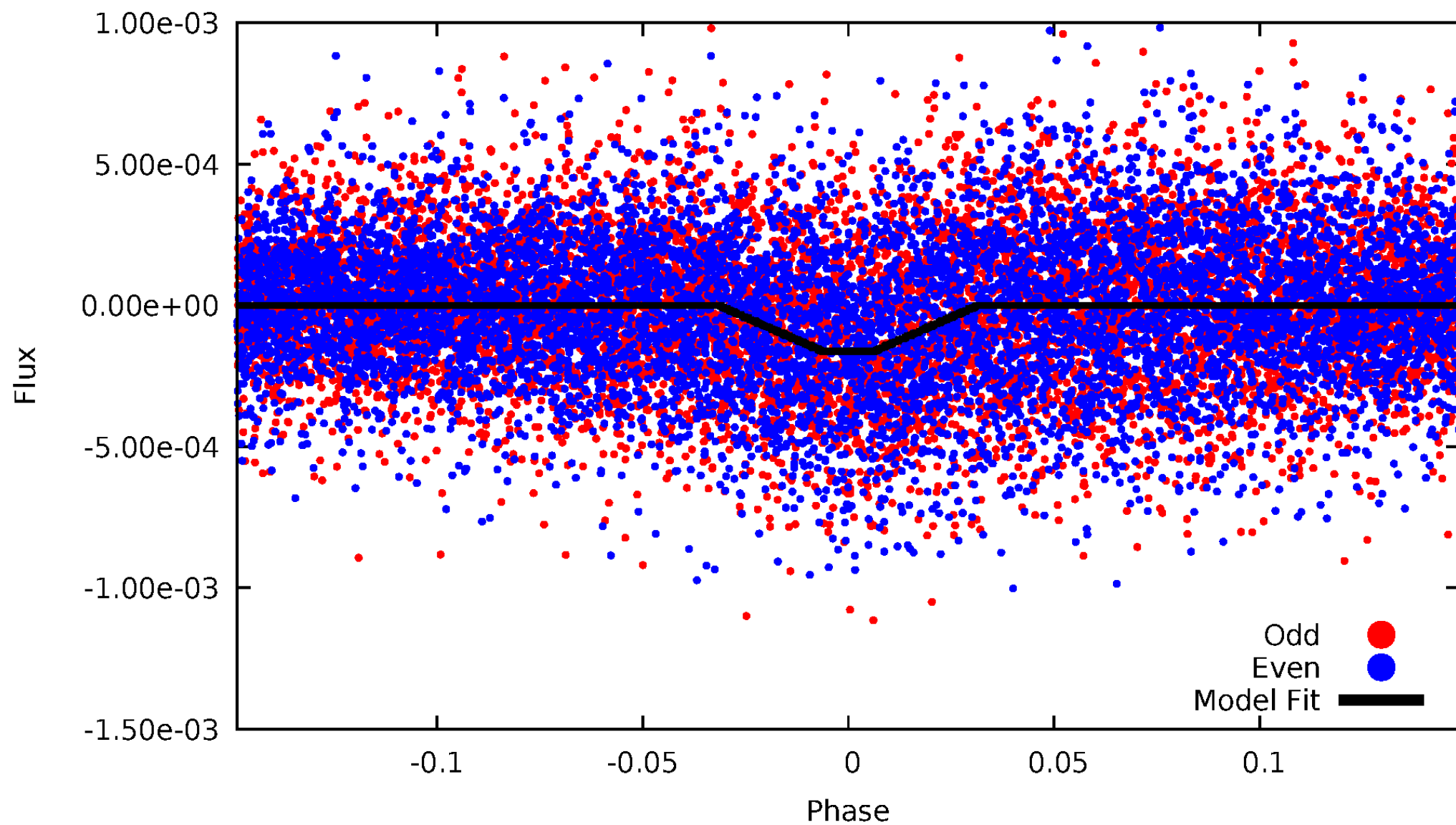
DV Odd/Even

TCE 007631194-01

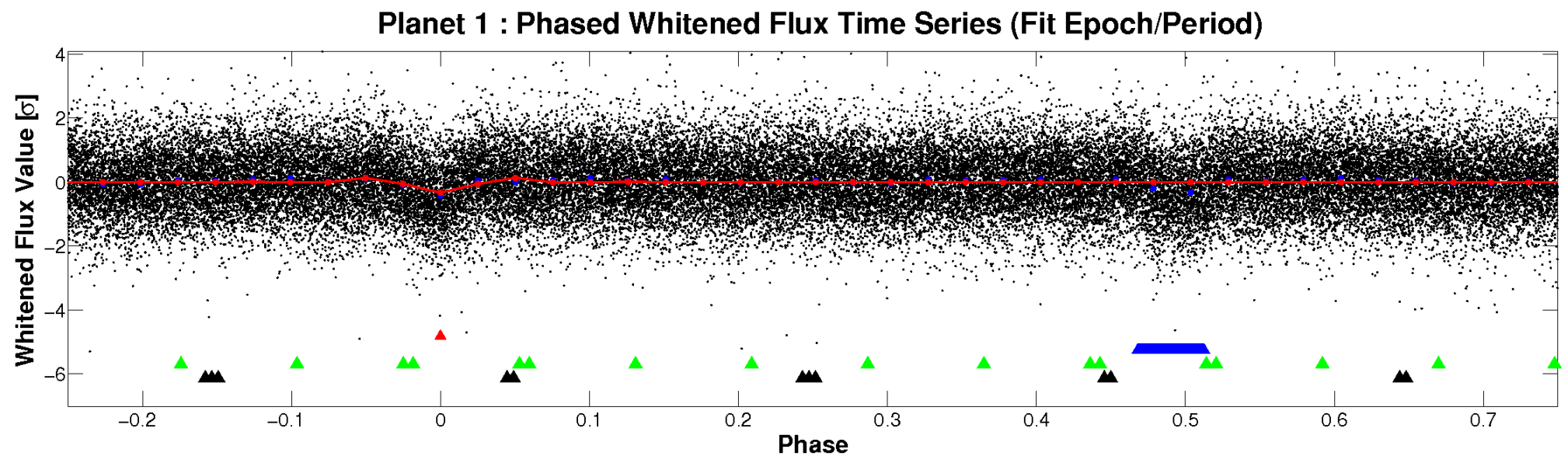
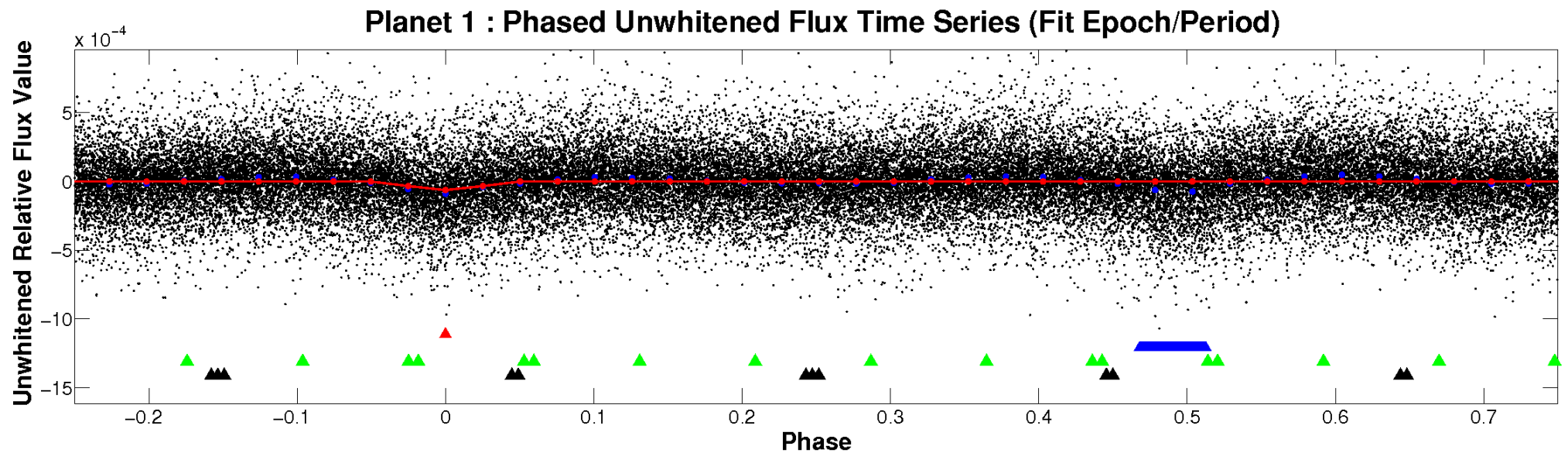


ALT Odd/Even

TCE 007631194-01

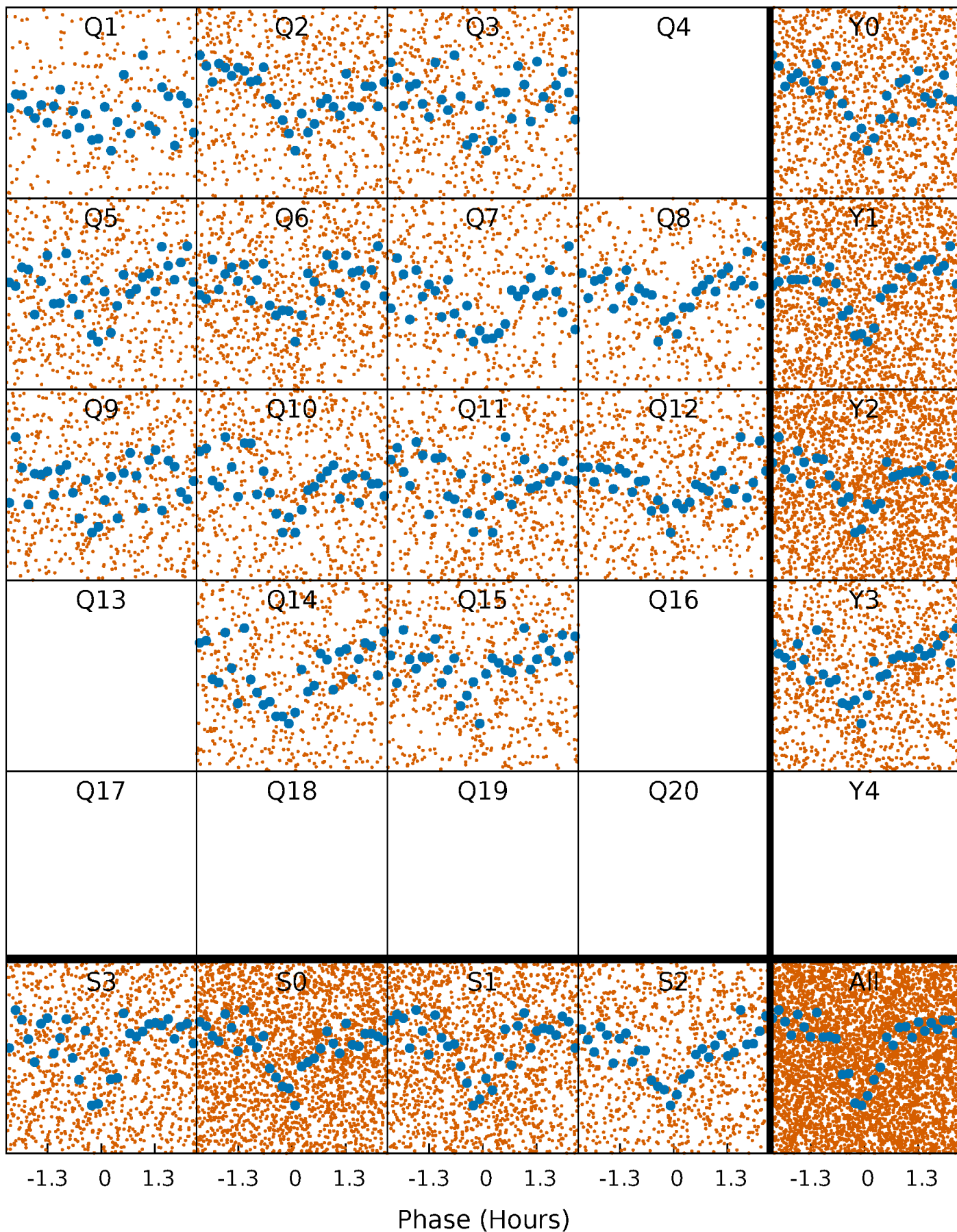


Non-Whitened Vs. Whitened Light Curve



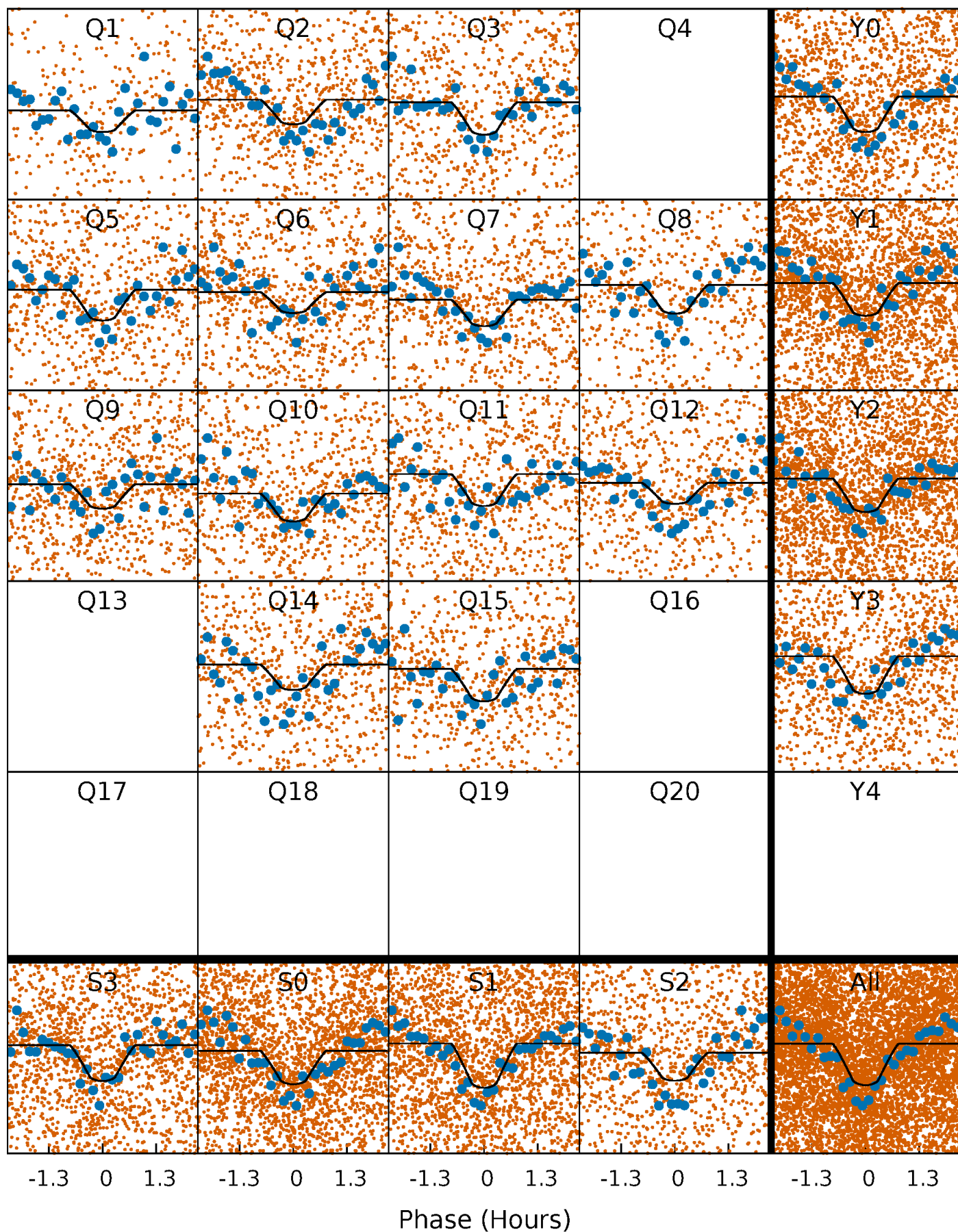
PDC Quarter-Phased Transit Curves

TCE 007631194-01 P= 0.811399 Days $T_0=131.873759$ (BKJD)



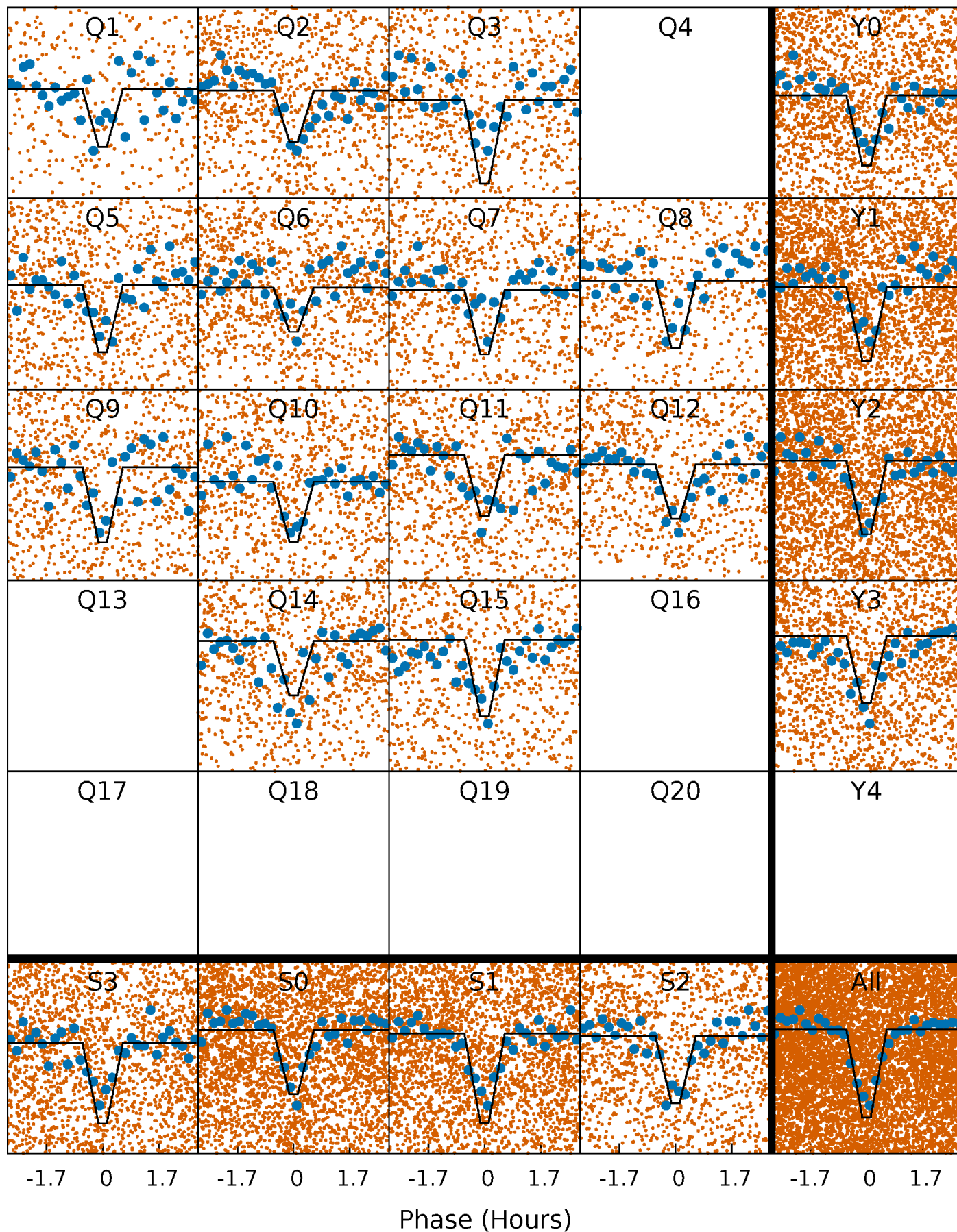
DV Quarter-Phased Transit Curves

TCE 007631194-01 P= 0.811399 Days $T_0=131.873759$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

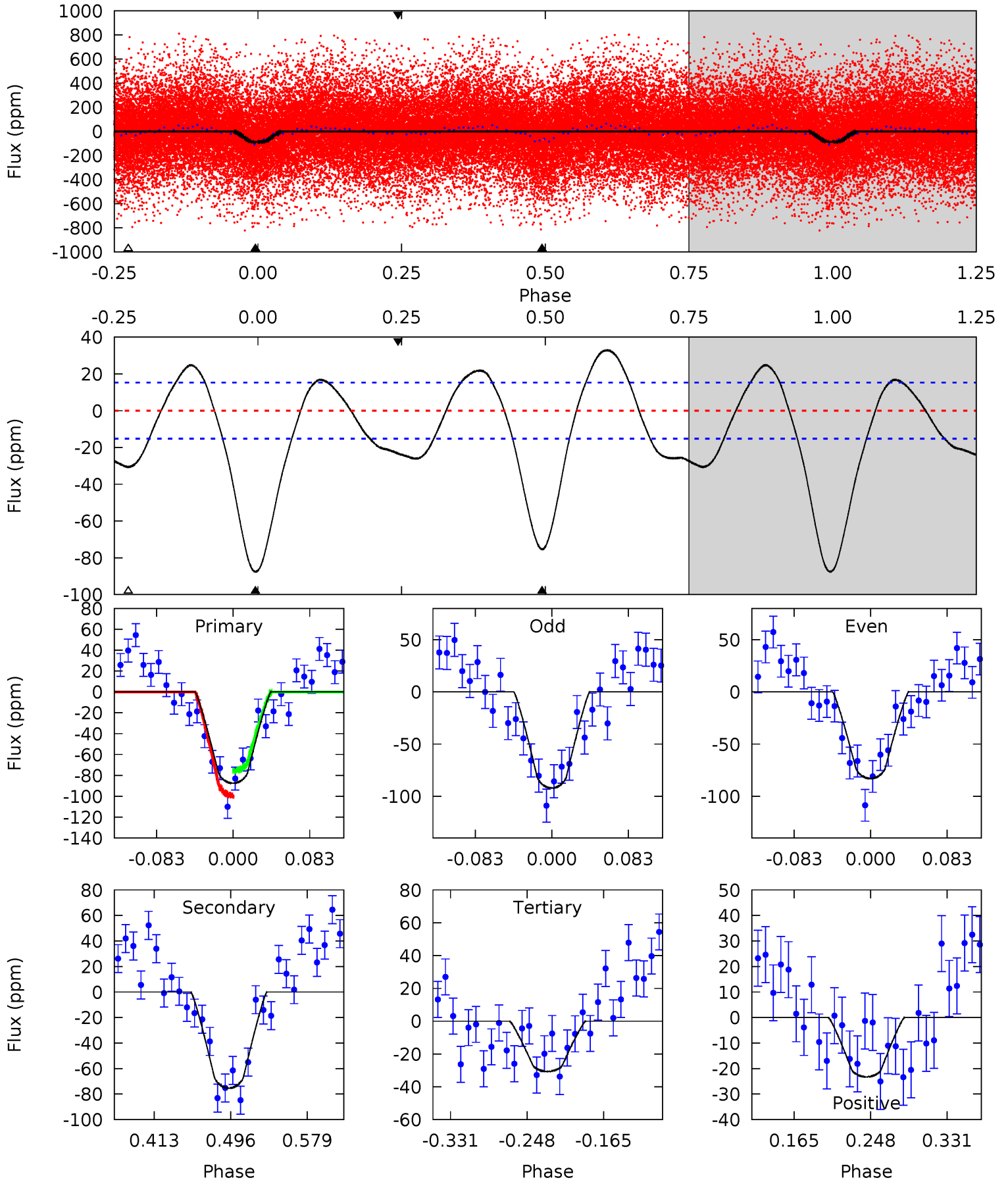
TCE 007631194-01 P= 0.811394 Days $T_0=131.873987$ (BKJD)



DV Model-Shift Uniqueness Test

007631194-01, P = 0.811399 Days, E = 131.062360 Days

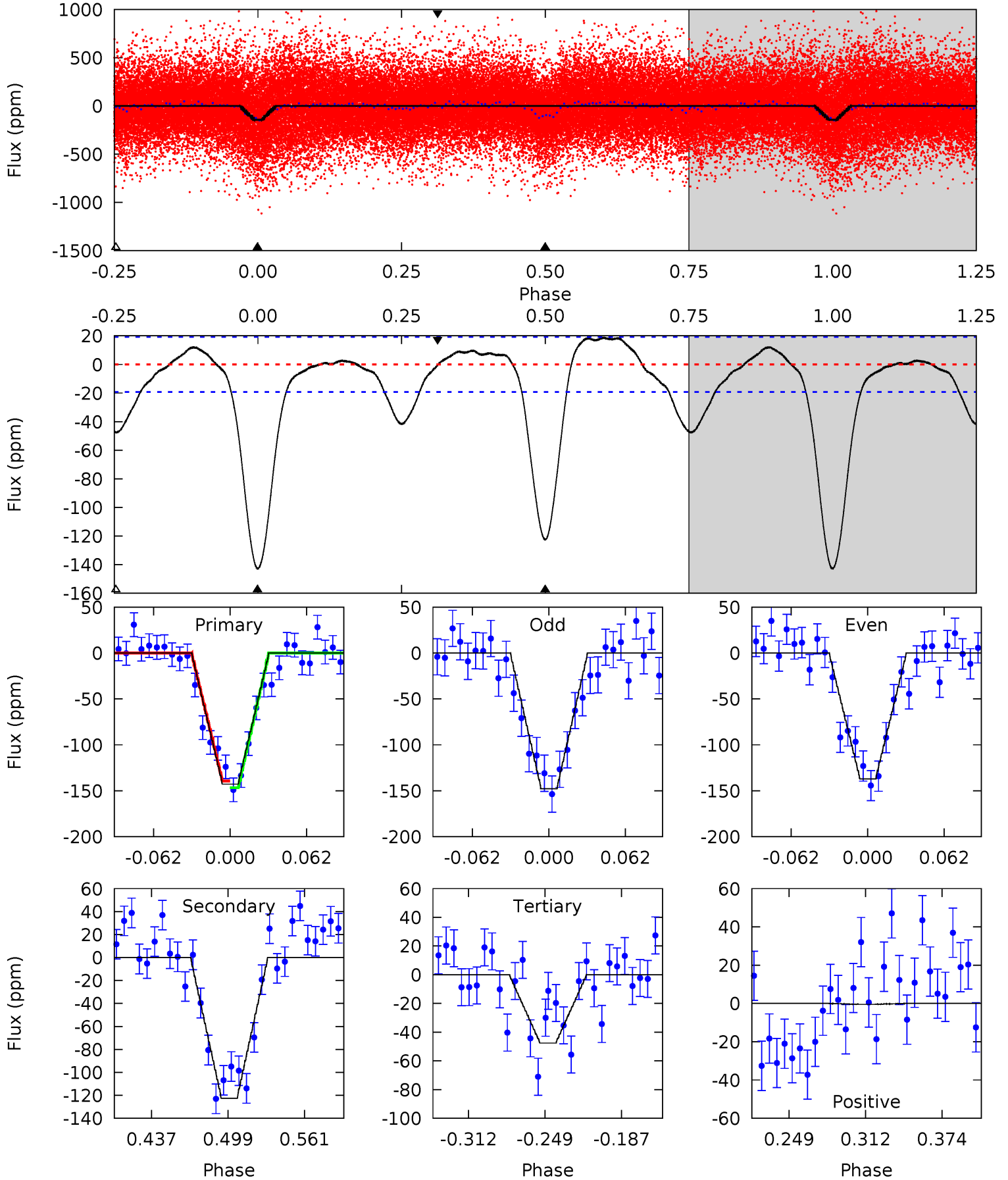
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	22.7	9.25	-7.02	4.60	1.74	6.02	17.2	33.4	13.5	29.8	1.39	1.11	0.27	3.58



Alt Model-Shift Uniqueness Test

007631194-01, P = 0.811394 Days, E = 131.062593 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.5	29.6	11.5	-0.11	4.66	1.86	4.11	23.0	34.6	18.1	29.7	1.32	1.01	0.12	0.88



Stellar Parameters For KIC 007631194

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4994^{+37}_{-150}	$2.682^{+0.033}_{-0.027}$	$0.070^{+0.150}_{-0.300}$	$12.487^{+0.836}_{-3.343}$	$2.731^{+0.214}_{-1.285}$	$0.002^{+0.001}_{-0.000}$
	+1%/-3%	+1%/-1%	+214%/-429%	+7%/-27%	+8%/-47%	+41%/-11%
Source	SPE74	AST9	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 007631194-01 / KOI 6896.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-75 ± 3	$12.27^{+3.42}_{-3.41}$	7017^{+139}_{-222}	-4794^{+1881}_{-395}	$0.155^{+0.137}_{-0.058}$
Alt.	-123 ± 4	$17.56^{+3.41}_{-3.66}$	7025^{+129}_{-246}	-4973^{+463}_{-267}	$0.124^{+0.069}_{-0.036}$

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

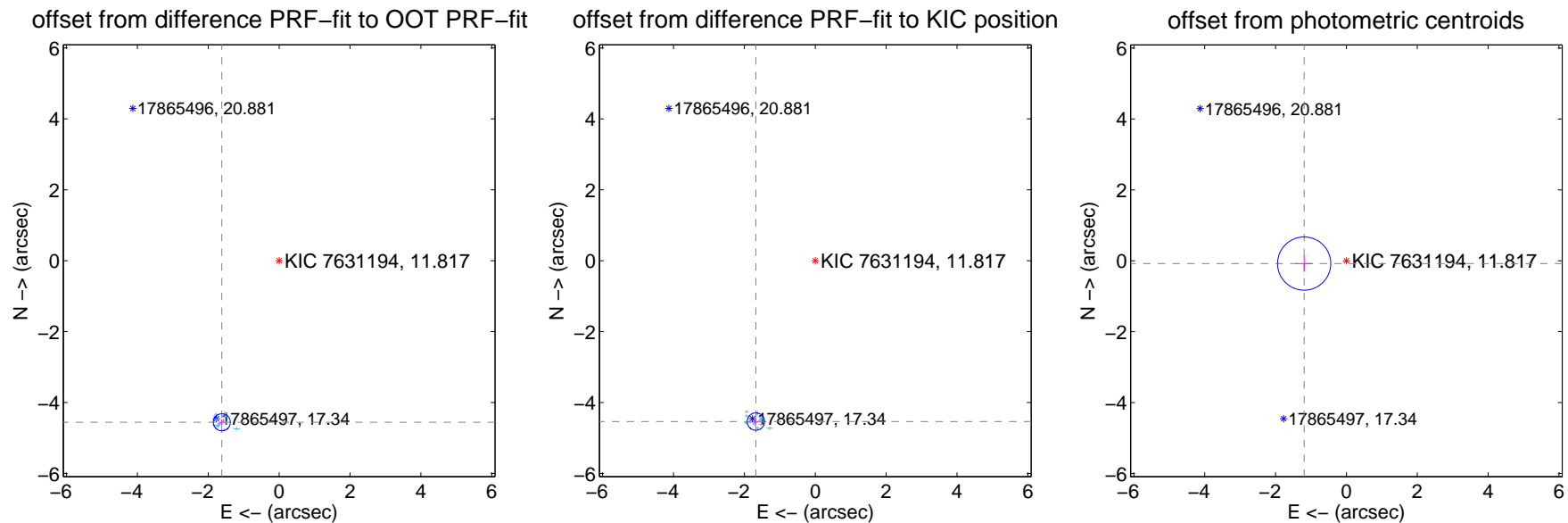
DV Centroid Data

Supplemental centroid analysis for 007631194-01. **Kepler magnitude: 11.82.** Transit SNR 16.45

There are 13 quarters with good PRF difference image offsets

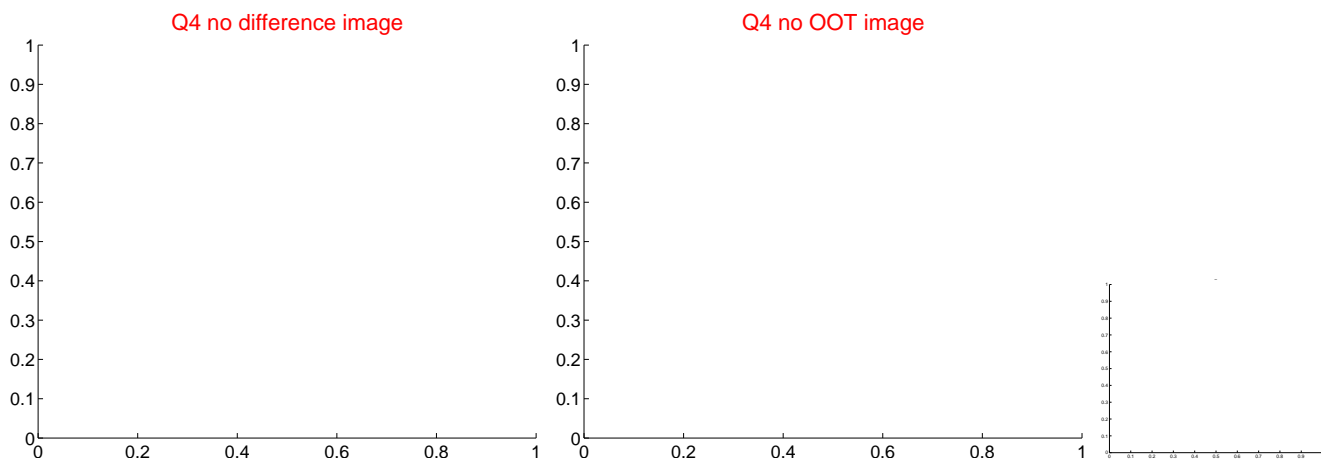
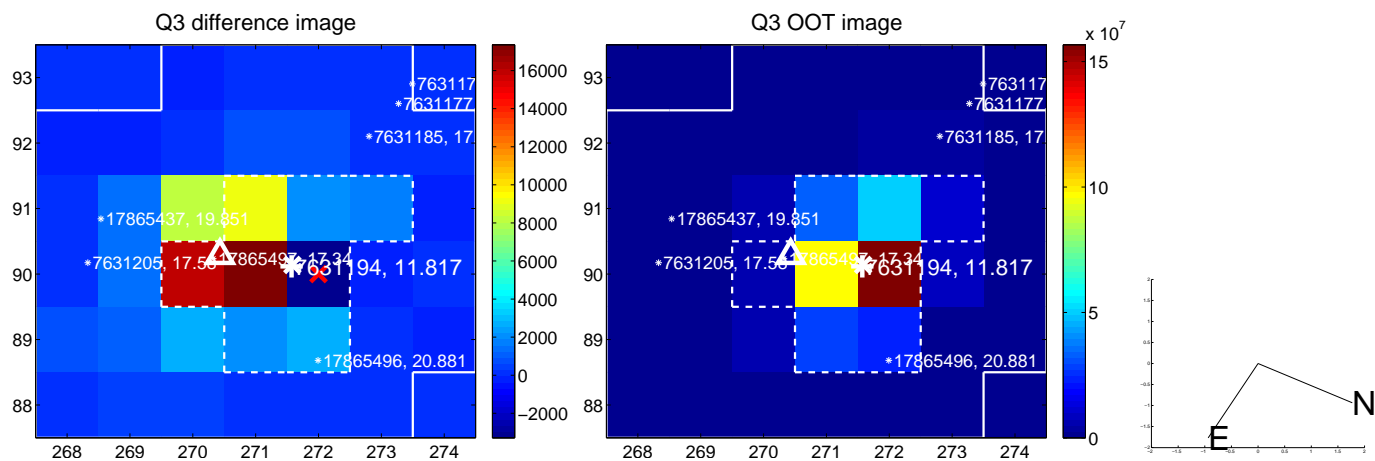
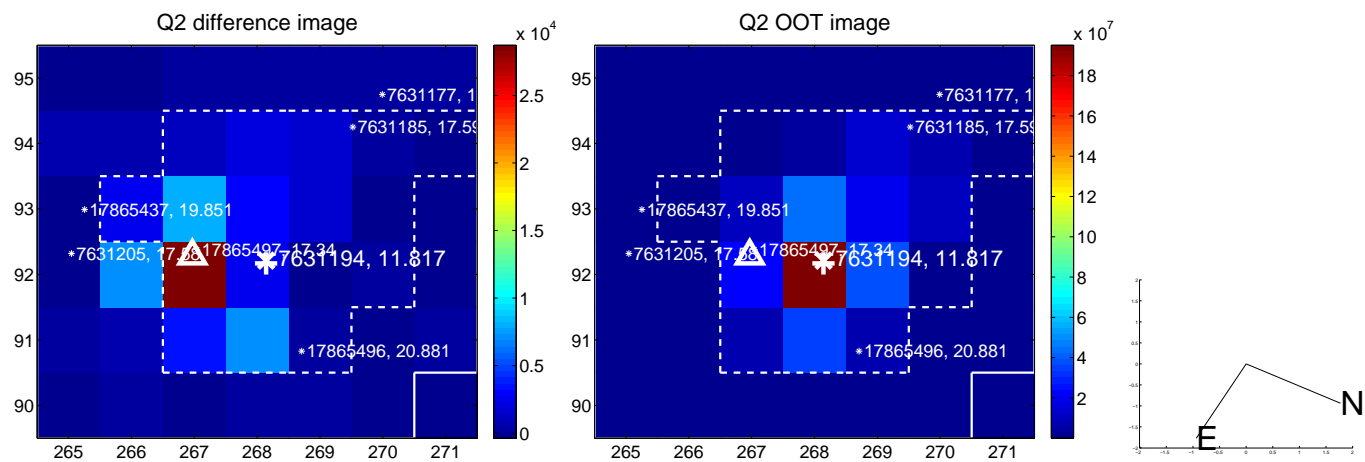
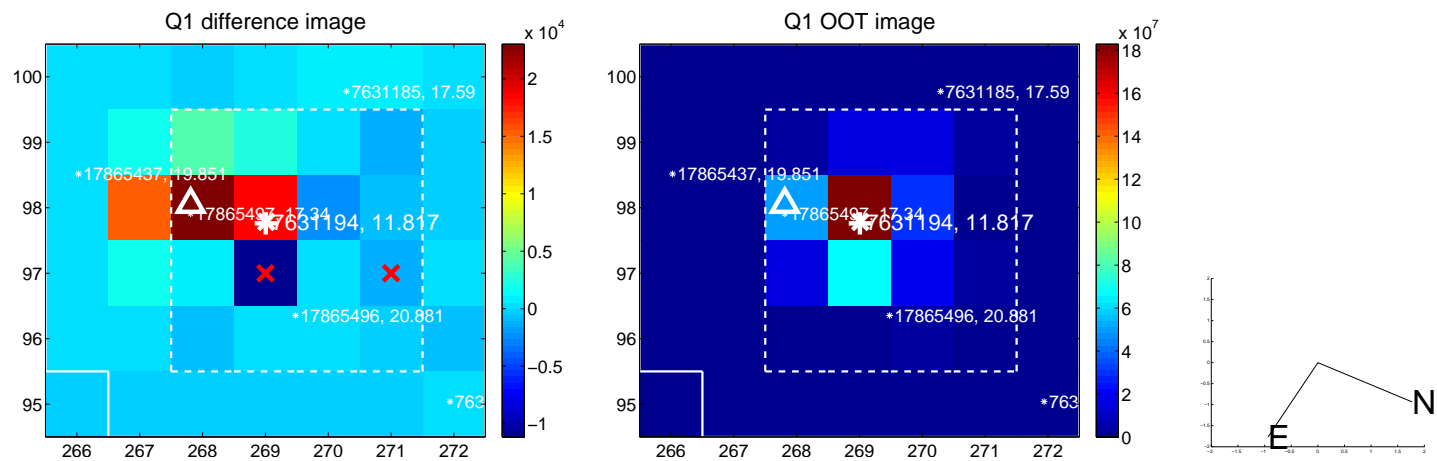
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.836 \pm 0.080	60.41	1.618 \pm 0.079	-4.557 \pm 0.080
PRF-fit source offset from KIC position	4.837 \pm 0.082	59.13	1.676 \pm 0.086	-4.537 \pm 0.081
photometric centroid source offset	1.20 \pm 0.25	4.77	1.19 \pm 0.25	-0.08 \pm 0.23

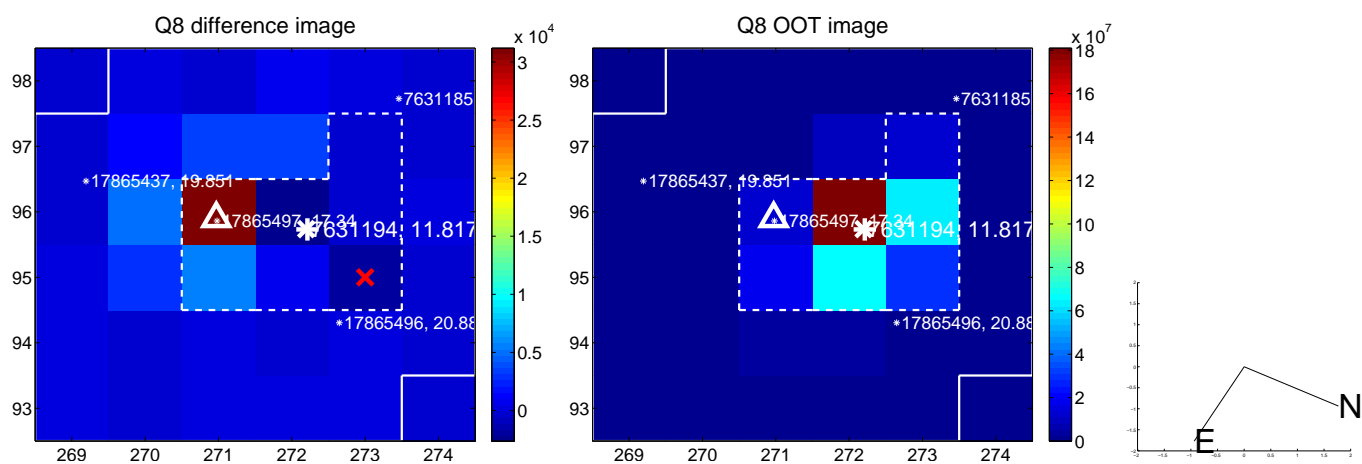
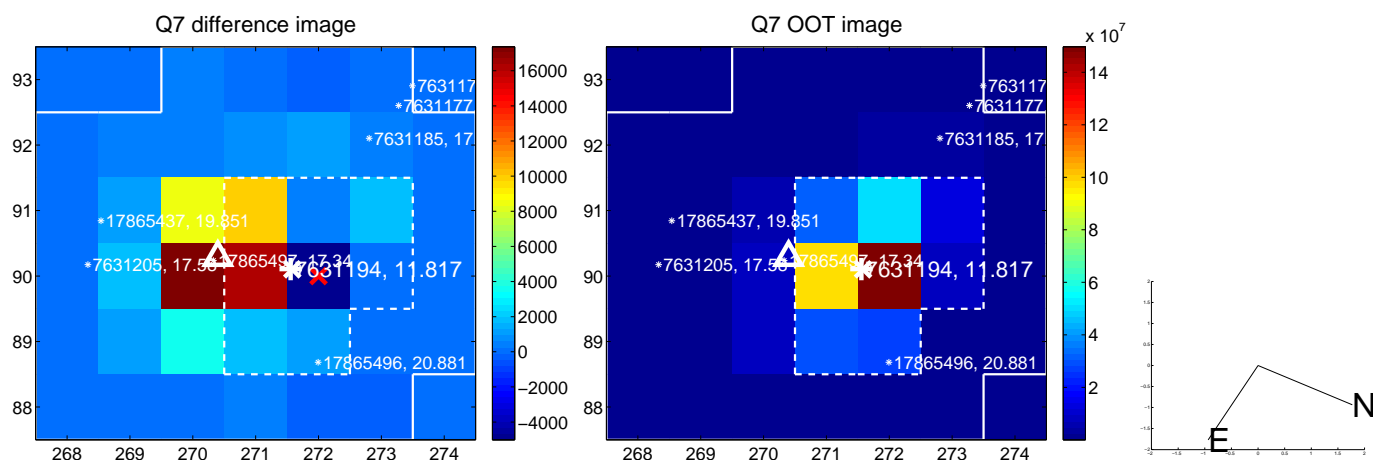
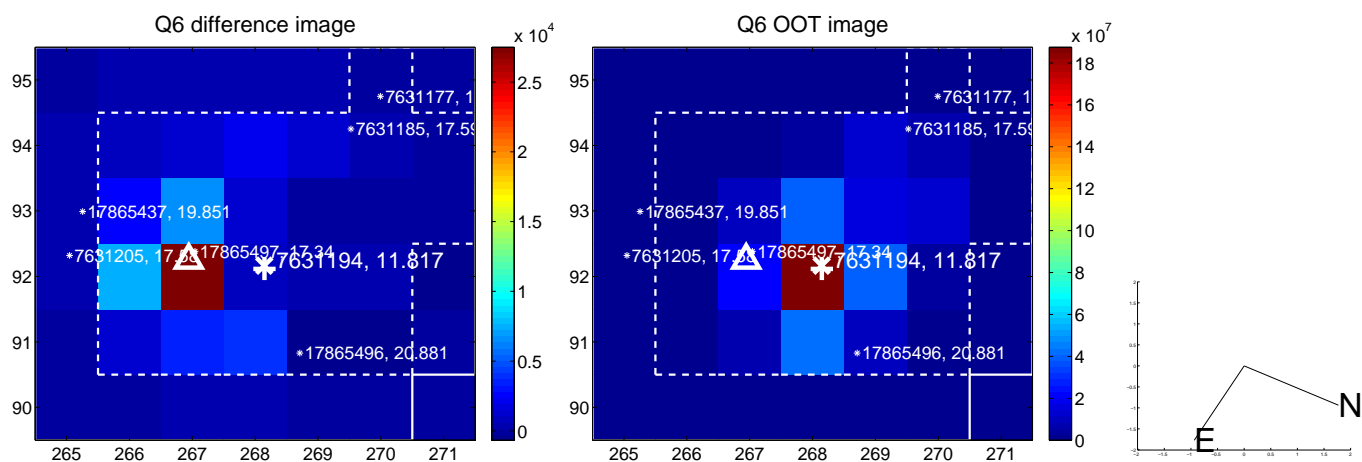
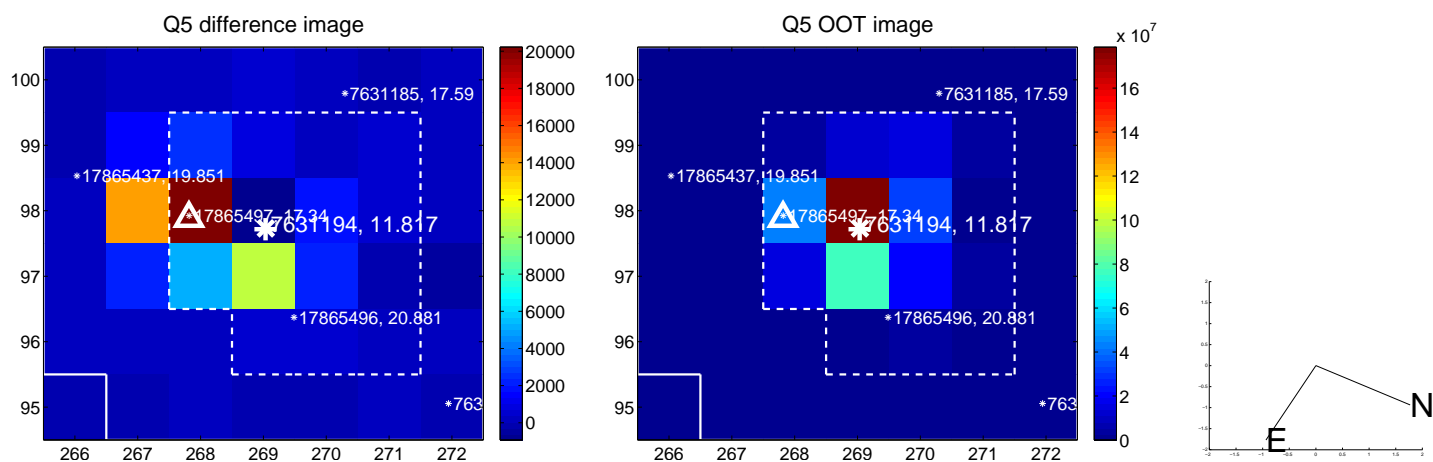


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

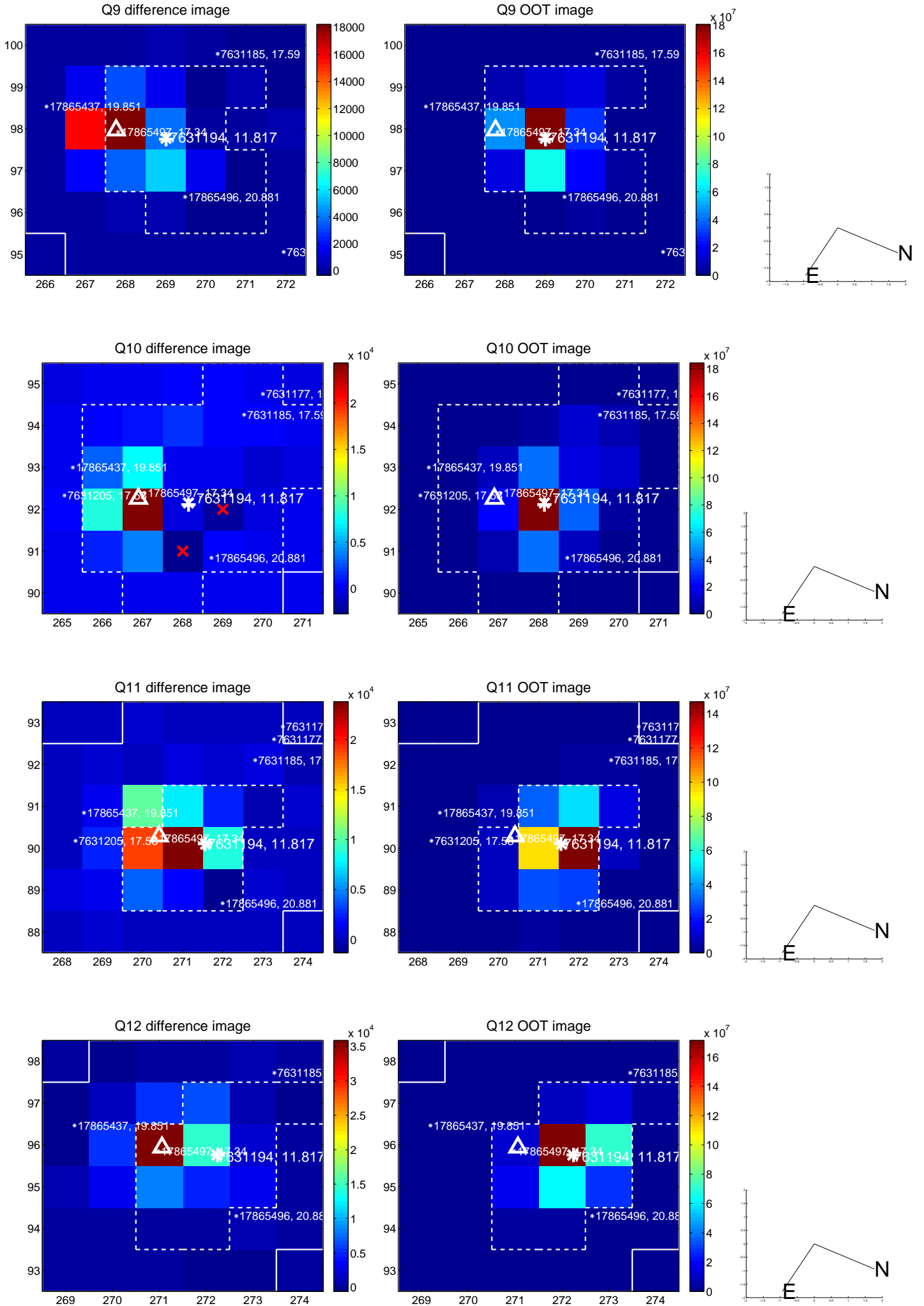
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

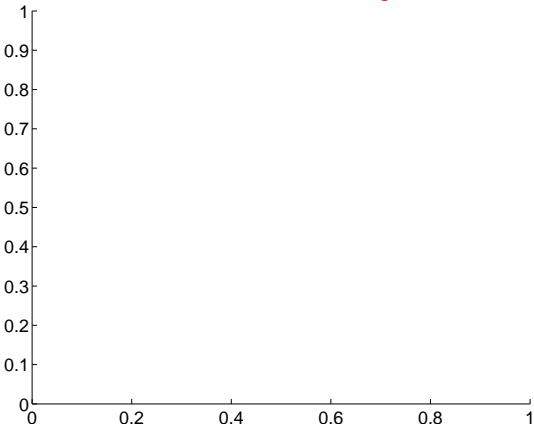


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

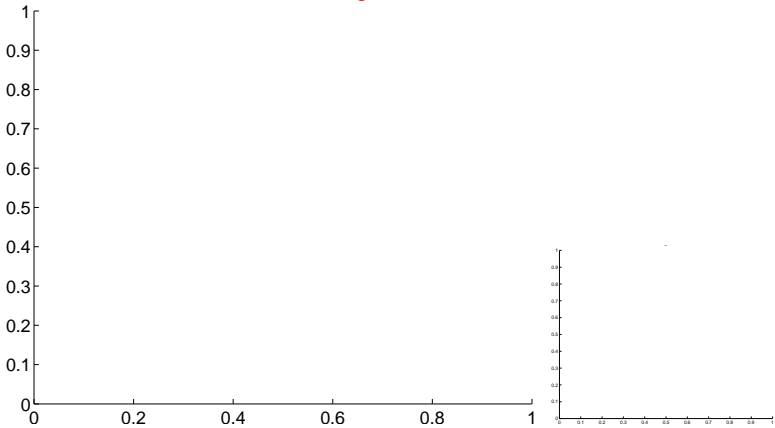


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

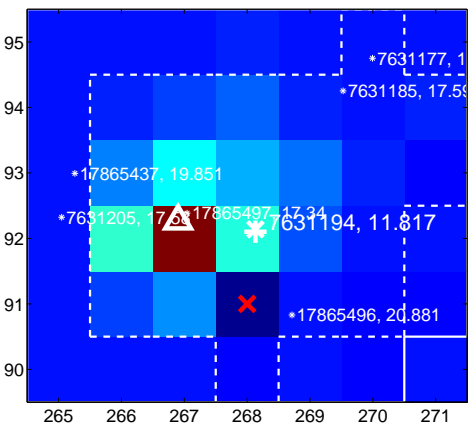
Q13 no difference image



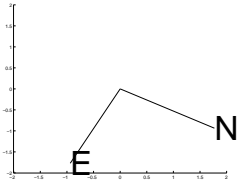
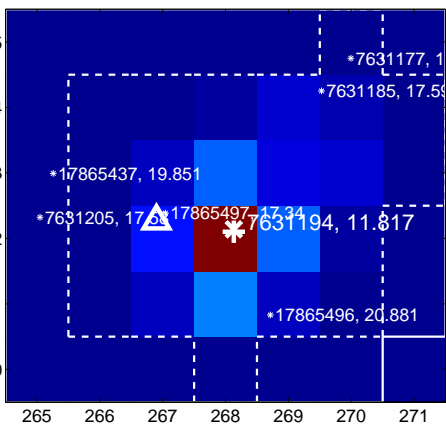
Q13 no OOT image



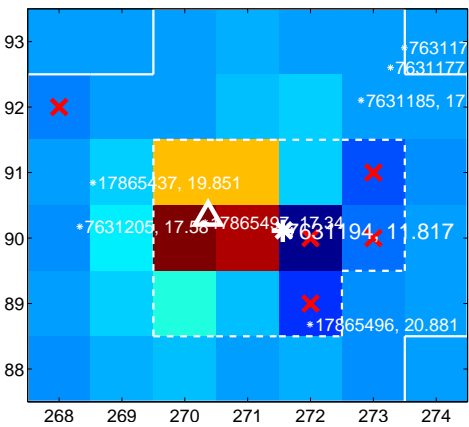
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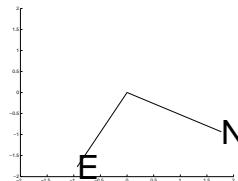
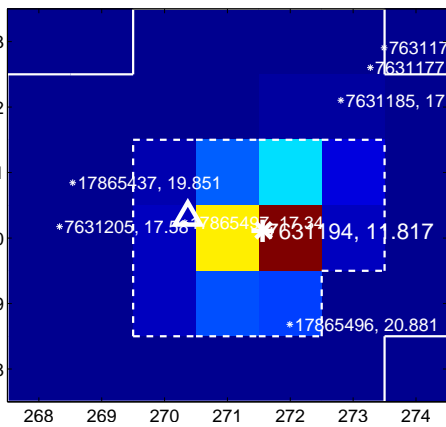
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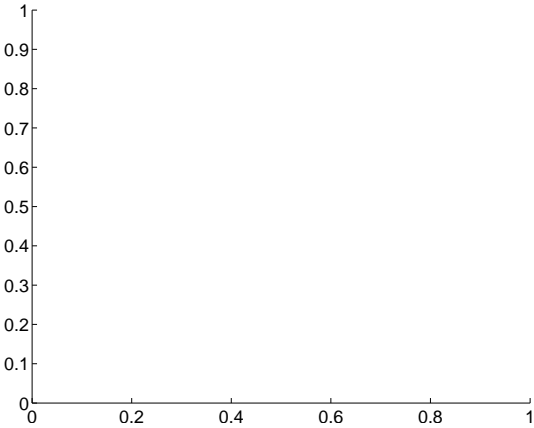
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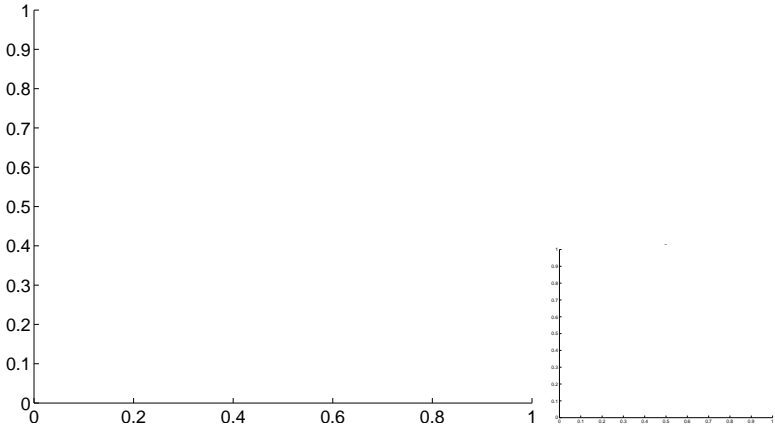
Q15 OOT image



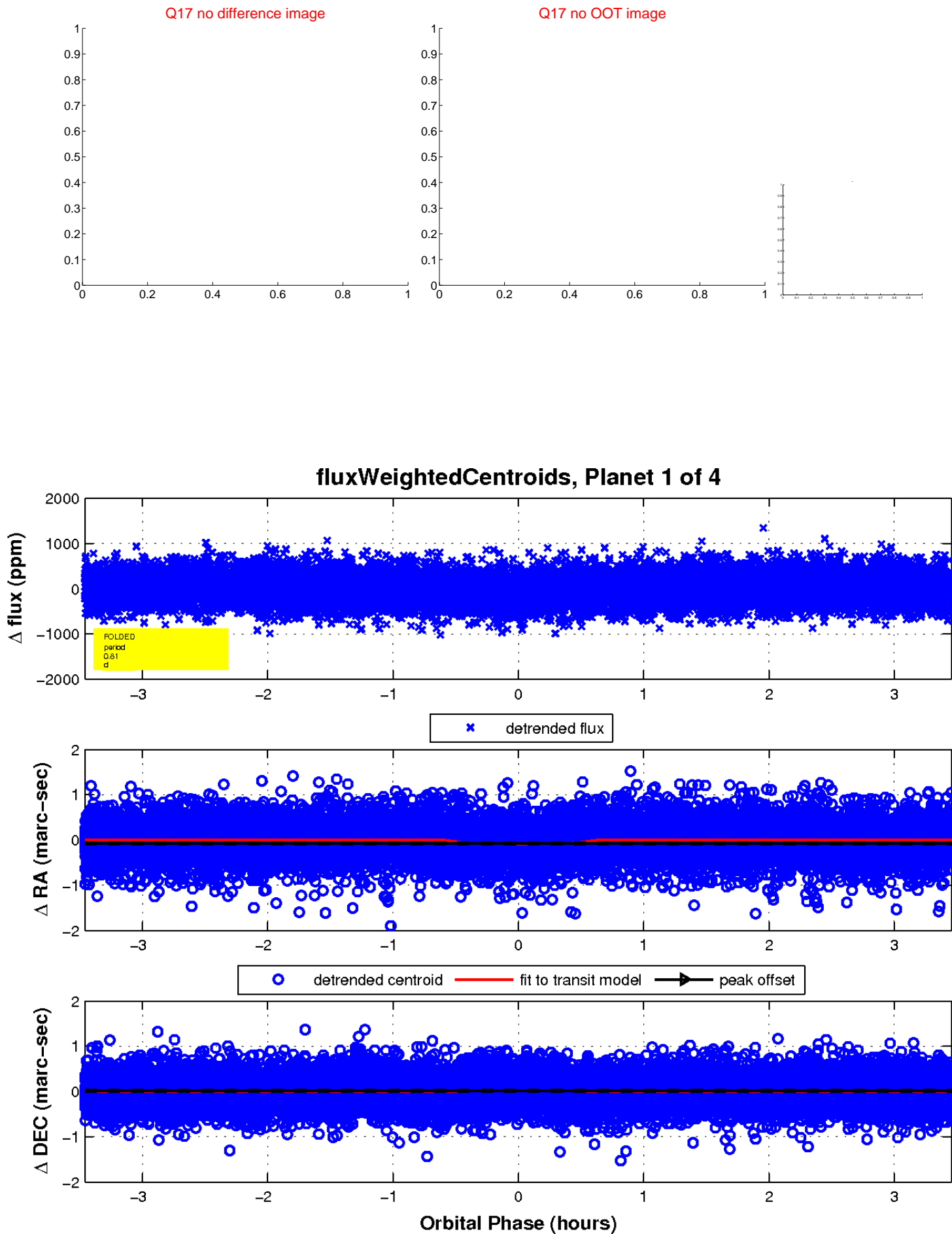
Q16 no difference image



Q16 no OOT image

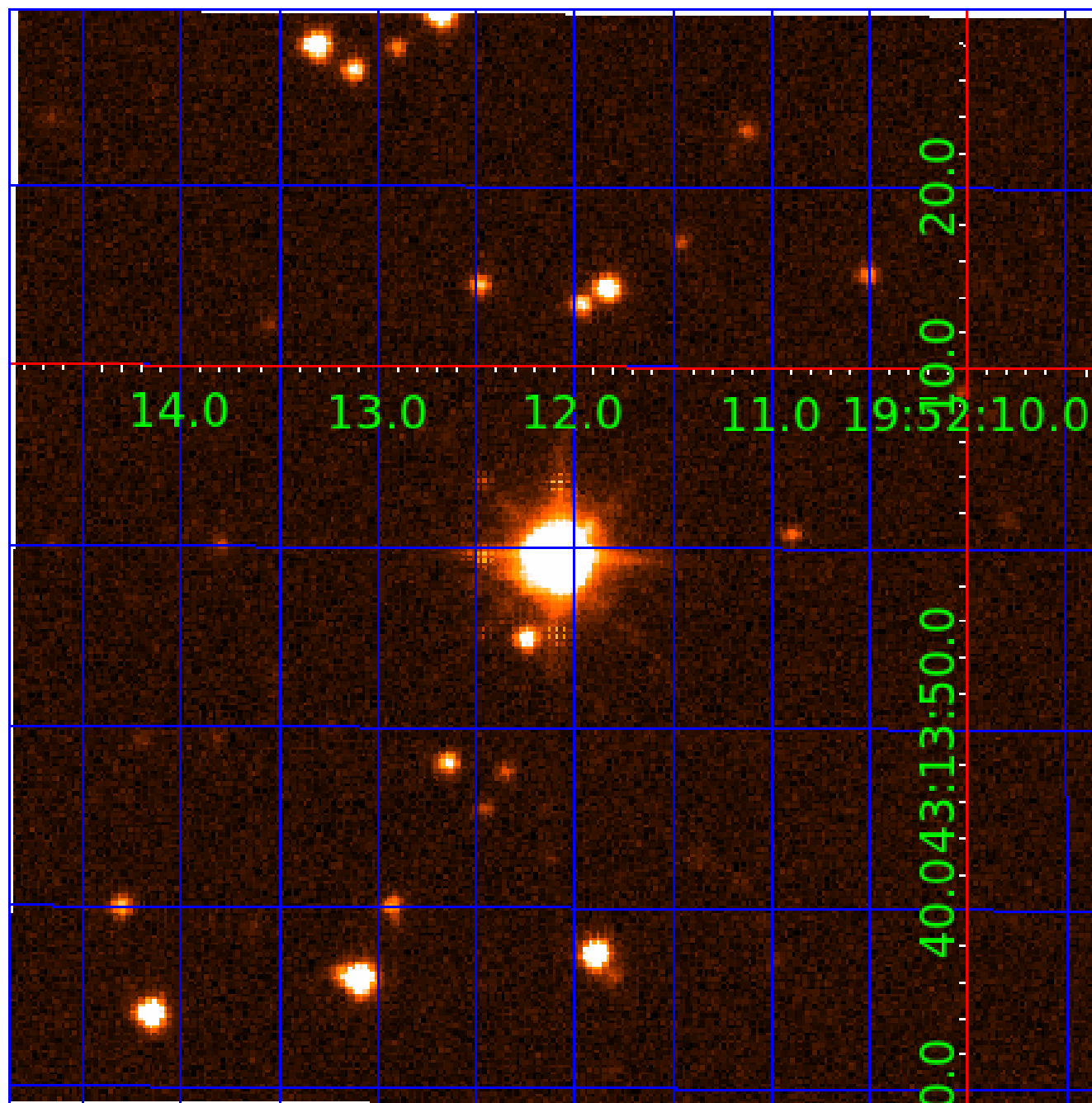


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007631194

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})
007631194-01	OBS	6896.01	0.811399	131.873759	63.9	1.153	11.3	16.5	12.49	4994	12.38	0.00
007631194-02	OBS	No	0.811379	132.289729	59.0	1.087	10.9	15.5	12.49	4994	11.81	0.00
007631194-03	OBS	No	88.068390	172.797555	719.5	6.193	8.5	9.0	12.49	4994	68.91	295.96
007631194-04	OBS	No	120.573159	216.463461	630.8	4.094	7.3	7.8	12.49	4994	42.27	194.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007631194-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
007631194-02	OBS	FP	0.00	1	0	1	0	LPP_DV—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
007631194-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—HALO_GHOST
007631194-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE

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.

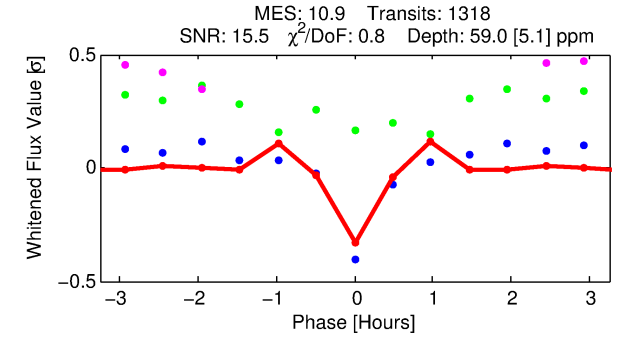
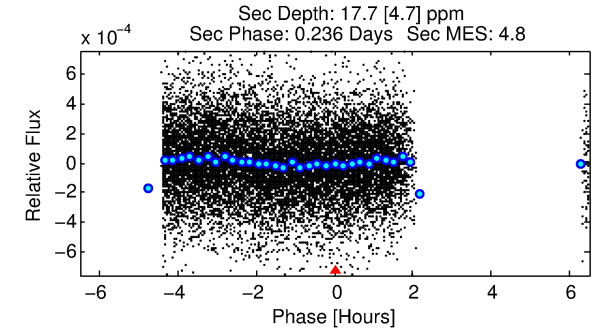
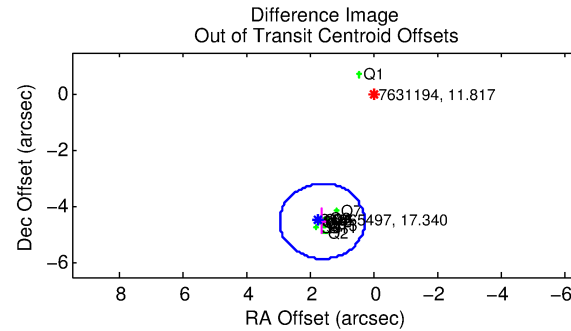
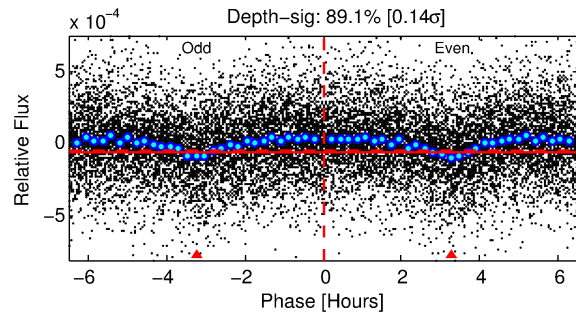
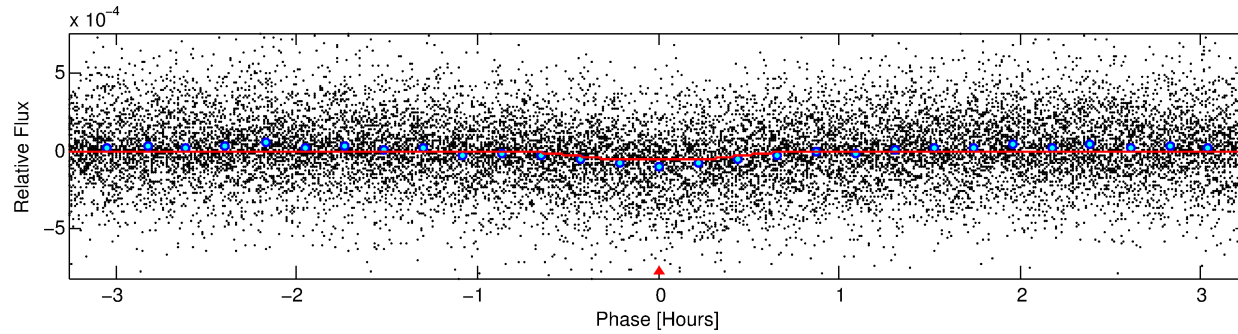
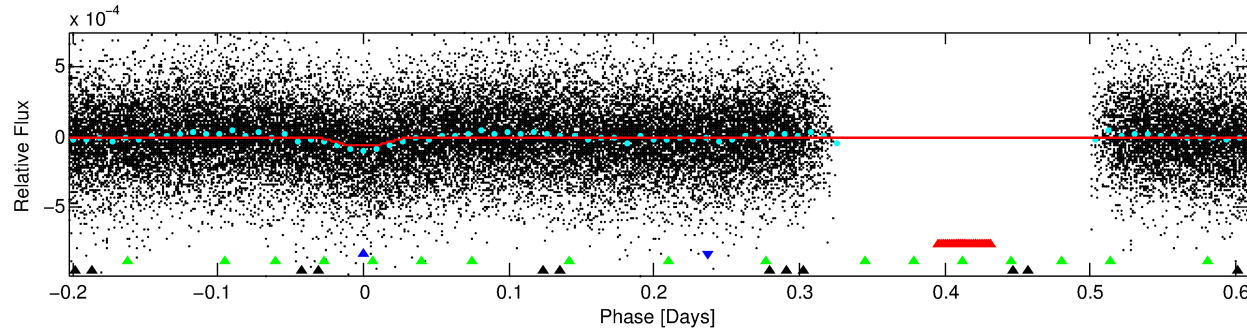
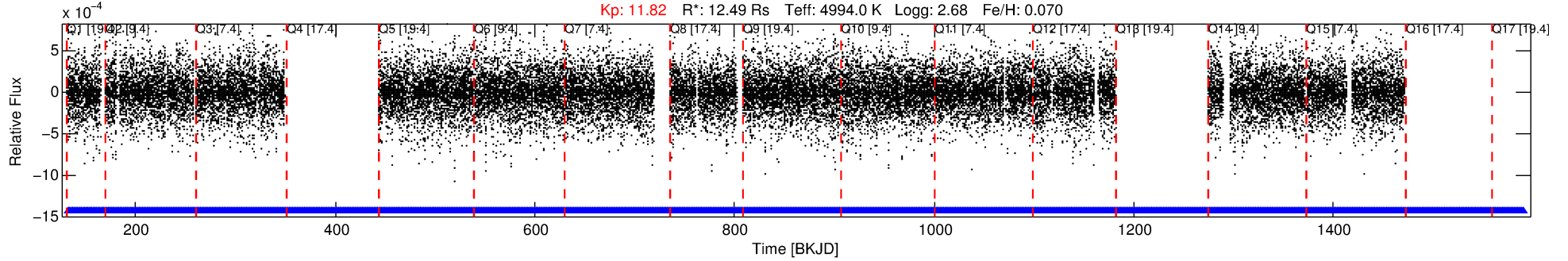
Ephemeris Match Information For 007631194-02

No Significant Match Found

DV One-Page Summary

KIC: 7631194 Candidate: 2 of 4 Period: 0.811 d
KOI: K06896 Corr: No Ephemeris Match

Kp: 11.82 R*: 12.49 Rs Teff: 4994.0 K Logg: 2.68 Fe/H: 0.070



DV Fit Results:

Period = 0.81138 [0.00001] d
Epoch = 132.2897 [0.0007] BKJD
Rp/R* = 0.0087 [0.0019]
a/R* = 2.72 [2.10]
b = 0.90 [0.19]
Seff = N/A
Teq = N/A
Rp = 11.81 [4.12] Re
a = N/A
Ag = N/A
Teffp = N/A

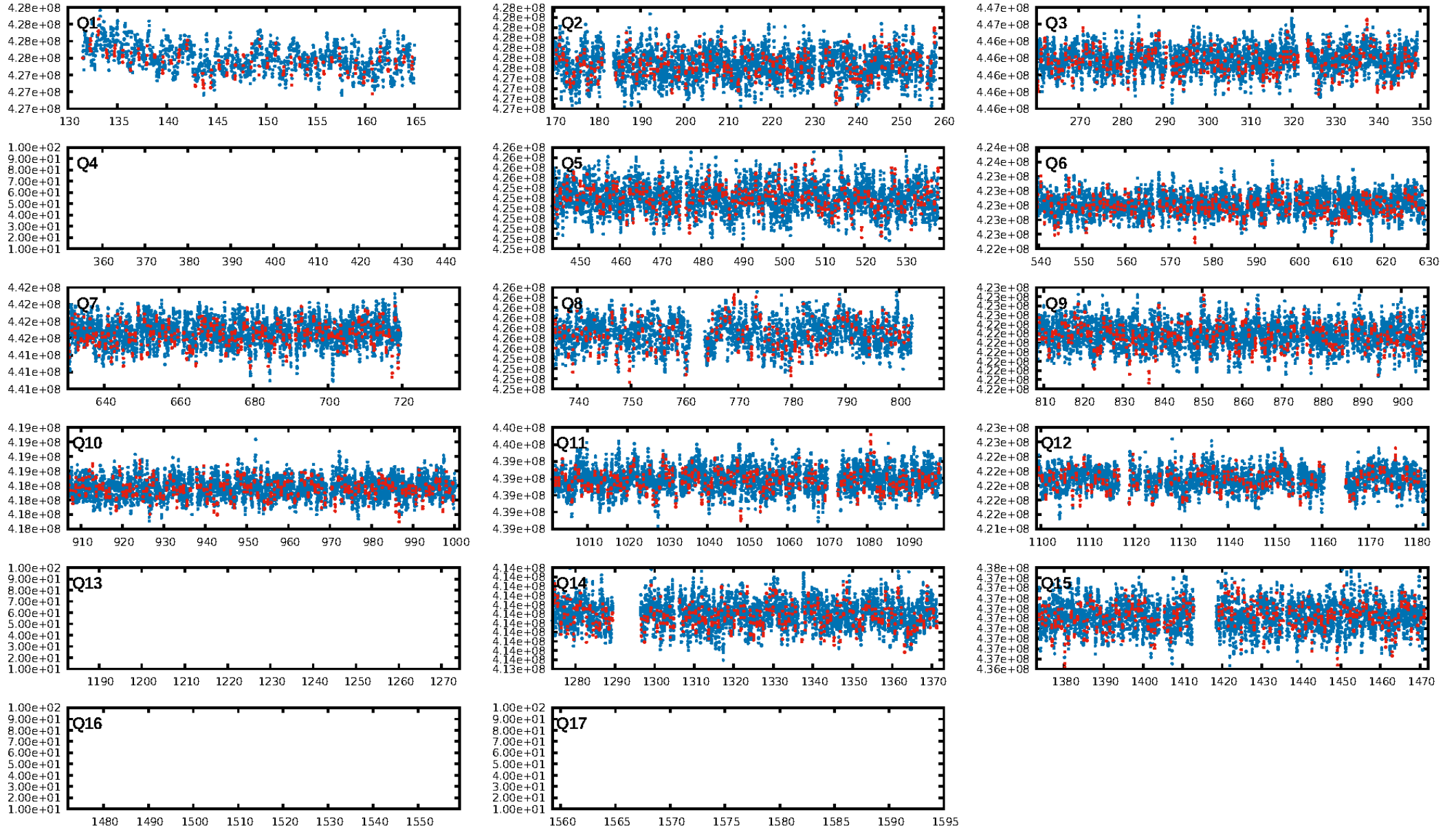
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.36e-19
RollingBand-fgt: 1.00 [1276/1276]
GhostDiagnostic-chr: 1.036
Centroid-sig: 0.0%
Centroid-so: 1.085 arcsec [3.93σ]
OotOffset-rm: 4.803 arcsec [10.77σ]
KicOffset-rm: 4.791 arcsec [10.04σ]
OotOffset-st: 4/4/2/2 [12]
KicOffset-st: 4/4/2/2 [12]
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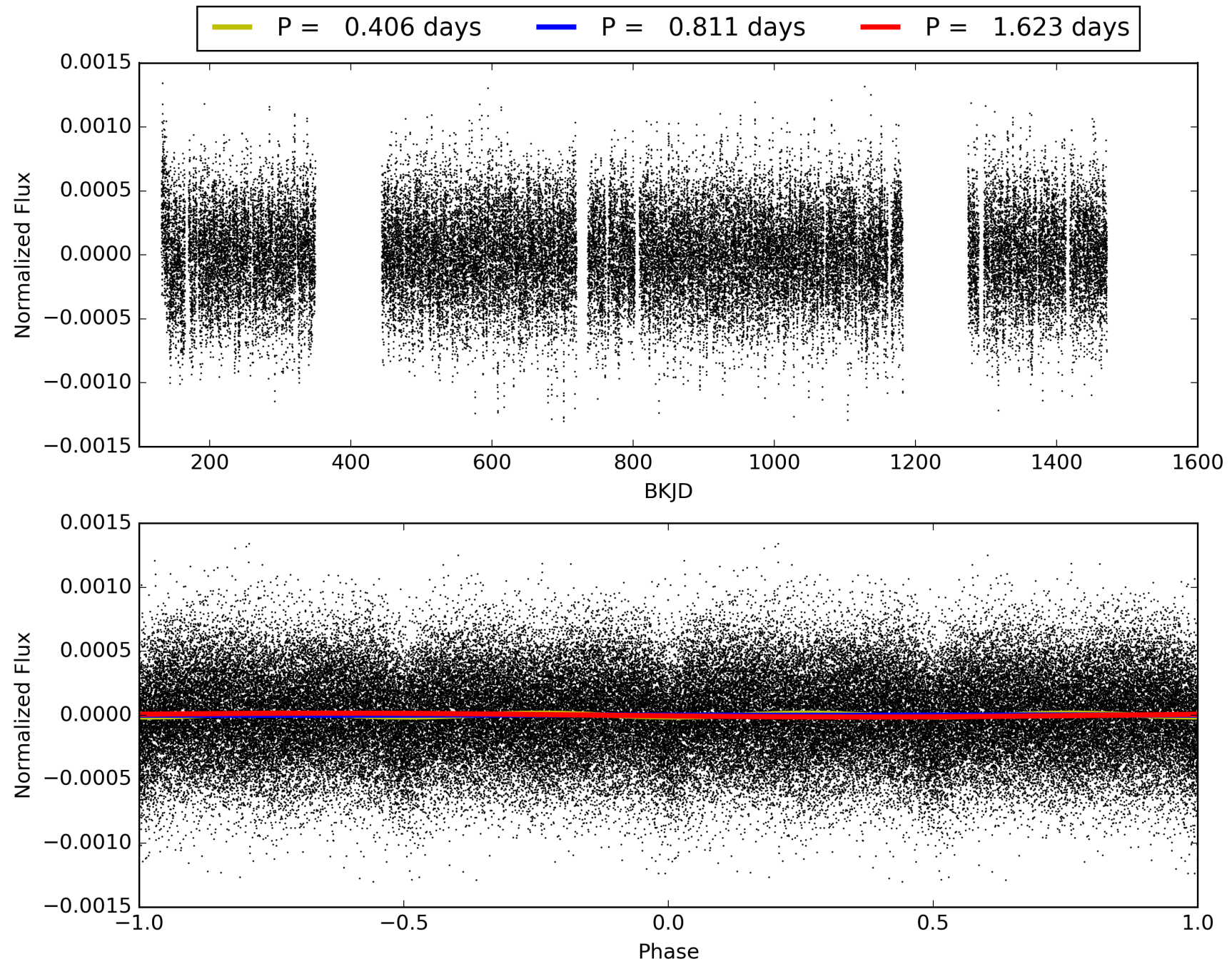
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:30:15 Z

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

TCE 007631194-02, PDC Light Curves

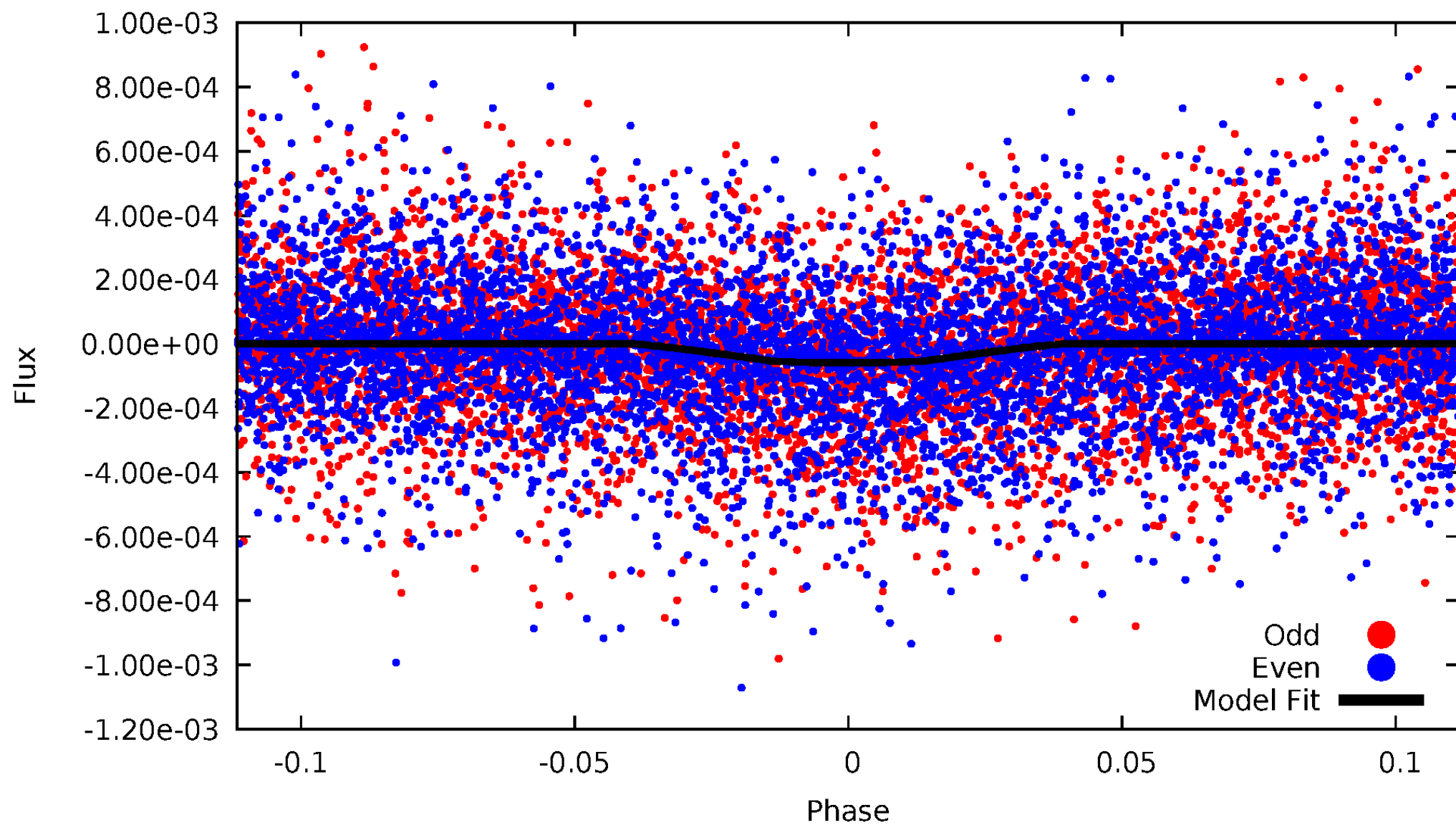


TCE 007631194-02



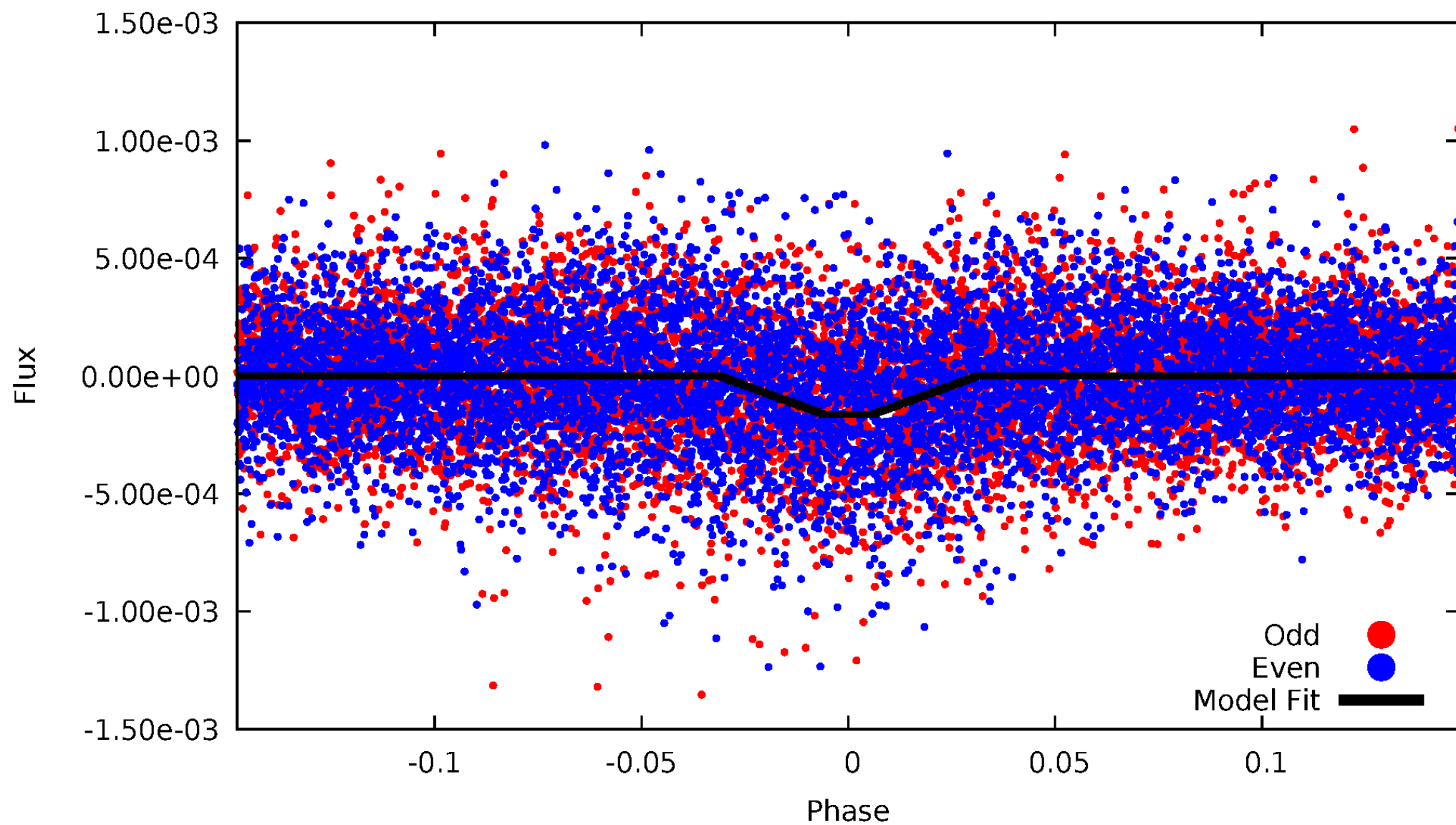
DV Odd/Even

TCE 007631194-02



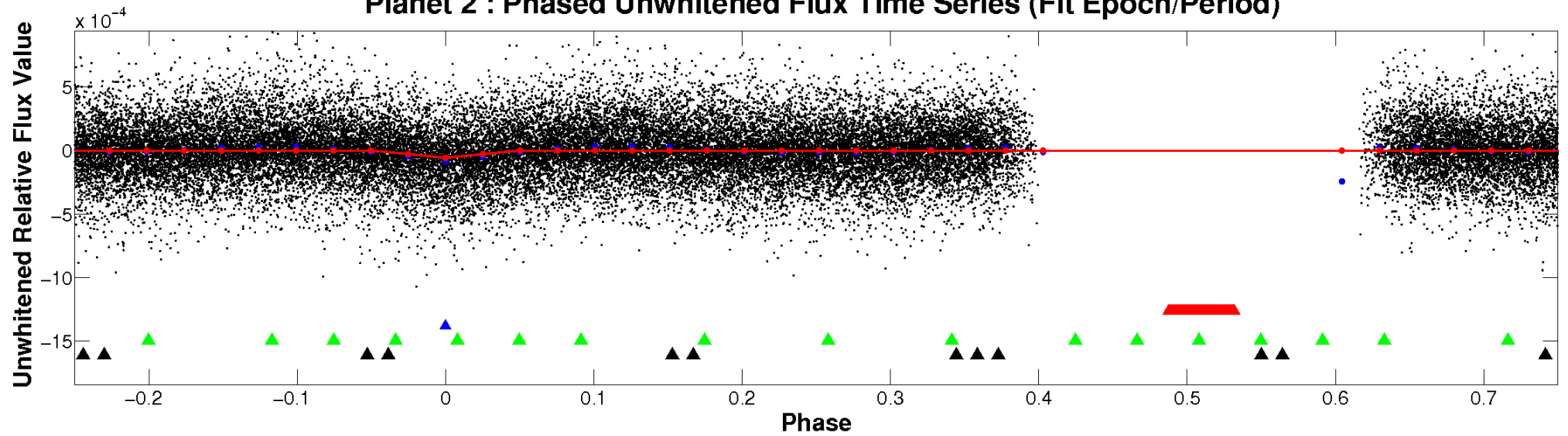
ALT Odd/Even

TCE 007631194-02

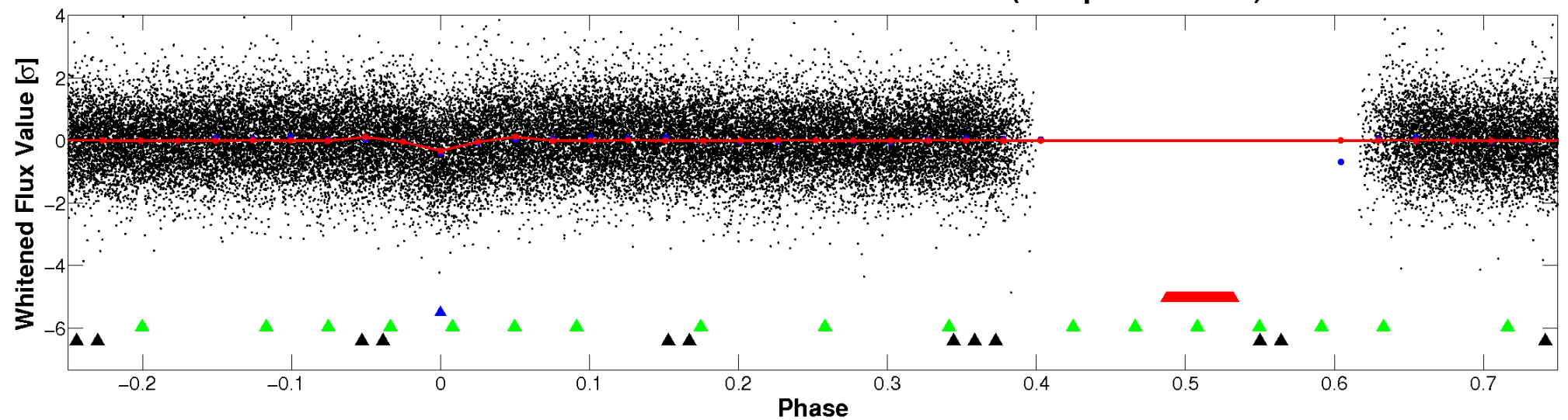


Non-Whitened Vs. Whitened Light Curve

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

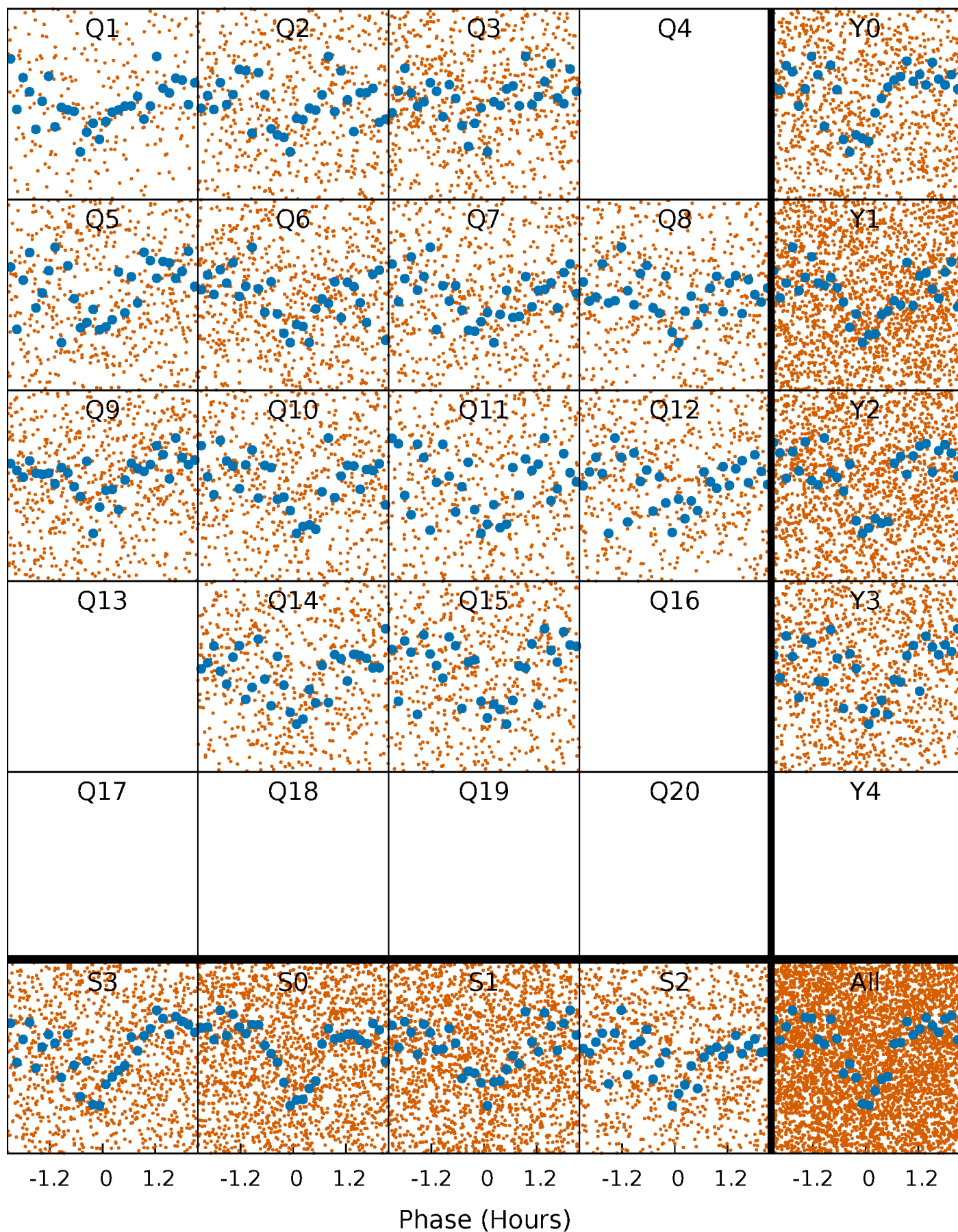


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



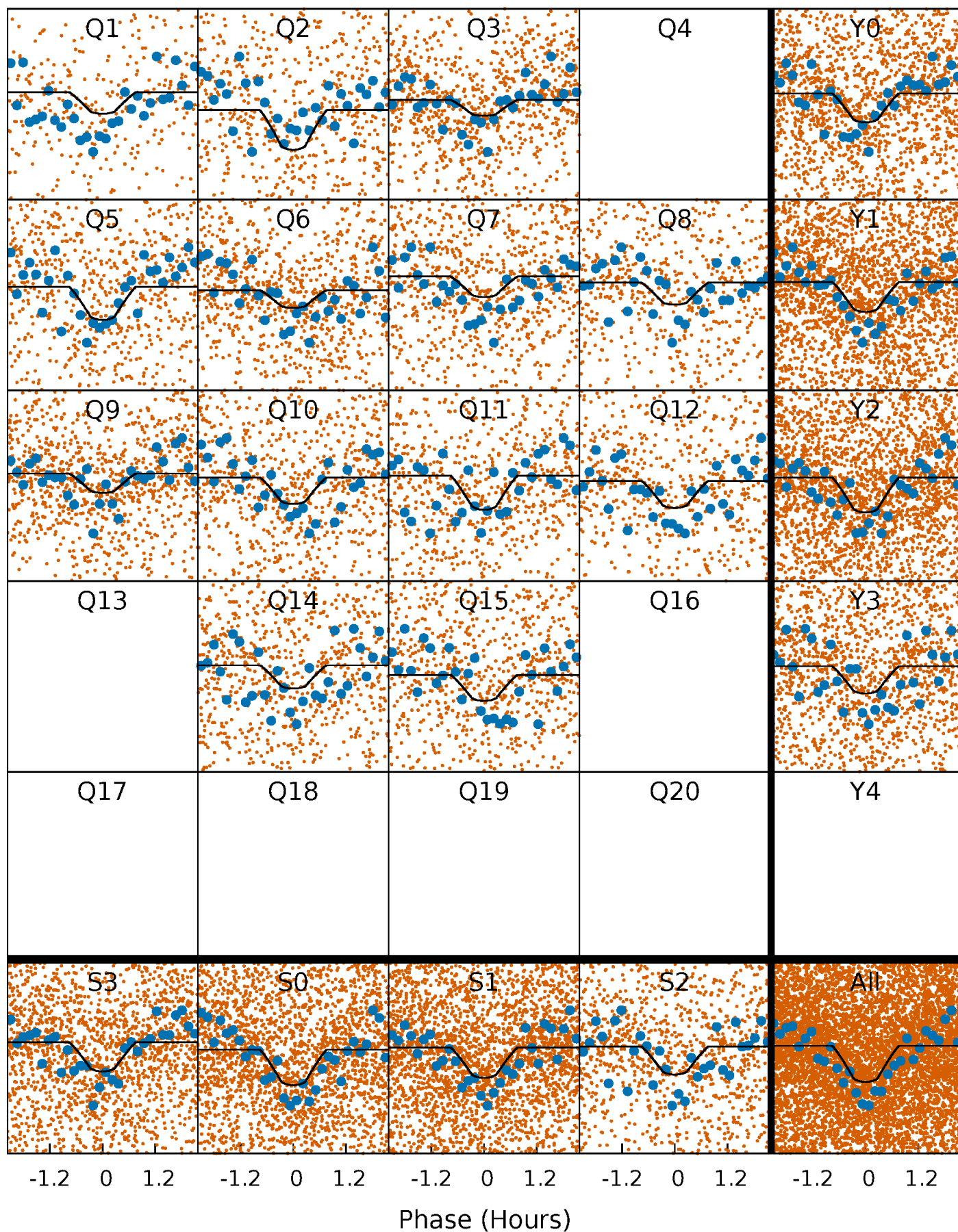
PDC Quarter-Phased Transit Curves

TCE 007631194-02 P= 0.811379 Days $T_0=132.289729$ (BKJD)



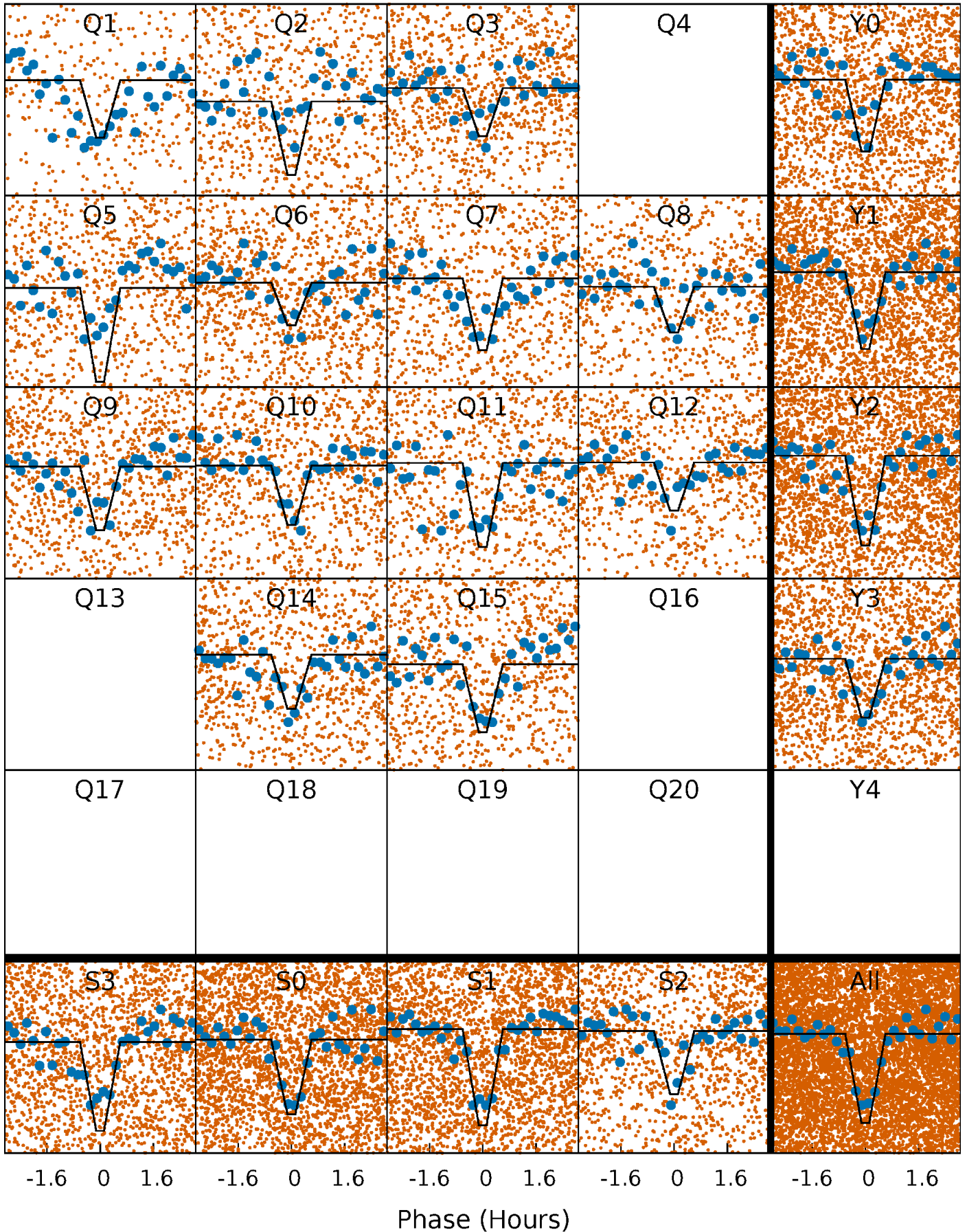
DV Quarter-Phased Transit Curves

TCE 007631194-02 P= 0.811379 Days $T_0=132.289729$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

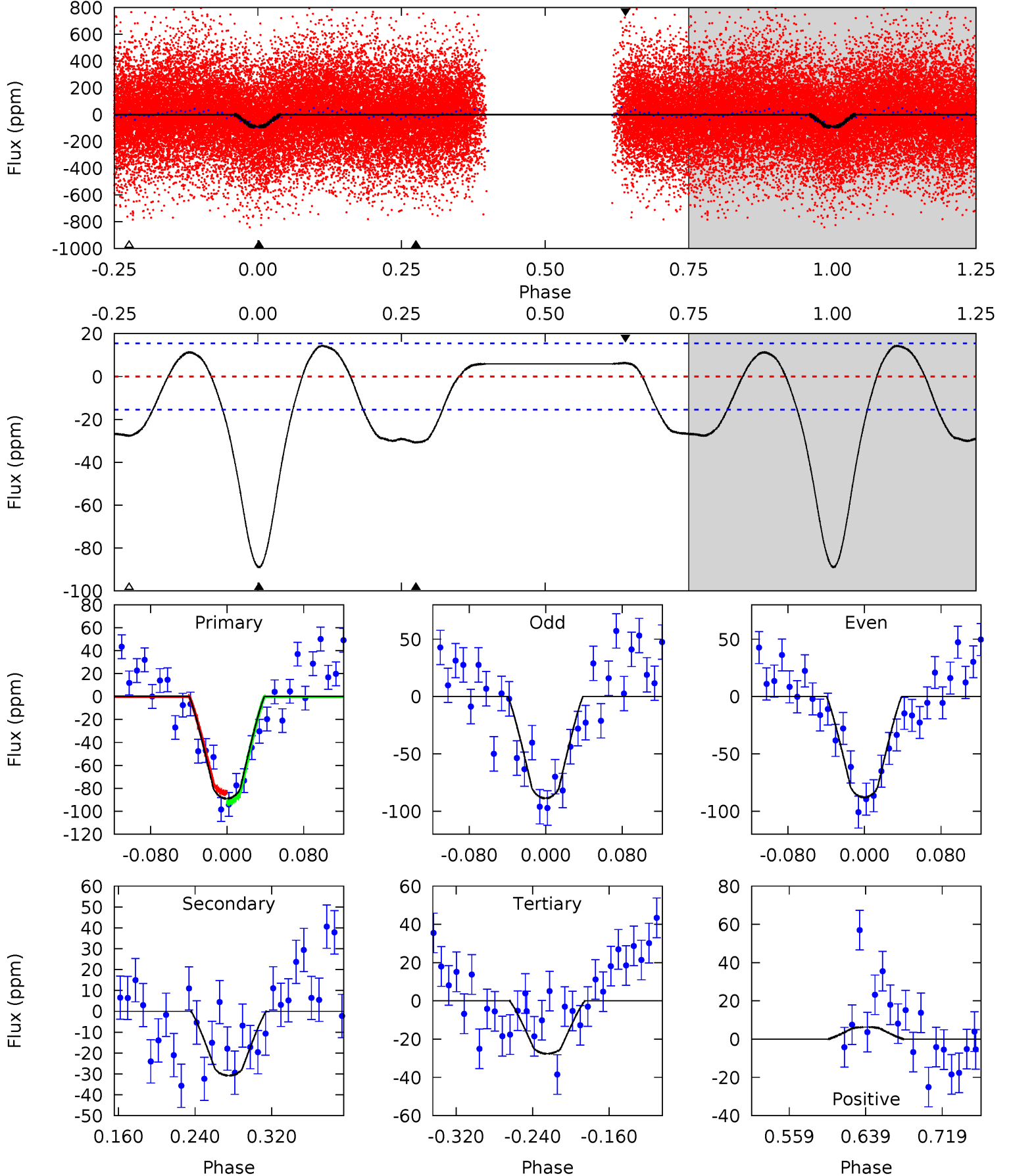
TCE 007631194-02 P= 0.811385 Days $T_0=132.286589$ (BKJD)



DV Model-Shift Uniqueness Test

007631194-02, P = 0.811379 Days, E = 131.478350 Days

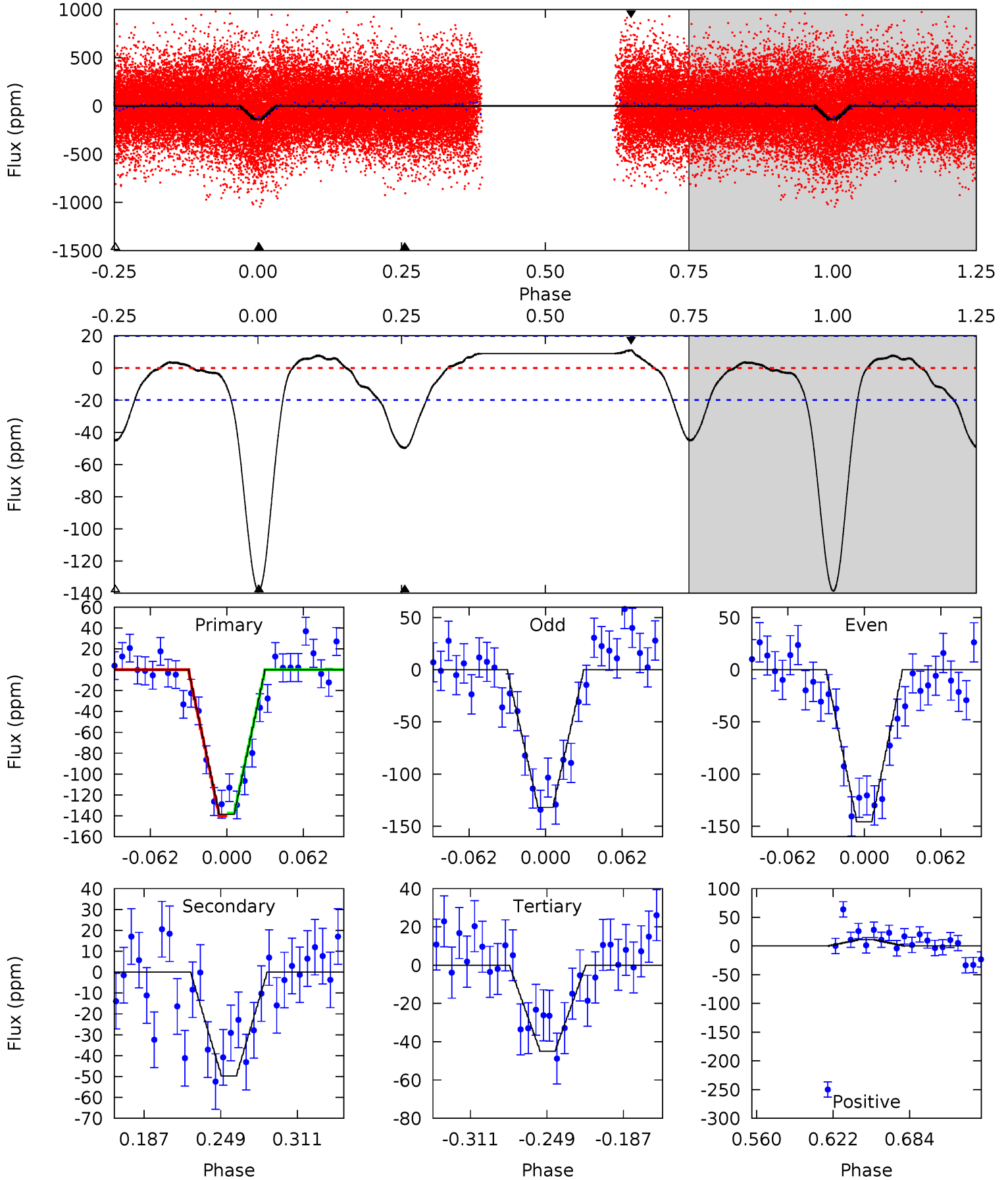
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.5	9.16	8.23	1.88	4.61	1.75	4.31	18.2	24.6	0.93	7.29	0.12	1.13	0.14	1.25



Alt Model-Shift Uniqueness Test

007631194-02, P = 0.811385 Days, E = 131.475204 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.5	11.7	10.6	2.61	4.66	1.86	3.19	22.0	29.9	1.12	9.07	1.63	1.09	0.07	0.34



Stellar Parameters For KIC 007631194

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4994^{+37}_{-150}	$2.682^{+0.033}_{-0.027}$	$0.070^{+0.150}_{-0.300}$	$12.487^{+0.836}_{-3.343}$	$2.731^{+0.214}_{-1.285}$	$0.002^{+0.001}_{-0.000}$
	+1%/-3%	+1%/-1%	+214%/-429%	+7%/-27%	+8%/-47%	+41%/-11%
Source	SPE74	AST9	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 007631194-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-31 ± 3	$11.94^{+2.88}_{-2.78}$	7039^{+115}_{-223}	-5309^{+312}_{-187}	$0.067^{+0.046}_{-0.023}$
Alt.	-50 ± 4	$17.47^{+3.01}_{-3.01}$	7027^{+132}_{-244}	-5405^{+230}_{-141}	$0.052^{+0.022}_{-0.015}$

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

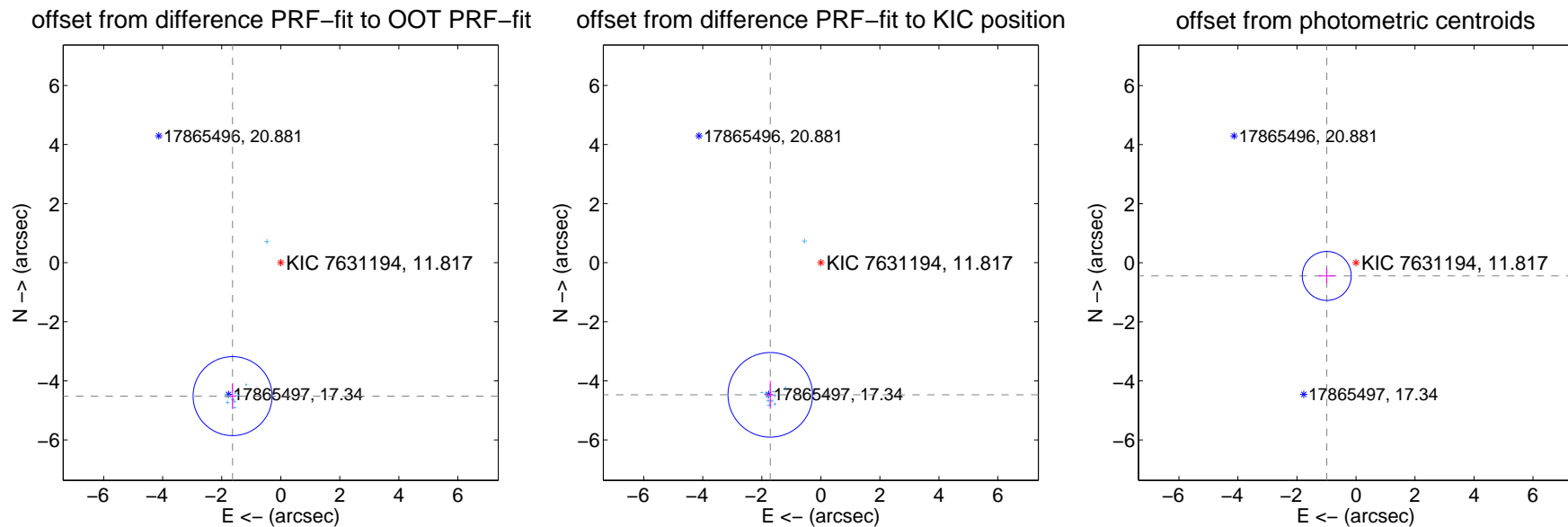
DV Centroid Data

Supplemental centroid analysis for 007631194-02. **Kepler magnitude: 11.82.** Transit SNR 15.53

There are 12 quarters with good PRF difference image offsets

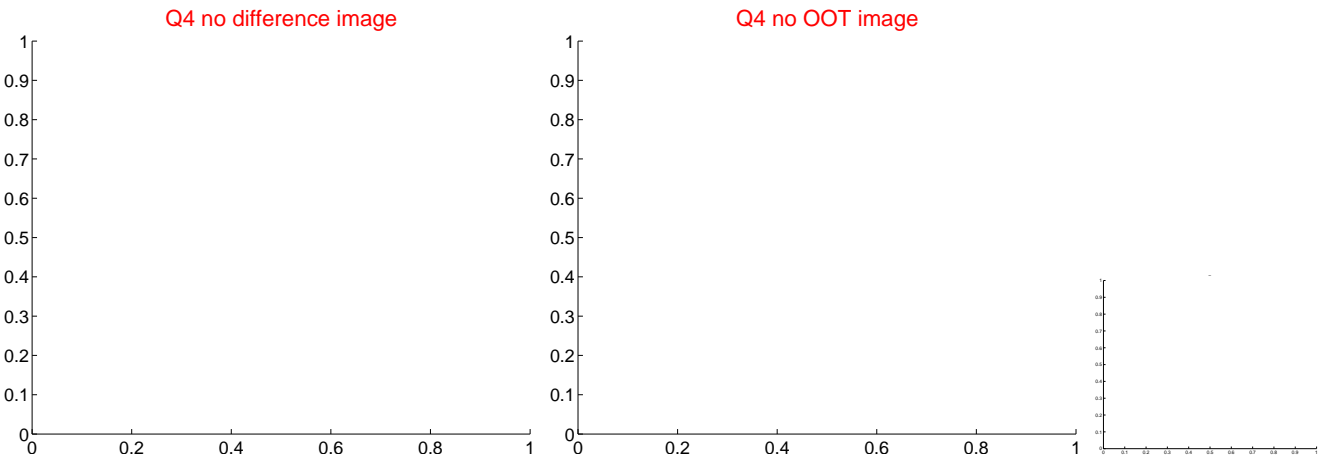
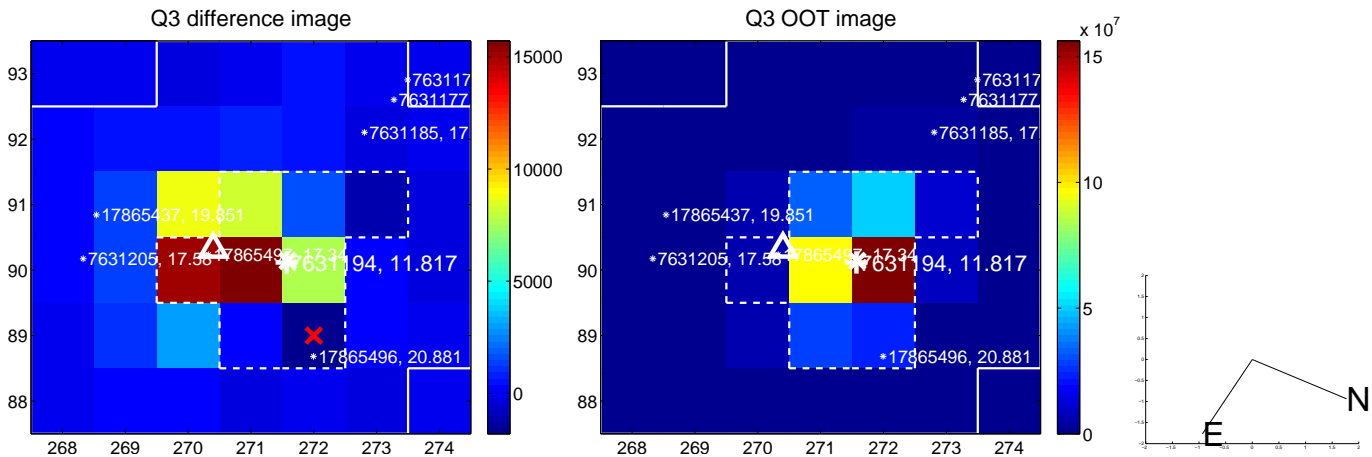
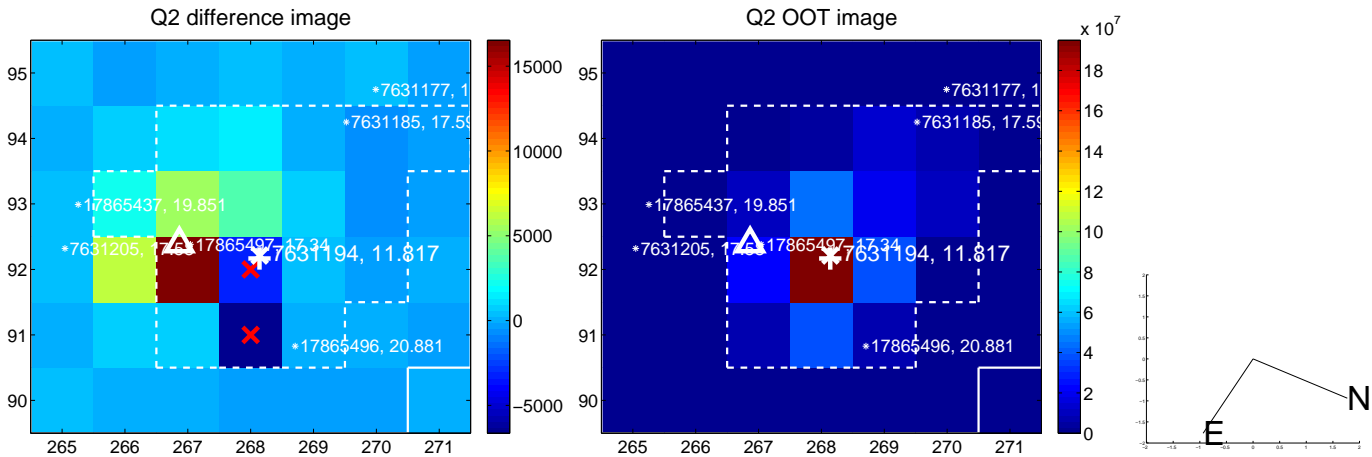
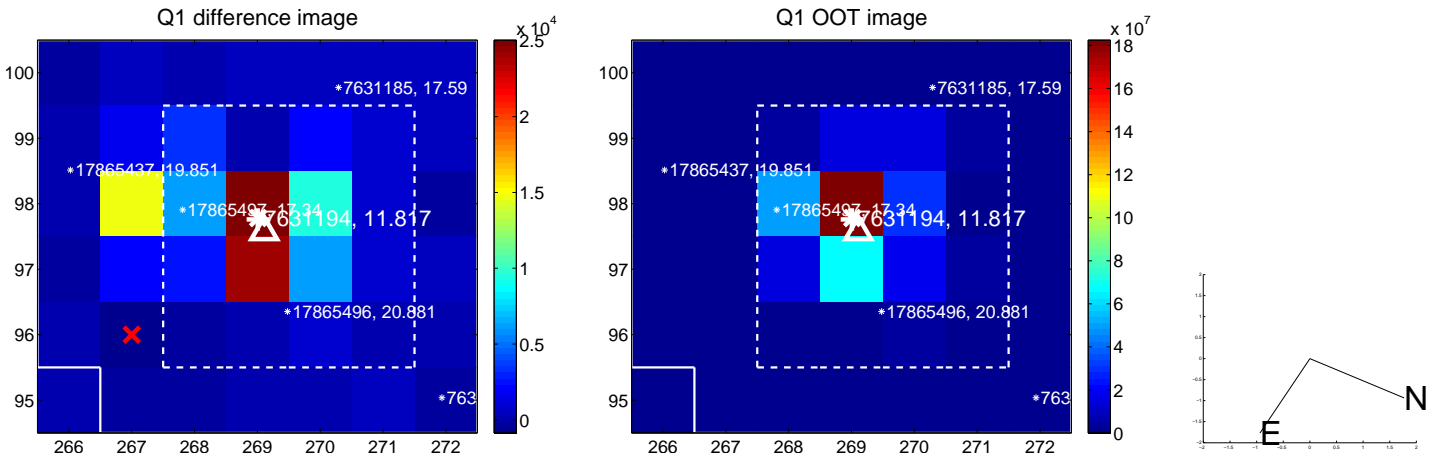
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.803 ± 0.446	10.77	1.632 ± 0.126	-4.517 ± 0.438
PRF-fit source offset from KIC position	4.791 ± 0.477	10.04	1.714 ± 0.127	-4.474 ± 0.474
photometric centroid source offset	1.09 ± 0.28	3.93	0.99 ± 0.28	-0.45 ± 0.26

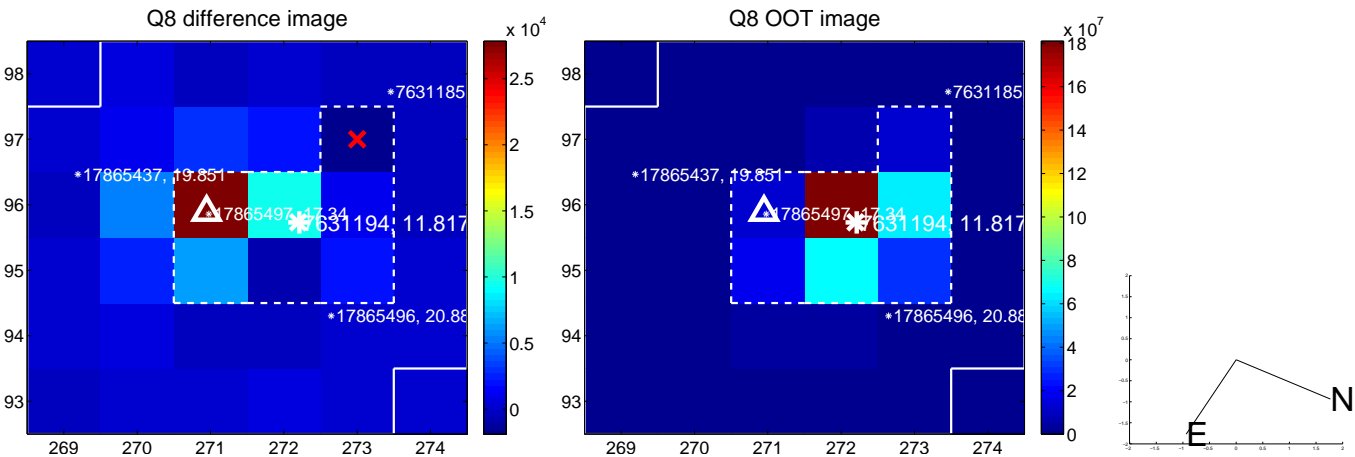
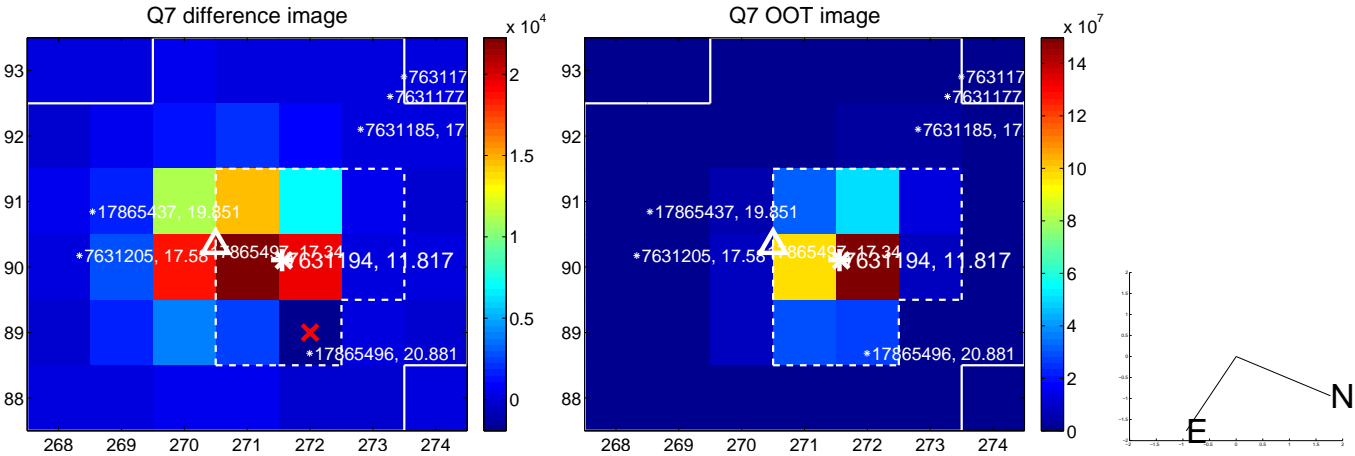
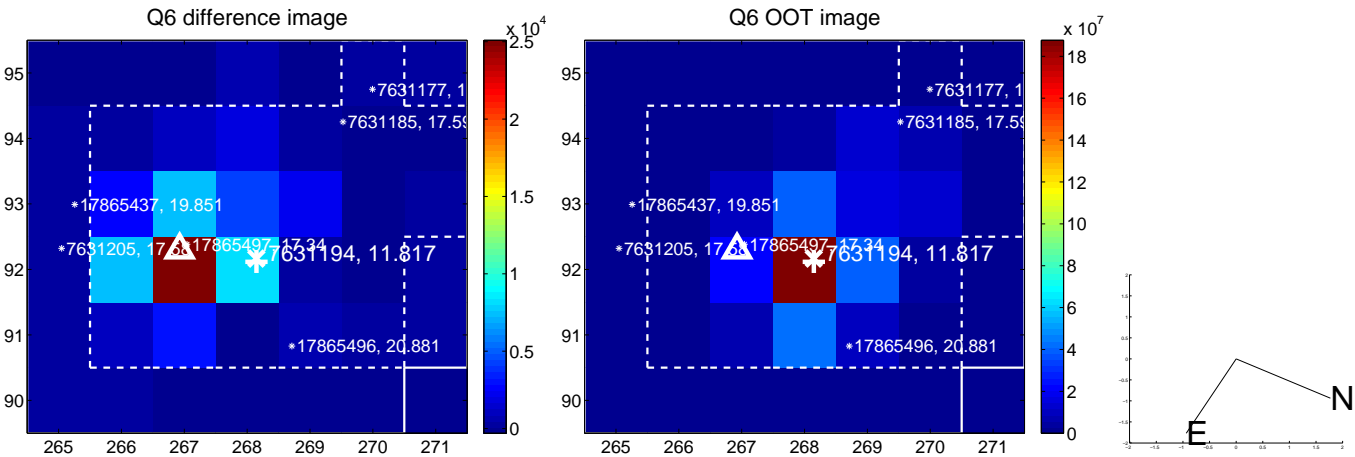
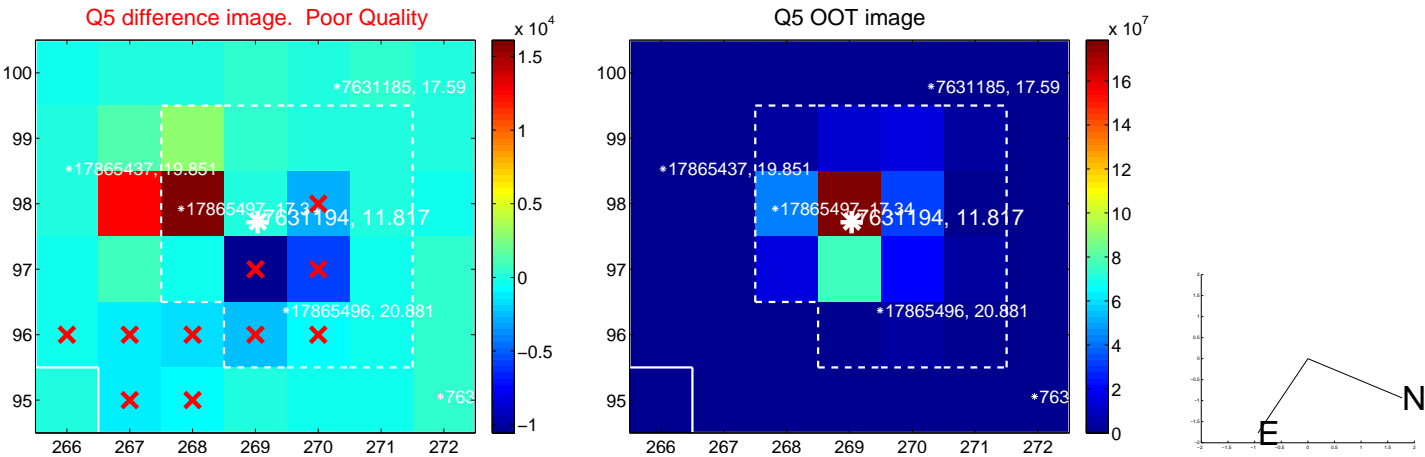


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

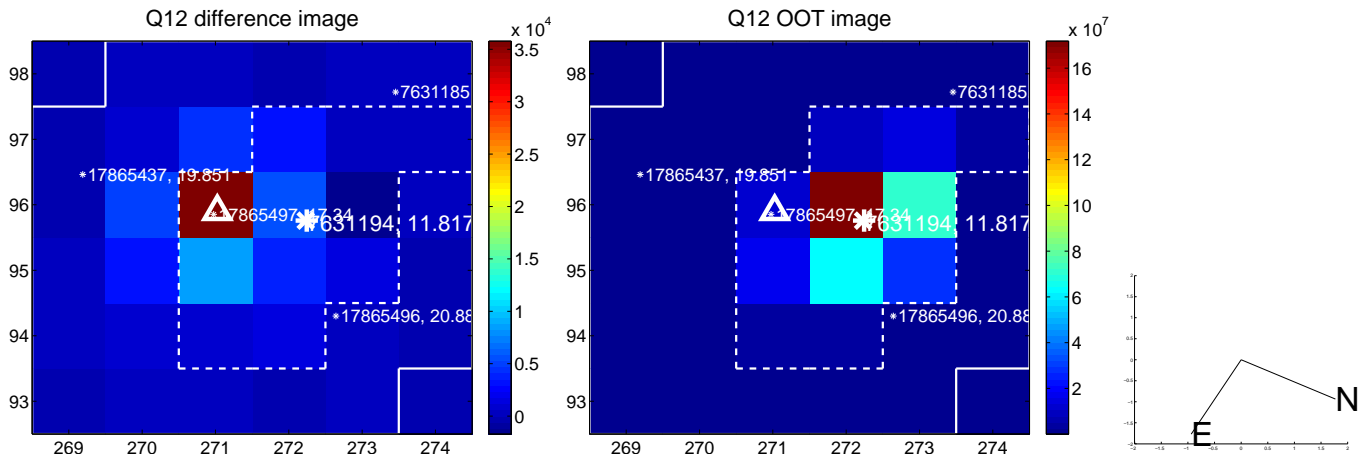
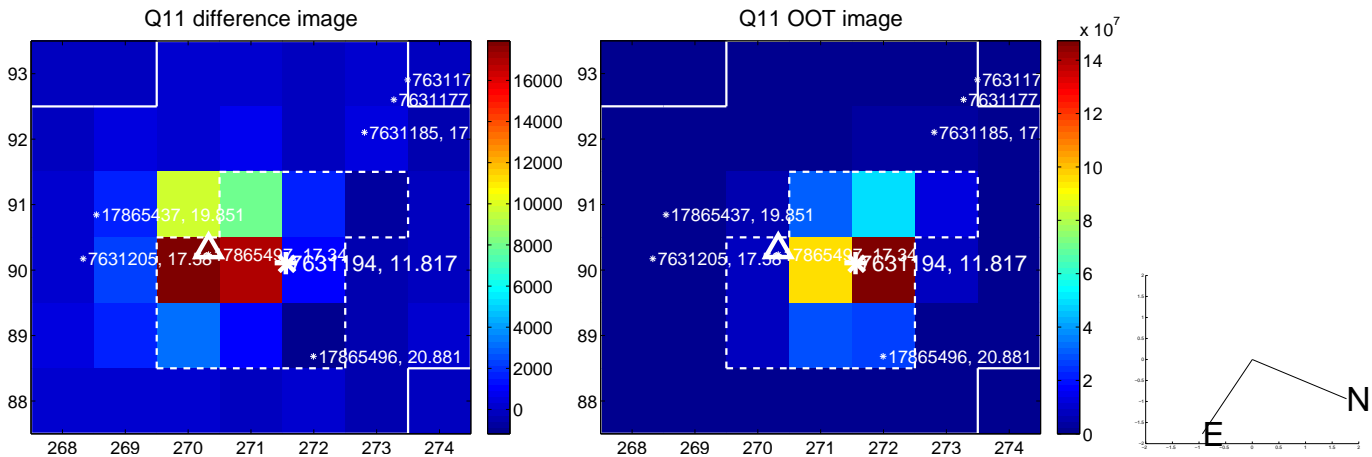
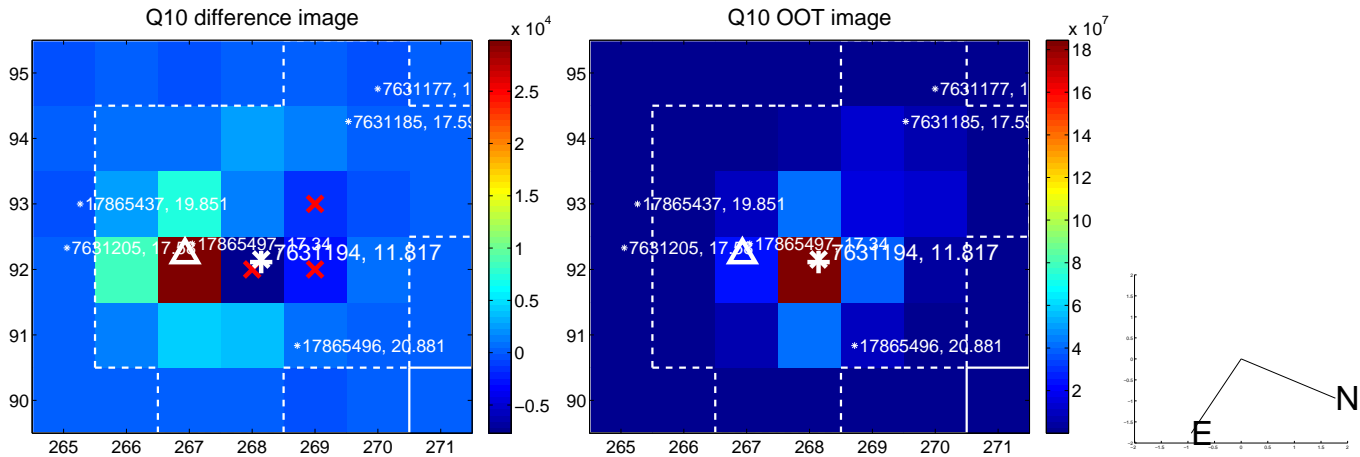
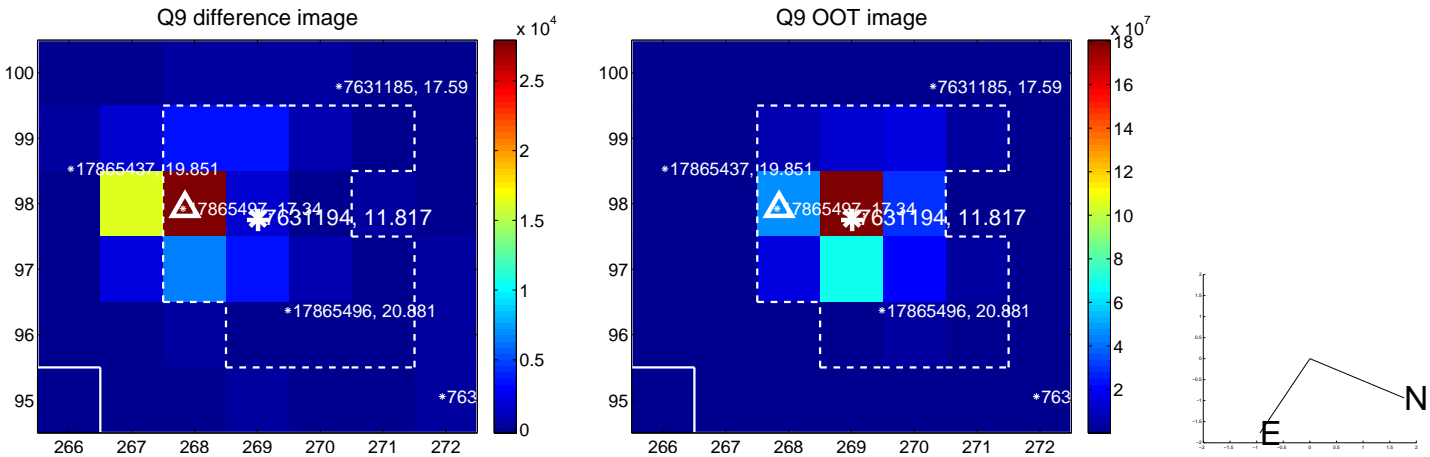
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

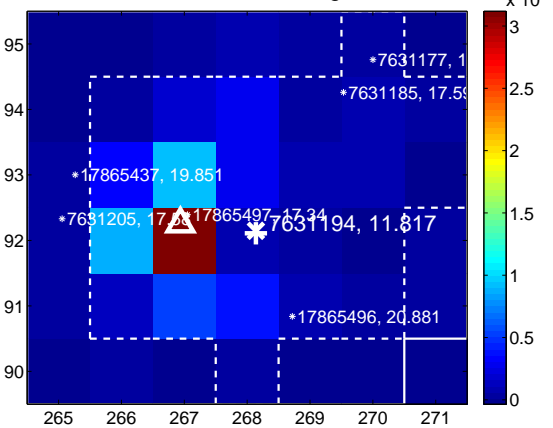
Q13 no difference image



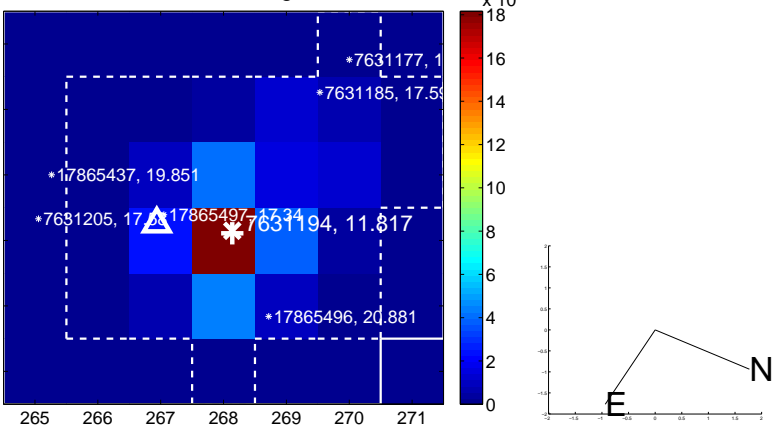
Q13 no OOT image



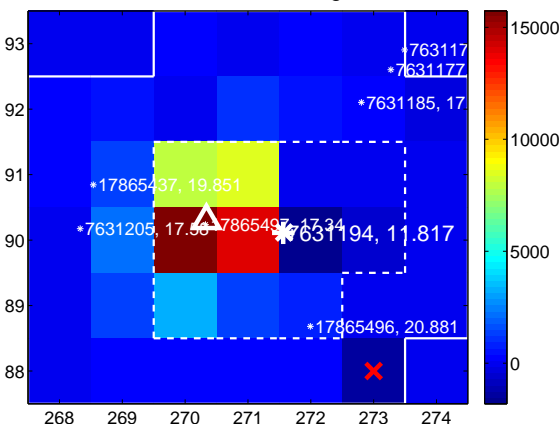
Q14 difference image



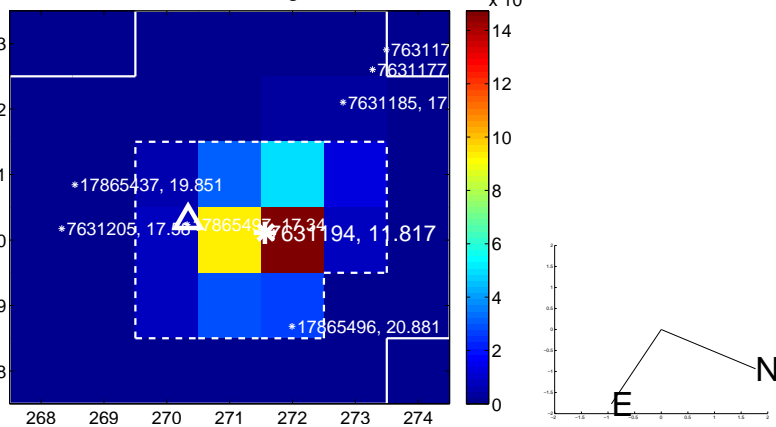
Q14 OOT image



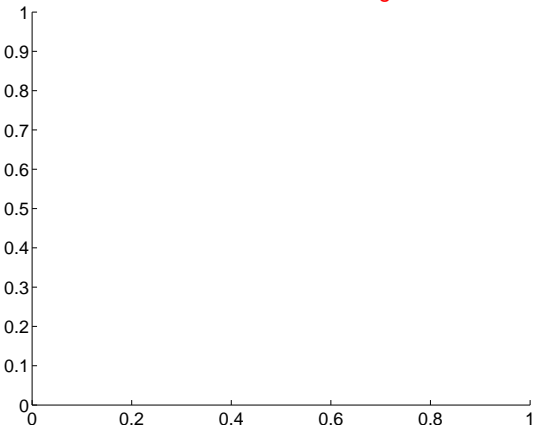
Q15 difference image



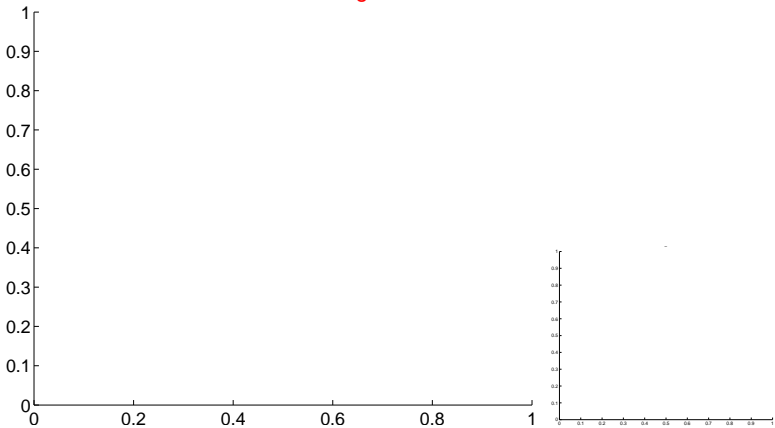
Q15 OOT image



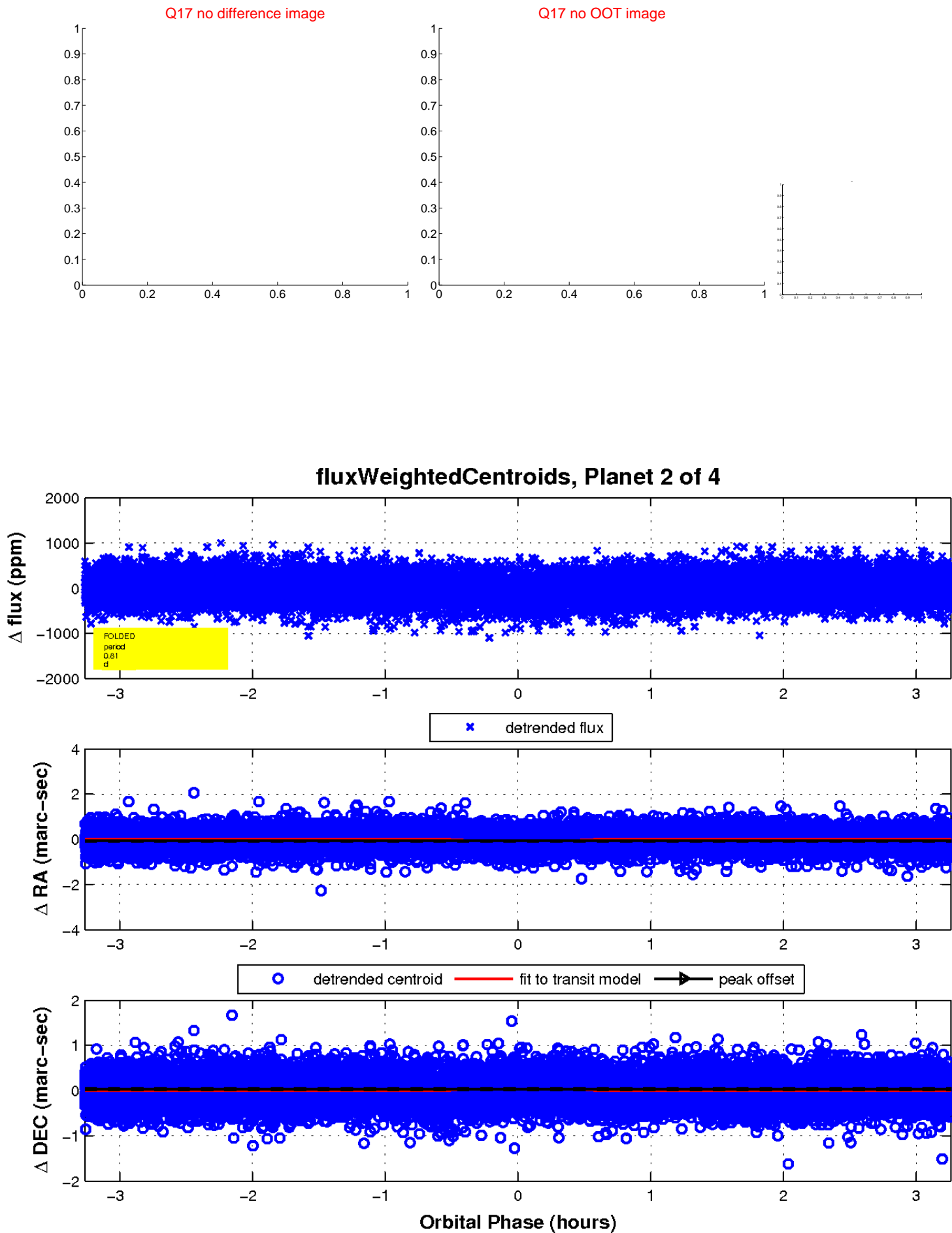
Q16 no difference image



Q16 no OOT image

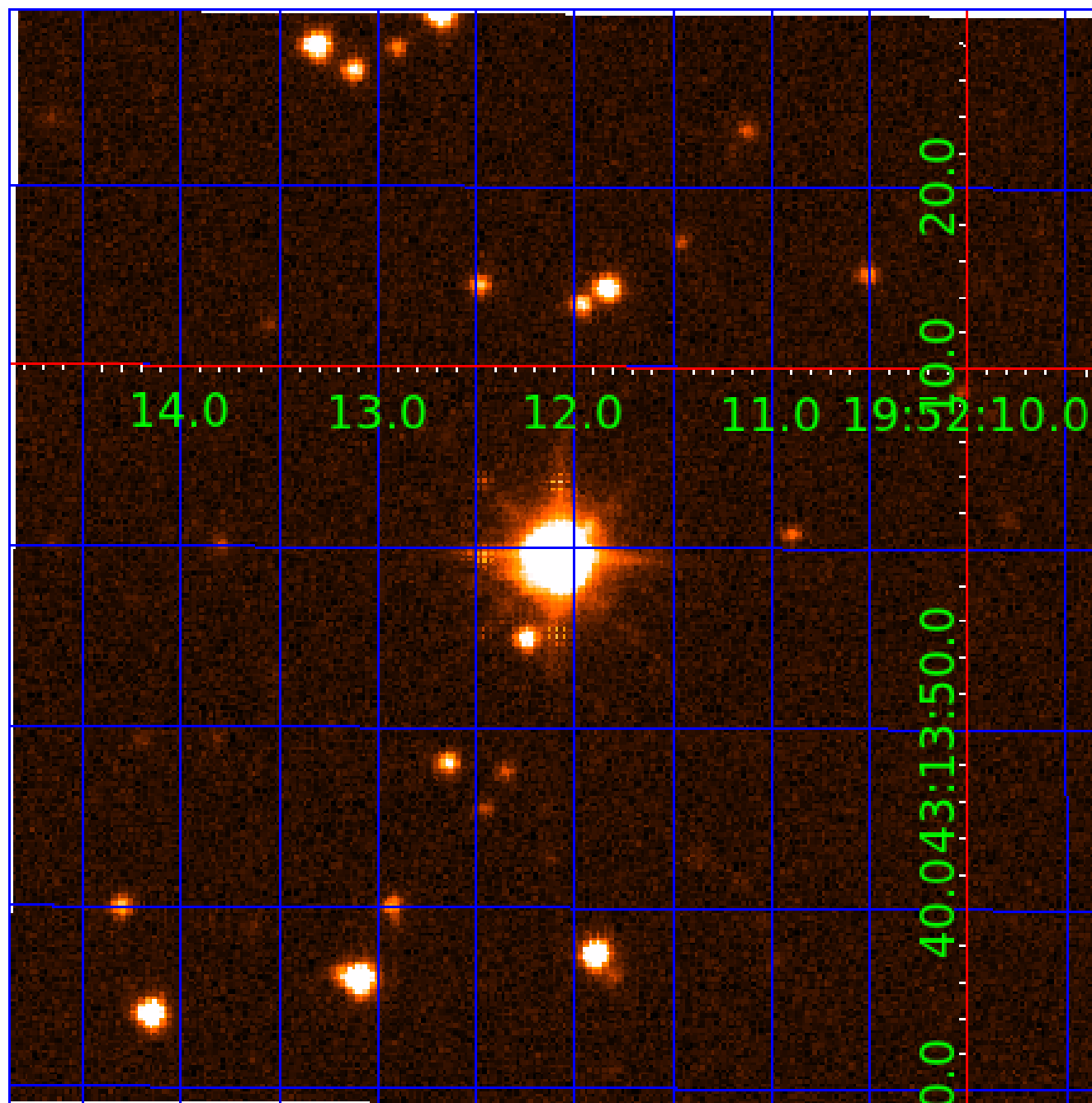


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007631194

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})
007631194-01	OBS	6896.01	0.811399	131.873759	63.9	1.153	11.3	16.5	12.49	4994	12.38	0.00
007631194-02	OBS	No	0.811379	132.289729	59.0	1.087	10.9	15.5	12.49	4994	11.81	0.00
007631194-03	OBS	No	88.068390	172.797555	719.5	6.193	8.5	9.0	12.49	4994	68.91	295.96
007631194-04	OBS	No	120.573159	216.463461	630.8	4.094	7.3	7.8	12.49	4994	42.27	194.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007631194-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
007631194-02	OBS	FP	0.00	1	0	1	0	LPP_DV—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
007631194-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—HALO_GHOST
007631194-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE

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 007631194-03

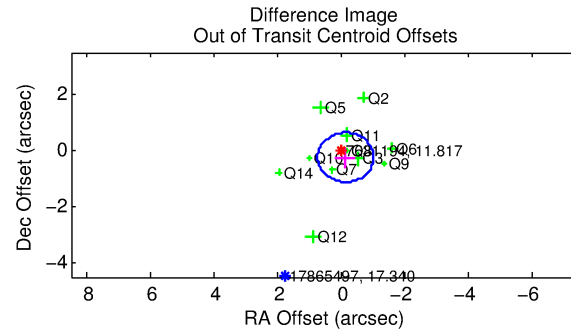
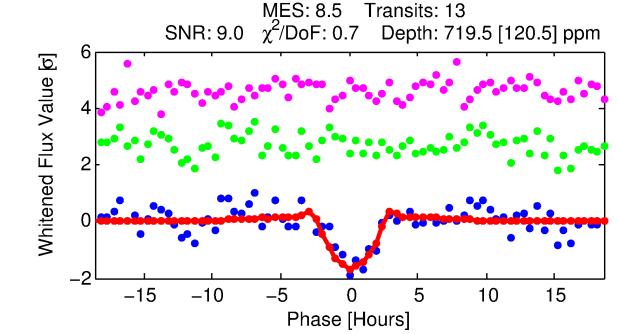
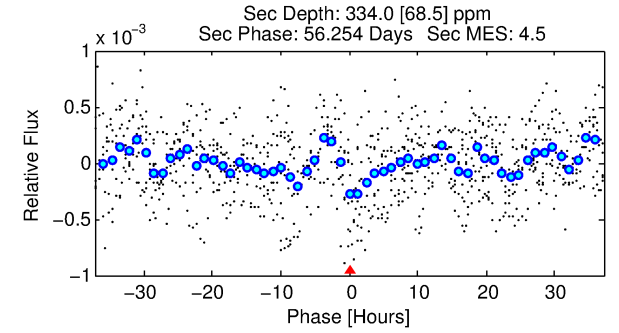
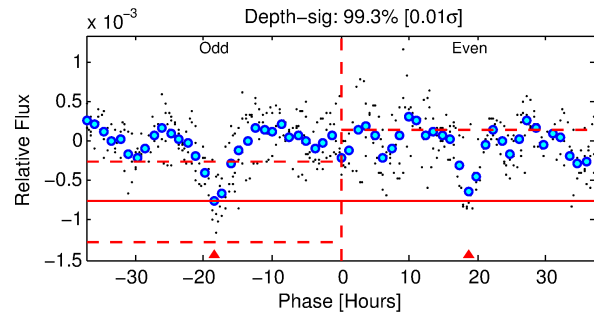
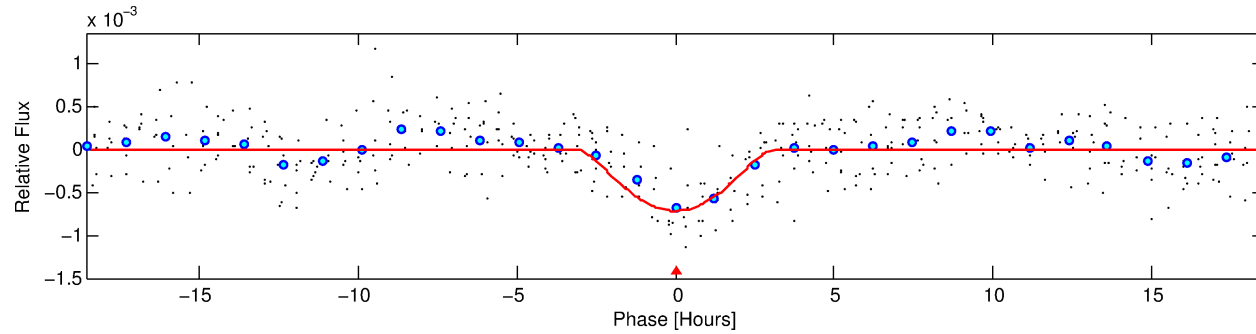
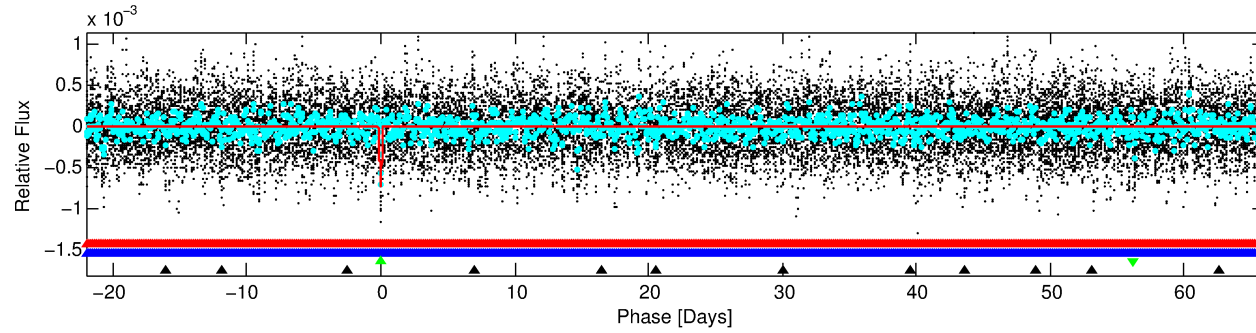
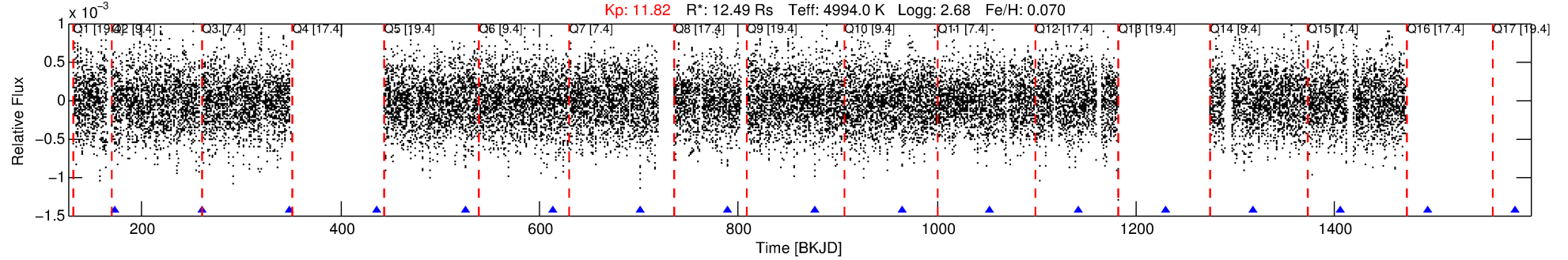
No Significant Match Found

DV One-Page Summary

KIC: 7631194 Candidate: 3 of 4 Period: 88.068 d

KOI: K06896 Corr: No Ephemeris Match

Kp: 11.82 R*: 12.49 Rs Teff: 4994.0 K Logg: 2.68 Fe/H: 0.070



DV Fit Results:

Period = 88.06839 [0.00165] d
Epoch = 172.7976 [0.0130] BKJD
Rp/R* = 0.0506 [0.0959]
a/R* = 35.04 [15.15]
b = 1.00 [0.13]
Seff = 295.96 [65.42]
Teq = 1058 [58] K
Rp = 68.91 [131.98] Re
a = 0.5419 [0.0977] AU
Ag = 11.36 [43.21] [0.24σ]
Teffp = 3002 [2852] K [0.68σ]

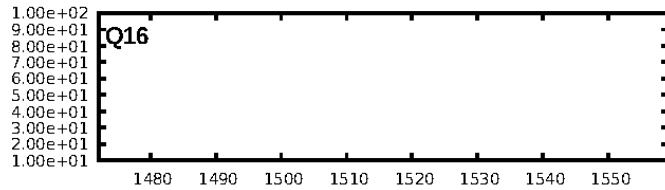
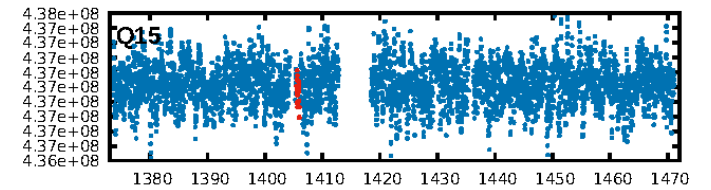
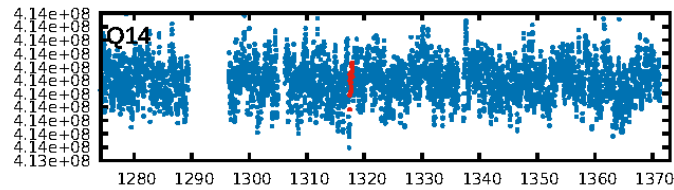
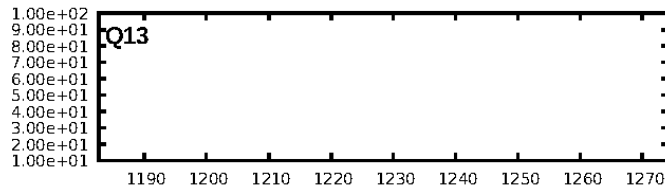
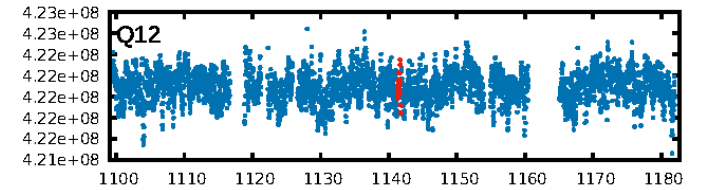
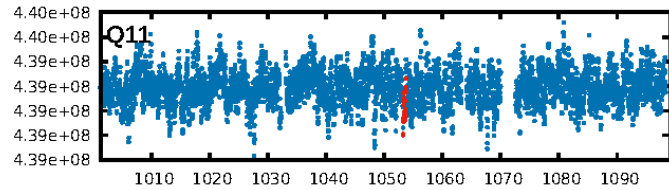
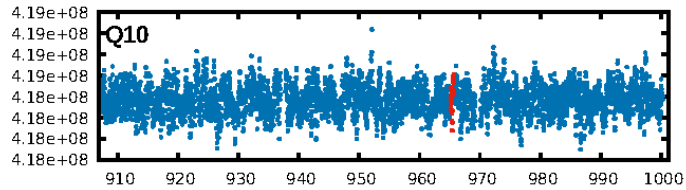
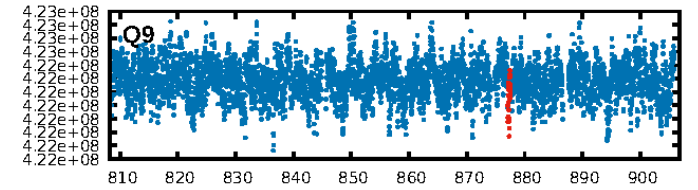
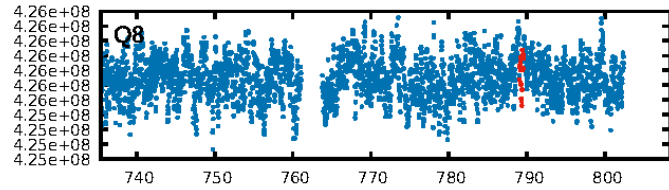
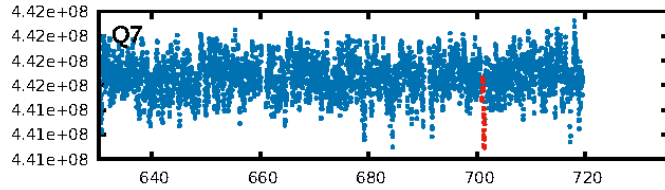
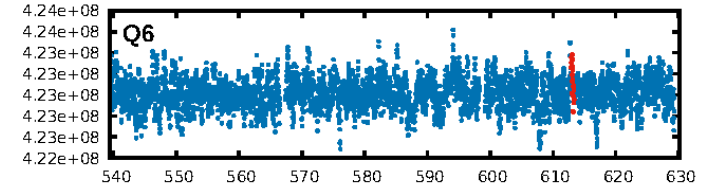
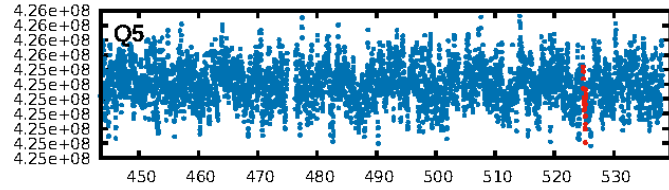
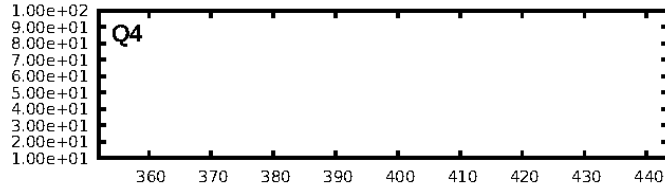
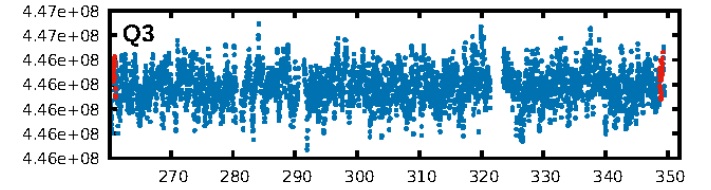
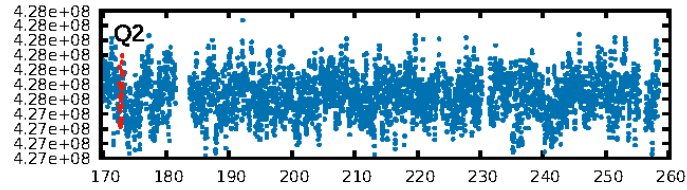
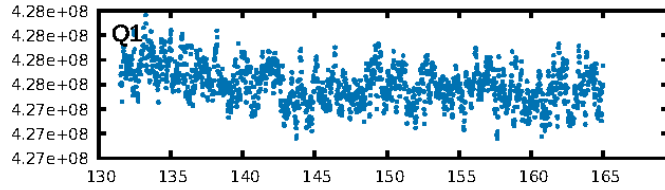
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [332.43σ]
LongPeriod-sig: 100.0% [105.08σ]
ModelChiSquare2-sig: 40.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.02e-12
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: -0.06351
Centroid-sig: 57.3%
Centroid-so: 0.130 arcsec [1.01σ]
OotOffset-rm: 0.271 arcsec [0.93σ]
KicOffset-rm: 0.262 arcsec [0.82σ]
OotOffset-st: 4/3/2/2 [11]
KicOffset-st: 4/3/2/2 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 0.00 [0/11]

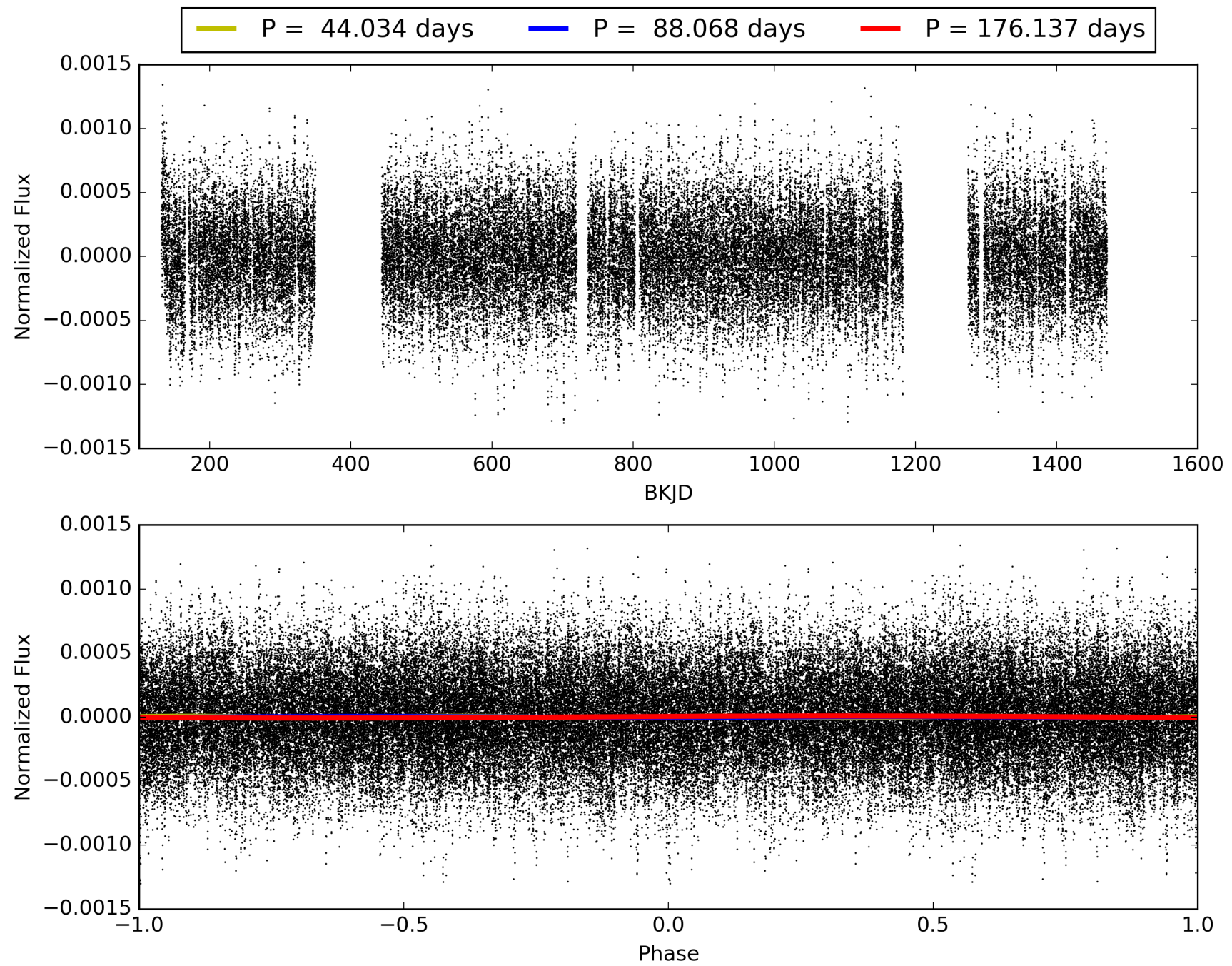
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:30:22 Z

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

TCE 007631194-03, PDC Light Curves

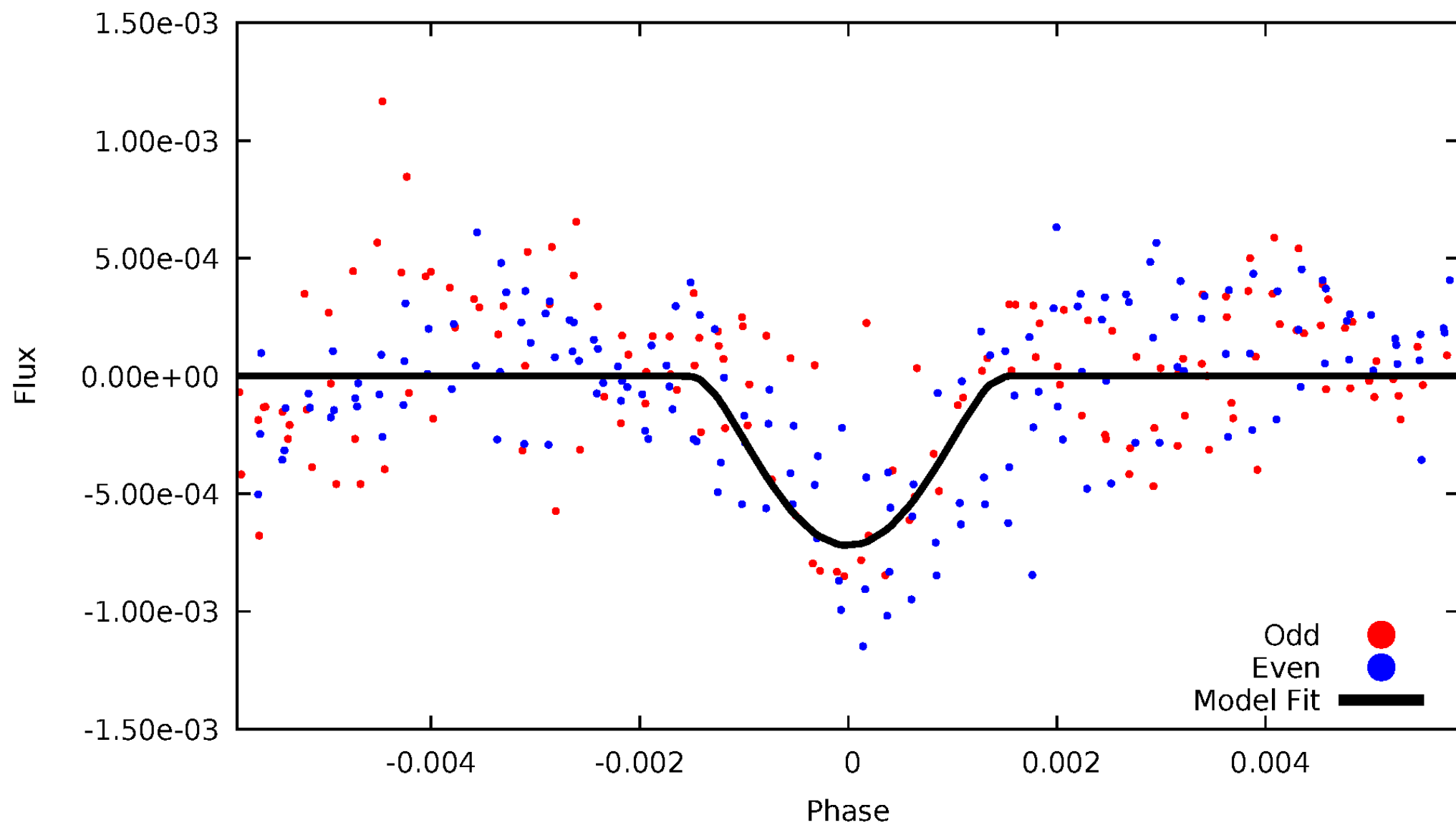


TCE 007631194-03



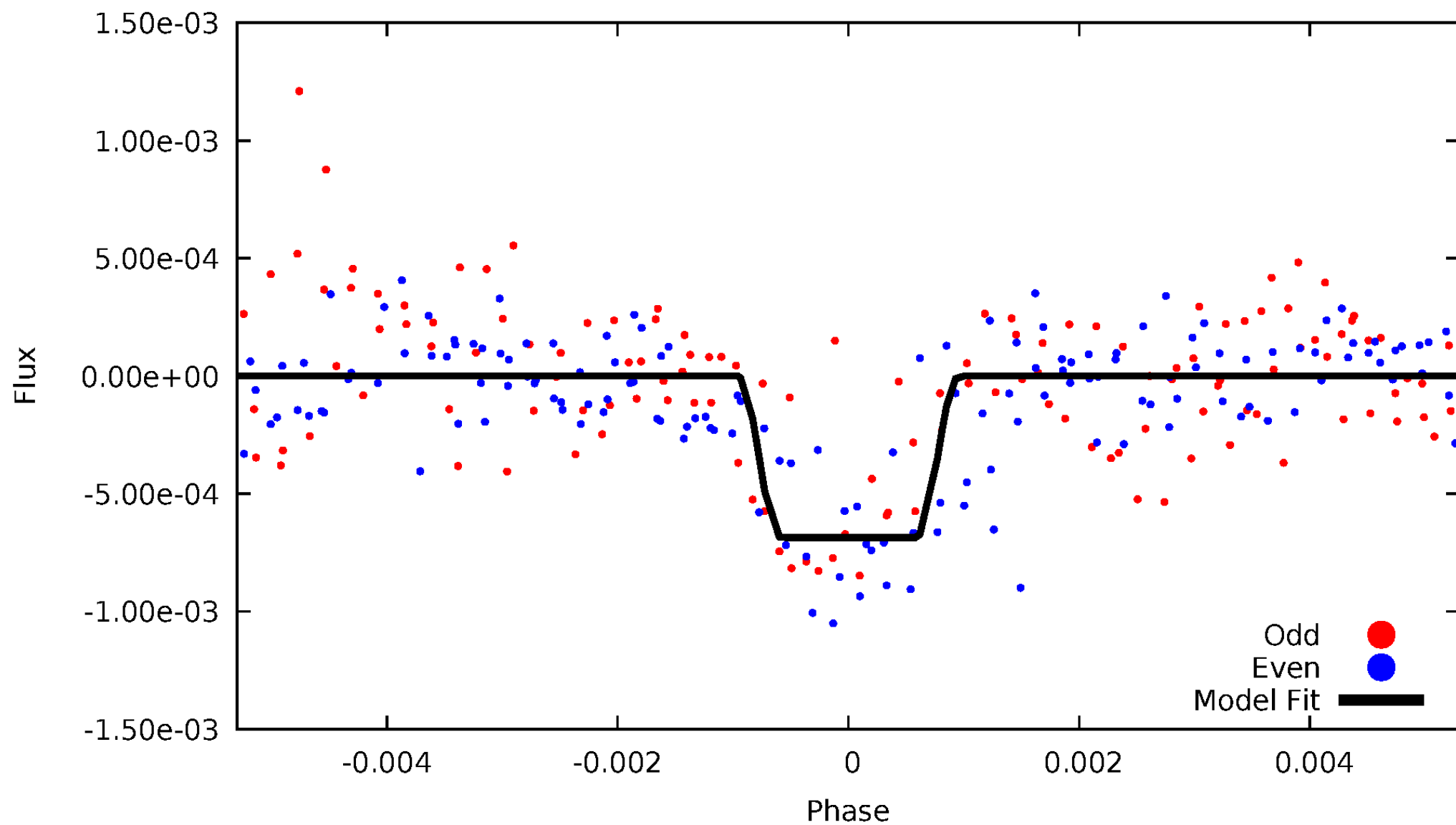
DV Odd/Even

TCE 007631194-03



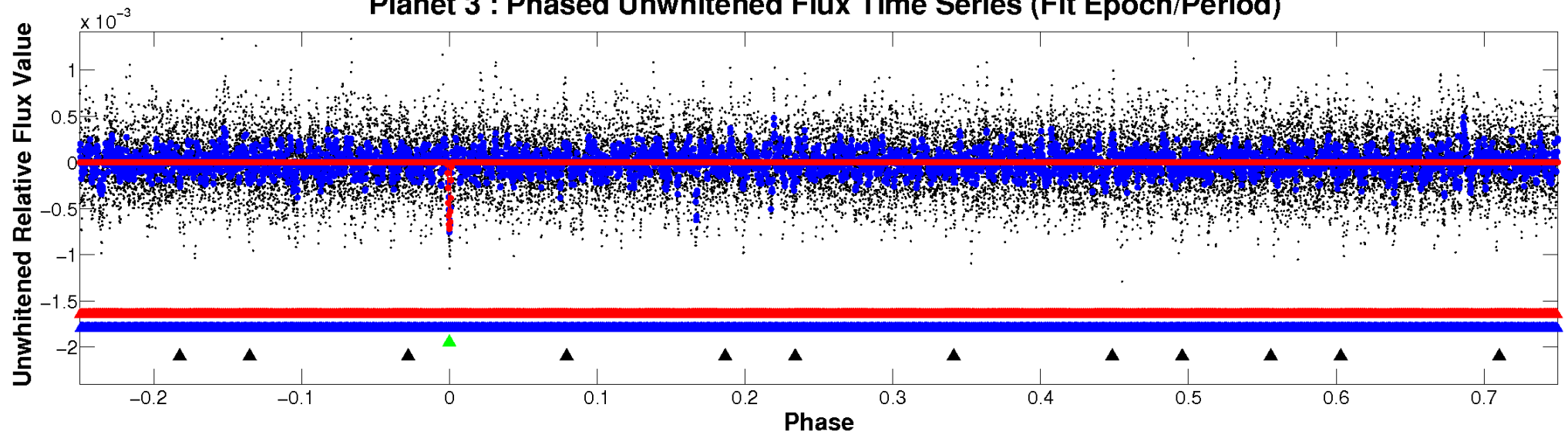
ALT Odd/Even

TCE 007631194-03

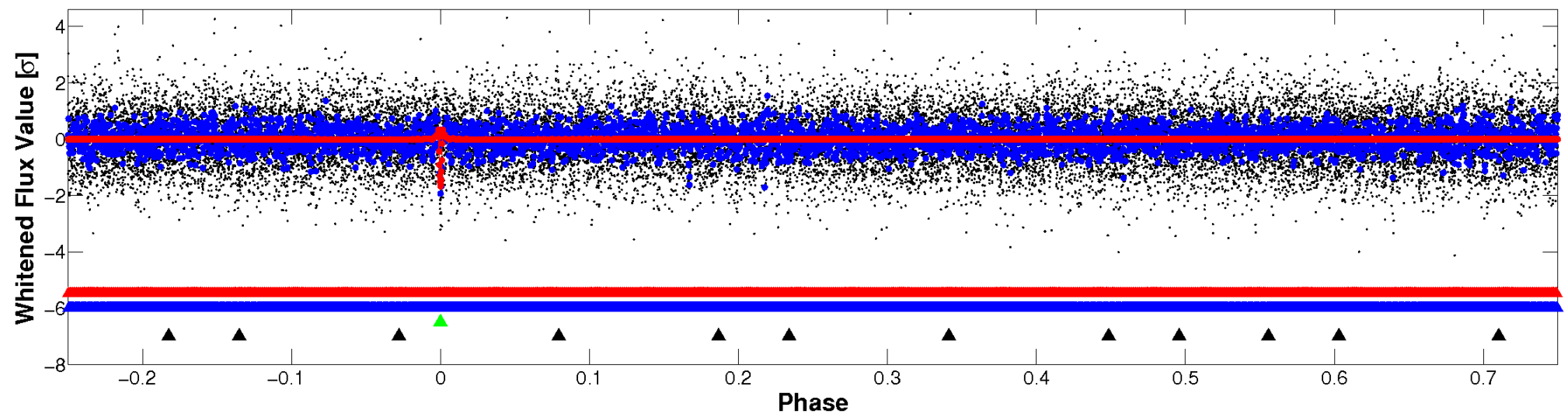


Non-Whitened Vs. Whitened Light Curve

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

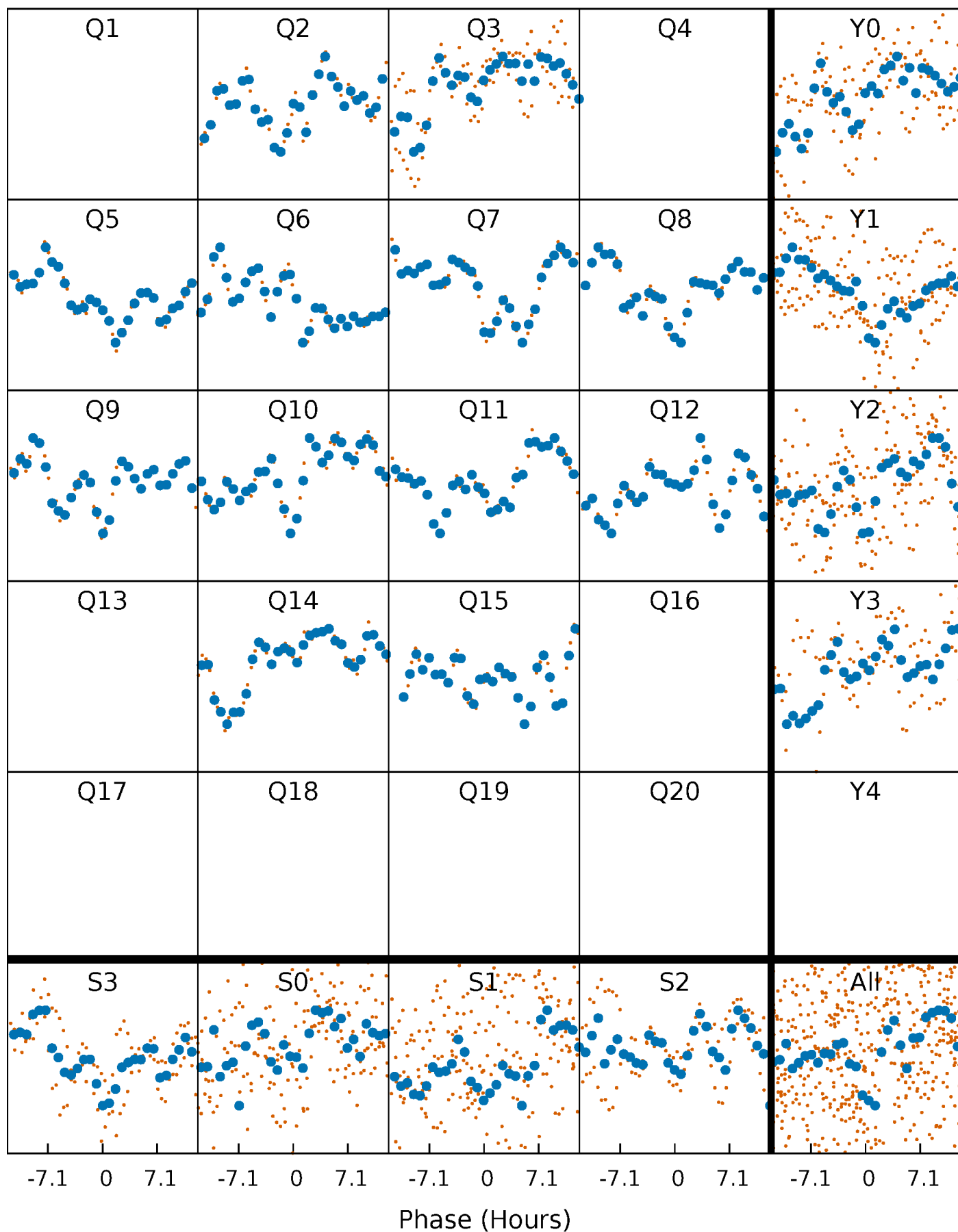


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



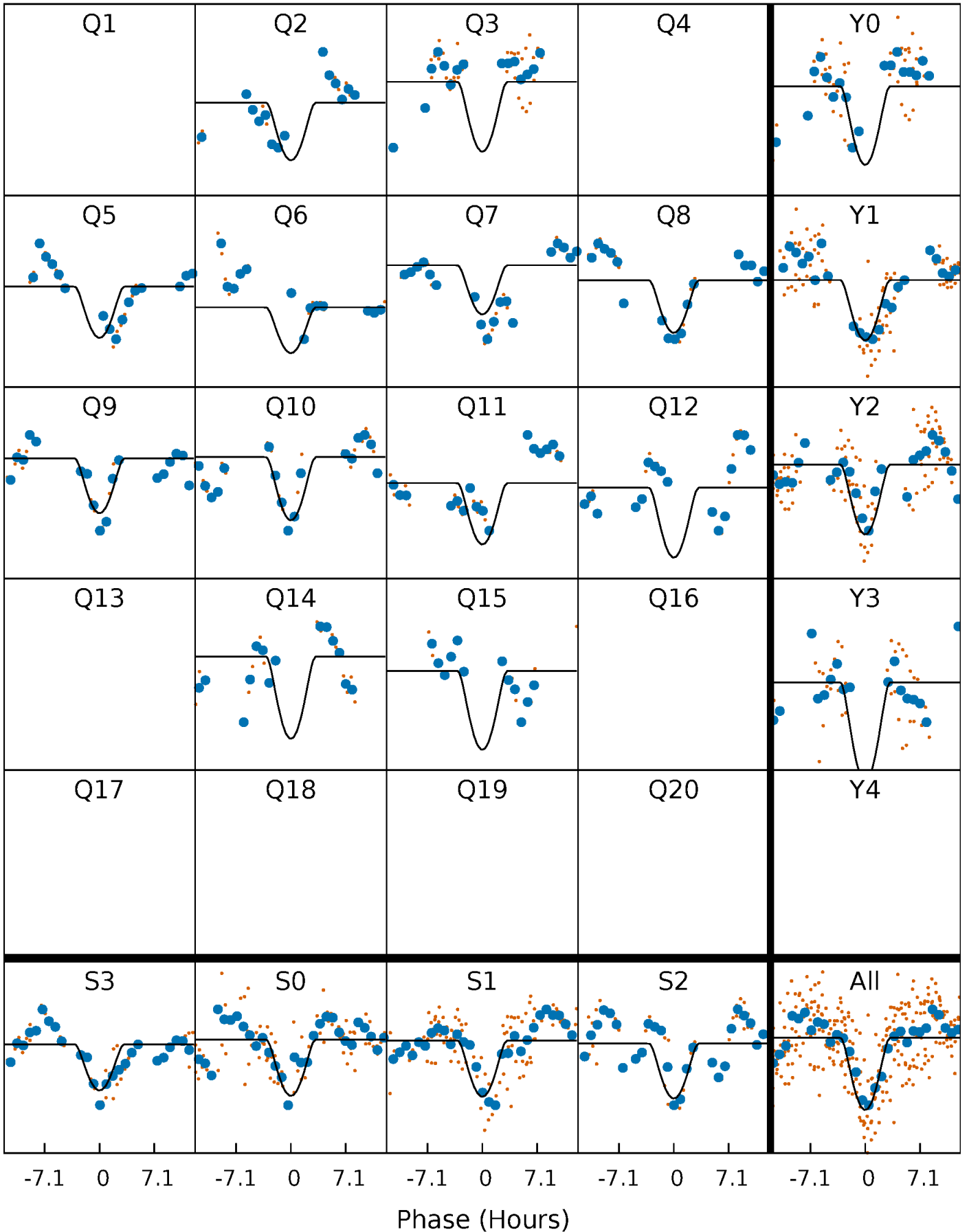
PDC Quarter-Phased Transit Curves

TCE 007631194-03 P= 88.068390 Days $T_0=172.797555$ (BKJD)



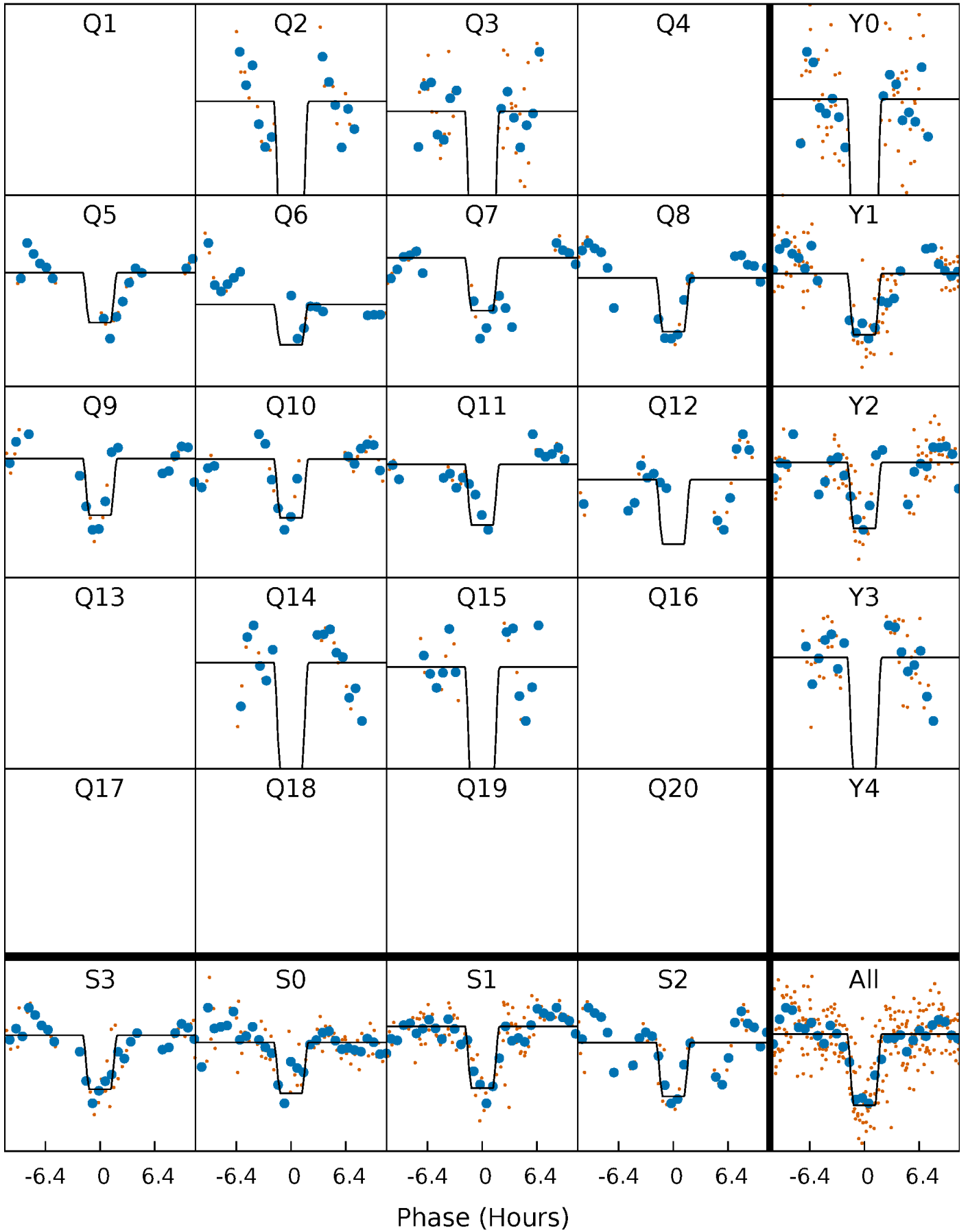
DV Quarter-Phased Transit Curves

TCE 007631194-03 P= 88.068390 Days $T_0=172.797555$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

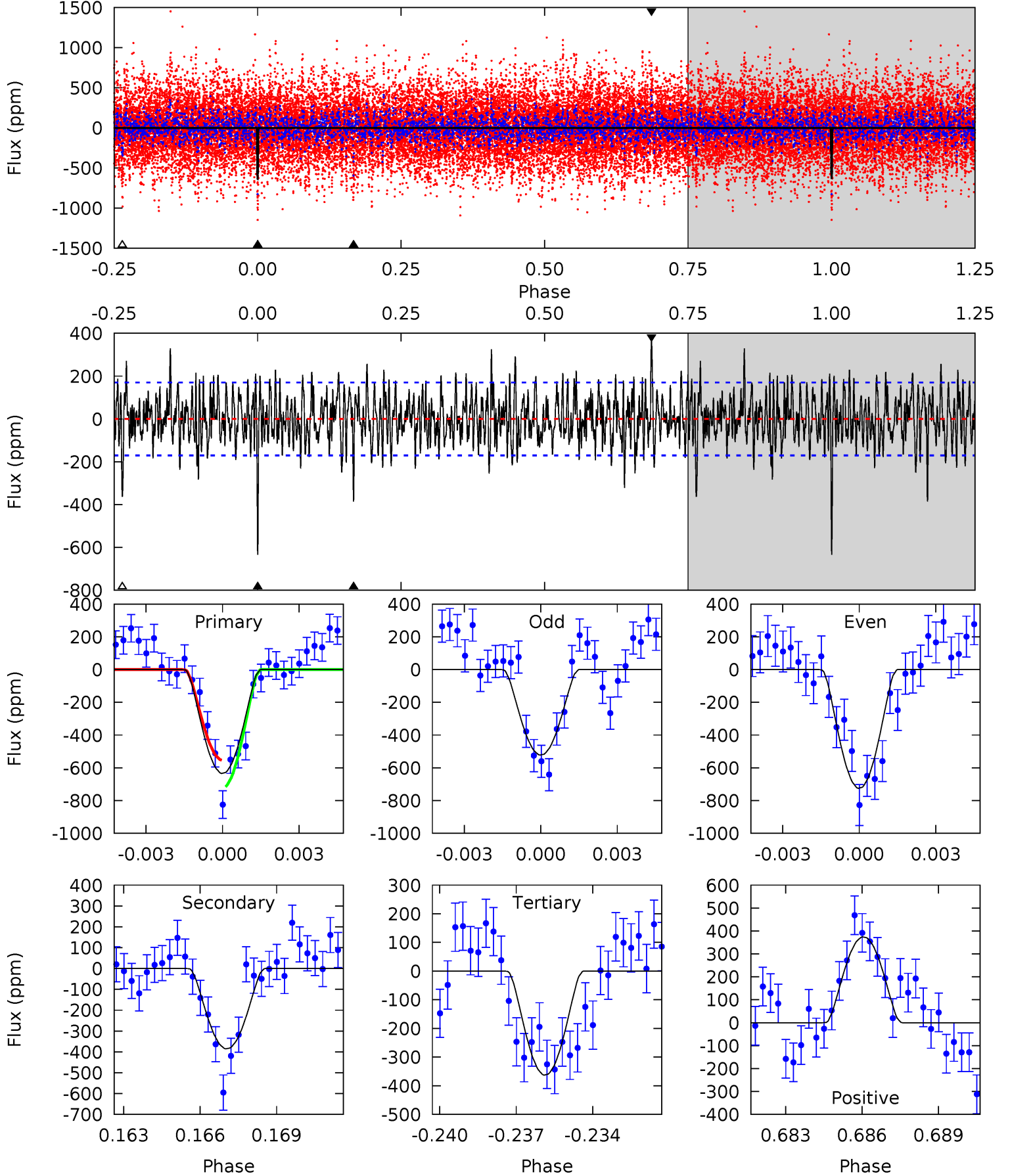
TCE 007631194-03 P= 88.066863 Days $T_0=172.830755$ (BKJD)



DV Model-Shift Uniqueness Test

007631194-03, P = 88.068390 Days, E = 84.729165 Days

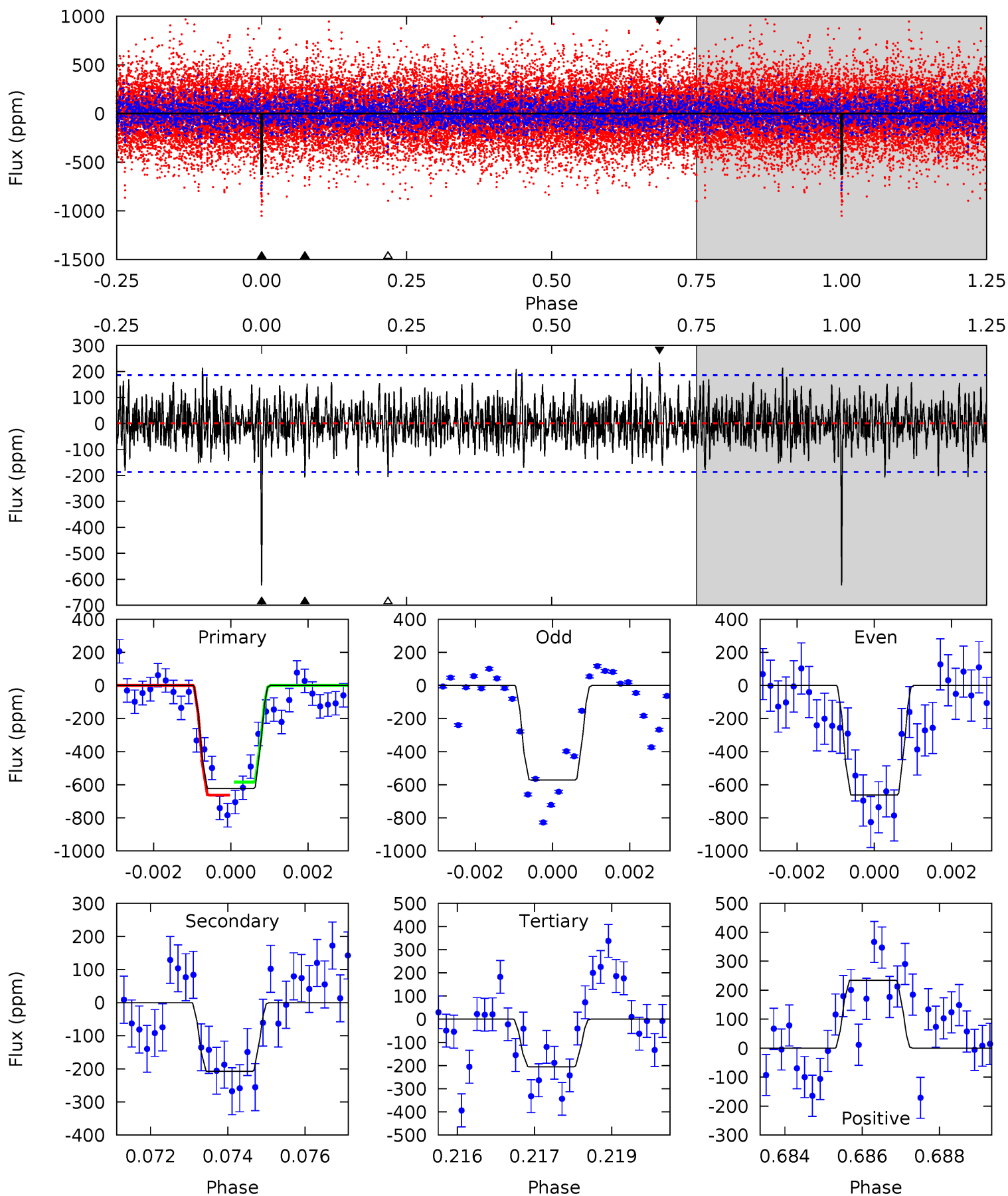
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	11.9	11.2	11.5	5.25	2.96	2.99	8.37	8.01	0.69	0.34	3.13	0.60	0.37	2.49



Alt Model-Shift Uniqueness Test

007631194-03, P = 88.066863 Days, E = 84.763892 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.8	5.93	5.87	6.70	5.33	3.10	1.74	11.9	11.1	0.06	-0.76	1.29	0.91	0.27	1.12



Stellar Parameters For KIC 007631194

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4994^{+37}_{-150}	$2.682^{+0.033}_{-0.027}$	$0.070^{+0.150}_{-0.300}$	$12.487^{+0.836}_{-3.343}$	$2.731^{+0.214}_{-1.285}$	$0.002^{+0.001}_{-0.000}$
	+1%/-3%	+1%/-1%	+214%/-429%	+7%/-27%	+8%/-47%	+41%/-11%
Source	SPE74	AST9	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 007631194-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-385 ± 32	$113.53^{+120.39}_{-73.42}$	1474^{+26}_{-48}	2986^{+1146}_{-563}	$4.816^{+31.086}_{-3.655}$
Alt.	-208 ± 35	$113.24^{+95.37}_{-81.24}$	1474^{+26}_{-47}	2745^{+1319}_{-501}	$2.723^{+30.690}_{-1.950}$

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 $A_{obs} \gg 1.0$

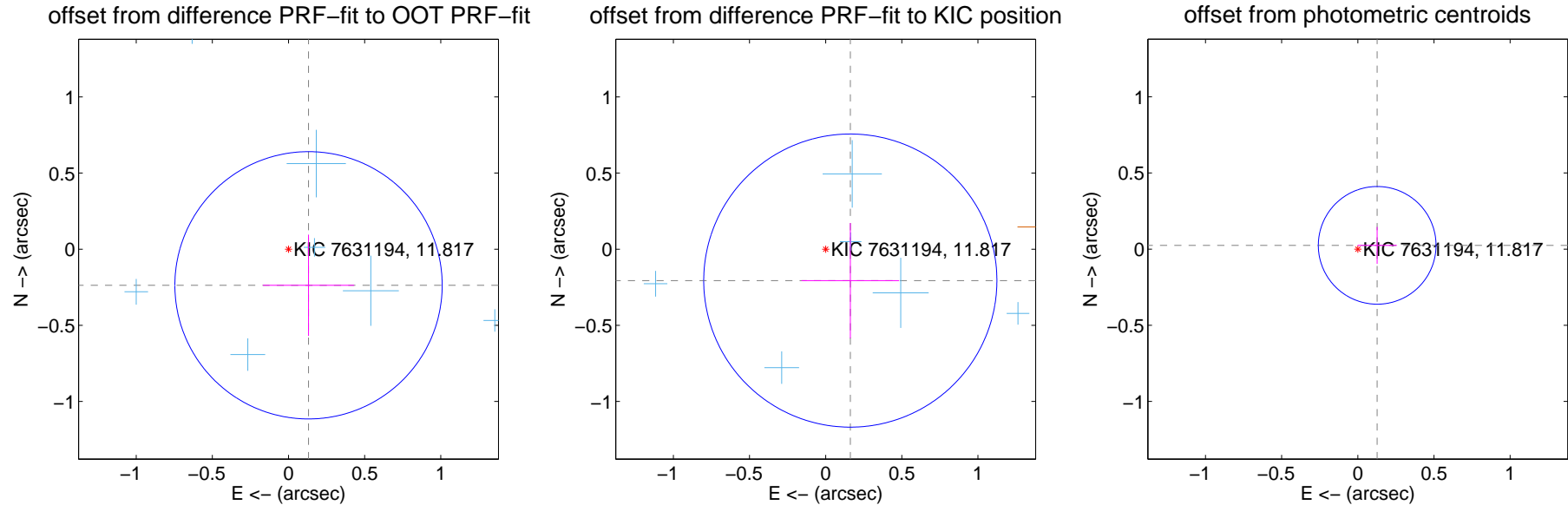
DV Centroid Data

Supplemental centroid analysis for 007631194-03. **Kepler magnitude: 11.82.** Transit SNR 9.02

There are 8 quarters with good PRF difference image offsets

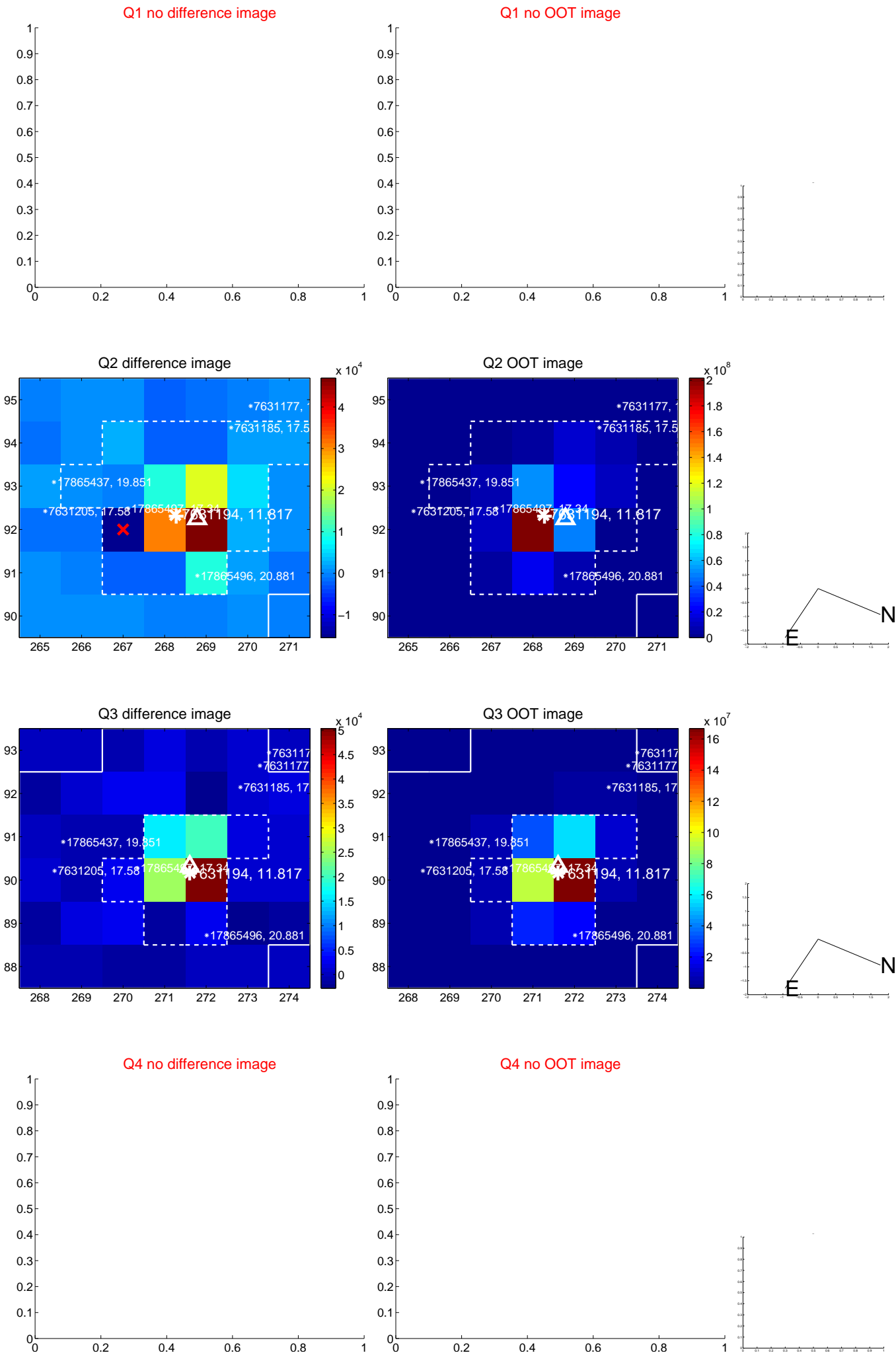
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.271 ± 0.293	0.93	-0.132 ± 0.300	-0.237 ± 0.333
PRF-fit source offset from KIC position	0.262 ± 0.321	0.82	-0.162 ± 0.320	-0.206 ± 0.379
photometric centroid source offset	0.13 ± 0.13	1.01	-0.13 ± 0.13	0.02 ± 0.12

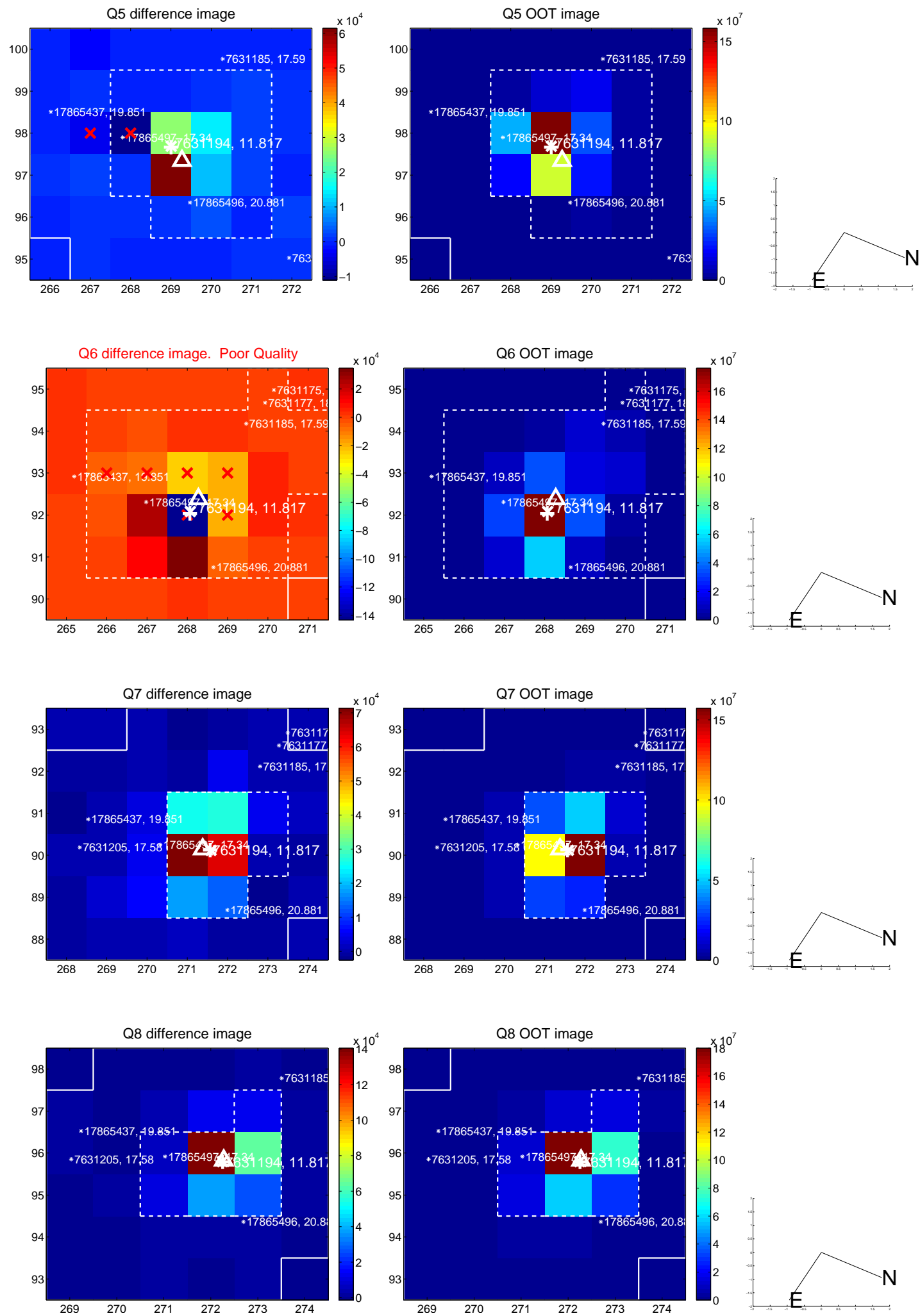


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

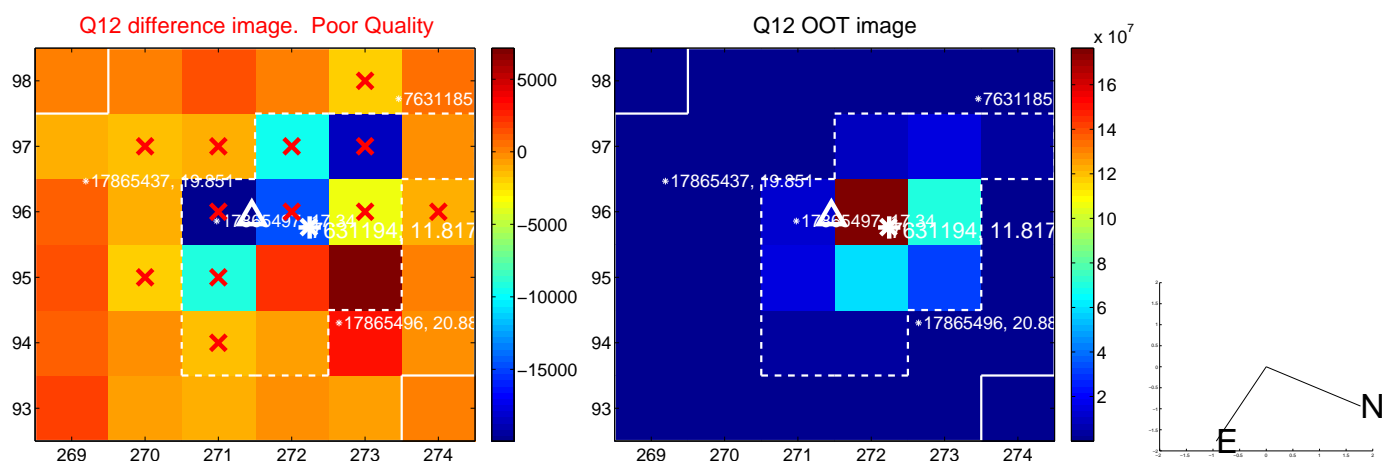
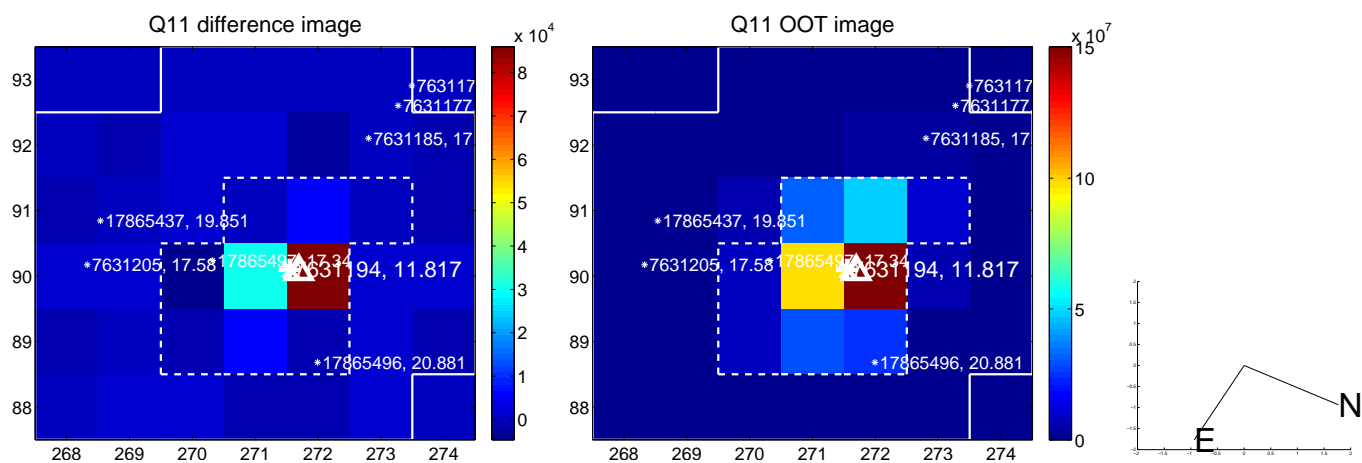
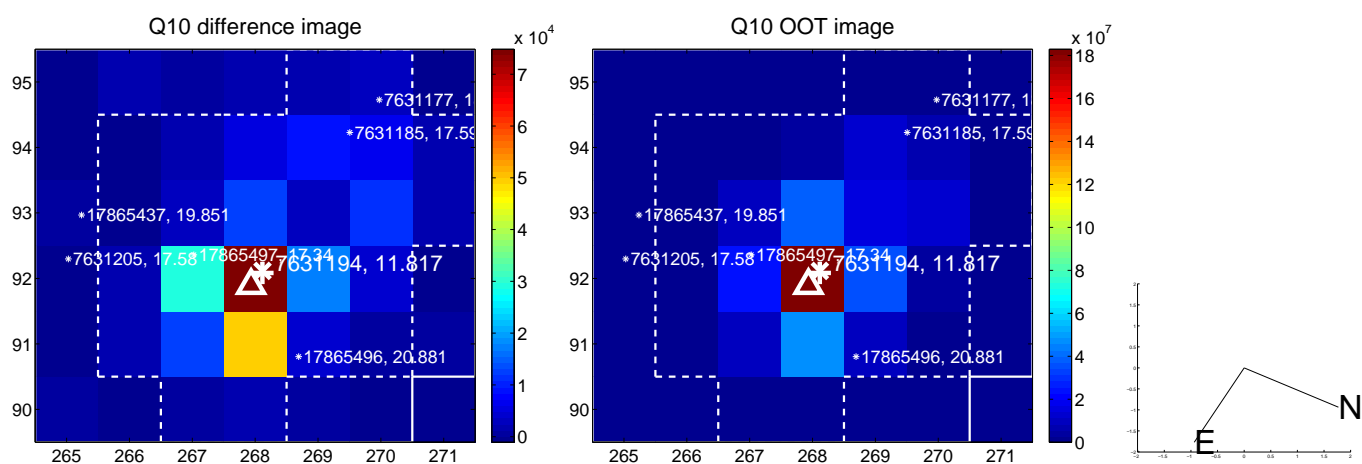
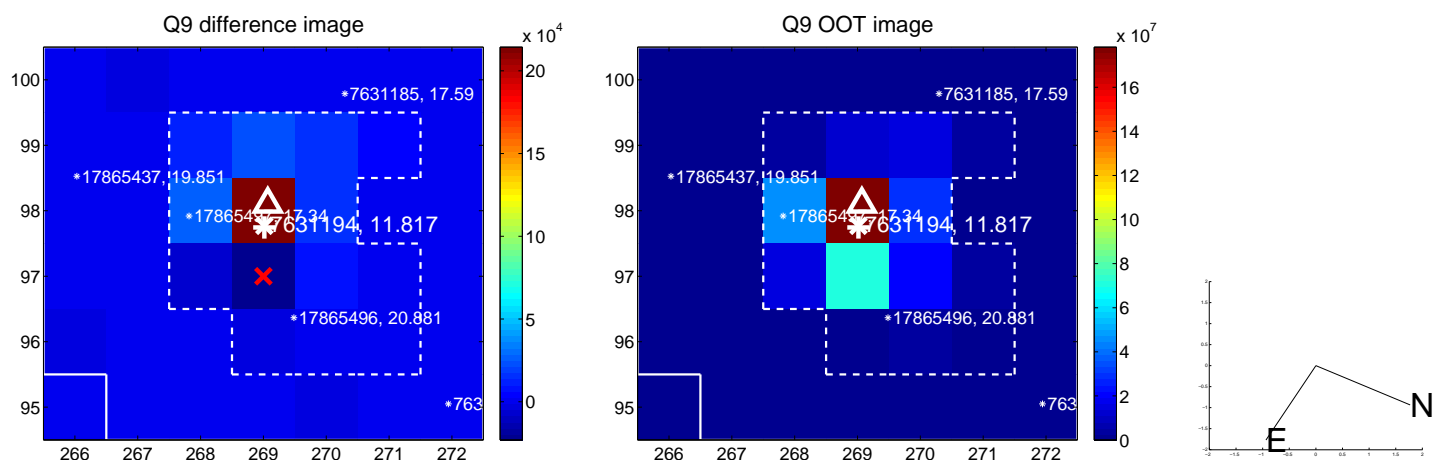
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



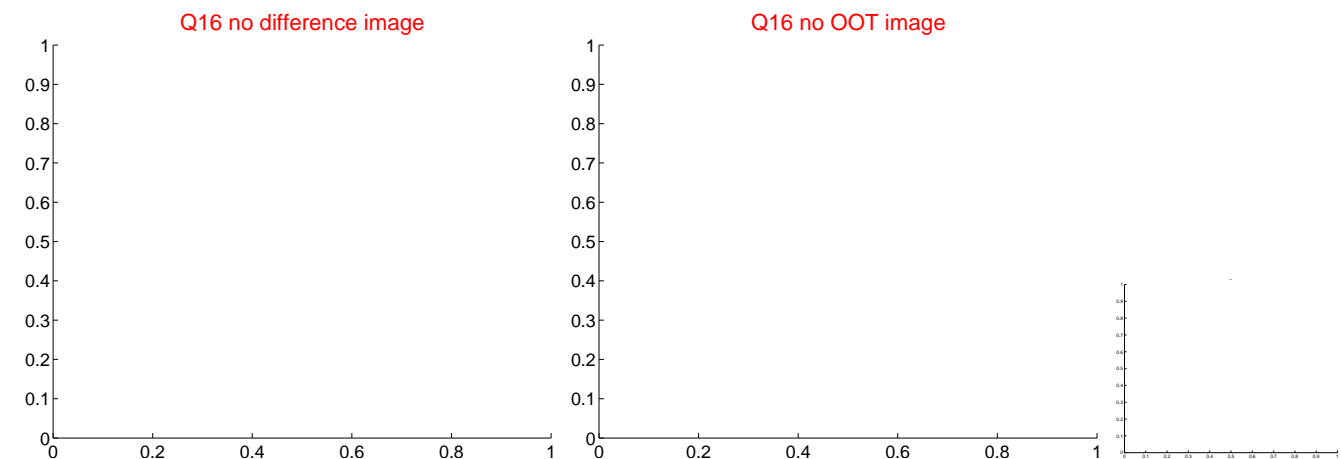
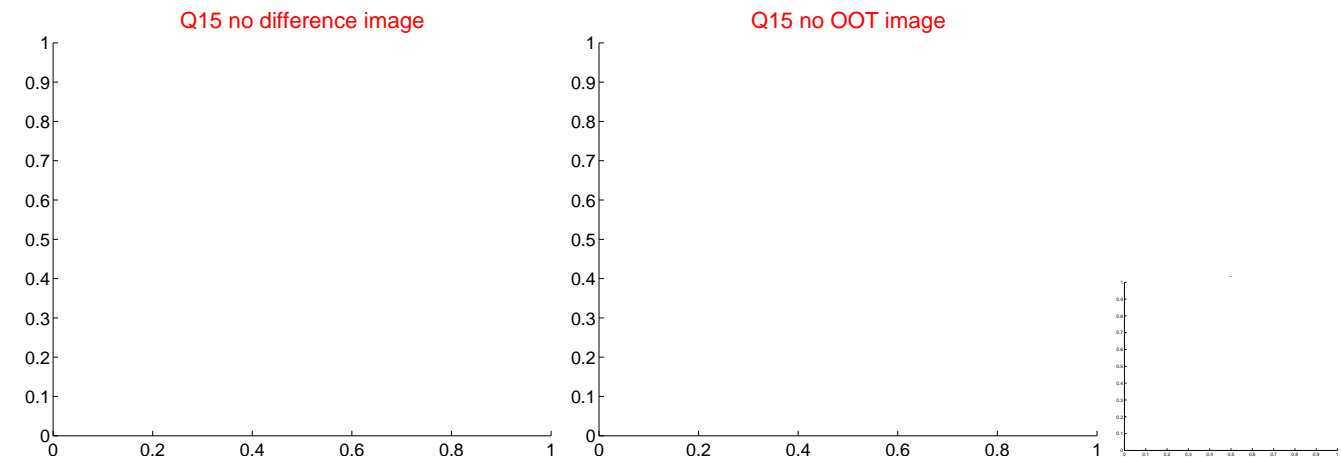
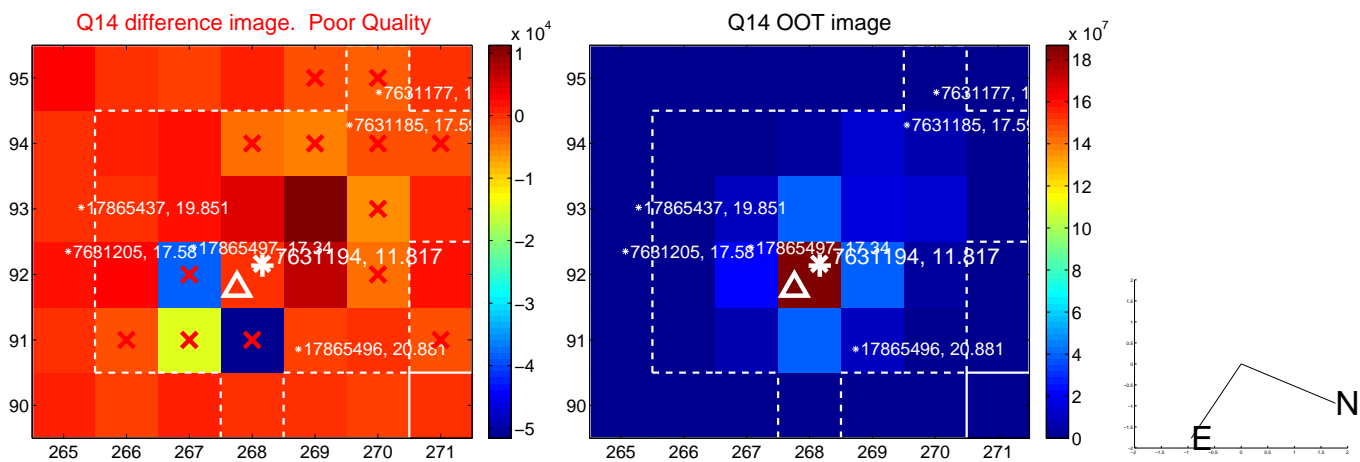
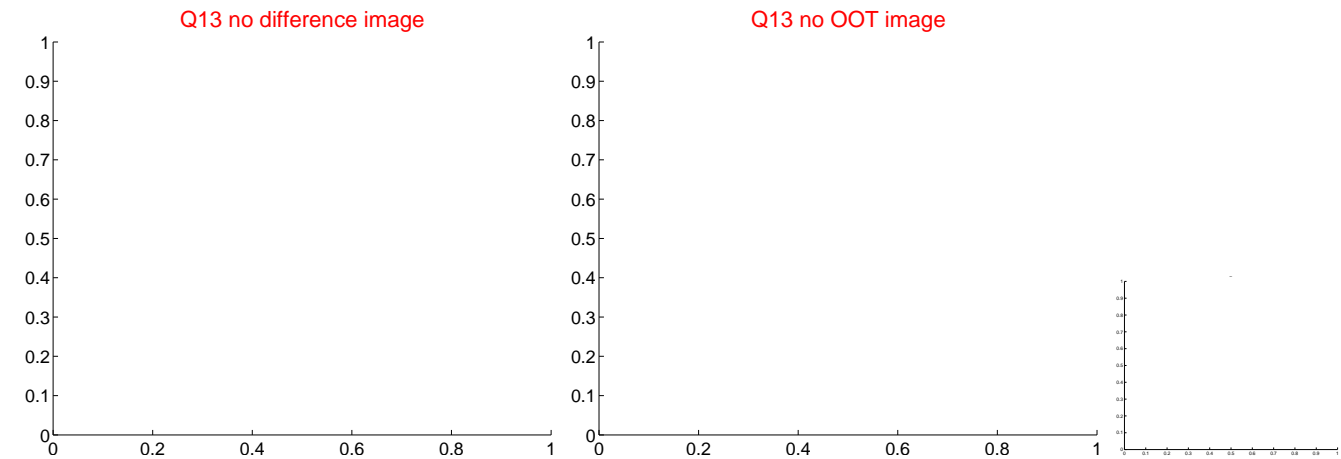
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



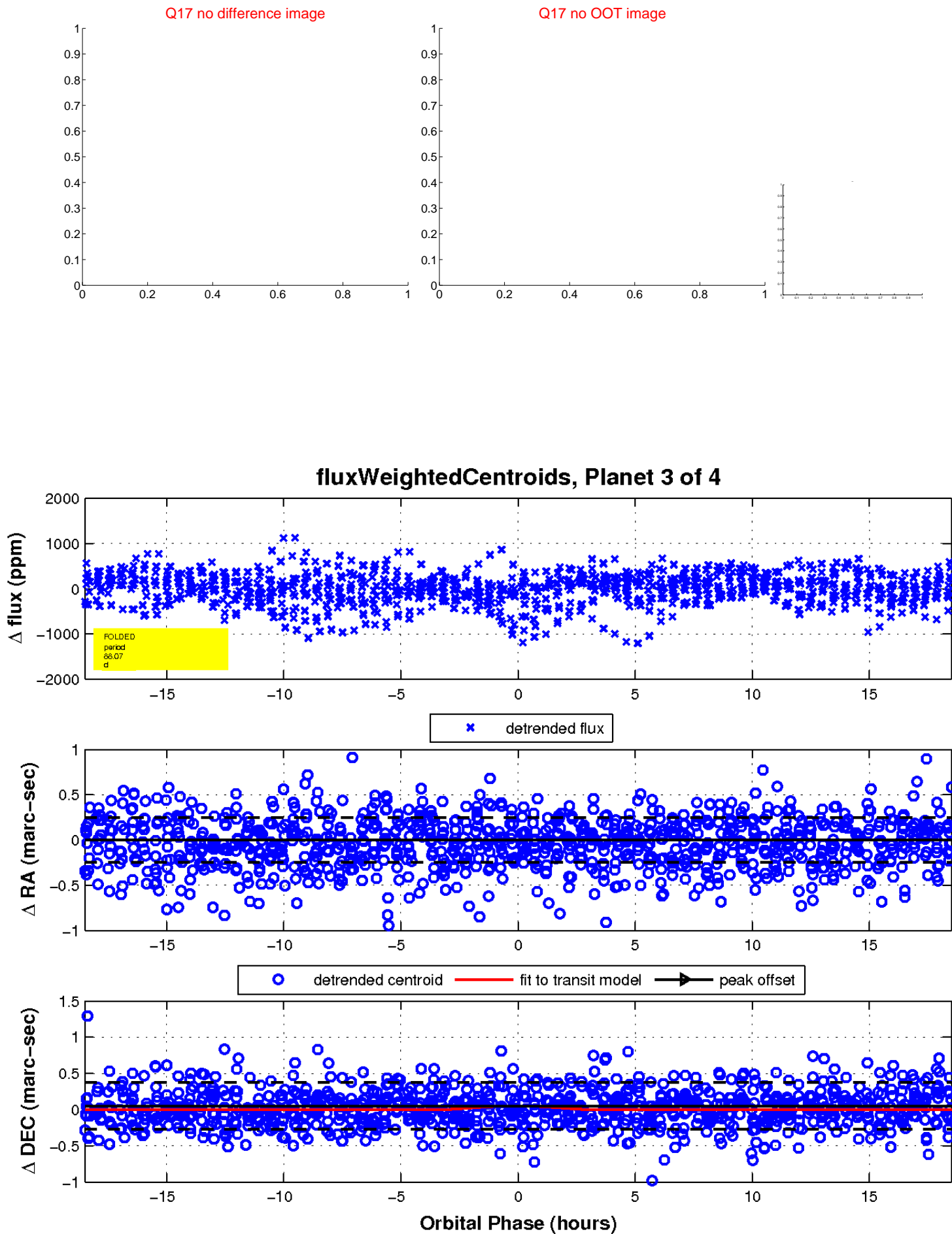
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

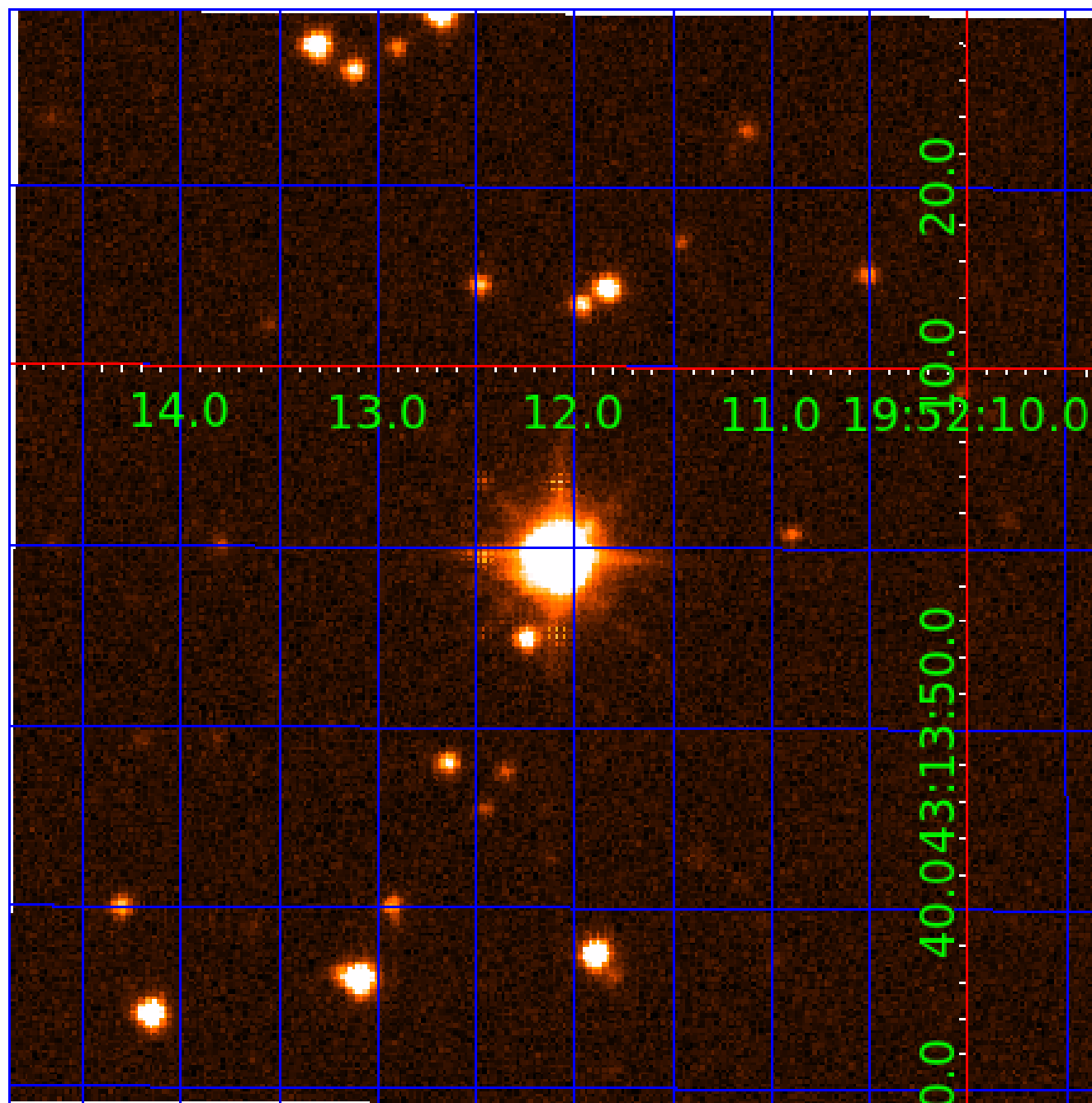


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007631194

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})
007631194-01	OBS	6896.01	0.811399	131.873759	63.9	1.153	11.3	16.5	12.49	4994	12.38	0.00
007631194-02	OBS	No	0.811379	132.289729	59.0	1.087	10.9	15.5	12.49	4994	11.81	0.00
007631194-03	OBS	No	88.068390	172.797555	719.5	6.193	8.5	9.0	12.49	4994	68.91	295.96
007631194-04	OBS	No	120.573159	216.463461	630.8	4.094	7.3	7.8	12.49	4994	42.27	194.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007631194-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_UNRESOLVED_OFFSET
007631194-02	OBS	FP	0.00	1	0	1	0	LPP_DV—SAME_NTL_PERIOD—CENT_UNRESOLVED_OFFSET
007631194-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—HALO_GHOST
007631194-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE

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

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

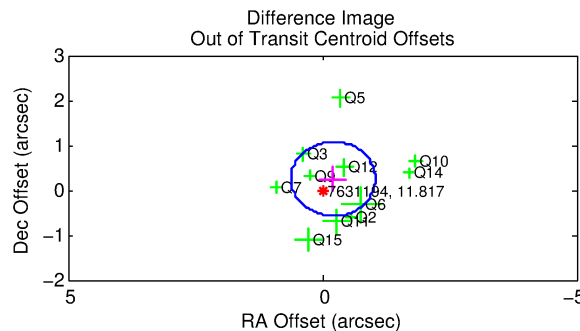
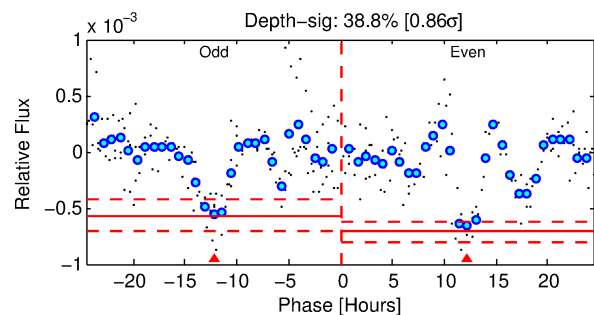
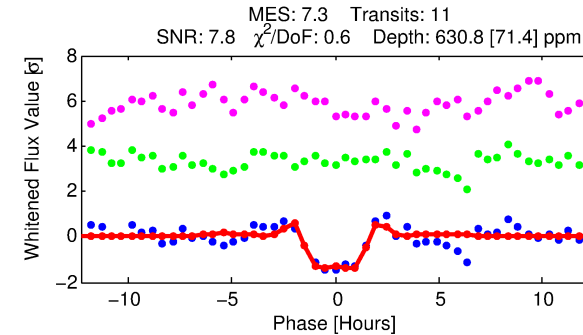
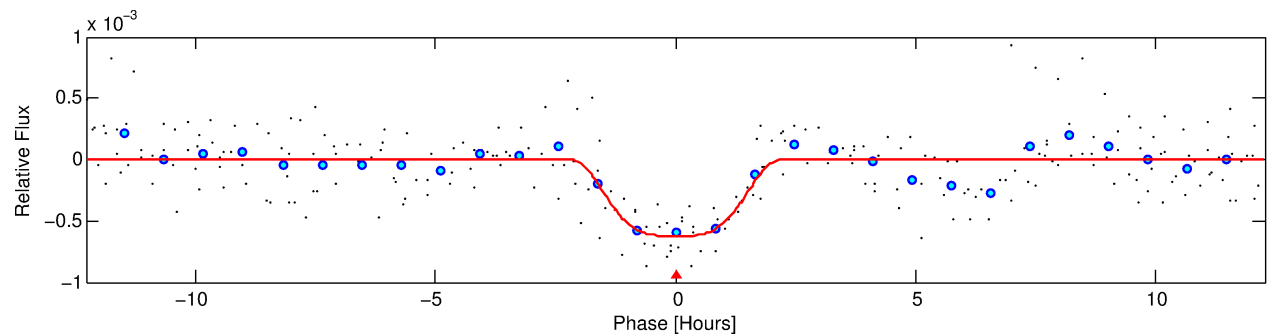
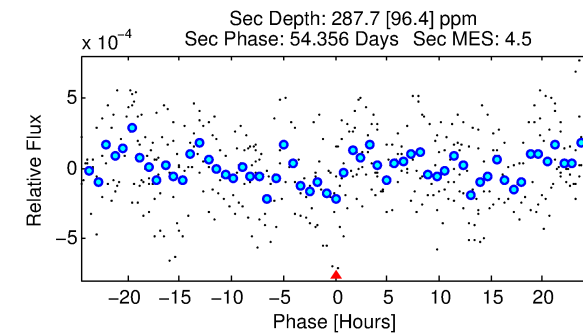
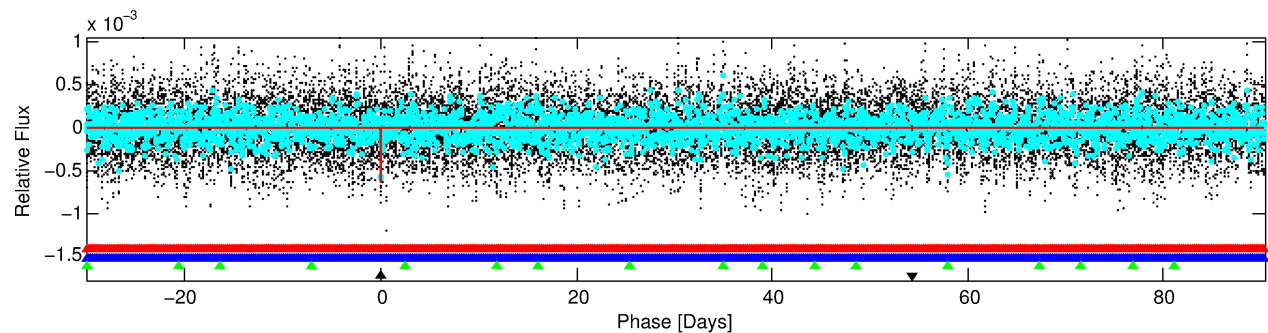
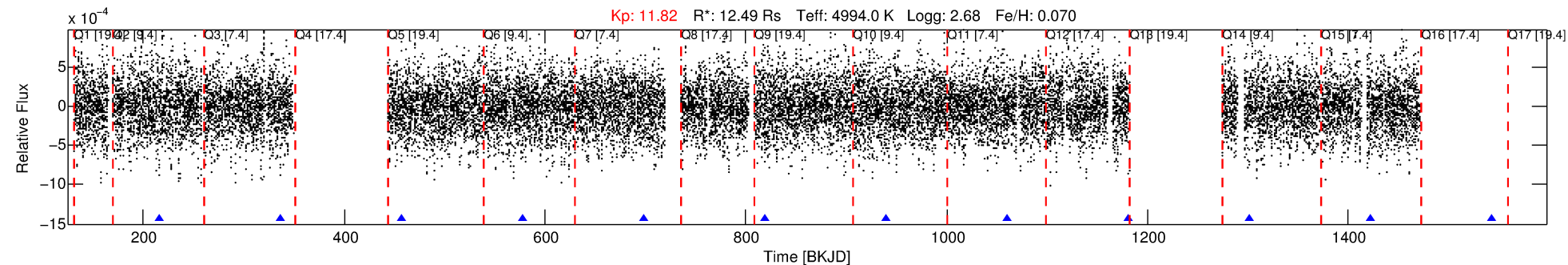
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007631194-04

No Significant Match Found

DV One-Page Summary

KIC: 7631194 Candidate: 4 of 4 Period: 120.573 d
KOI: K06896 Corr: No Ephemeris Match



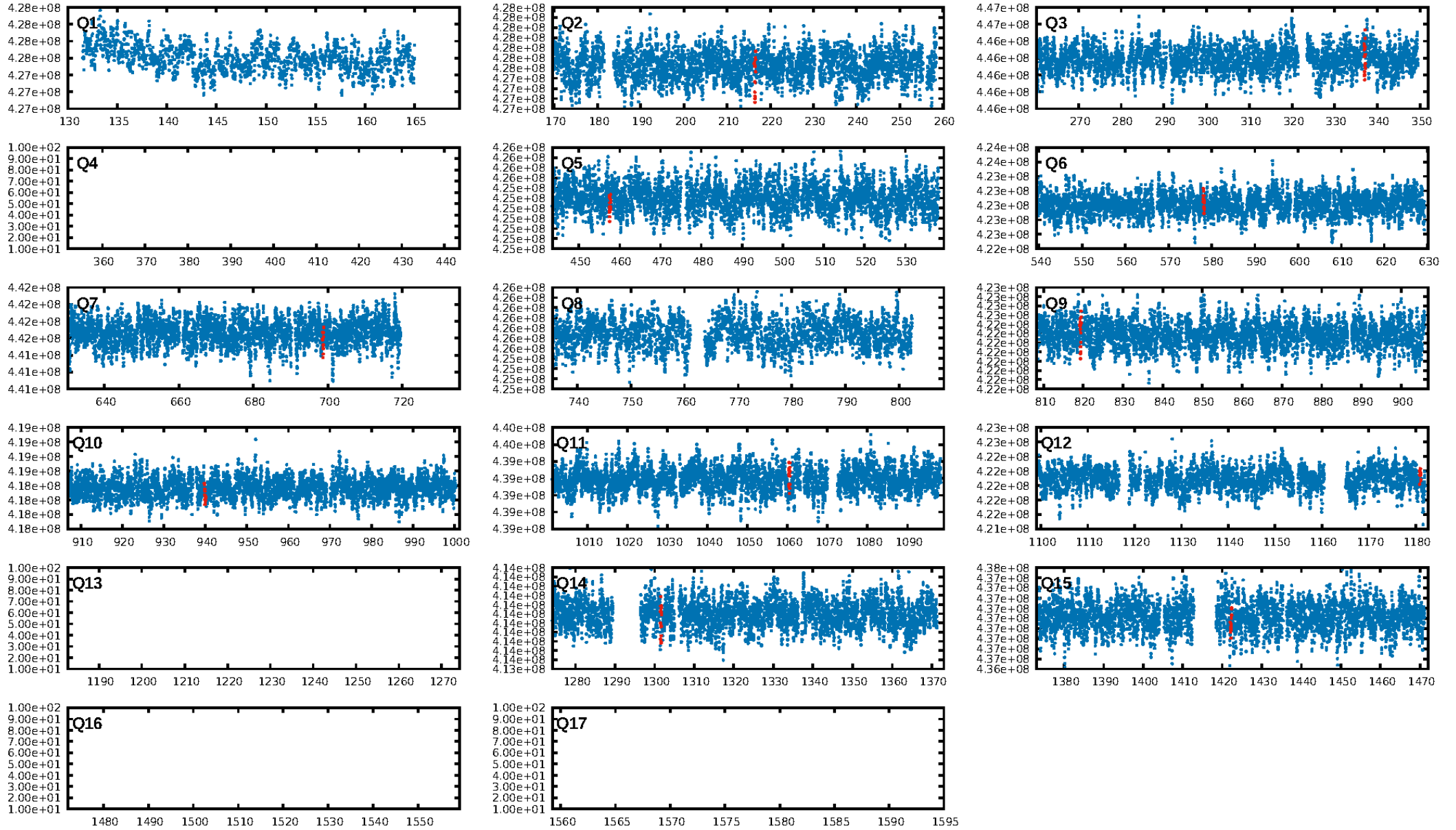
DV Fit Results:

Period = 120.57316 [0.00090] d
Epoch = 216.4635 [0.0051] BKJD
Rp/R* = 0.0310 [0.0021]
a/R* = 85.13 [8.04]
b = 0.96 [0.01]
Seff = 194.68 [43.03]
Teq = 952 [53] K
Rp = 42.27 [11.66] Re
a = 0.6681 [0.1204] AU
Ag = 39.55 [16.03] [2.40σ]
Teffp = 3693 [351] K [7.73σ]

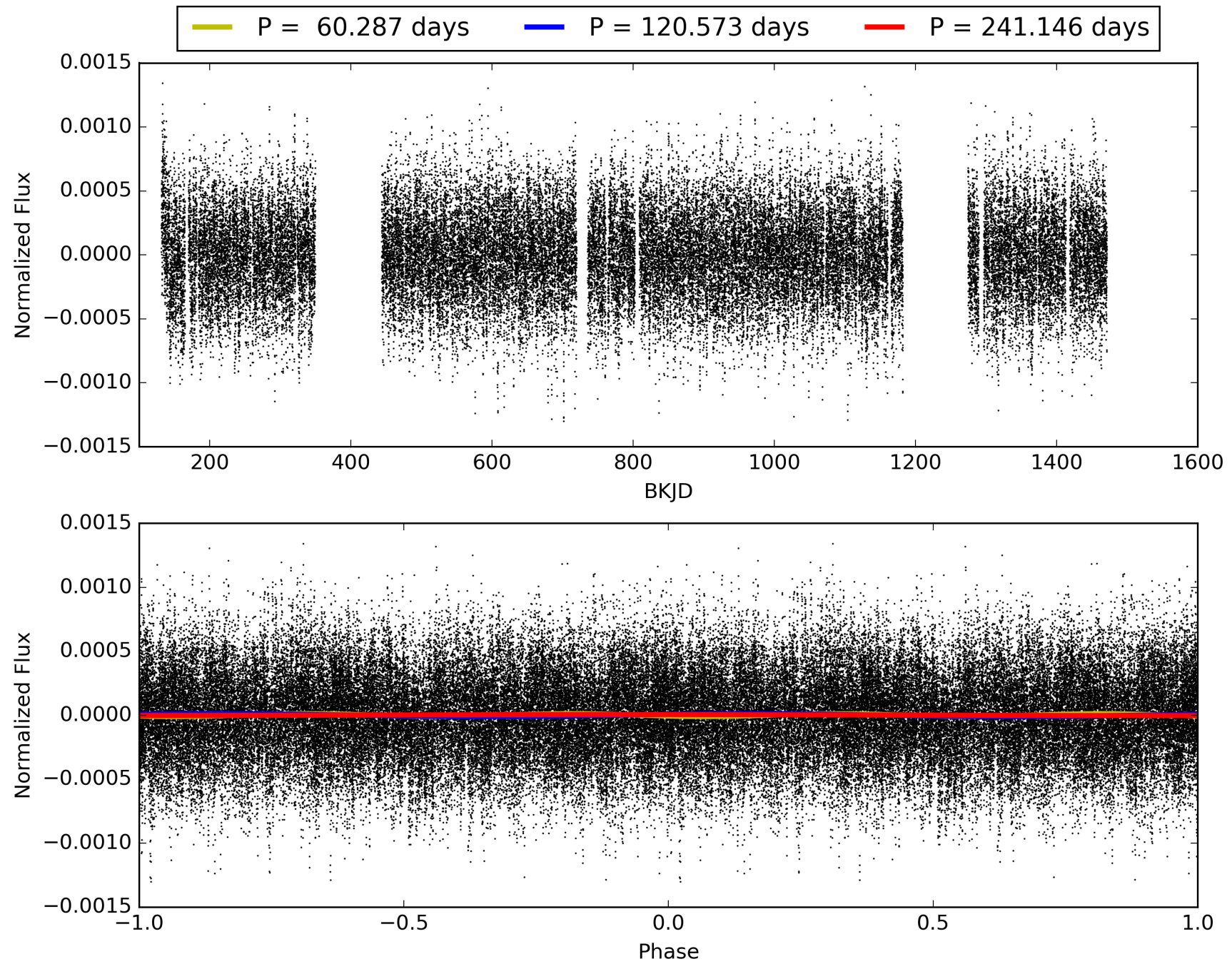
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [105.08σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 71.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.16e-09
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 4.192
Centroid-sig: 88.5%
Centroid-so: 0.213 arcsec [1.21σ]
OotOffset-rm: 0.325 arcsec [1.18σ]
KicOffset-rm: 0.307 arcsec [1.08σ]
OotOffset-st: 4/4/1/2 [11]
KicOffset-st: 4/4/1/2 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 0.00 [0/11]

TCE 007631194-04, PDC Light Curves

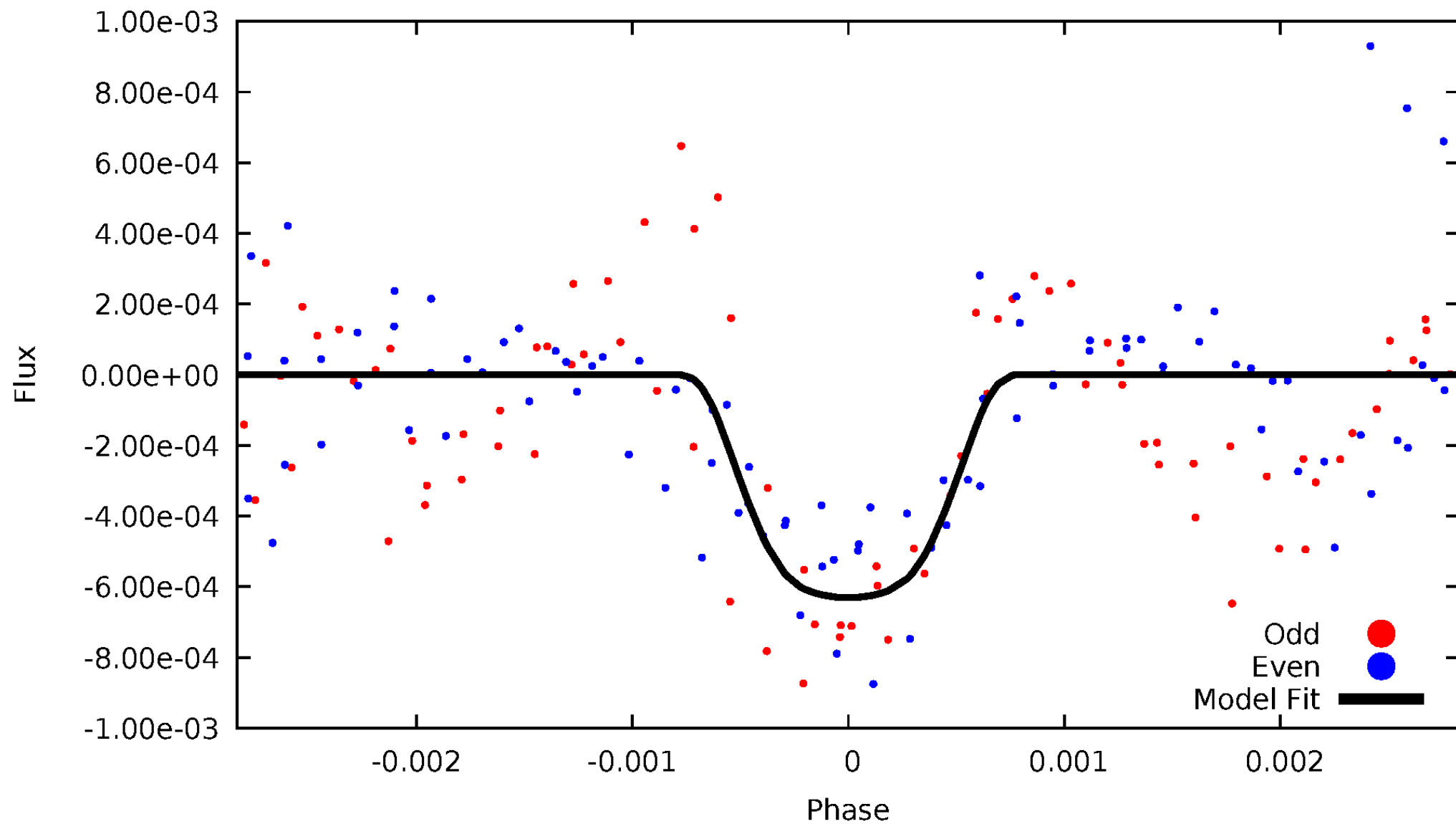


TCE 007631194-04



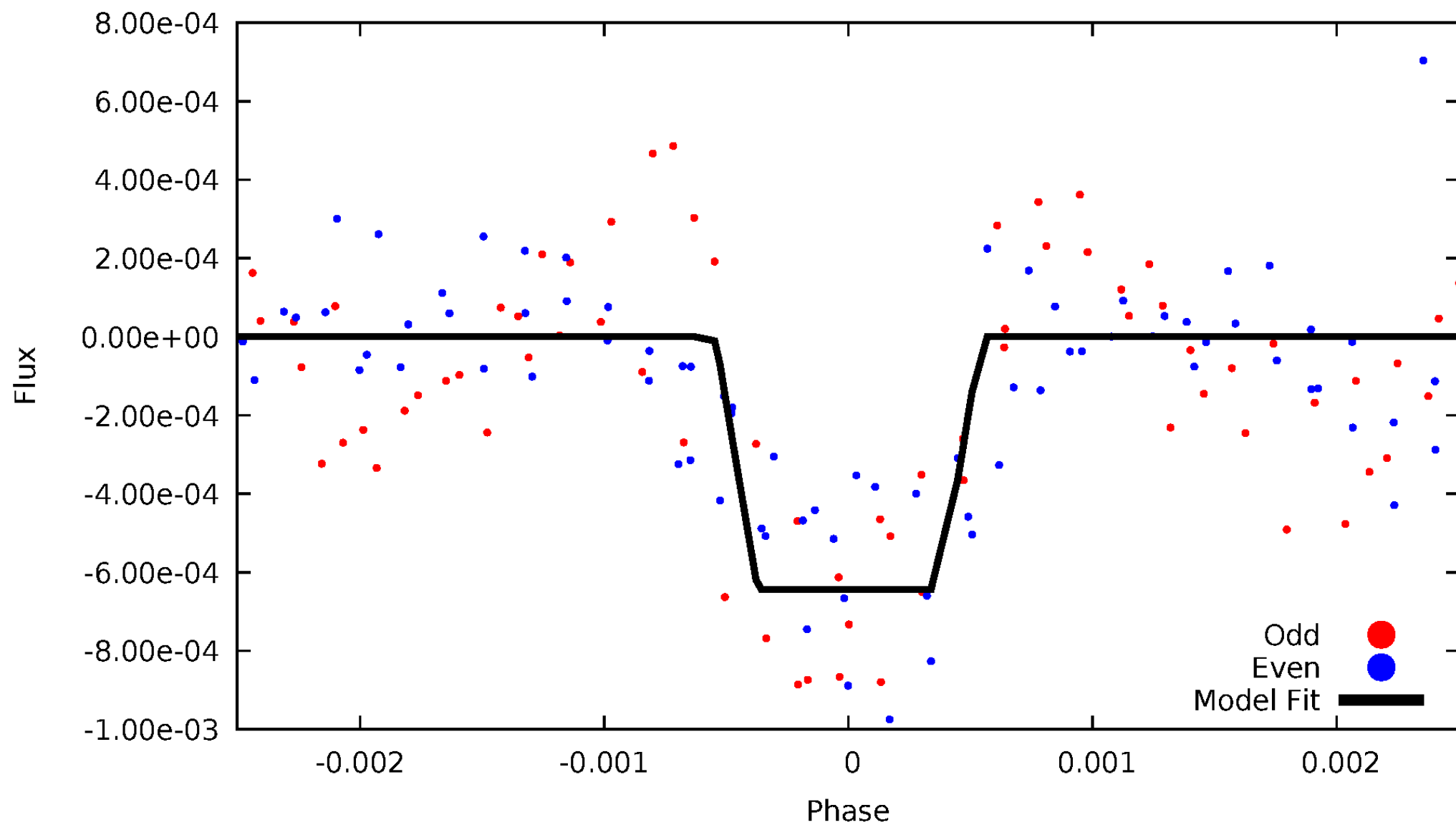
DV Odd/Even

TCE 007631194-04



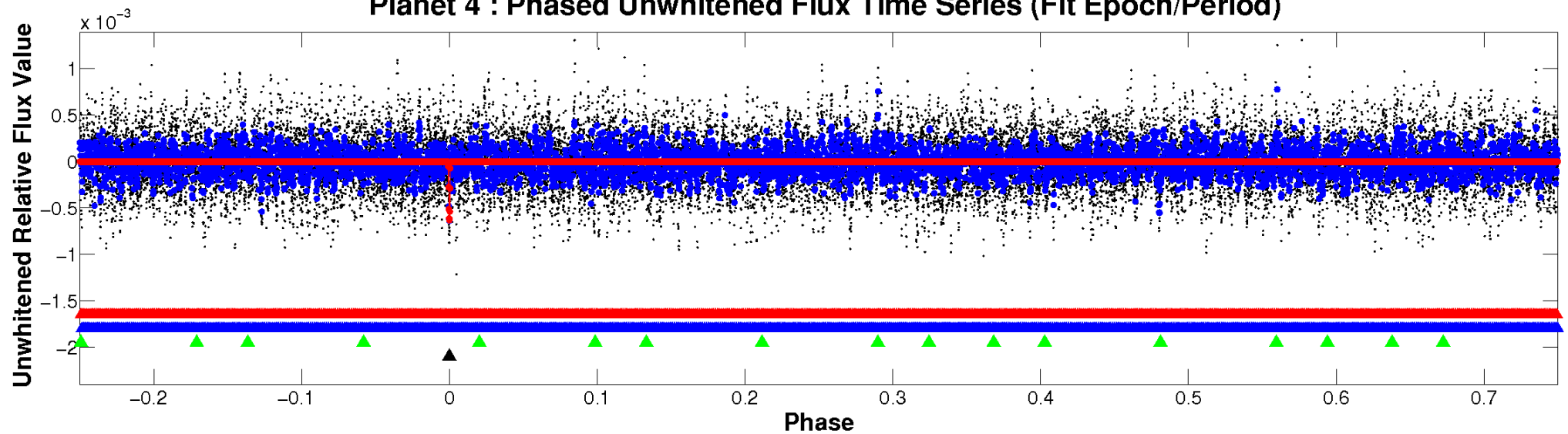
ALT Odd/Even

TCE 007631194-04

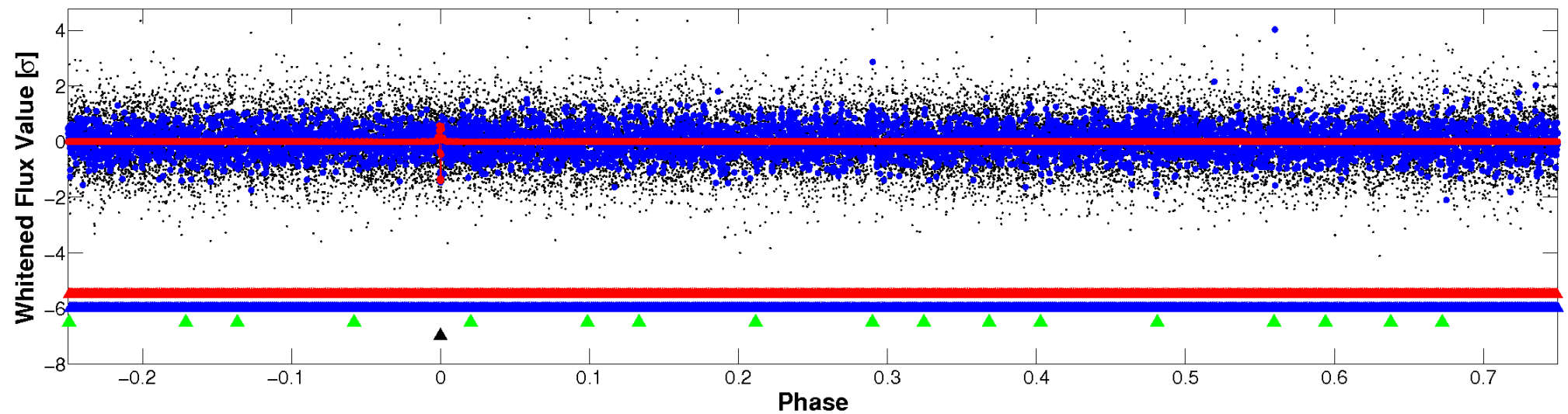


Non-Whitened Vs. Whitened Light Curve

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

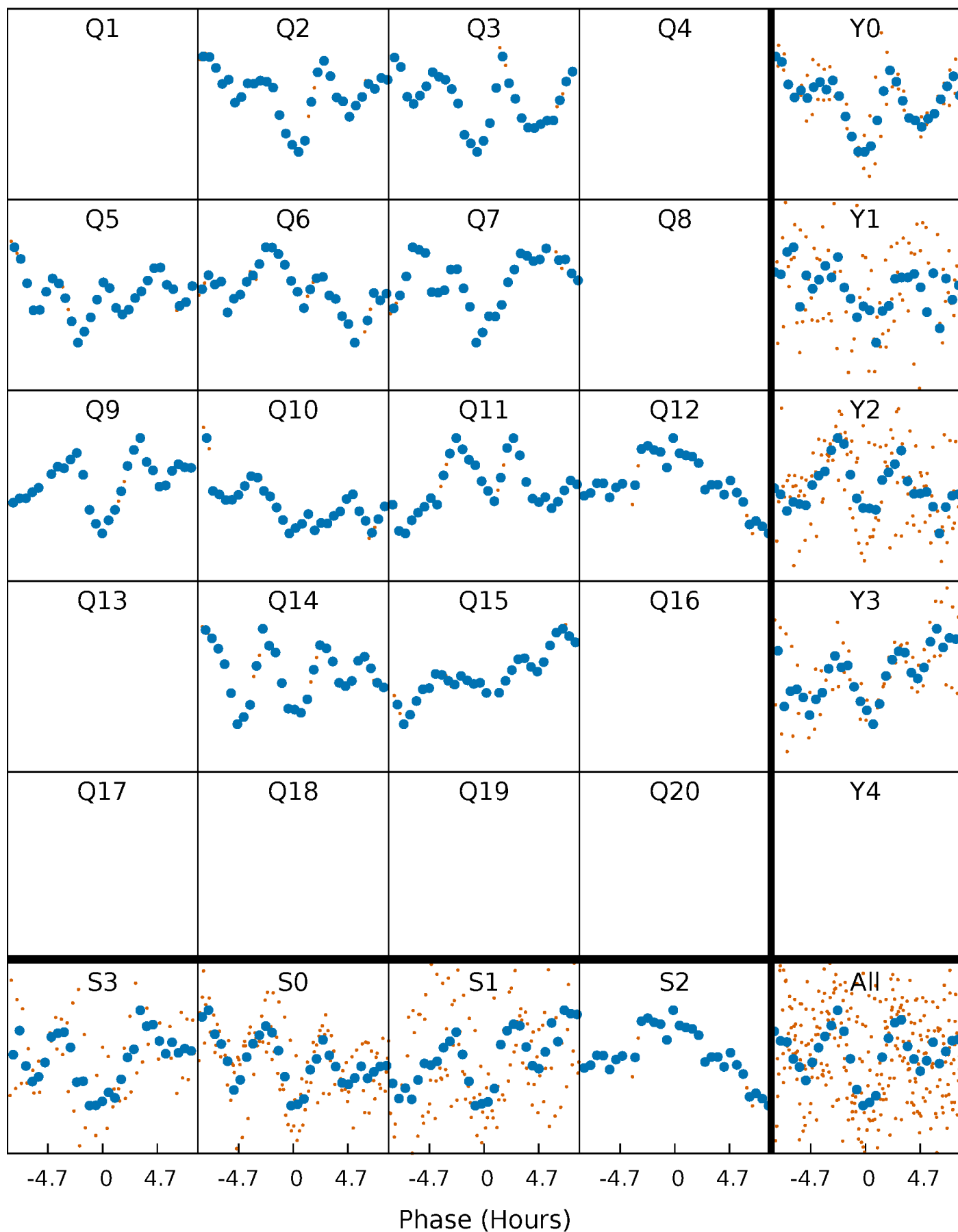


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



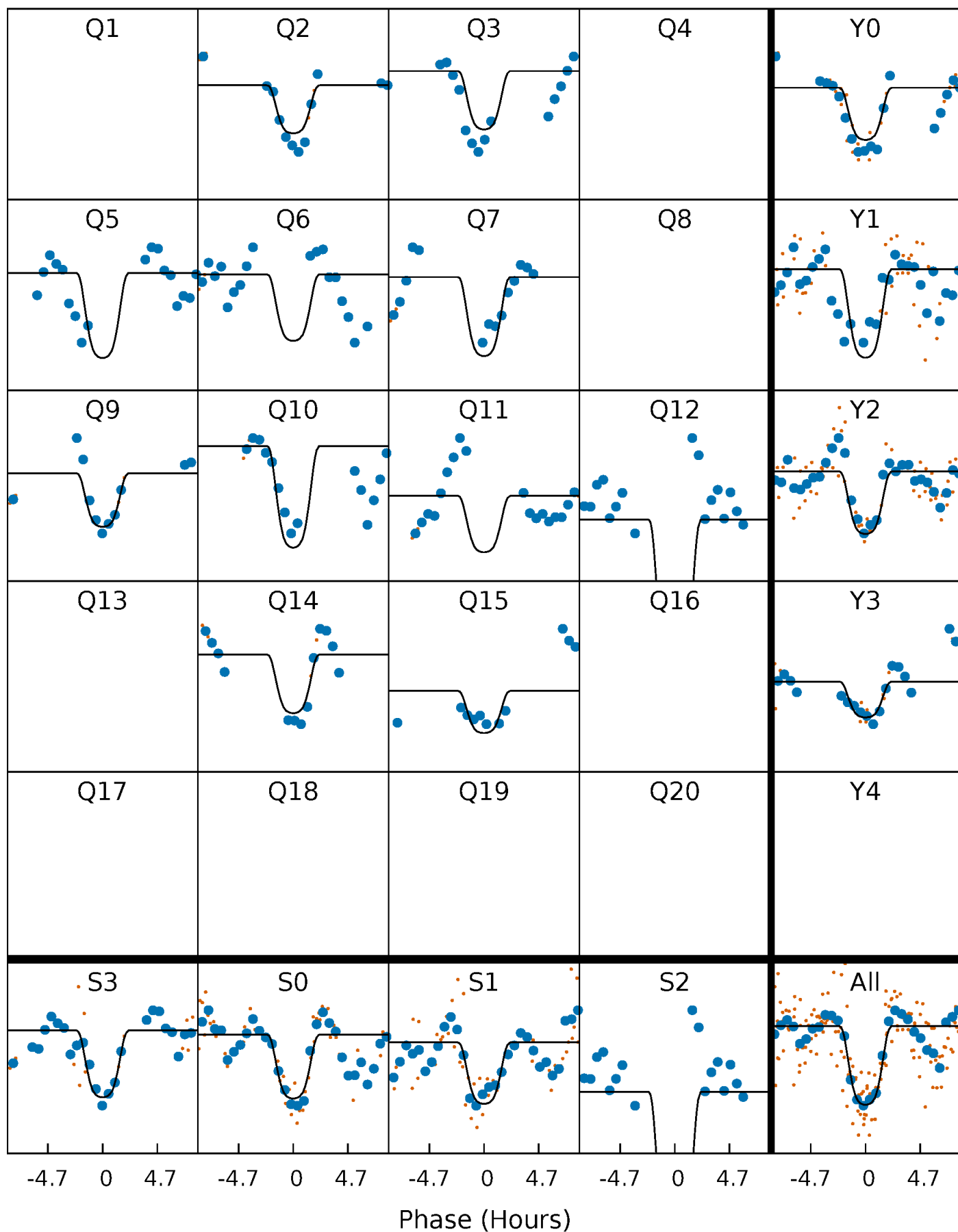
PDC Quarter-Phased Transit Curves

TCE 007631194-04 P=120.573159 Days $T_0=216.463461$ (BKJD)



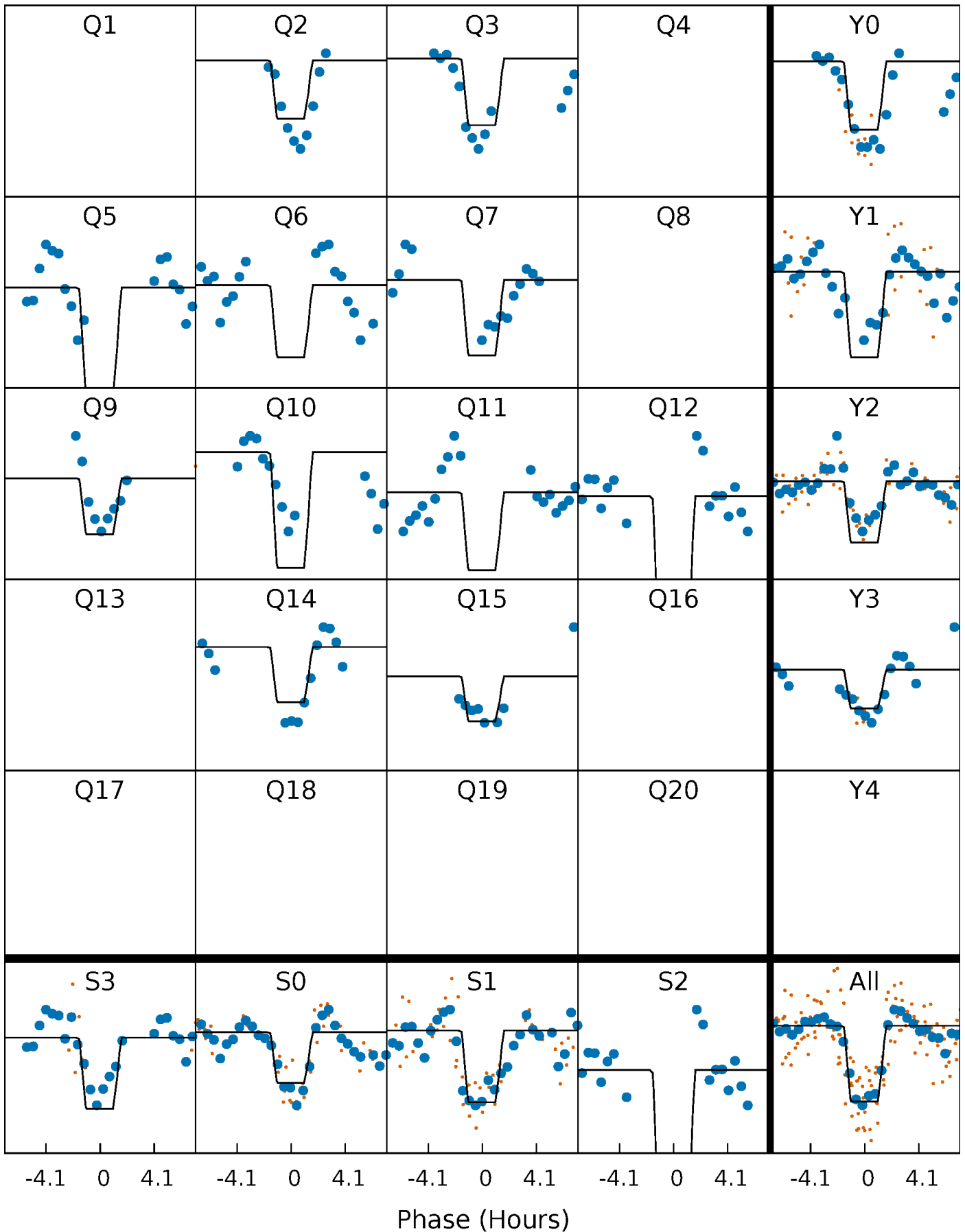
DV Quarter-Phased Transit Curves

TCE 007631194-04 P=120.573159 Days $T_0=216.463461$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

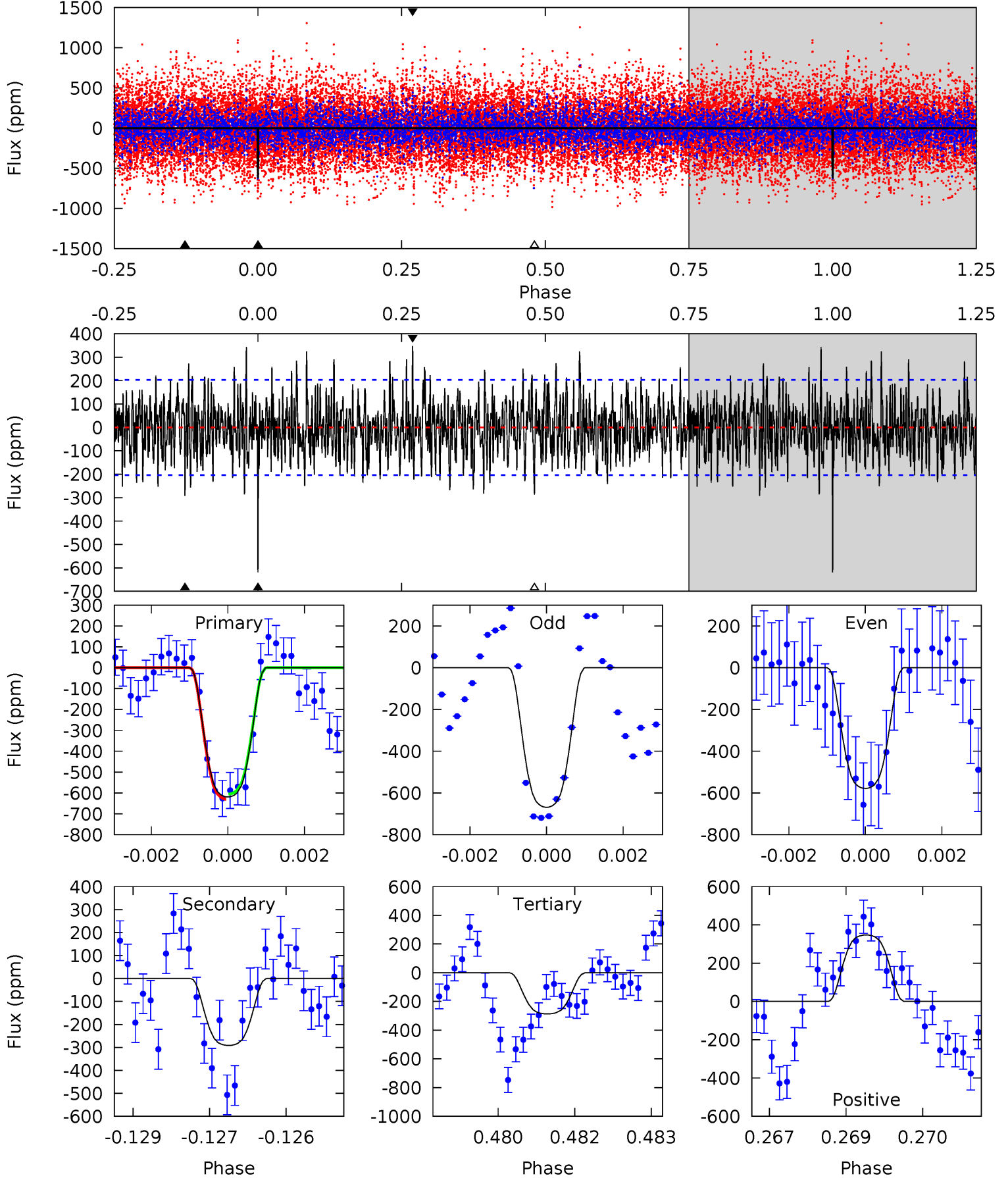
TCE 007631194-04 P=120.574551 Days $T_0=216.457035$ (BKJD)



DV Model-Shift Uniqueness Test

007631194-04, P = 120.573159 Days, E = 95.890302 Days

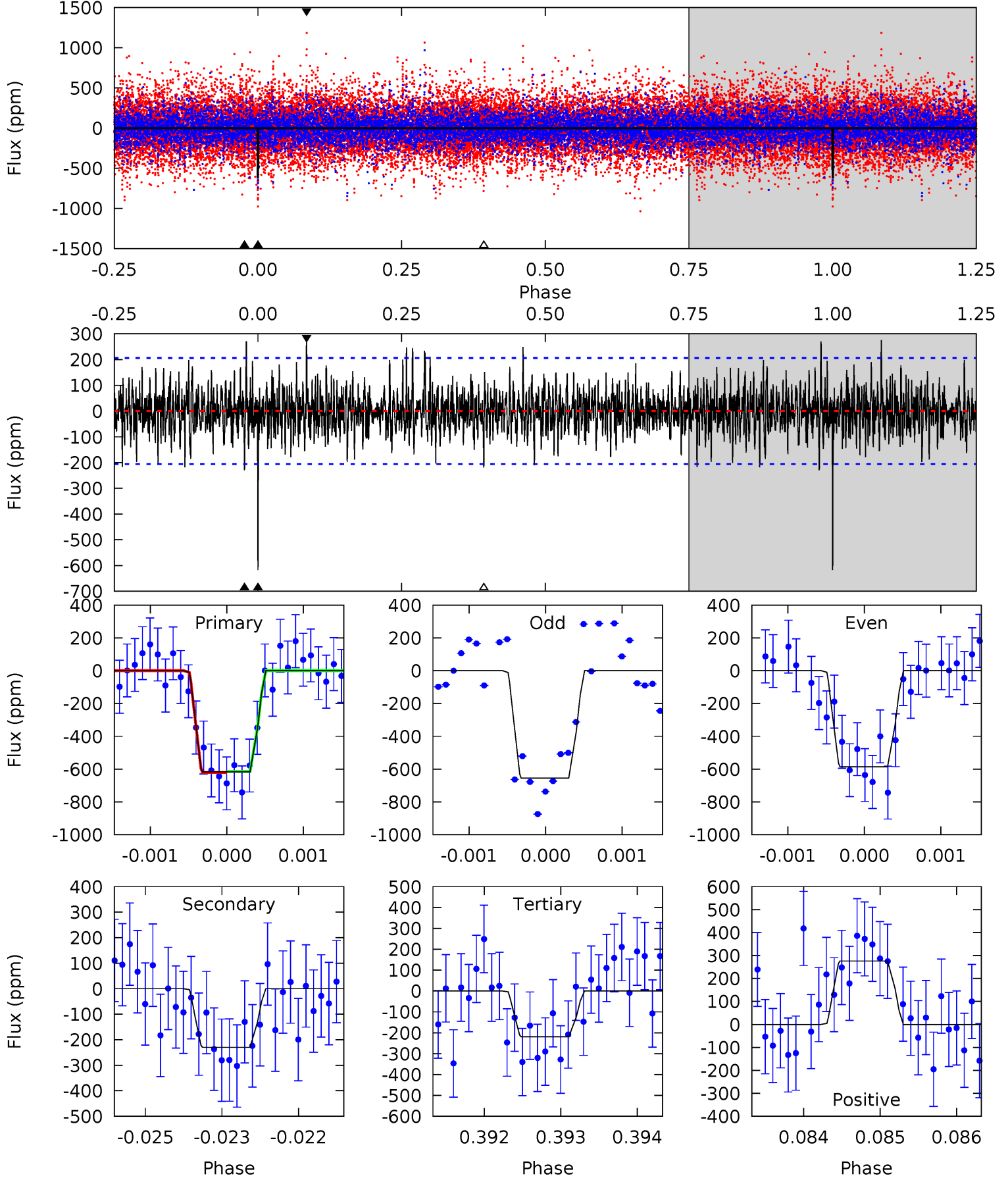
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	7.69	7.56	9.16	5.37	3.16	2.63	8.77	7.17	0.13	-1.47	1.19	0.09	0.36	0.32



Alt Model-Shift Uniqueness Test

007631194-04, P = 120.574551 Days, E = 95.882484 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	6.05	5.78	7.27	5.43	3.26	1.74	10.5	9.00	0.28	-1.22	0.91	1.01	0.31	0.09



Stellar Parameters For KIC 007631194

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4994^{+37}_{-150}	$2.682^{+0.033}_{-0.027}$	$0.070^{+0.150}_{-0.300}$	$12.487^{+0.836}_{-3.343}$	$2.731^{+0.214}_{-1.285}$	$0.002^{+0.001}_{-0.000}$
	+1%/-3%	+1%/-1%	+214%/-429%	+7%/-27%	+8%/-47%	+41%/-11%
Source	SPE74	AST9	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 007631194-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-292 ± 38	$42.76^{+3.58}_{-4.18}$	1327^{+23}_{-45}	3944^{+150}_{-152}	40^{+9}_{-8}
Alt.	-230 ± 38	$34.93^{+3.35}_{-3.82}$	1325^{+25}_{-42}	4052^{+186}_{-193}	47^{+14}_{-10}

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

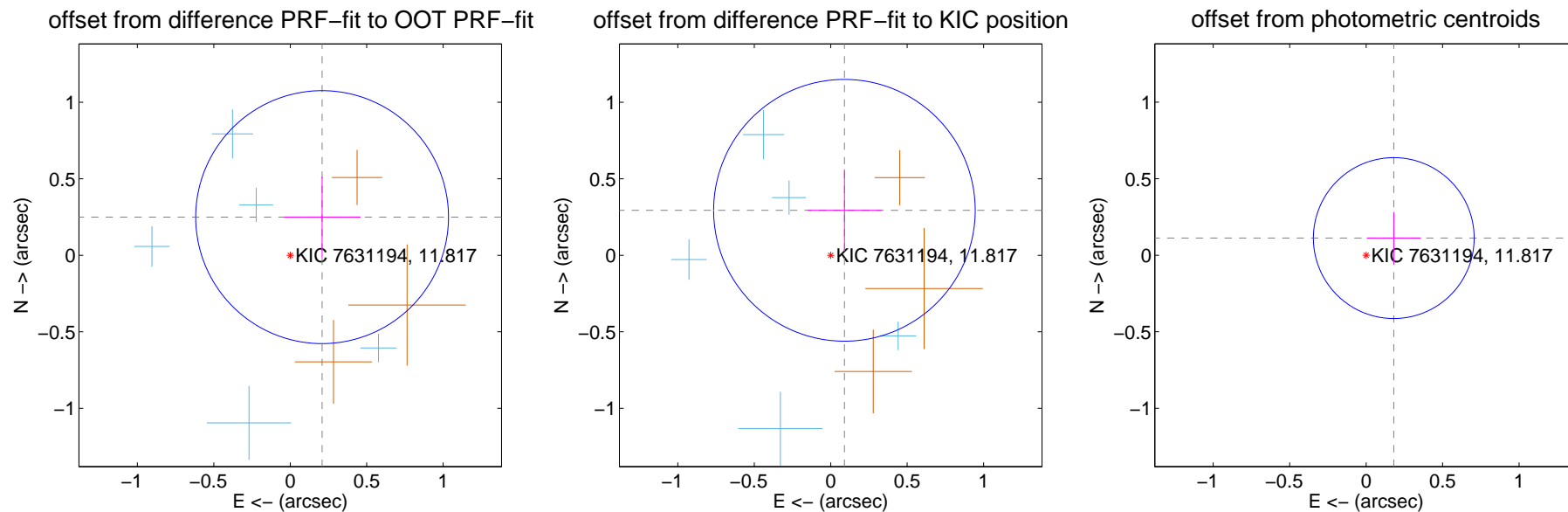
DV Centroid Data

Supplemental centroid analysis for 007631194-04. **Kepler magnitude: 11.82.** Transit SNR 7.82

There are 8 quarters with good PRF difference image offsets

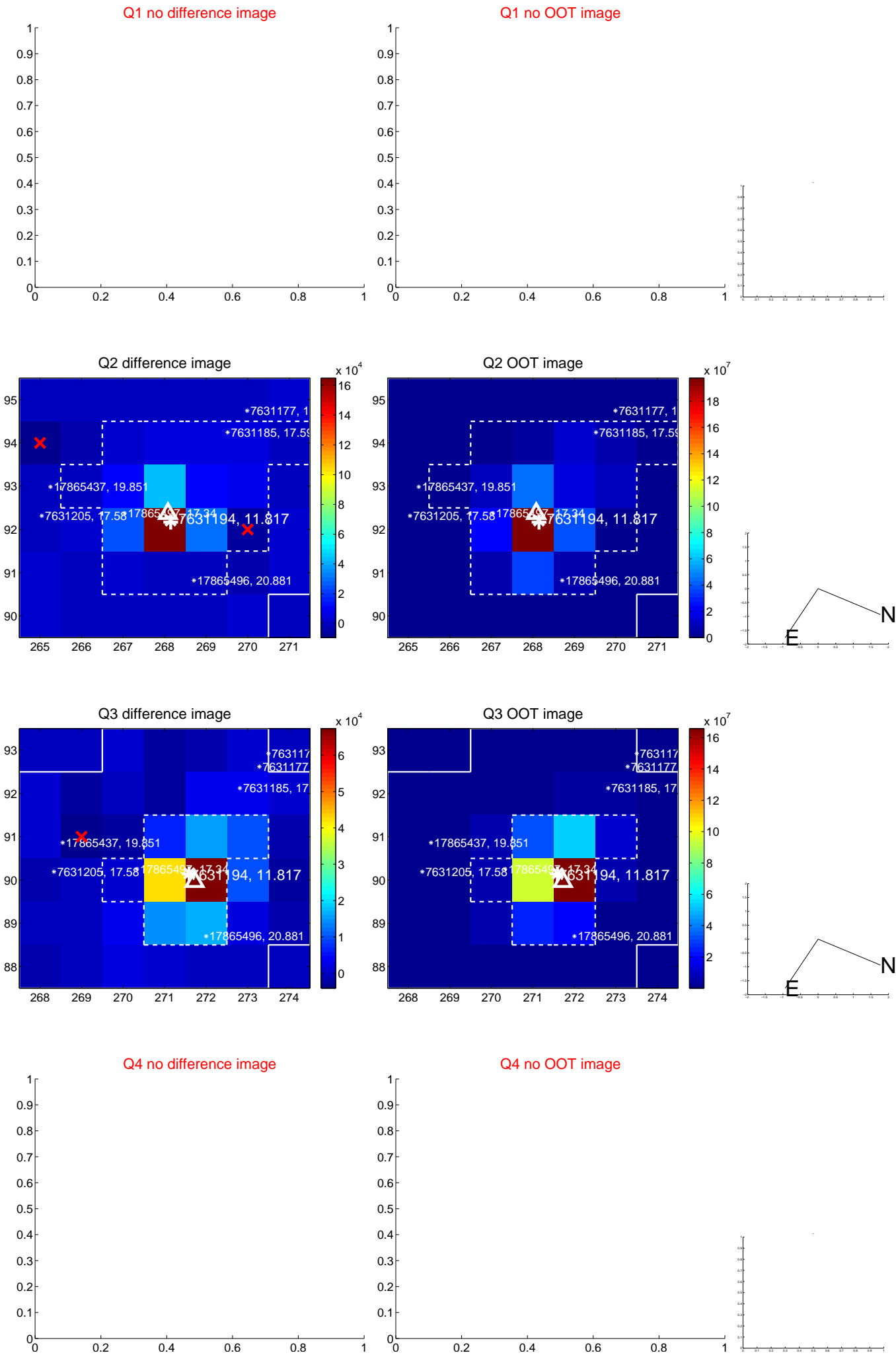
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.325 ± 0.275	1.18	-0.208 ± 0.251	0.249 ± 0.264
PRF-fit source offset from KIC position	0.307 ± 0.285	1.08	-0.090 ± 0.241	0.294 ± 0.268
photometric centroid source offset	0.21 ± 0.18	1.21	-0.18 ± 0.18	0.11 ± 0.17

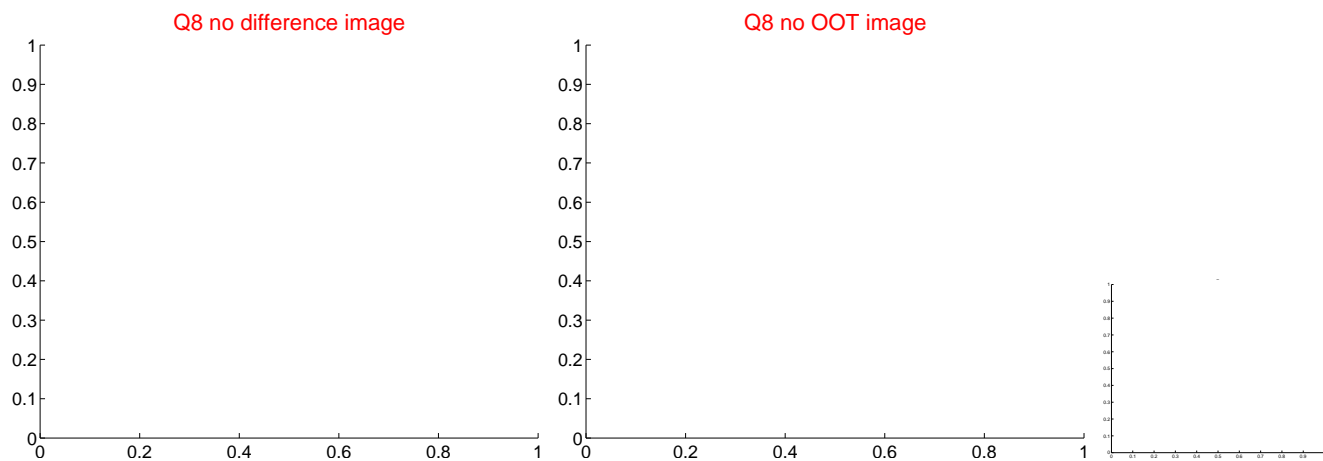
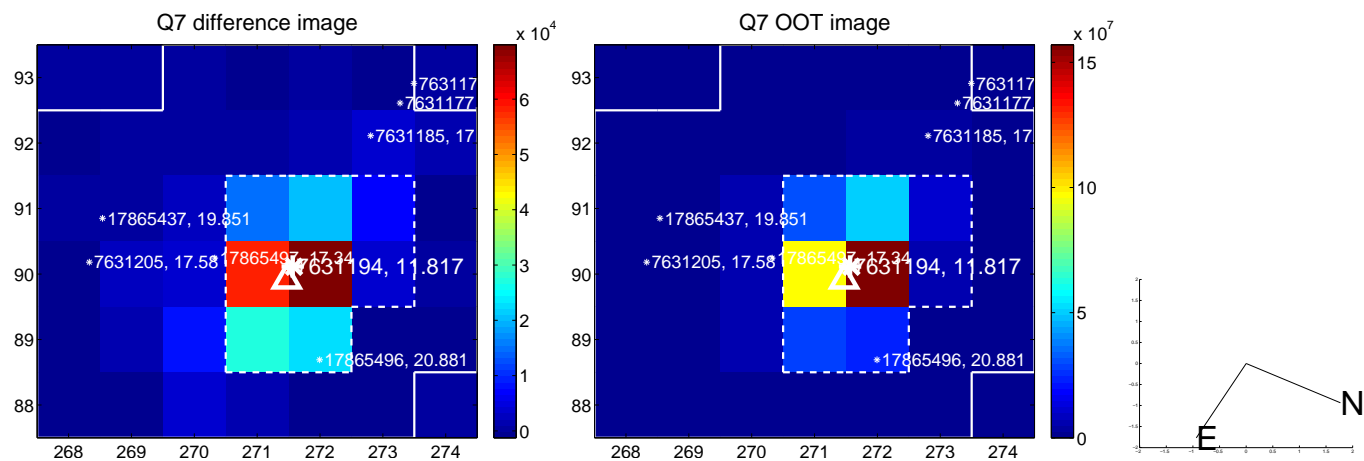
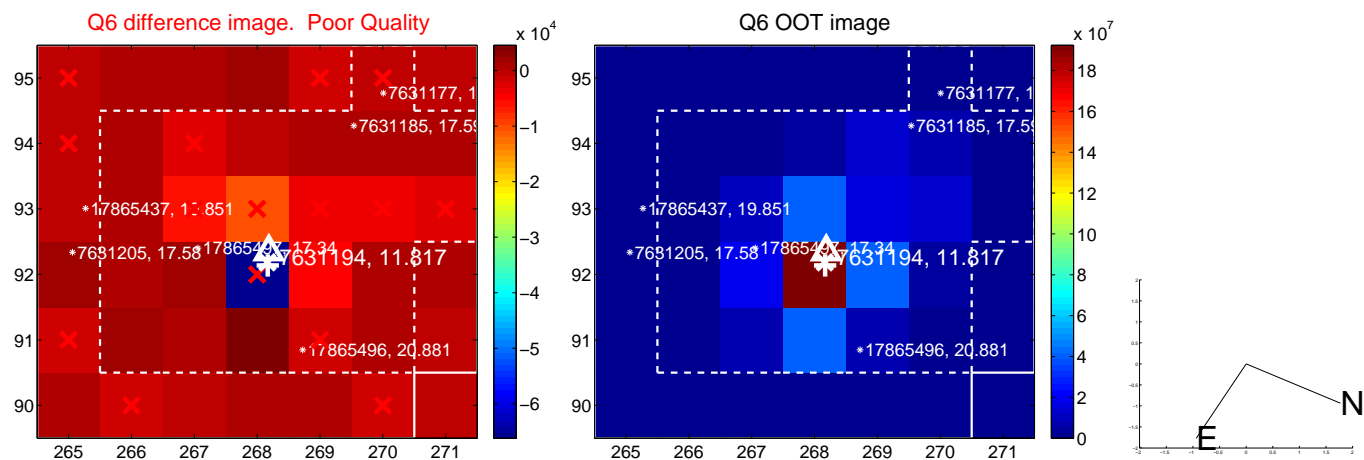
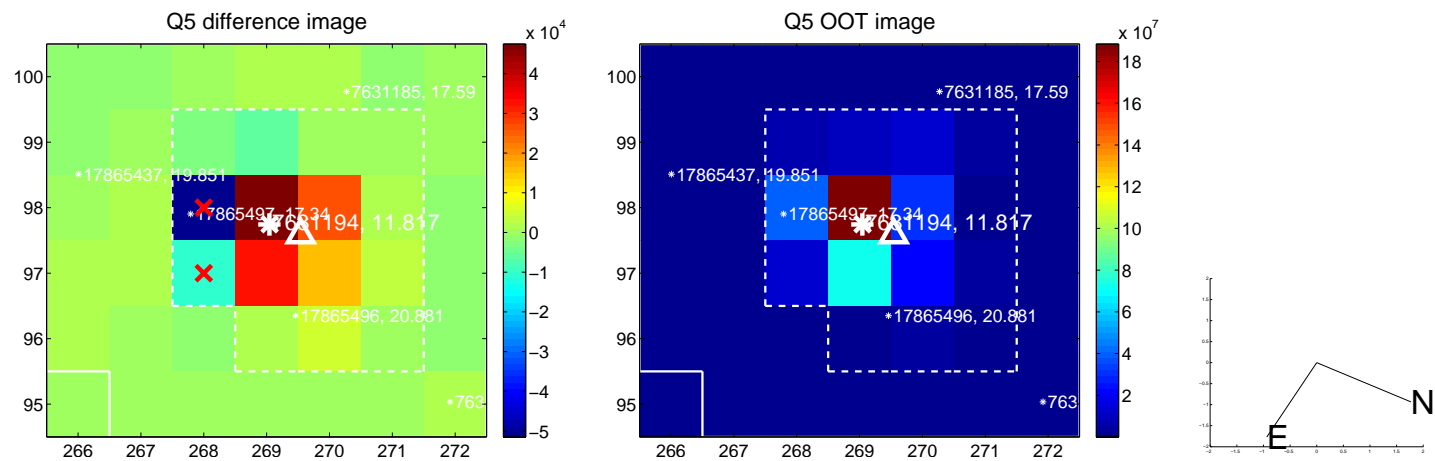


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

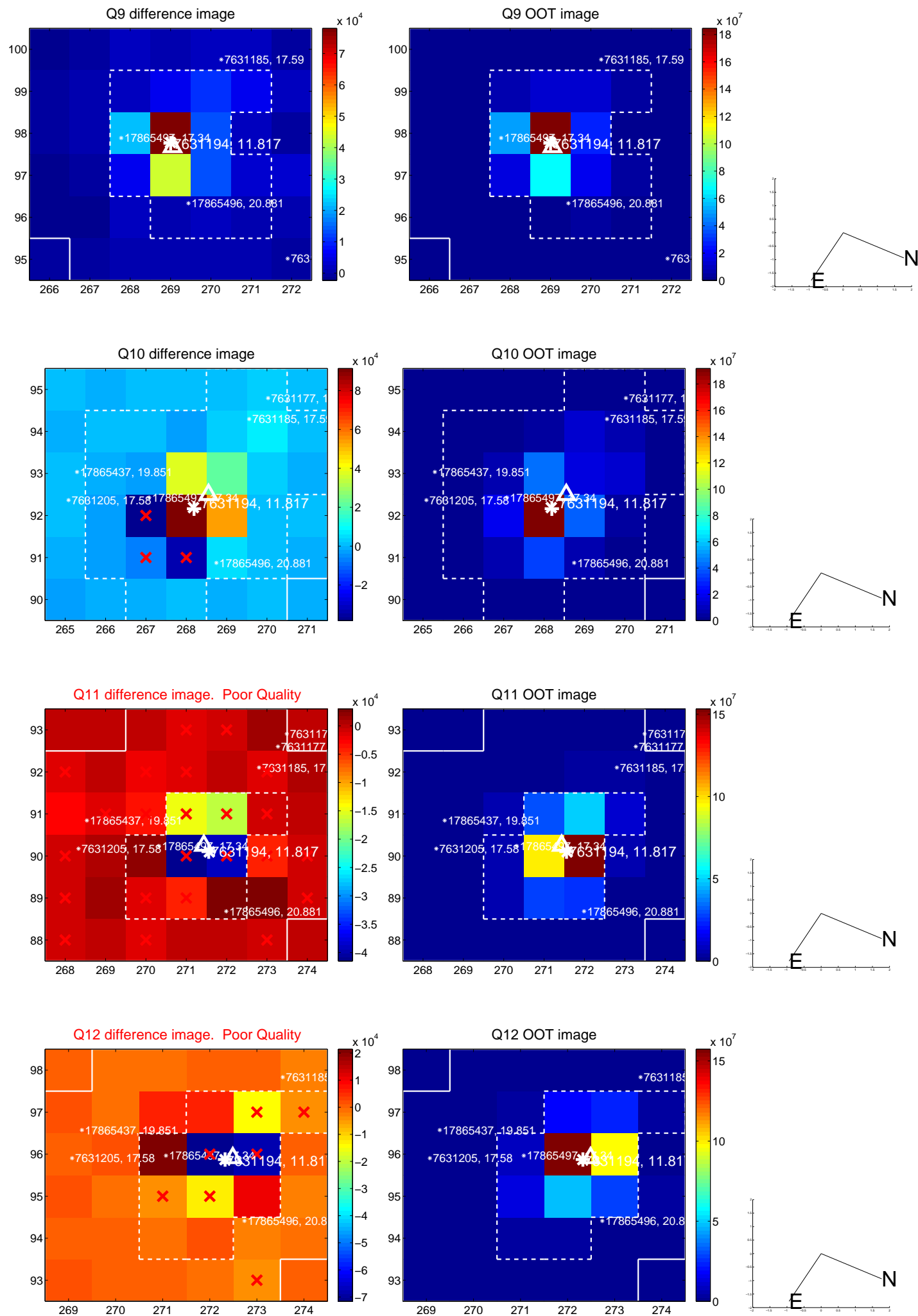
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



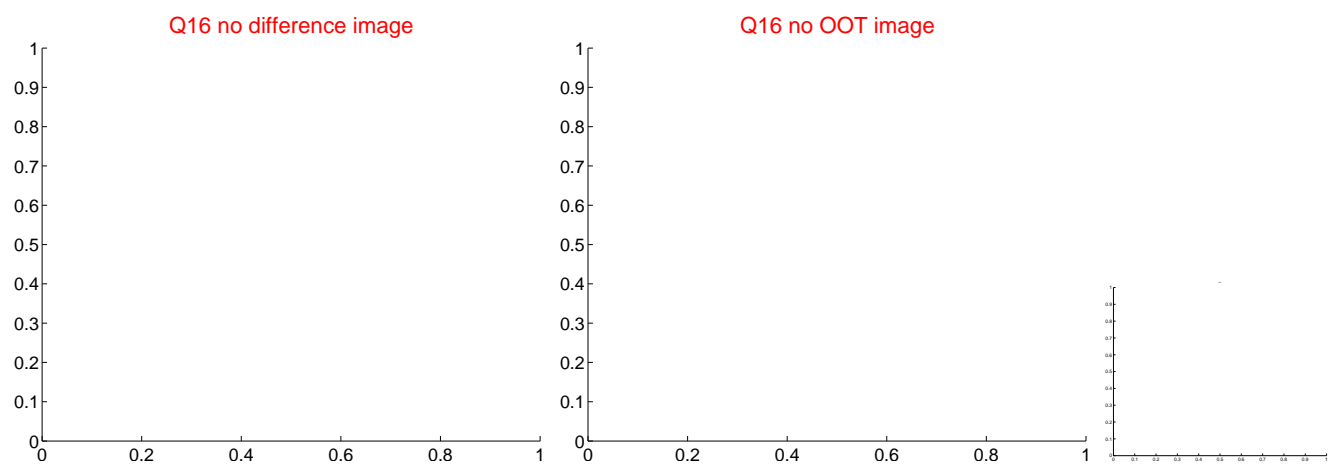
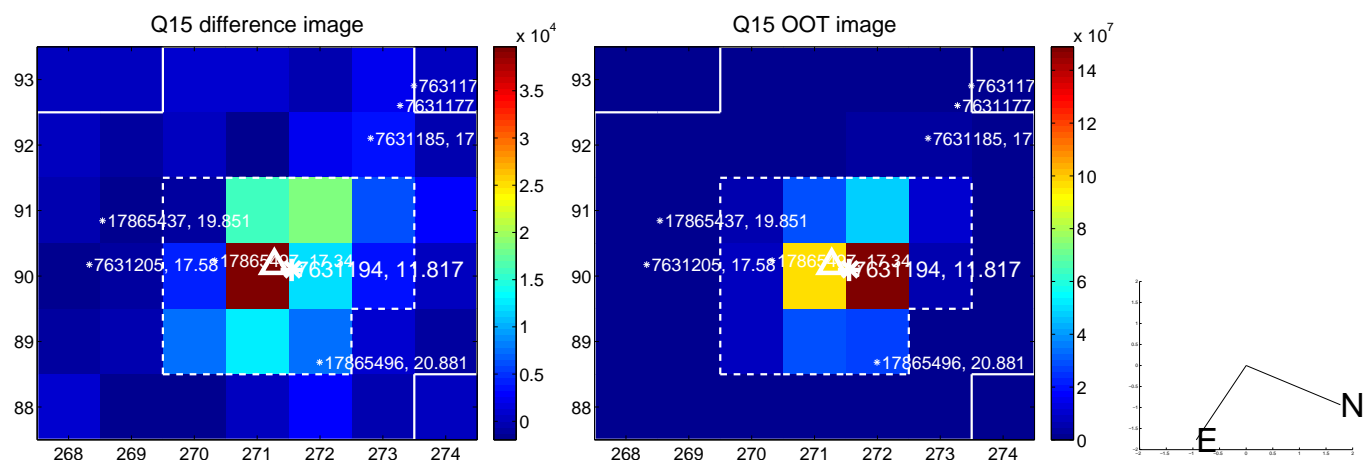
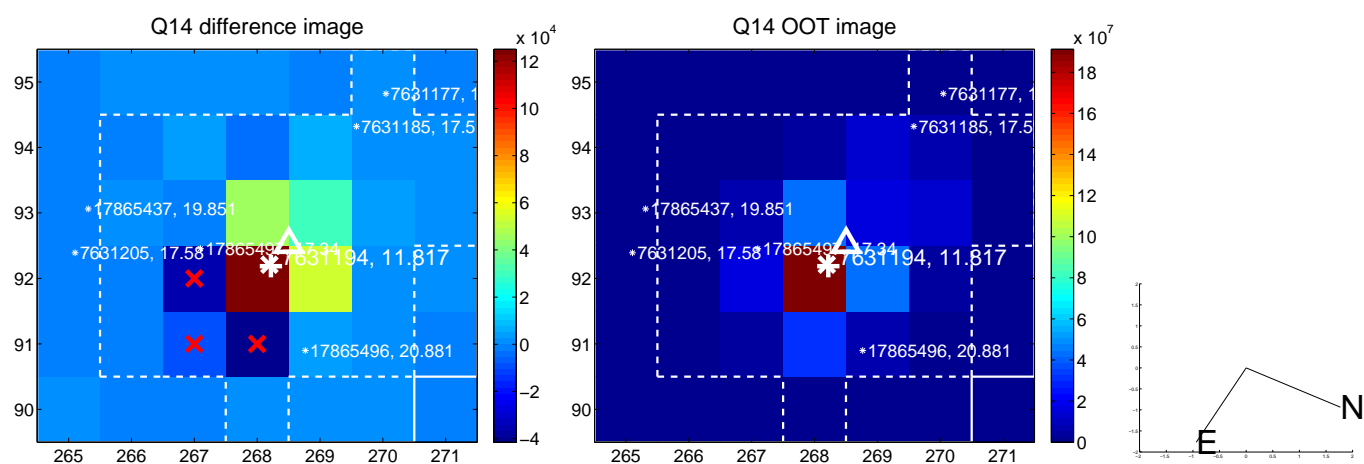
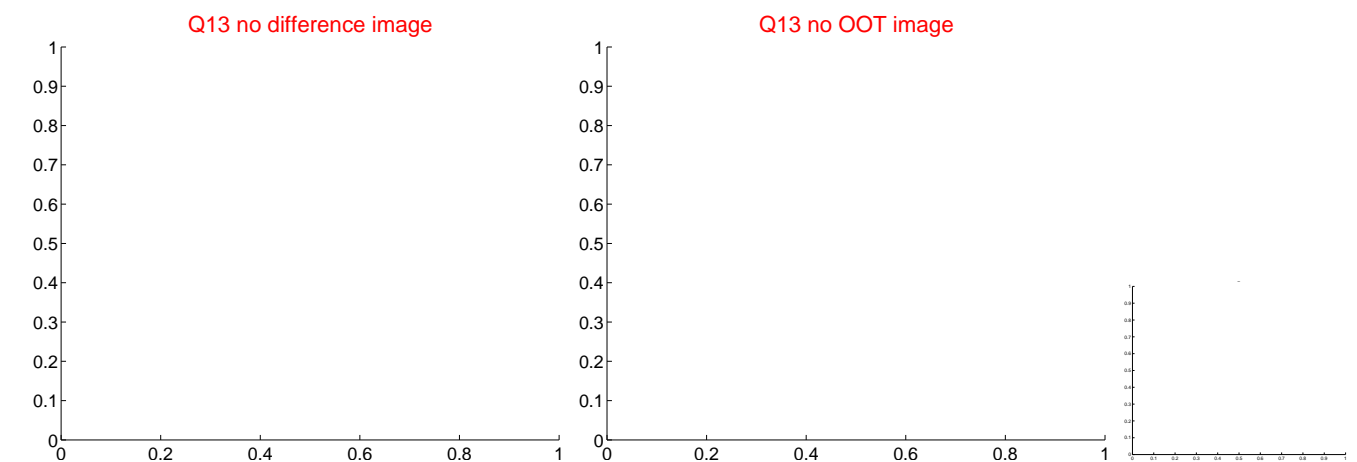
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



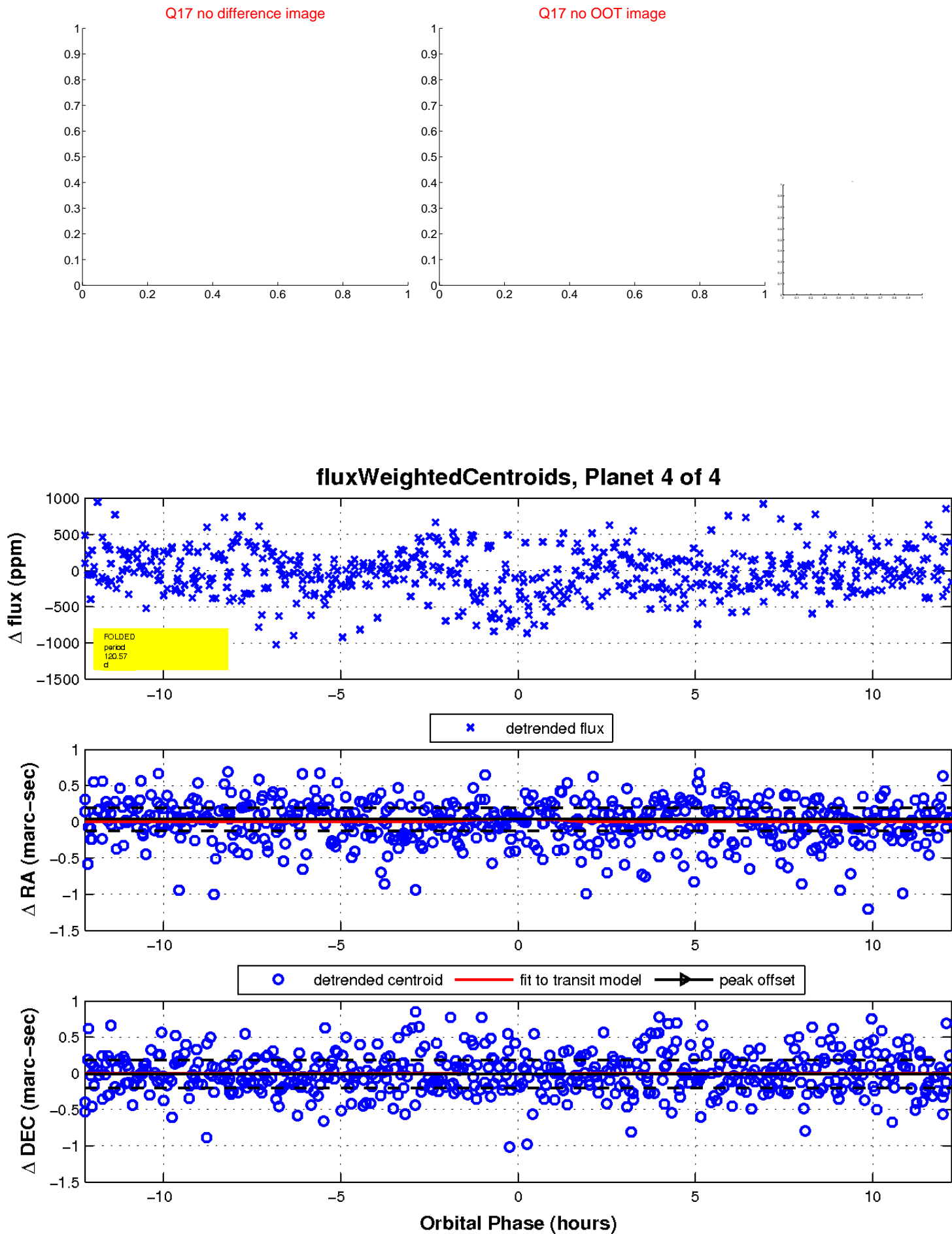
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

