

KIC 007031714

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})
007031714-01	OBS	No	0.814160	131.871882	462.3	5.773	749.2	53.8	13.13	4759	30.71	0.00
007031714-02	OBS	No	20.364895	141.217237	564.1	2.491	18.0	5.8	13.13	4759	65.88	2276.27
007031714-03	OBS	No	16.275481	143.673497	429.0	1.500	14.8	-1.0	13.13	4759	26.31	3069.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031714-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
007031714-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007031714-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_NOFITS

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

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

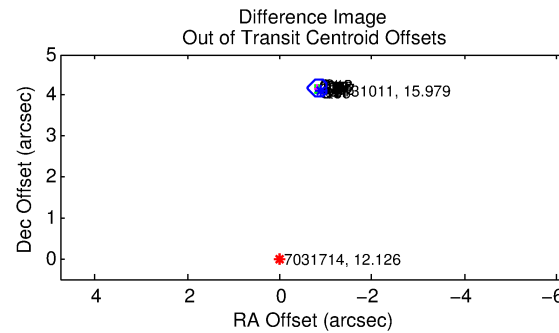
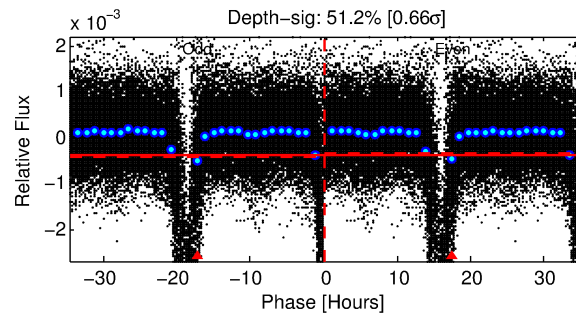
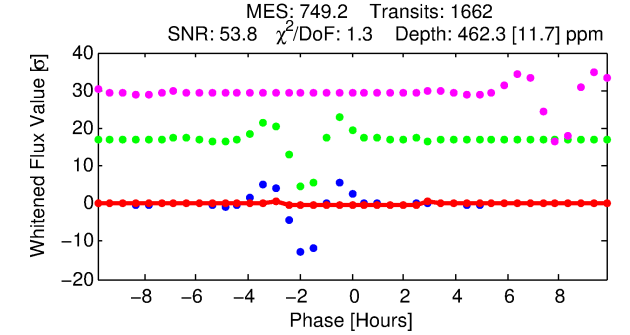
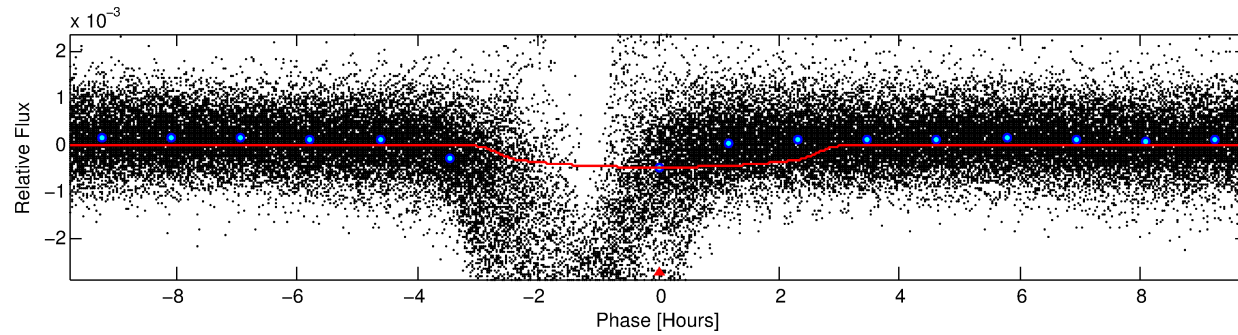
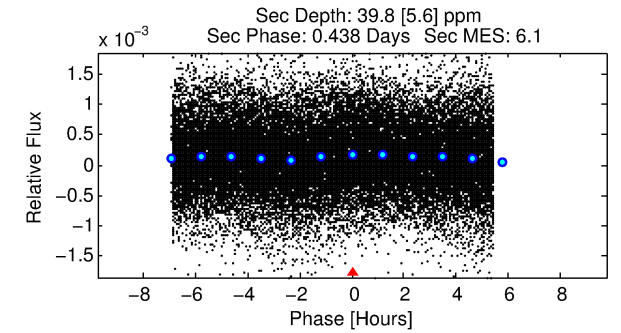
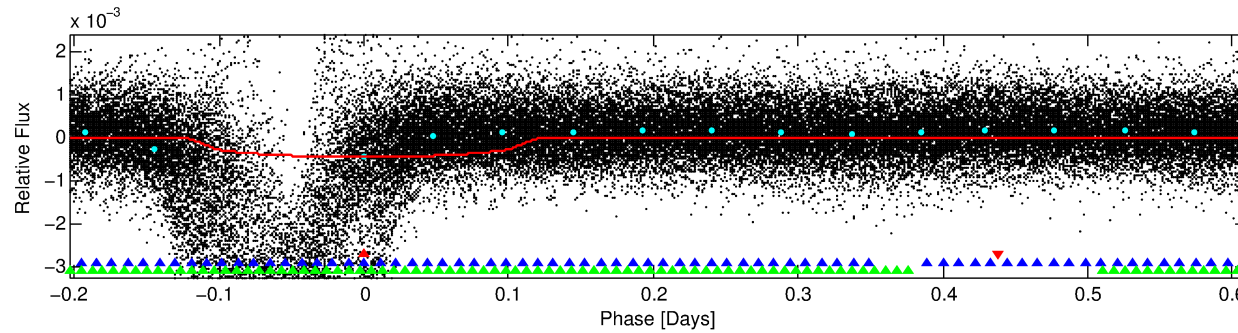
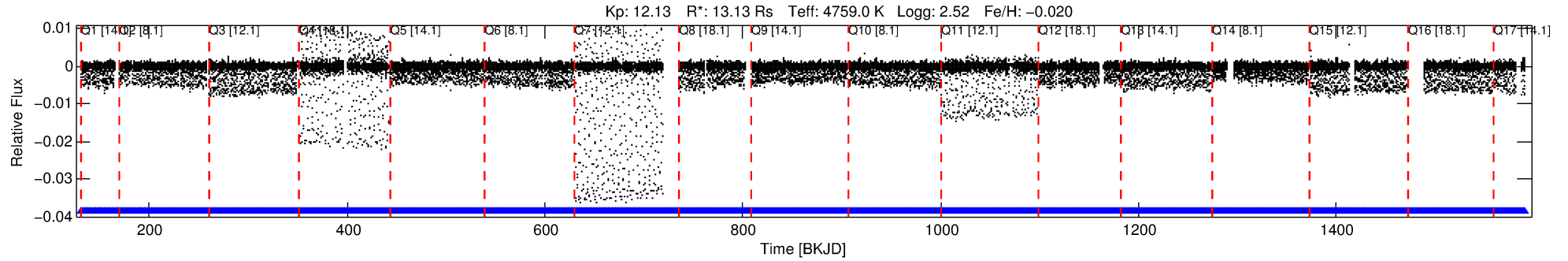
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007031714-01

No Significant Match Found

DV One-Page Summary

KIC: 7031714 Candidate: 1 of 3 Period: 0.814 d



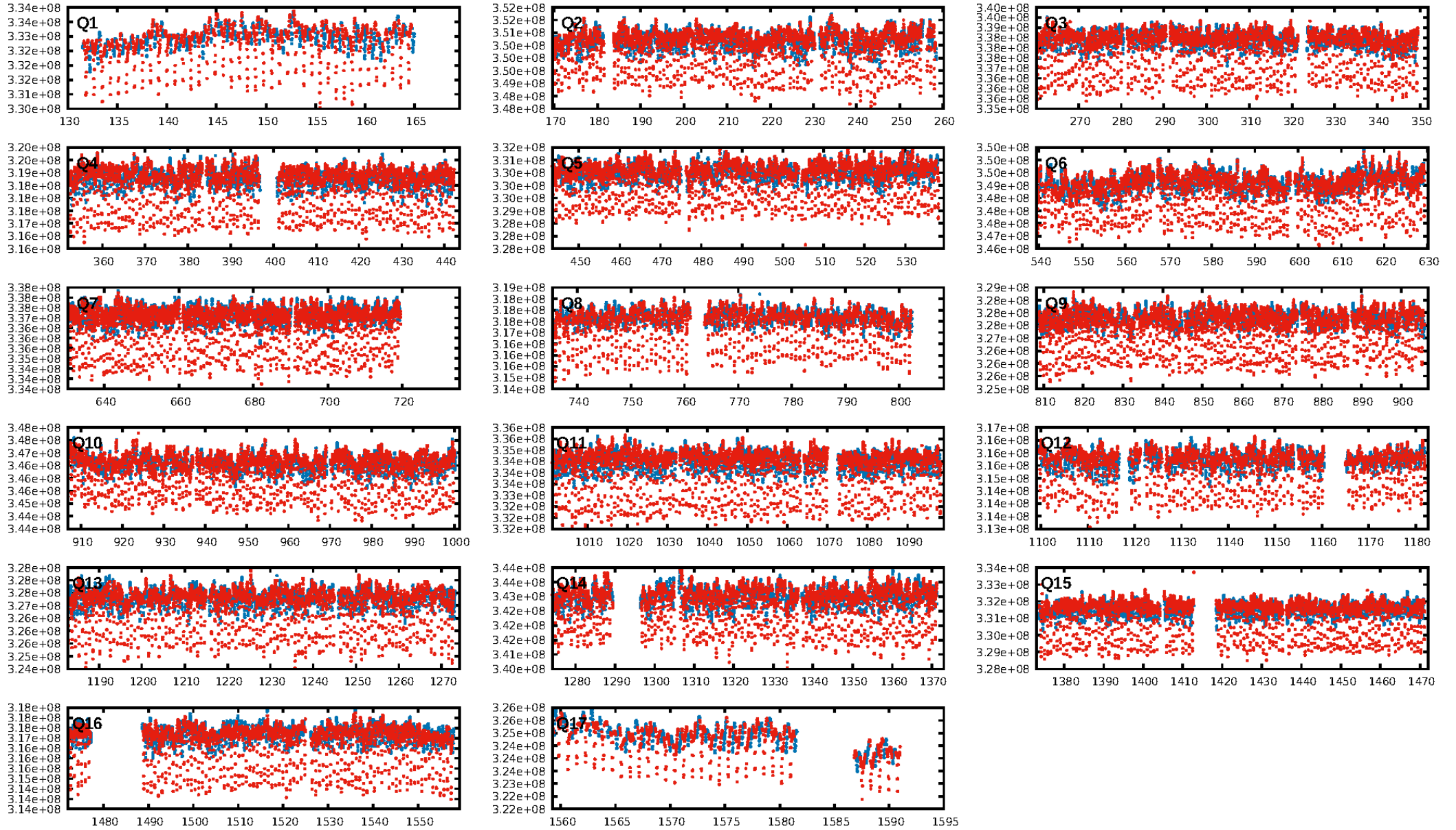
DV Fit Results:

Period = 0.81416 [0.00000] d
Epoch = 131.8719 [0.0003] BKJD
Rp/R* = 0.0214 [0.0007]
a/R* = 1.15 [0.03]
b = 0.74 [0.07]
Seff = N/A
Teq = N/A
Rp = 30.71 [9.65] Re
a = N/A
Ag = N/A
Teffp = N/A

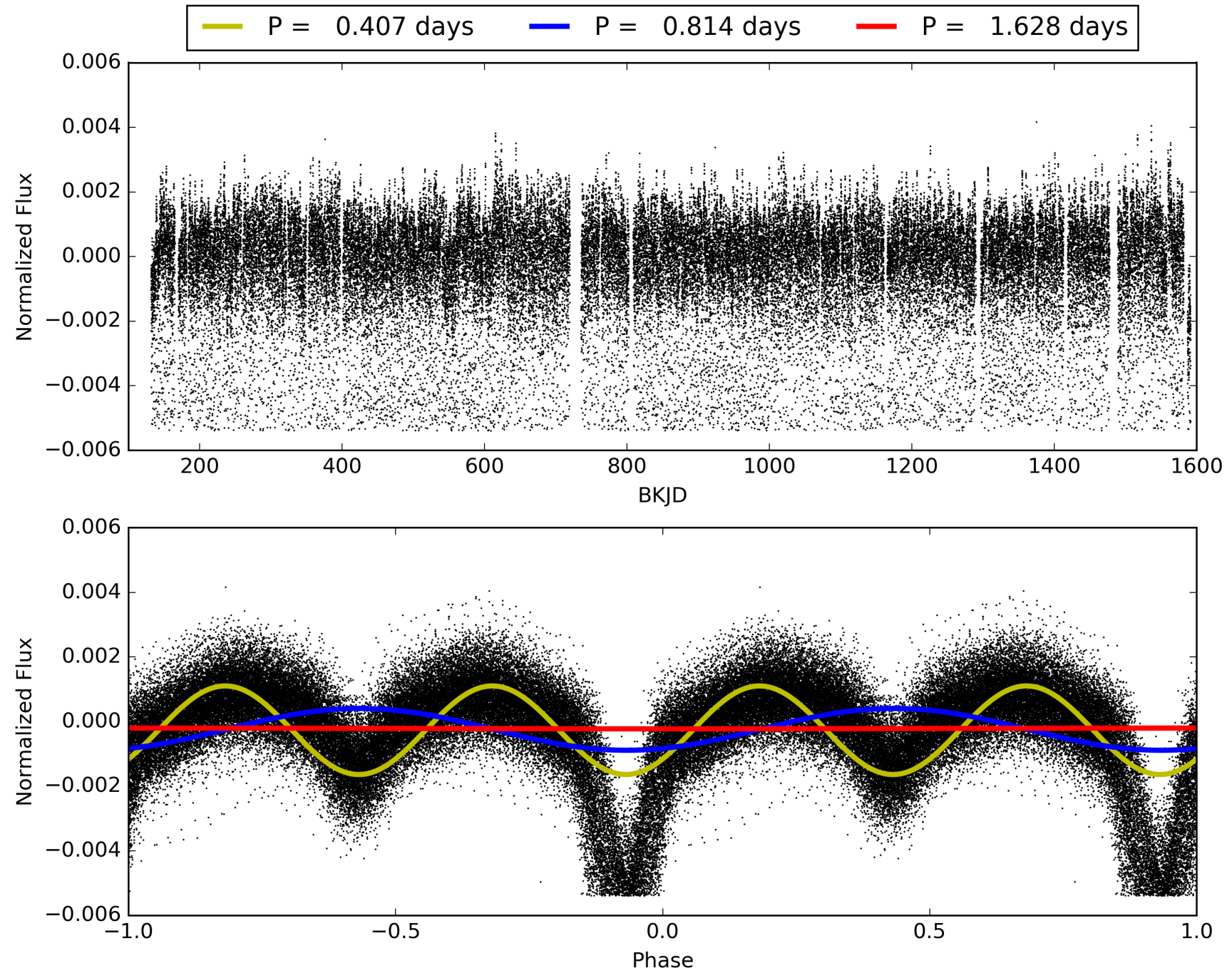
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [62.21σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1588/1588]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 4.254 arcsec [62.22σ]
KicOffset-rm: 4.205 arcsec [61.25σ]
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]

TCE 007031714-01, PDC Light Curves

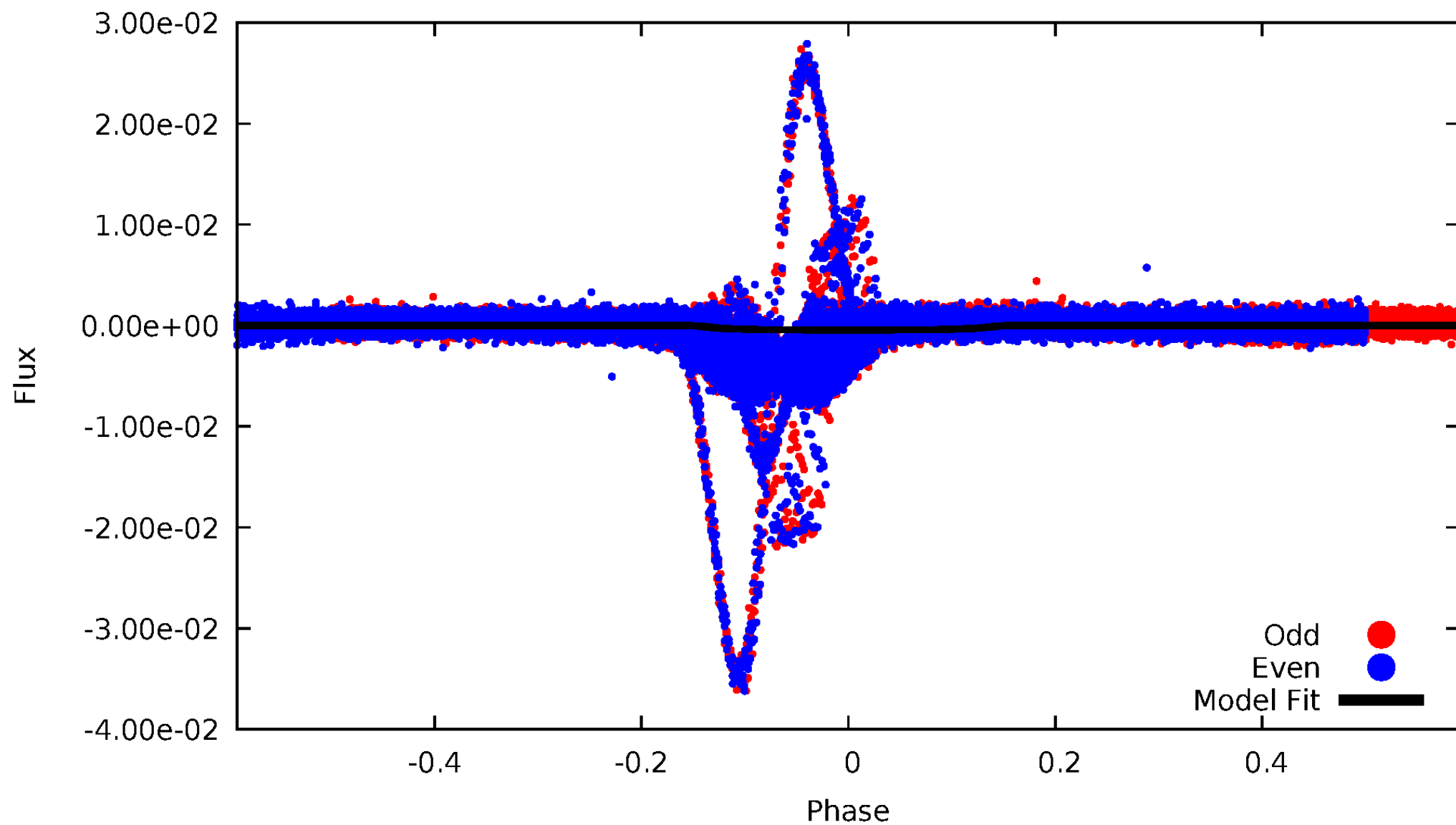


TCE 007031714-01



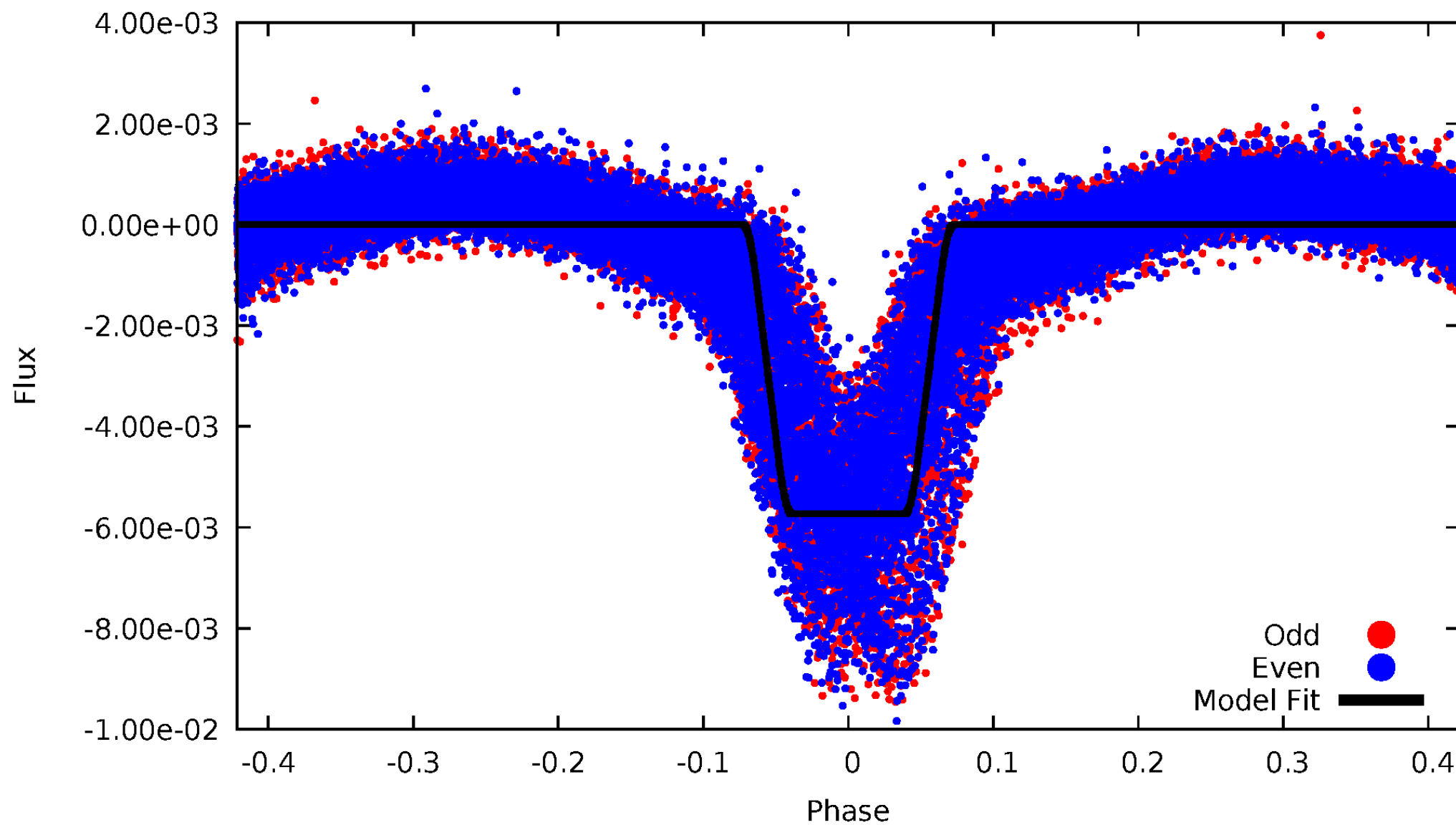
DV Odd/Even

TCE 007031714-01

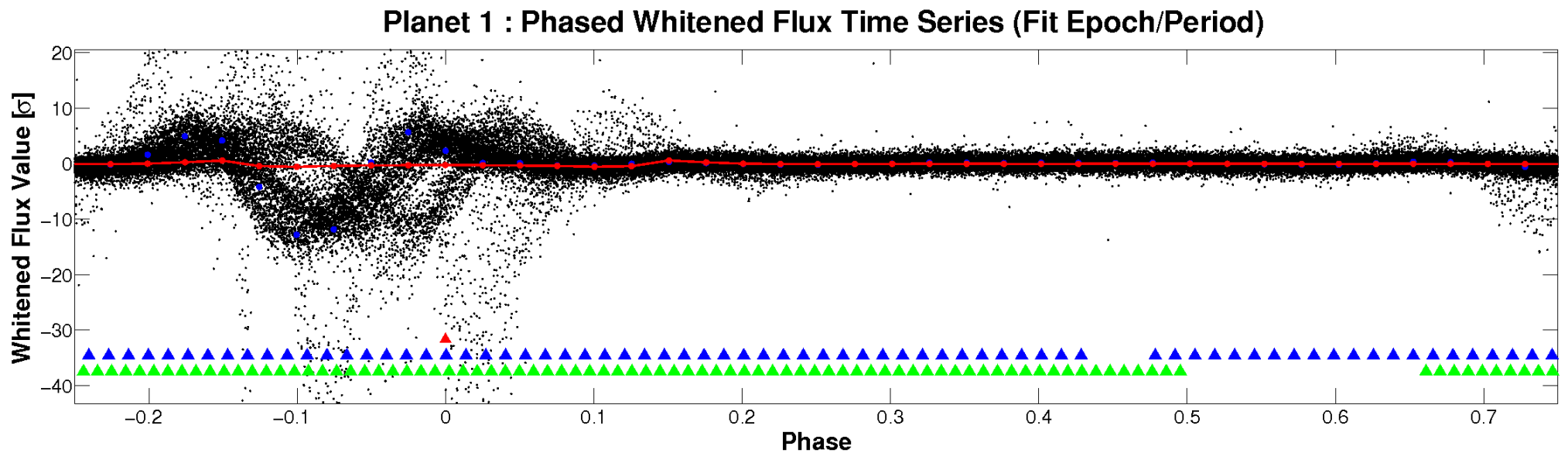
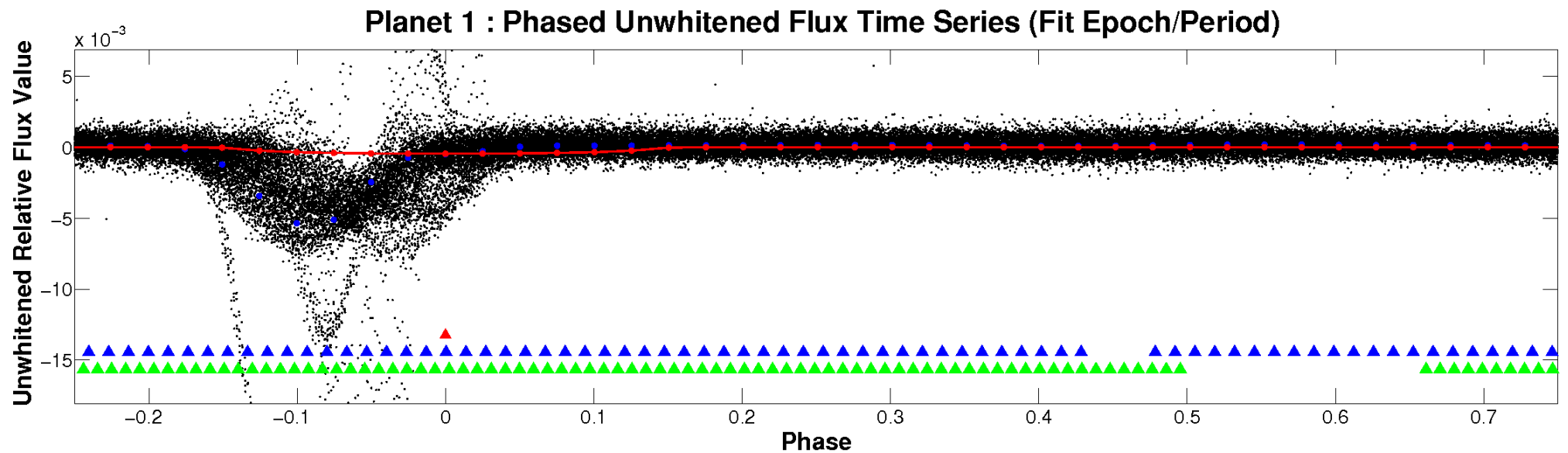


ALT Odd/Even

TCE 007031714-01

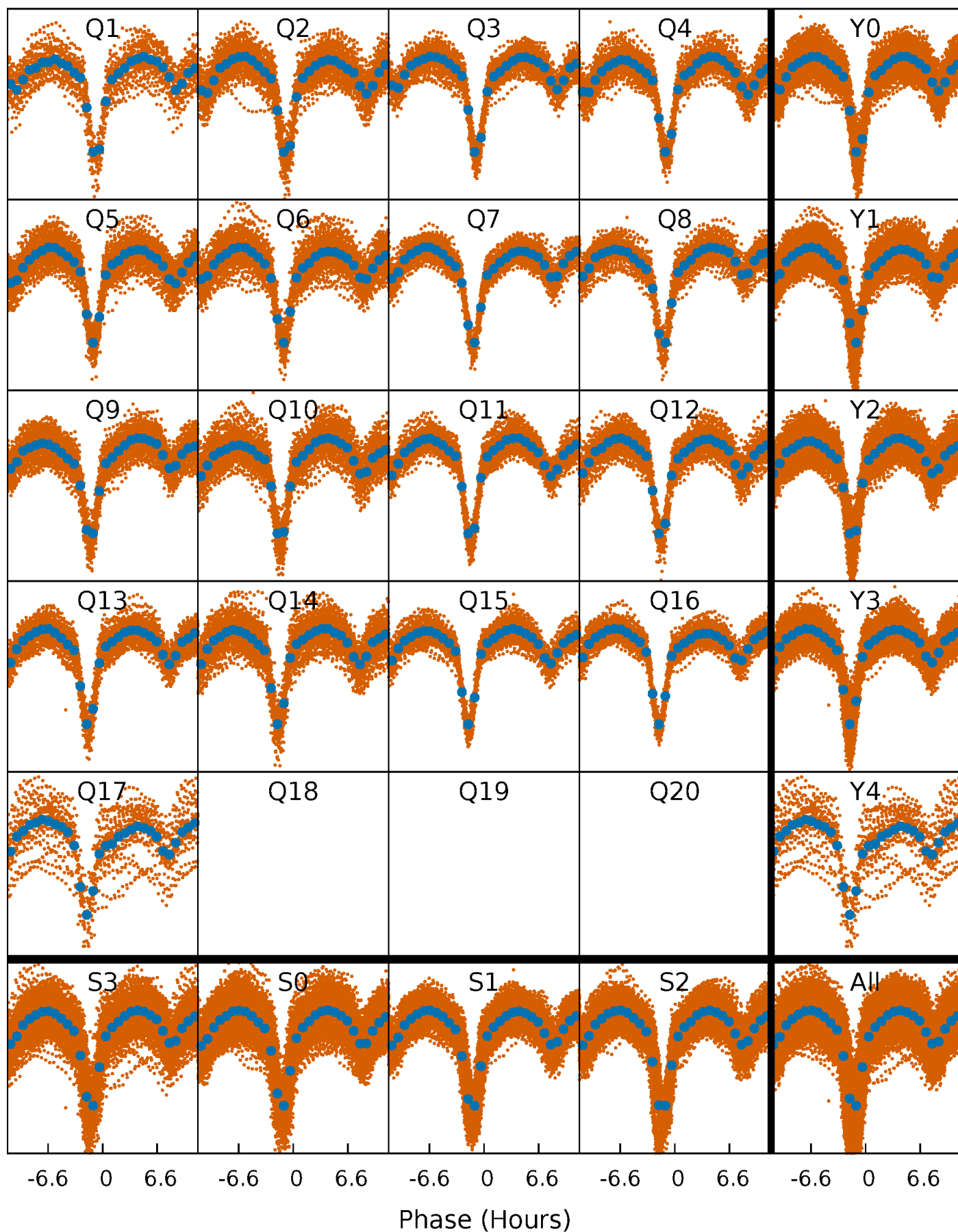


Non-Whitened Vs. Whitened Light Curve



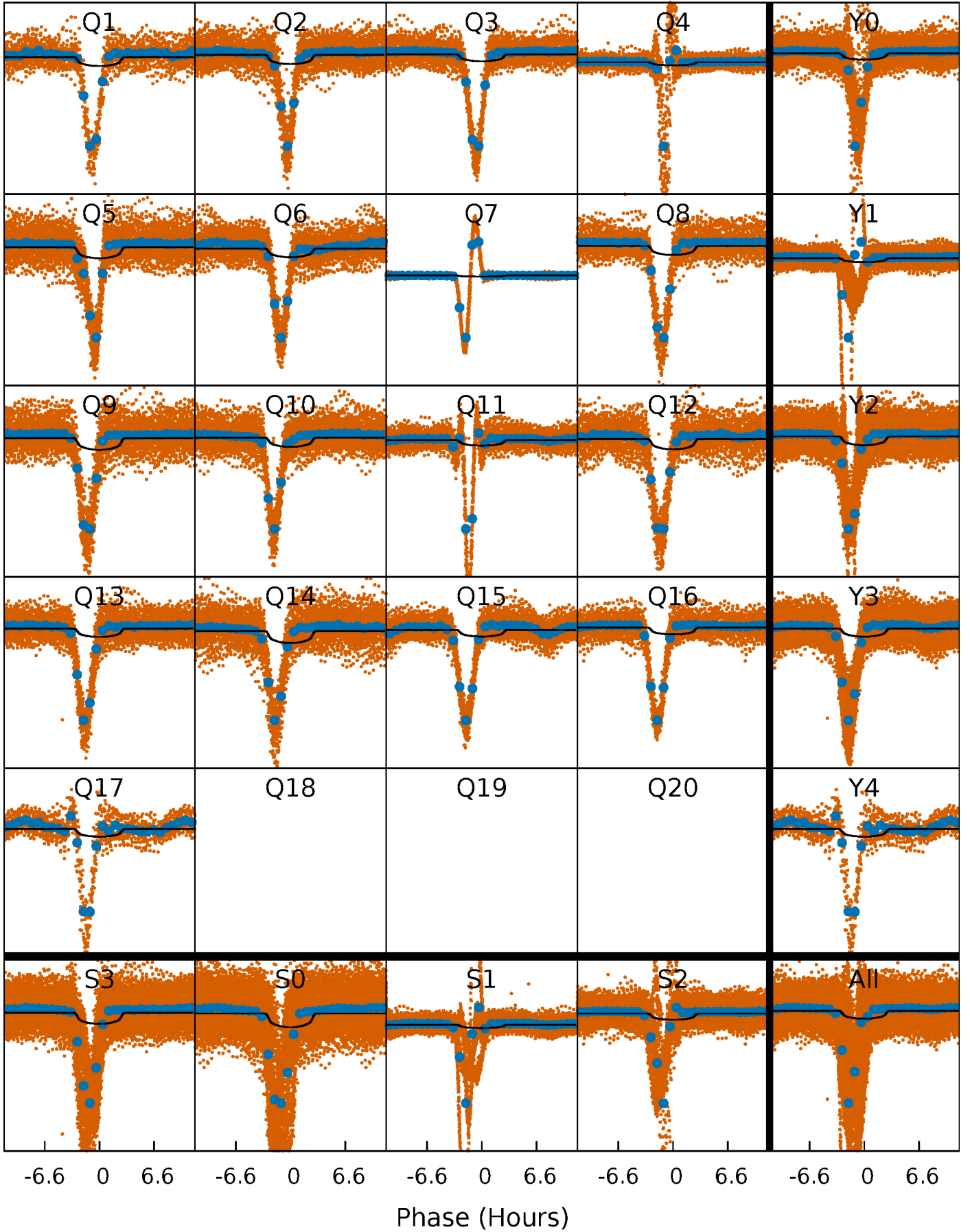
PDC Quarter-Phased Transit Curves

TCE 007031714-01 P= 0.814160 Days $T_0=131.871882$ (BKJD)



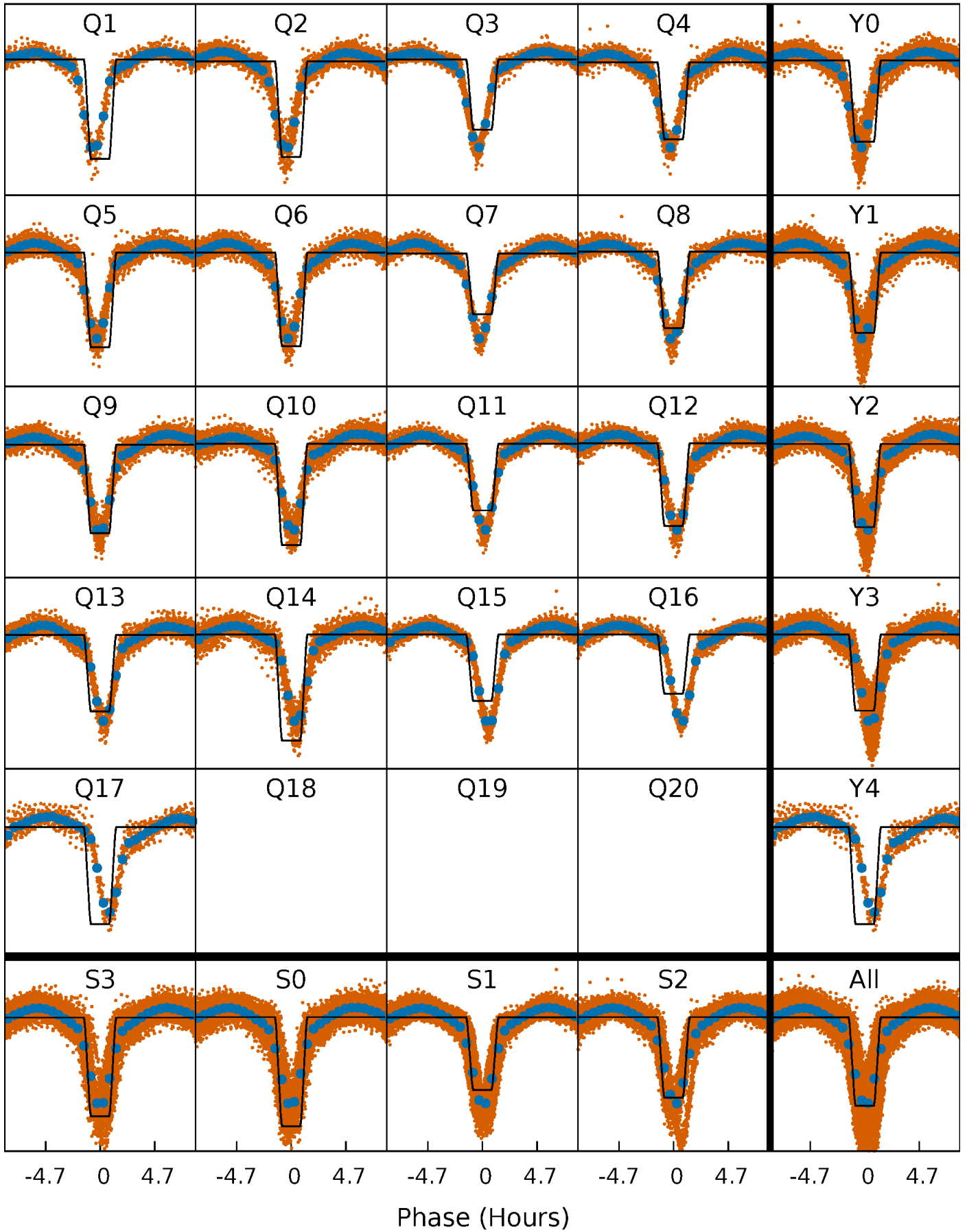
DV Quarter-Phased Transit Curves

TCE 007031714-01 P= 0.814160 Days $T_0=131.871882$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

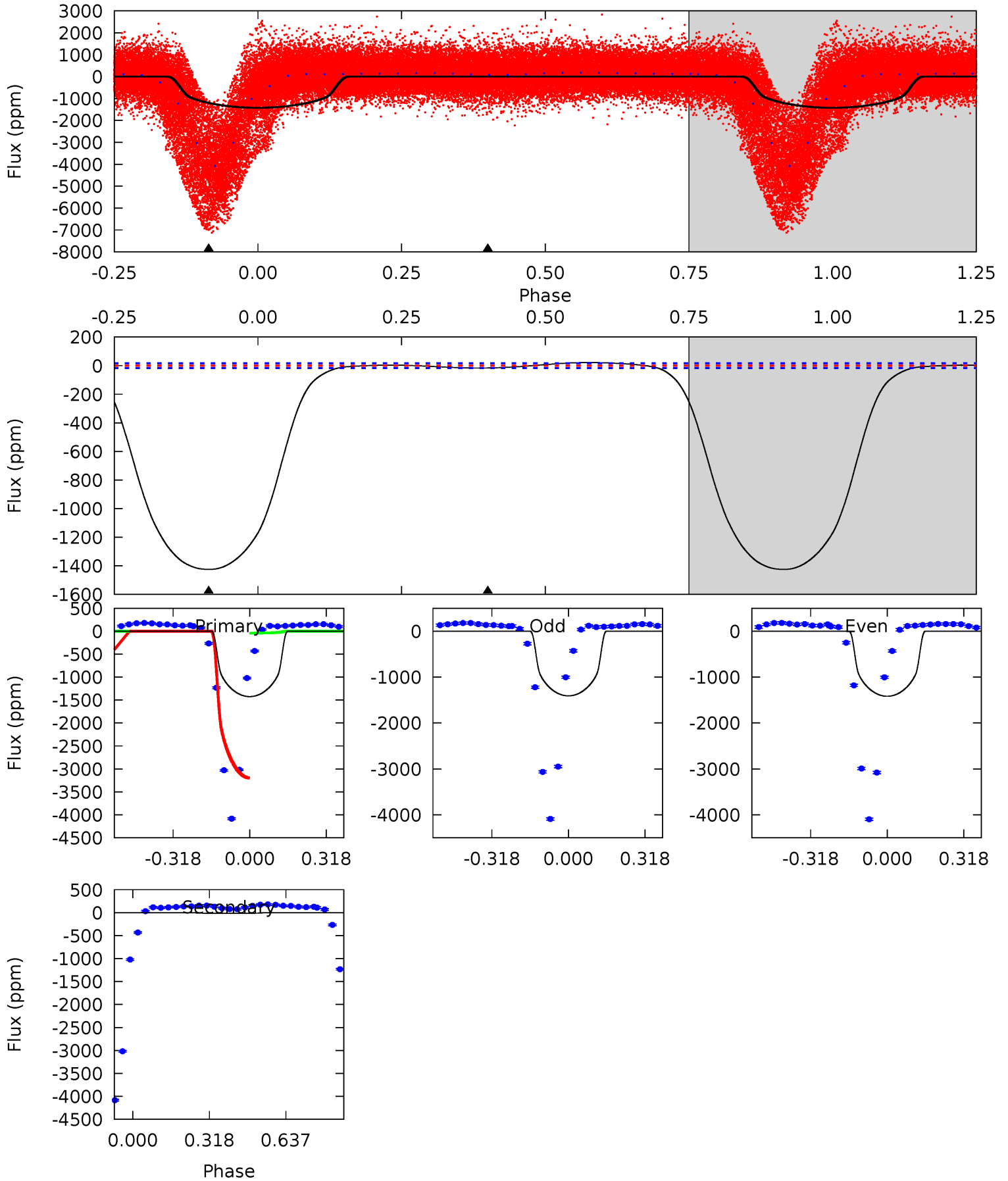
TCE 007031714-01 P= 0.814103 Days $T_0=131.861541$ (BKJD)



DV Model-Shift Uniqueness Test

007031714-01, P = 0.814160 Days, E = 131.057722 Days

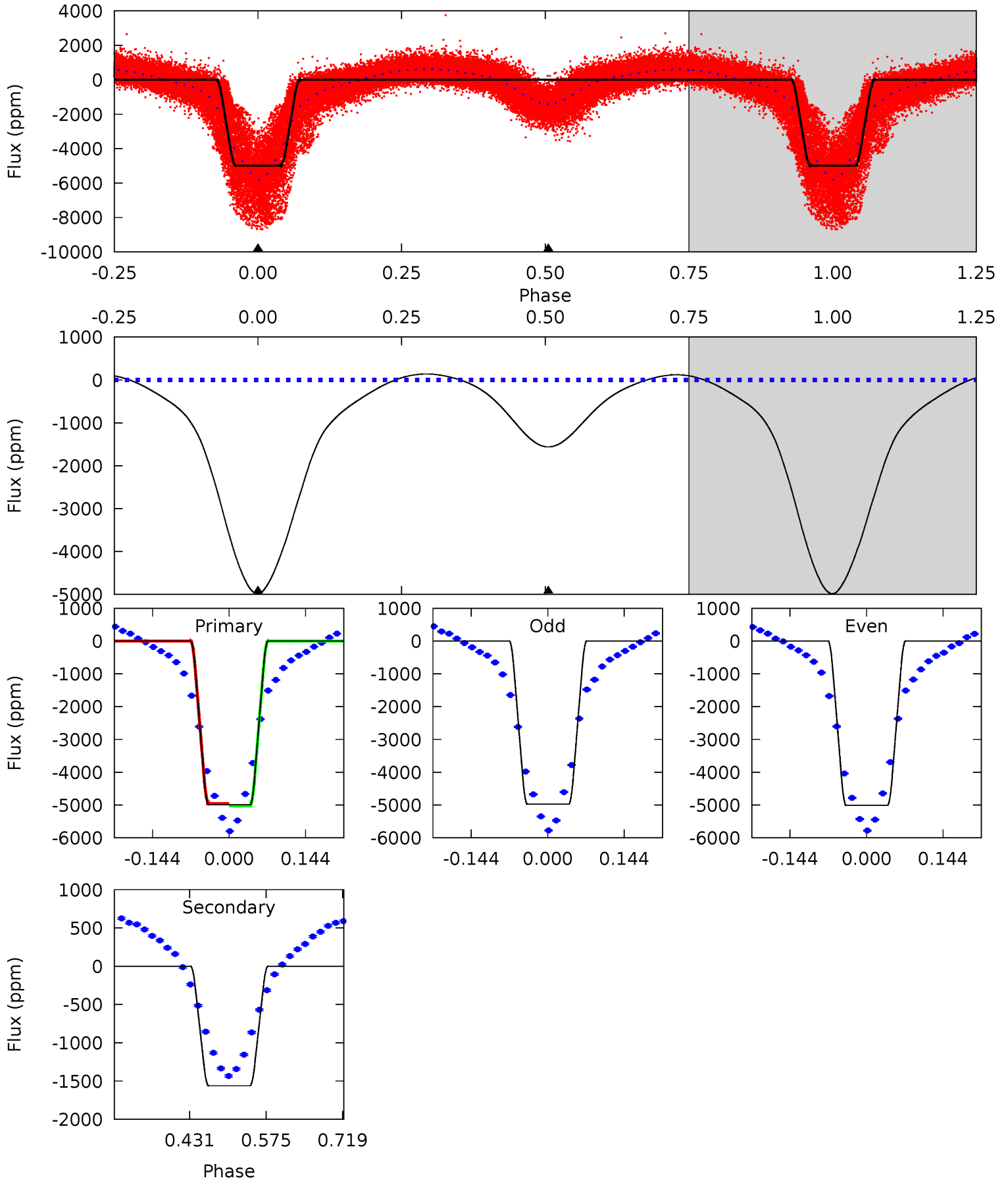
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
362.5	4.19	0	0	4.32	1.00	2.26	362.5	362.5	4.19	4.19	1.16	0.96	0.02	391.9



Alt Model-Shift Uniqueness Test

007031714-01, P = 0.814103 Days, E = 131.047438 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
780.7	244.3	0	0	4.49	1.46	36.4	780.7	780.7	244.3	244.3	2.38	1.01	0.03	6.29



Stellar Parameters For KIC 007031714

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4759^{+56}_{-103}	$2.521^{+0.163}_{-0.100}$	$-0.020^{+0.100}_{-0.200}$	$13.127^{+2.735}_{-4.102}$	$2.088^{+0.959}_{-0.785}$	$0.001^{+0.001}_{-0.000}$
	+1%/-2%	+6%/-4%	+500%/-1000%	+21%/-31%	+46%/-38%	+94%/-30%
Source	SPE74	SPE74	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 007031714-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 4	$31.37^{+4.47}_{-5.52}$	7116^{+398}_{-399}	-5655^{+302}_{-316}	$0.005^{+0.002}_{-0.001}$
Alt.	-1562 ± 6	$111.71^{+15.41}_{-20.62}$	7128^{+343}_{-421}	-5514^{+339}_{-294}	$0.036^{+0.009}_{-0.006}$

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 $A_{obs} \gg 1.0$

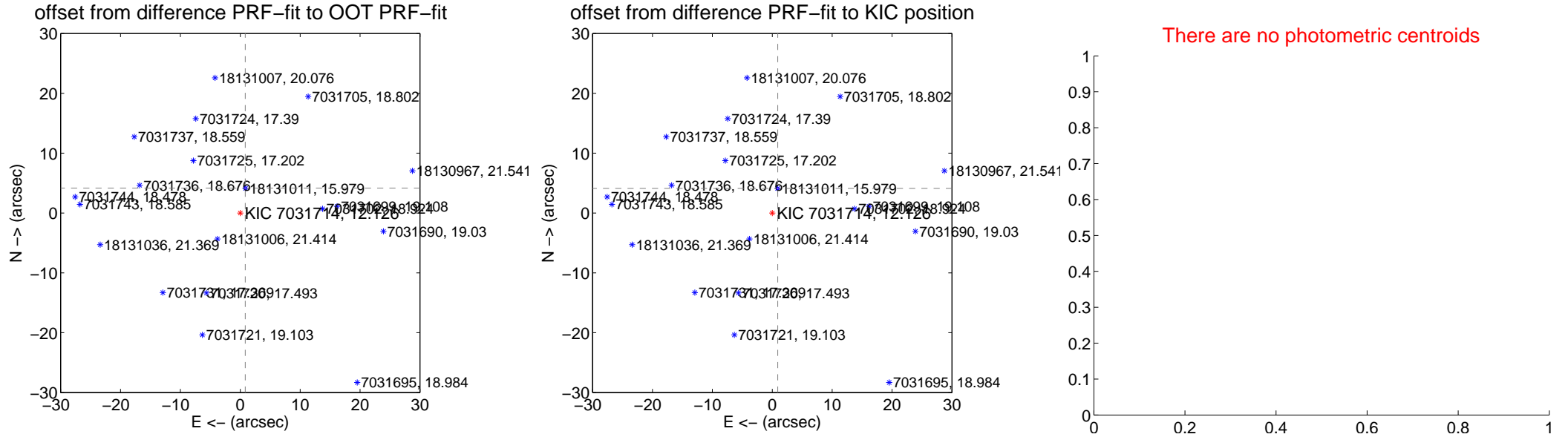
DV Centroid Data

Supplemental centroid analysis for 007031714-01. Kepler magnitude: 12.13. Transit SNR 53.82

There are 17 quarters with good PRF difference image offsets

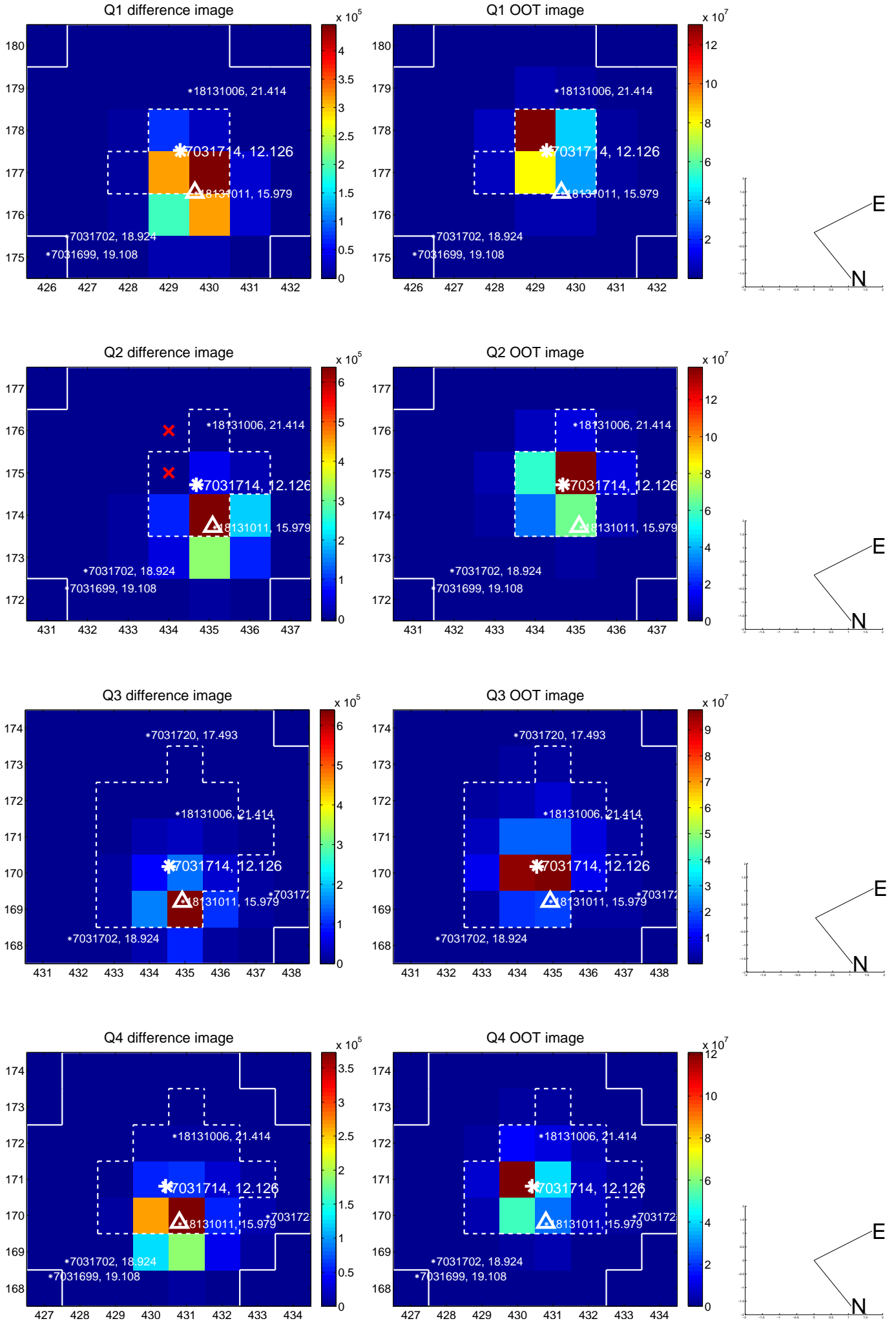
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.254 \pm 0.068	62.22	-0.824 \pm 0.068	4.174 \pm 0.068
PRF-fit source offset from KIC position	4.205 \pm 0.069	61.25	-0.921 \pm 0.067	4.103 \pm 0.069
photometric centroid source offset	—	—	—	—

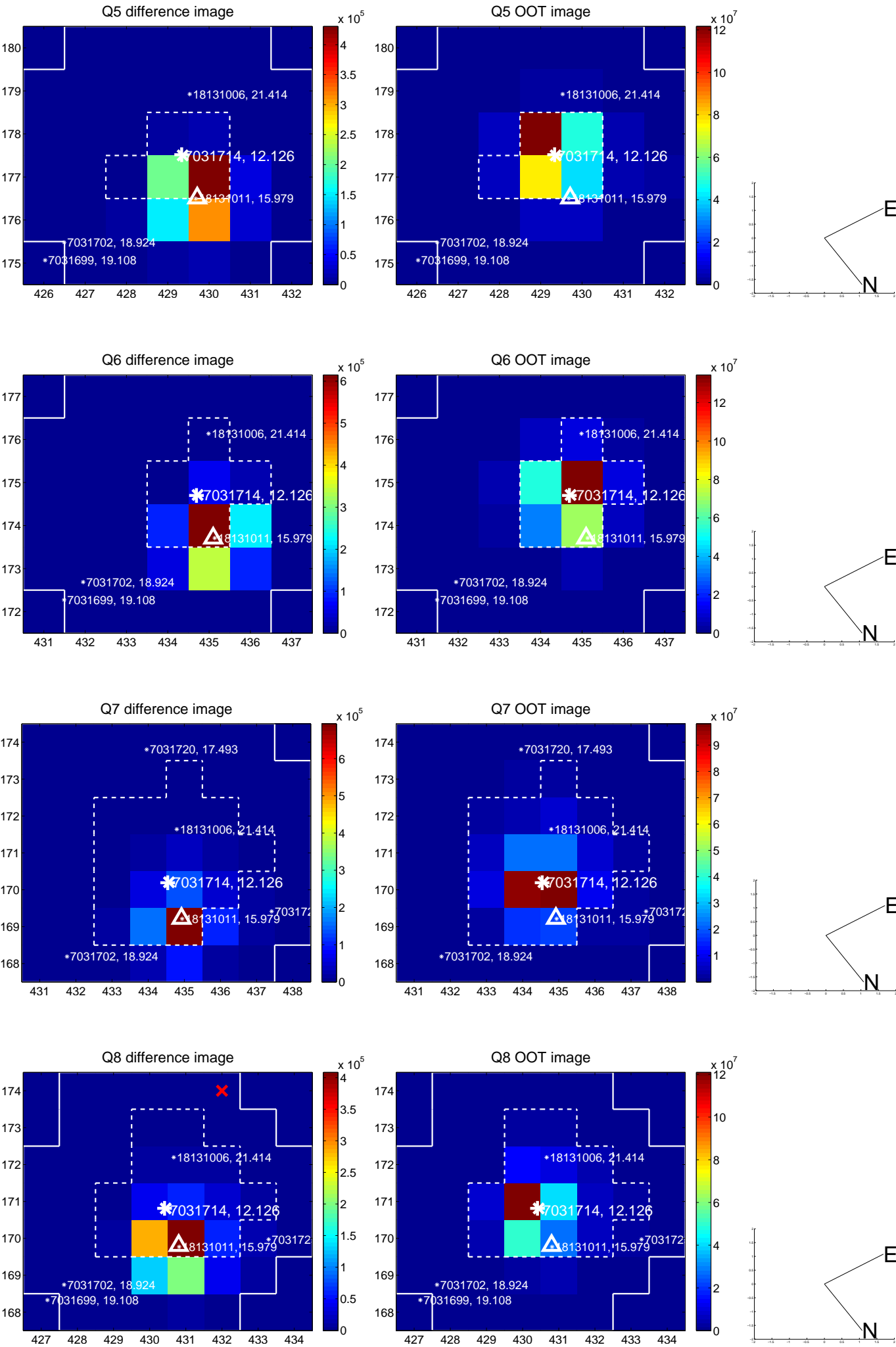


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

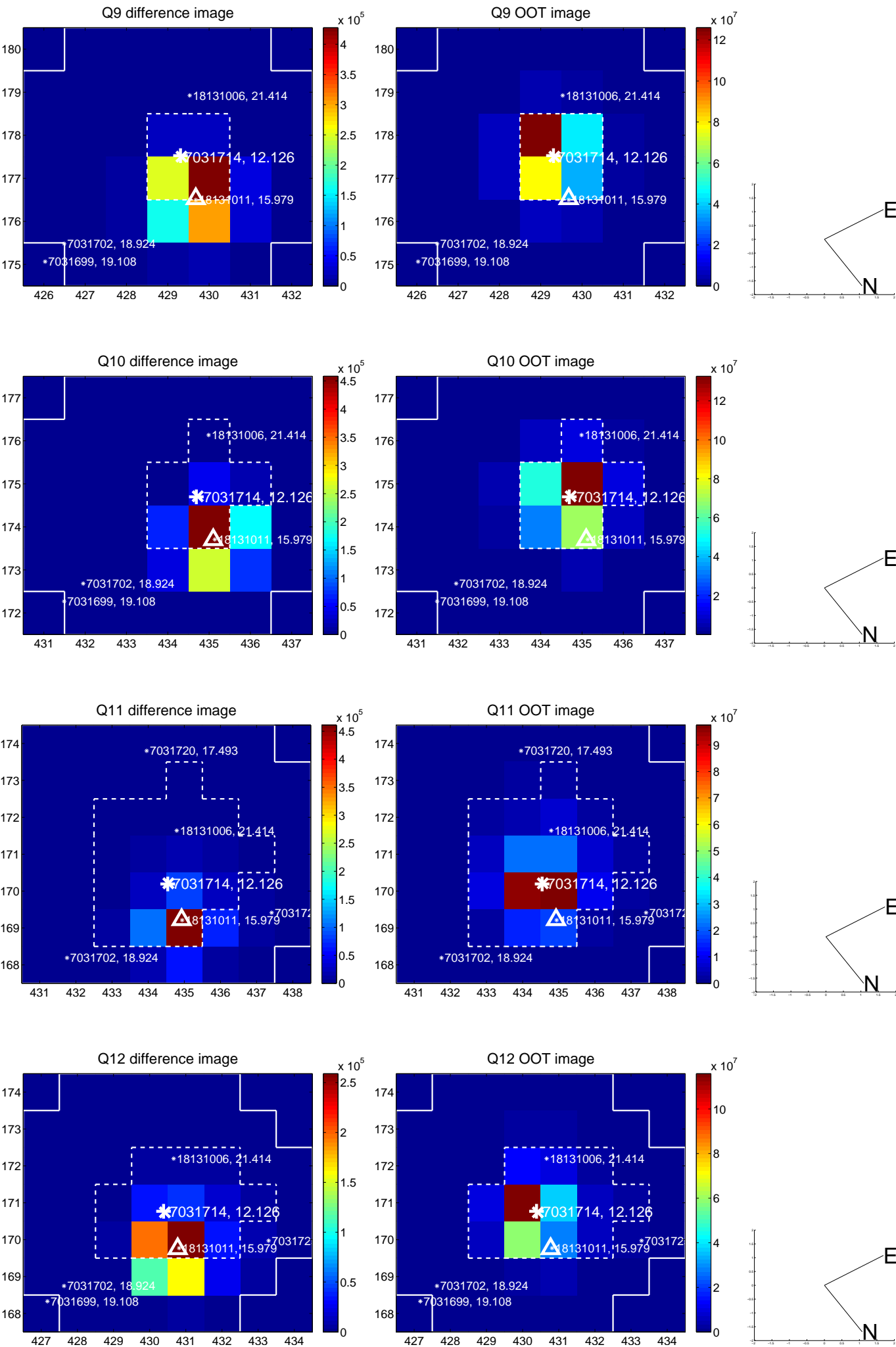
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



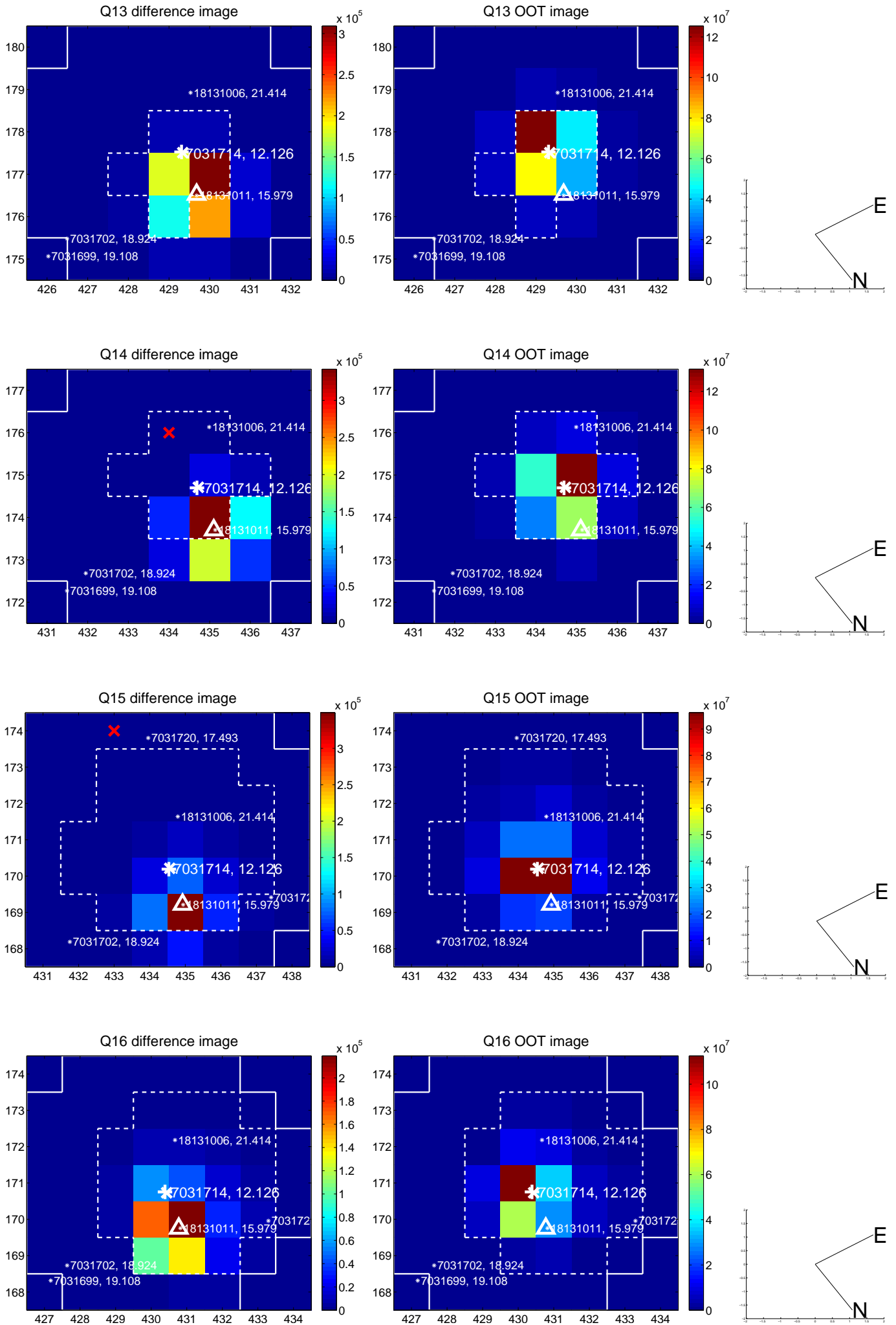
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



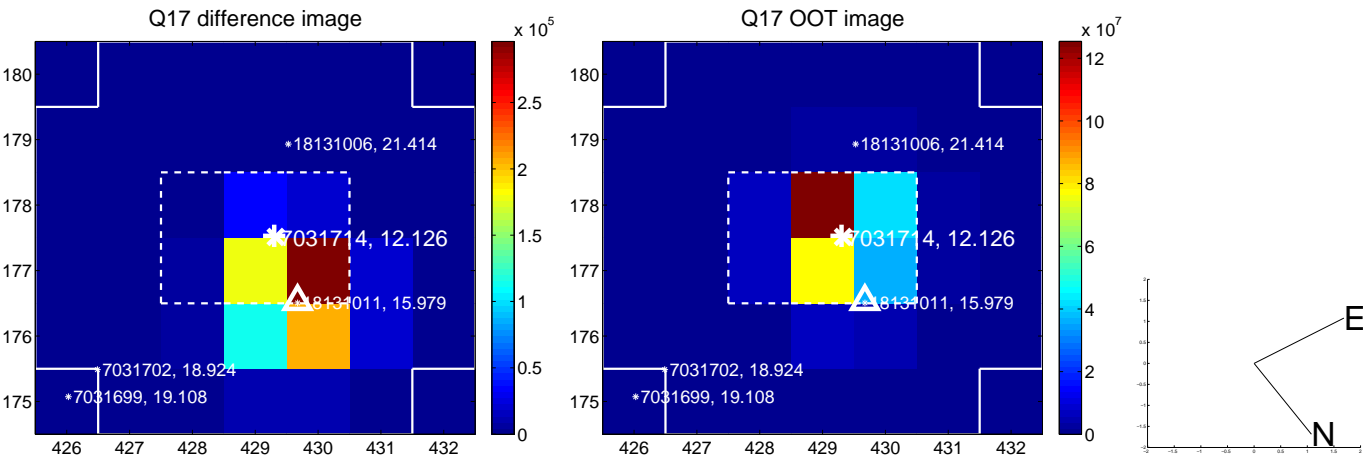
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



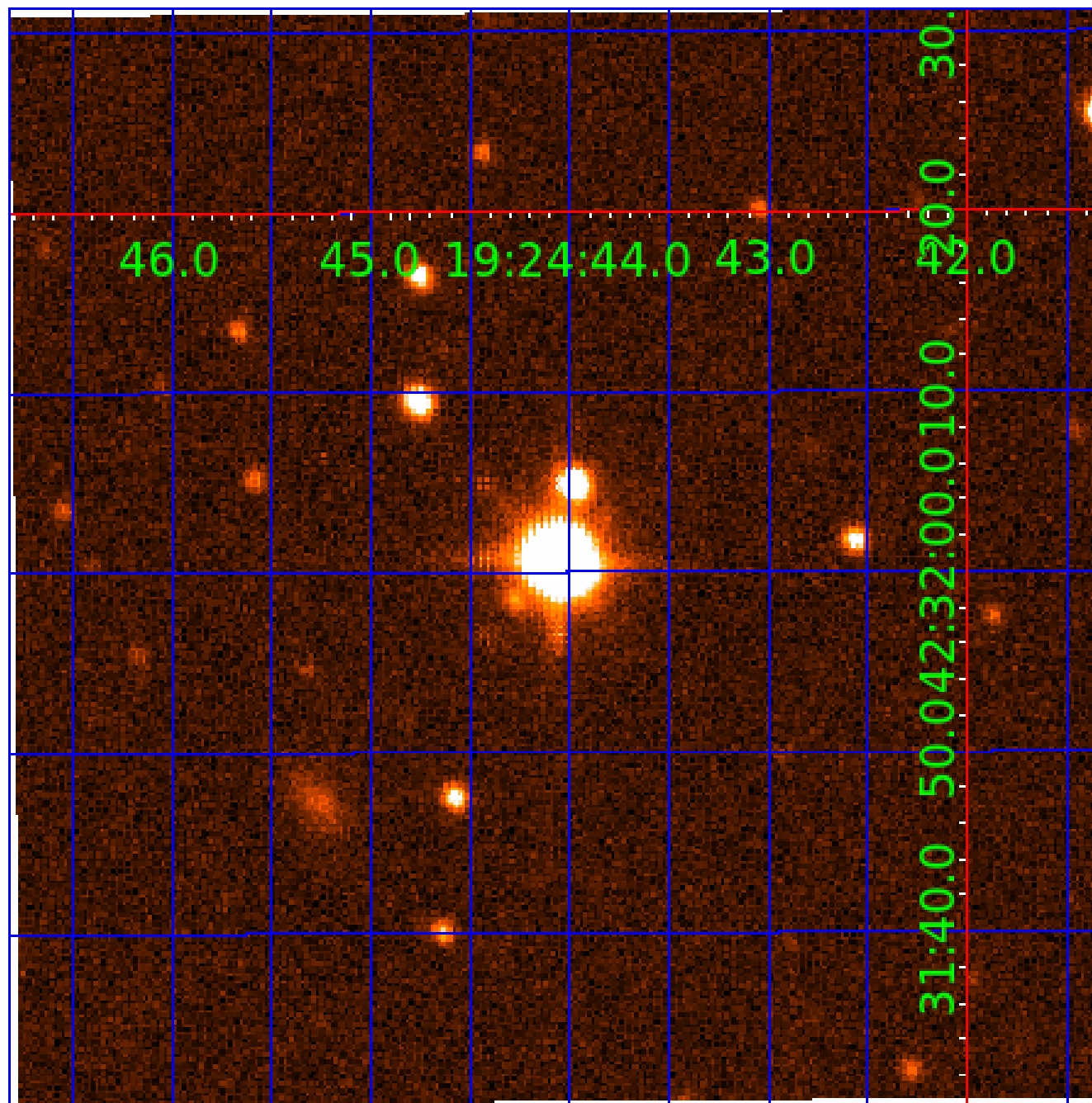
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007031714

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})
007031714-01	OBS	No	0.814160	131.871882	462.3	5.773	749.2	53.8	13.13	4759	30.71	0.00
007031714-02	OBS	No	20.364895	141.217237	564.1	2.491	18.0	5.8	13.13	4759	65.88	2276.27
007031714-03	OBS	No	16.275481	143.673497	429.0	1.500	14.8	-1.0	13.13	4759	26.31	3069.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031714-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
007031714-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007031714-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_NOFITS

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

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

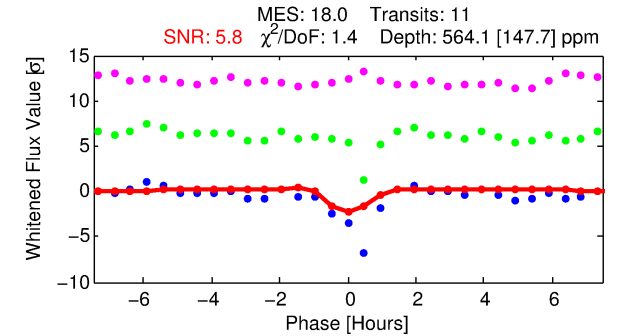
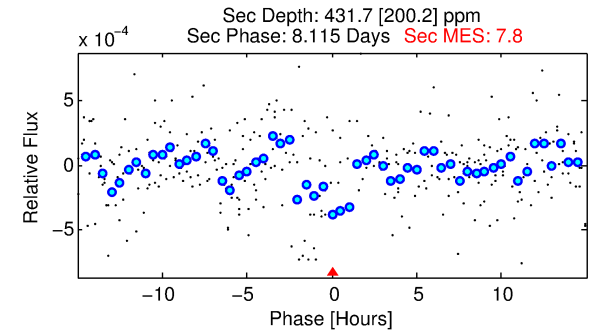
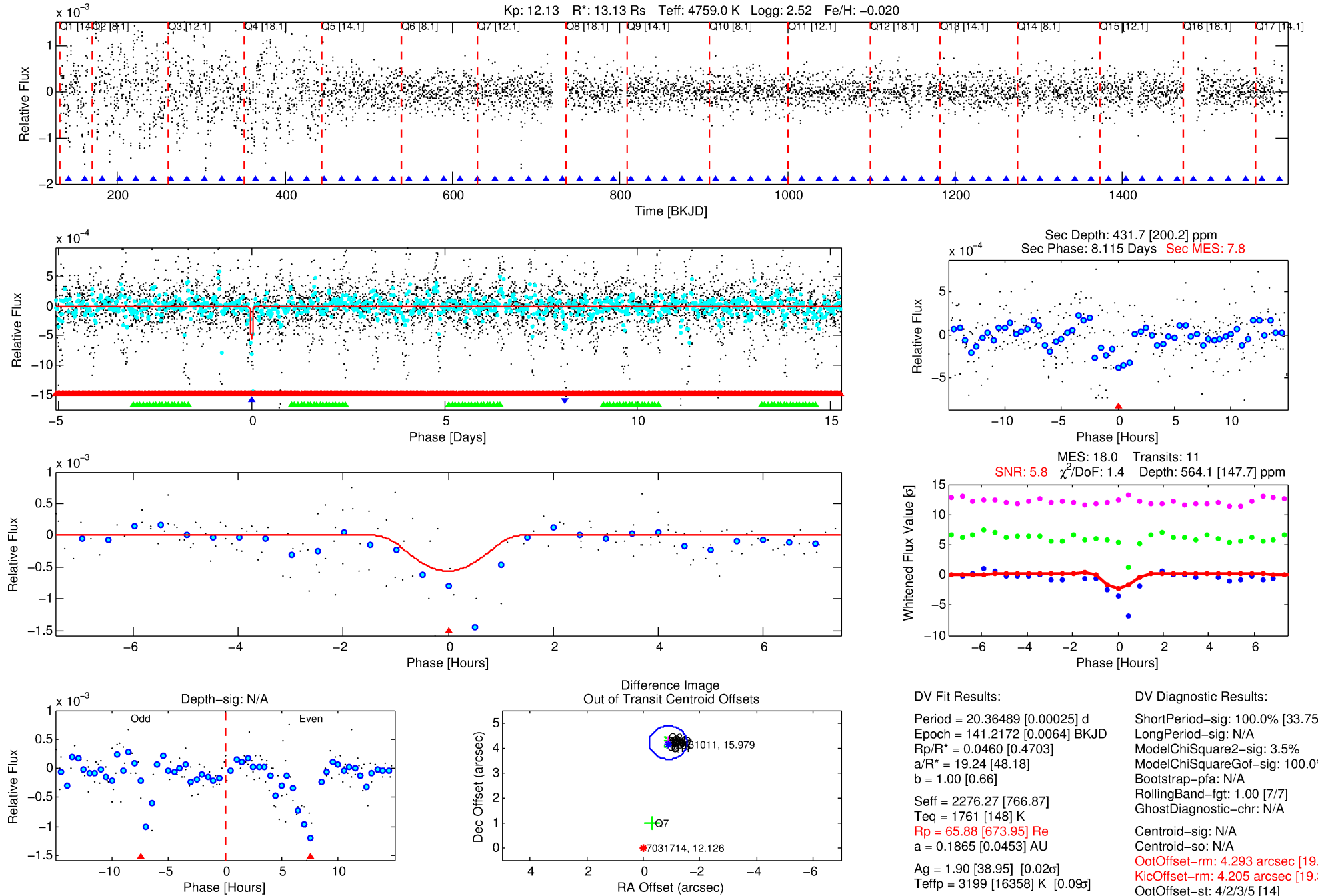
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007031714-02

No Significant Match Found

DV One-Page Summary

KIC: 7031714 Candidate: 2 of 3 Period: 20.365 d



DV Fit Results:

Period = 20.36489 [0.00025] d
 Epoch = 141.2172 [0.0064] BKJD
 Rp/R* = 0.0460 [0.4703]
 a/R* = 19.24 [48.18]
 b = 1.00 [0.66]
 Seff = 2276.27 [766.87]
 Teq = 1761 [148] K
 Rp = 65.88 [673.95] Re
 a = 0.1865 [0.0453] AU
 Ag = 1.90 [38.95] [0.02σ]
 Teffp = 3199 [16358] K [0.09σ]

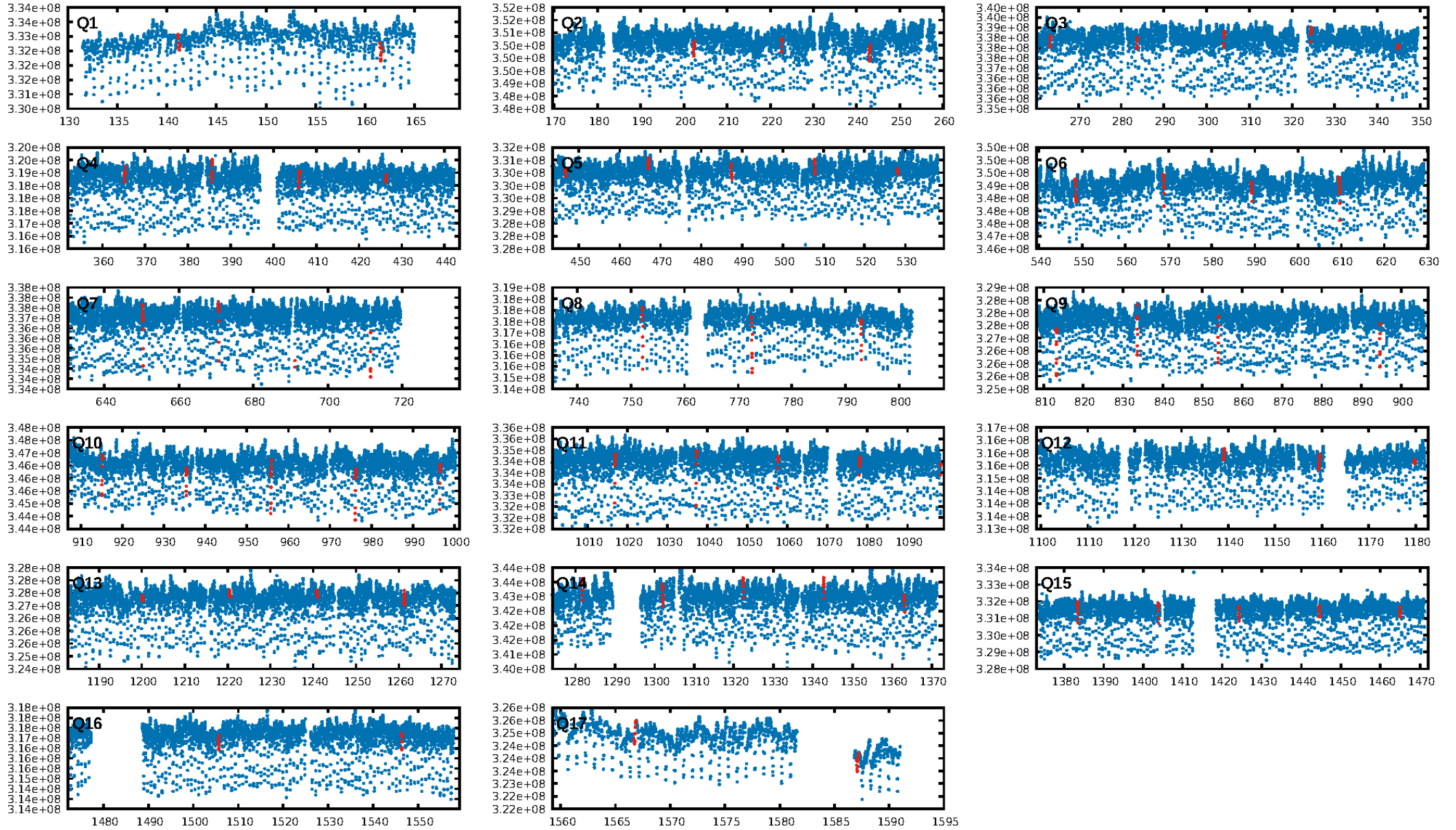
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [33.75σ]
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: 3.5%
 ModelChiSquareGof-sig: 100.0%
 Bootstrap-pfa: N/A
 RollingBand-fgt: 1.00 [7/7]
 GhostDiagnostic-chr: N/A
 Centroid-sig: N/A
 Centroid-so: N/A
 OotOffset-rm: 4.293 arcsec [19.32σ]
 KicOffset-rm: 4.205 arcsec [19.38σ]
 OotOffset-st: 4/2/3/5 [14]
 KicOffset-st: 4/2/3/5 [14]
 DiffImageQuality-fgm: 0.43 [6/14]
 DiffImageOverlap-fno: 0.00 [0/16]

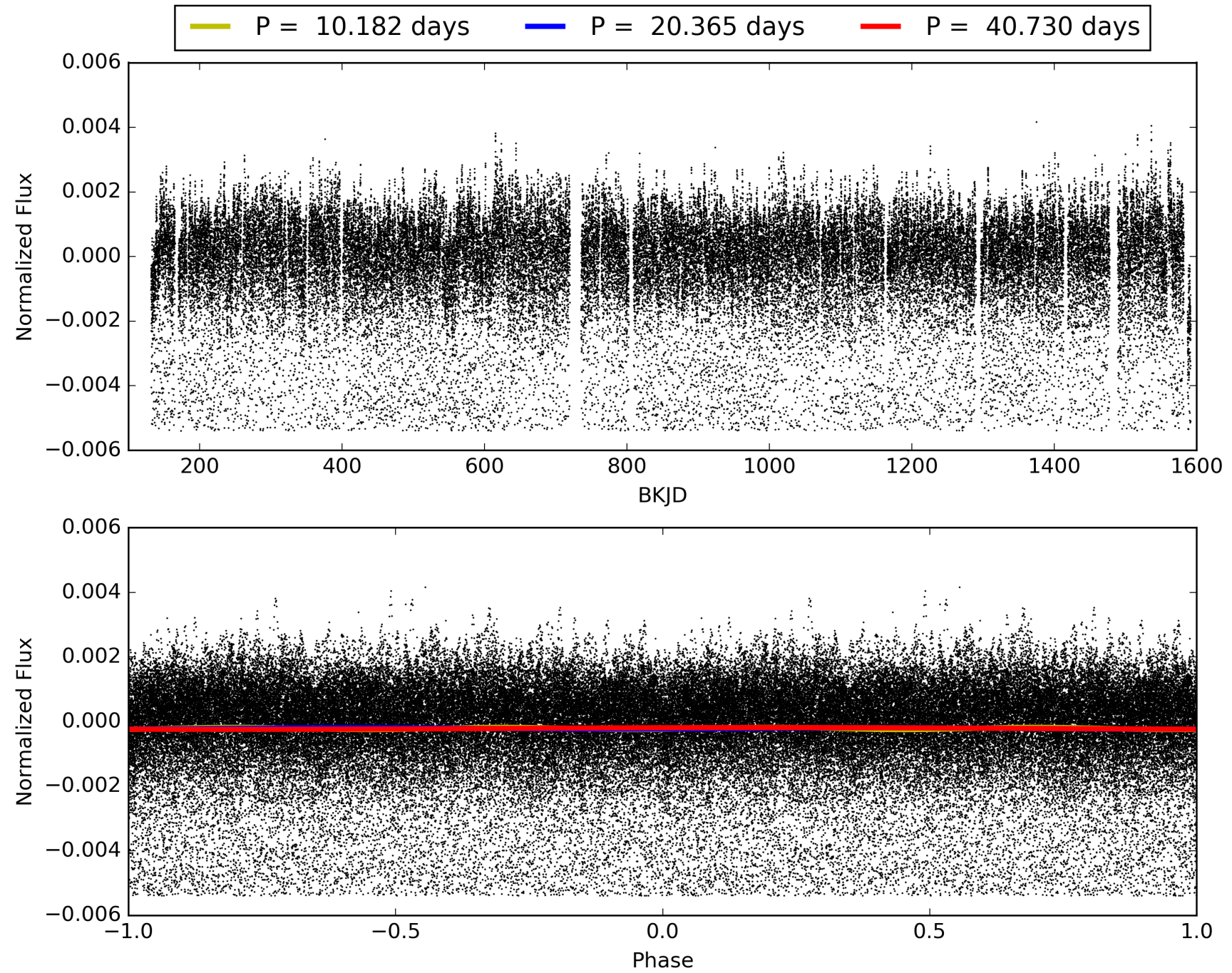
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:53:39 Z

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

TCE 007031714-02, PDC Light Curves

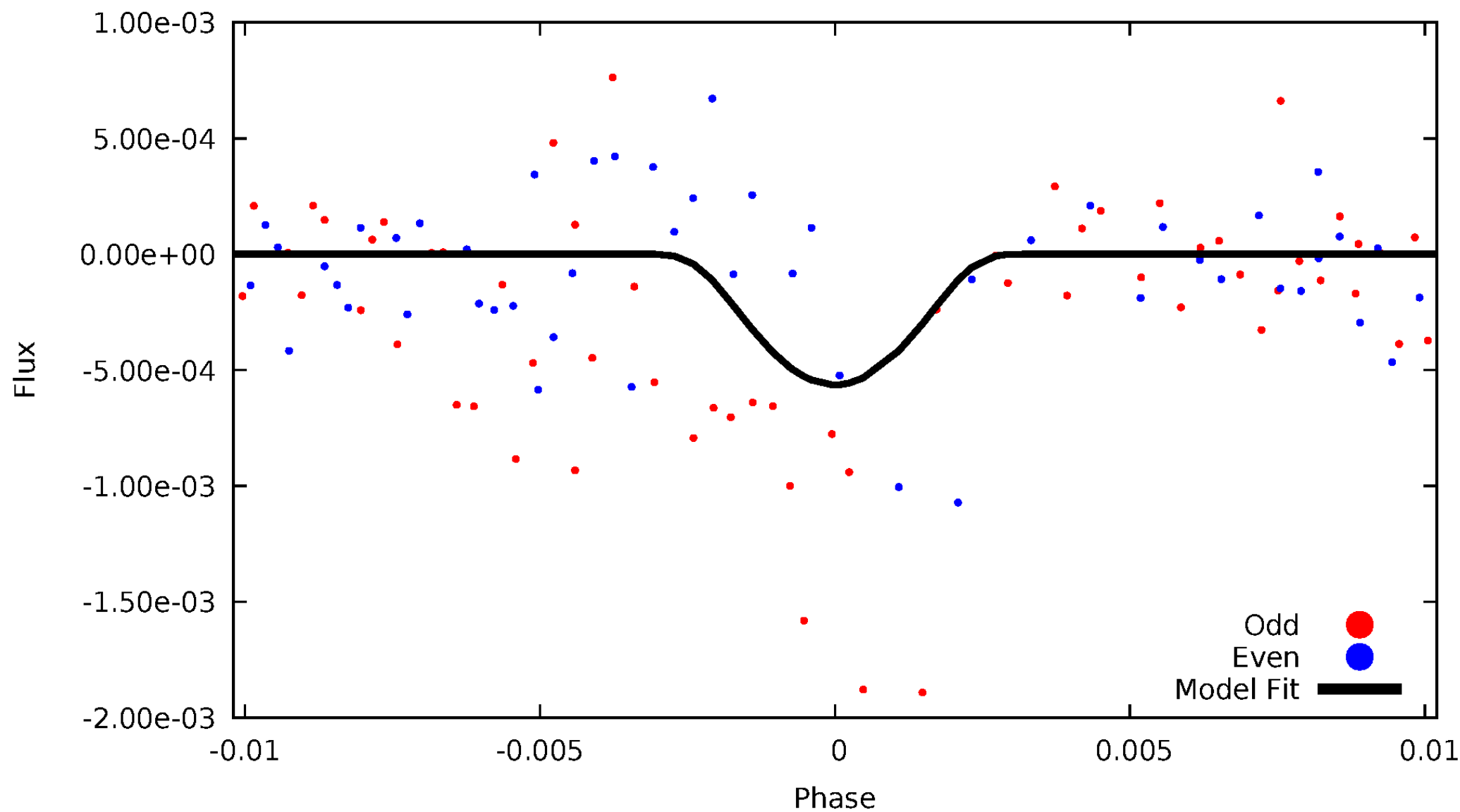


TCE 007031714-02



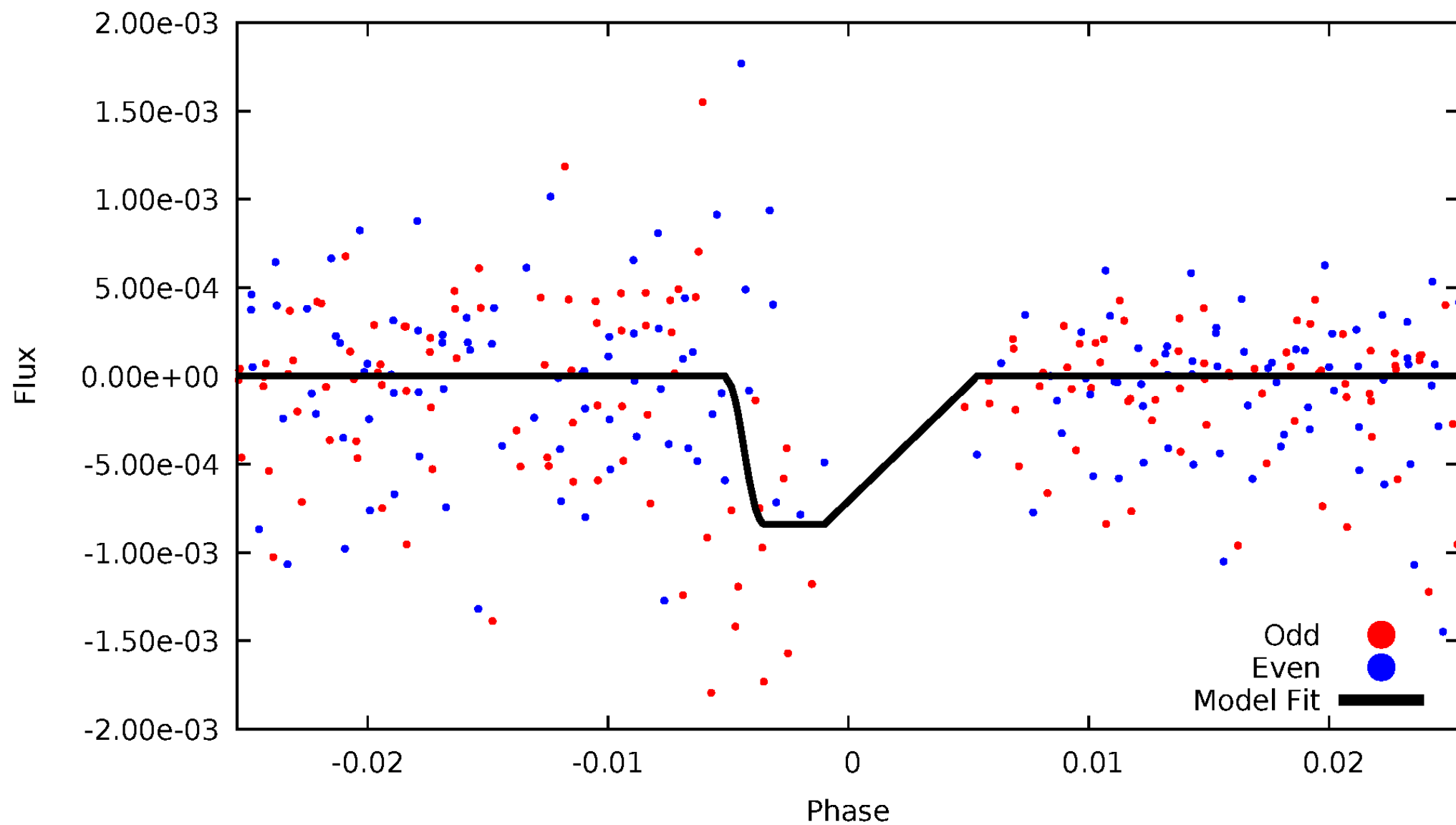
DV Odd/Even

TCE 007031714-02



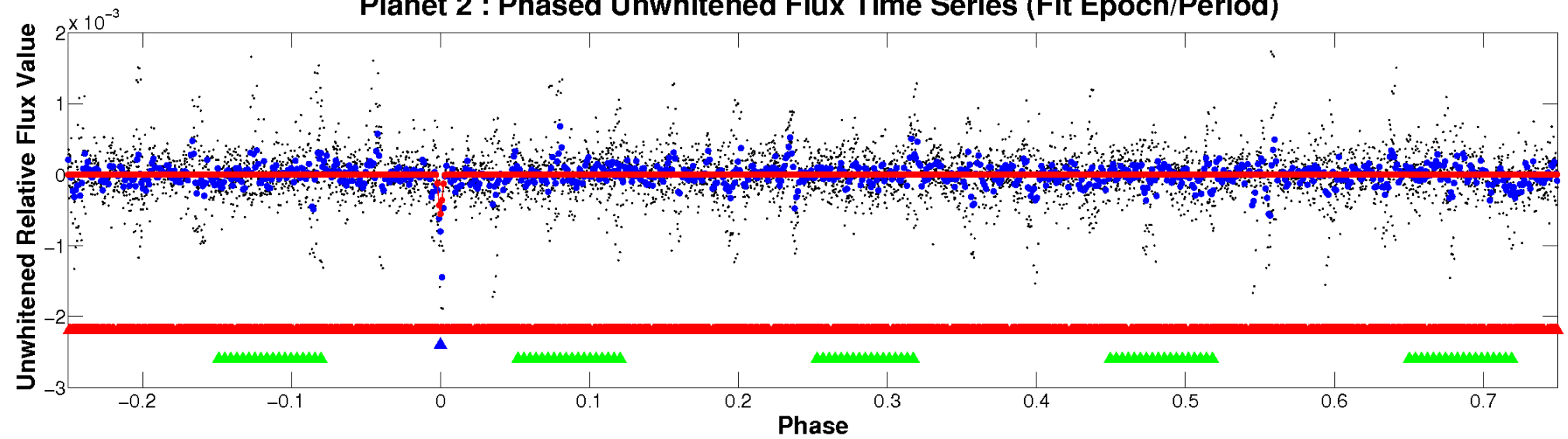
ALT Odd/Even

TCE 007031714-02

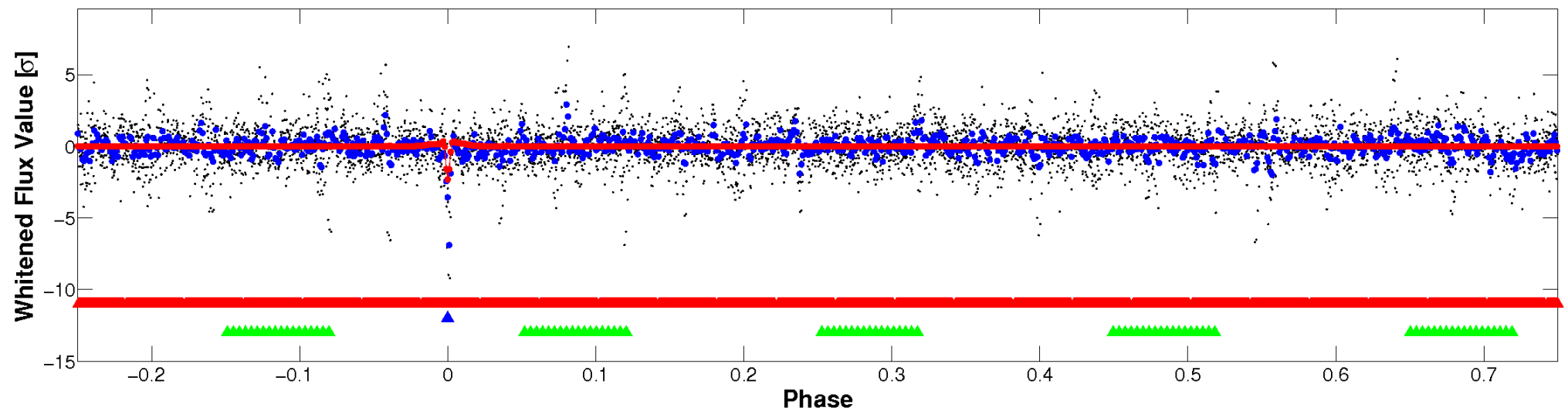


Non-Whitened Vs. Whitened Light Curve

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

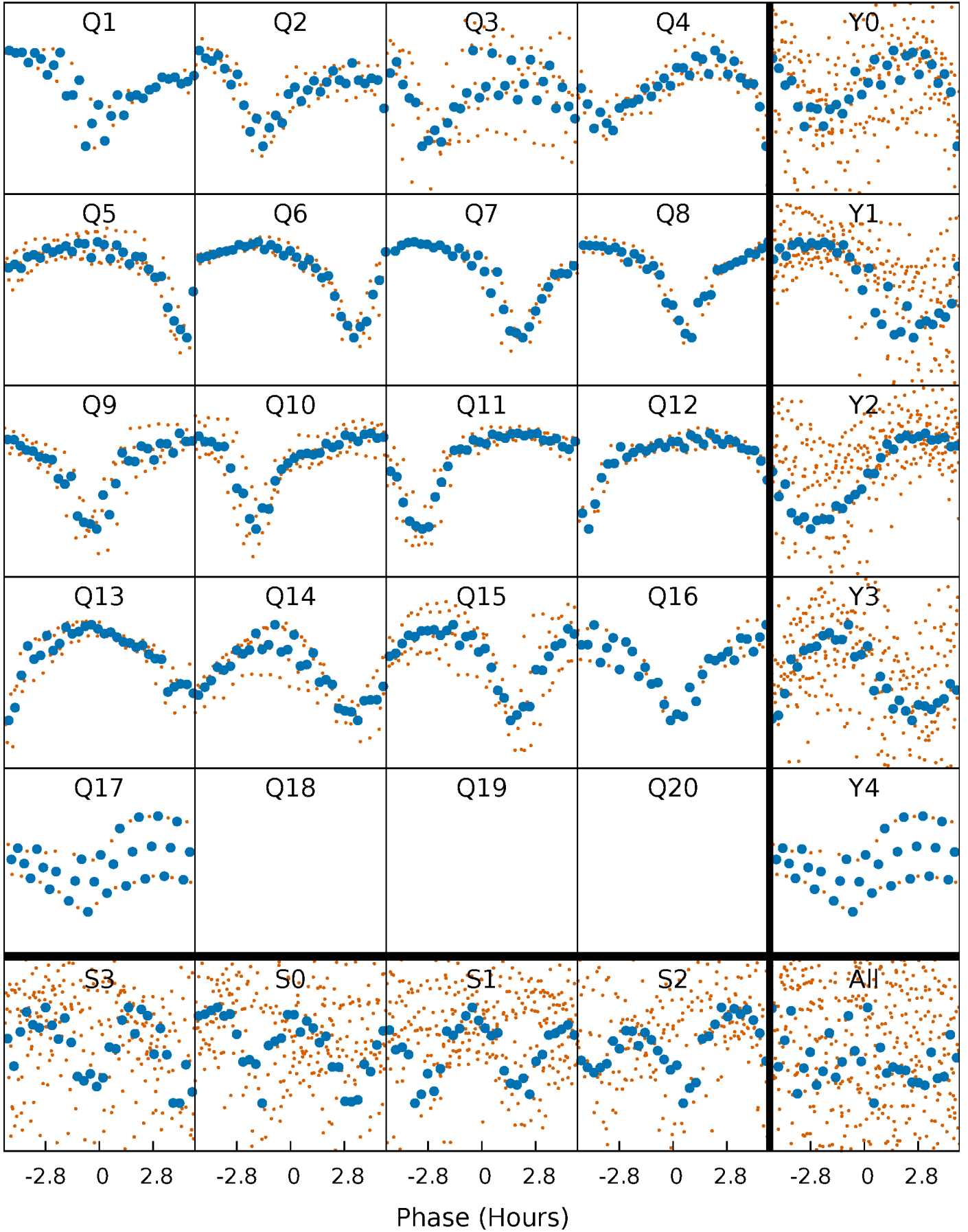


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



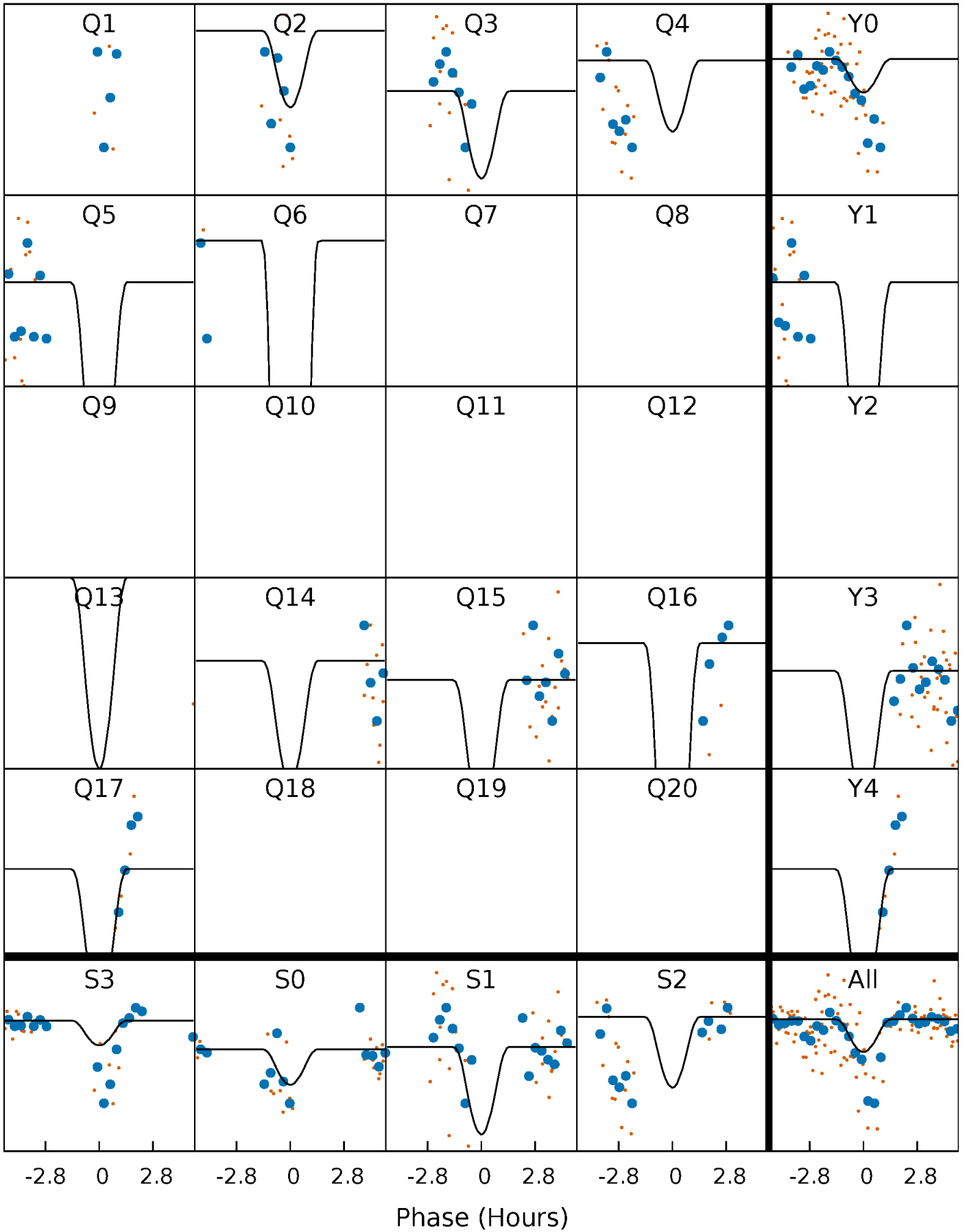
PDC Quarter-Phased Transit Curves

TCE 007031714-02 P= 20.364895 Days $T_0=141.217238$ (BKJD)



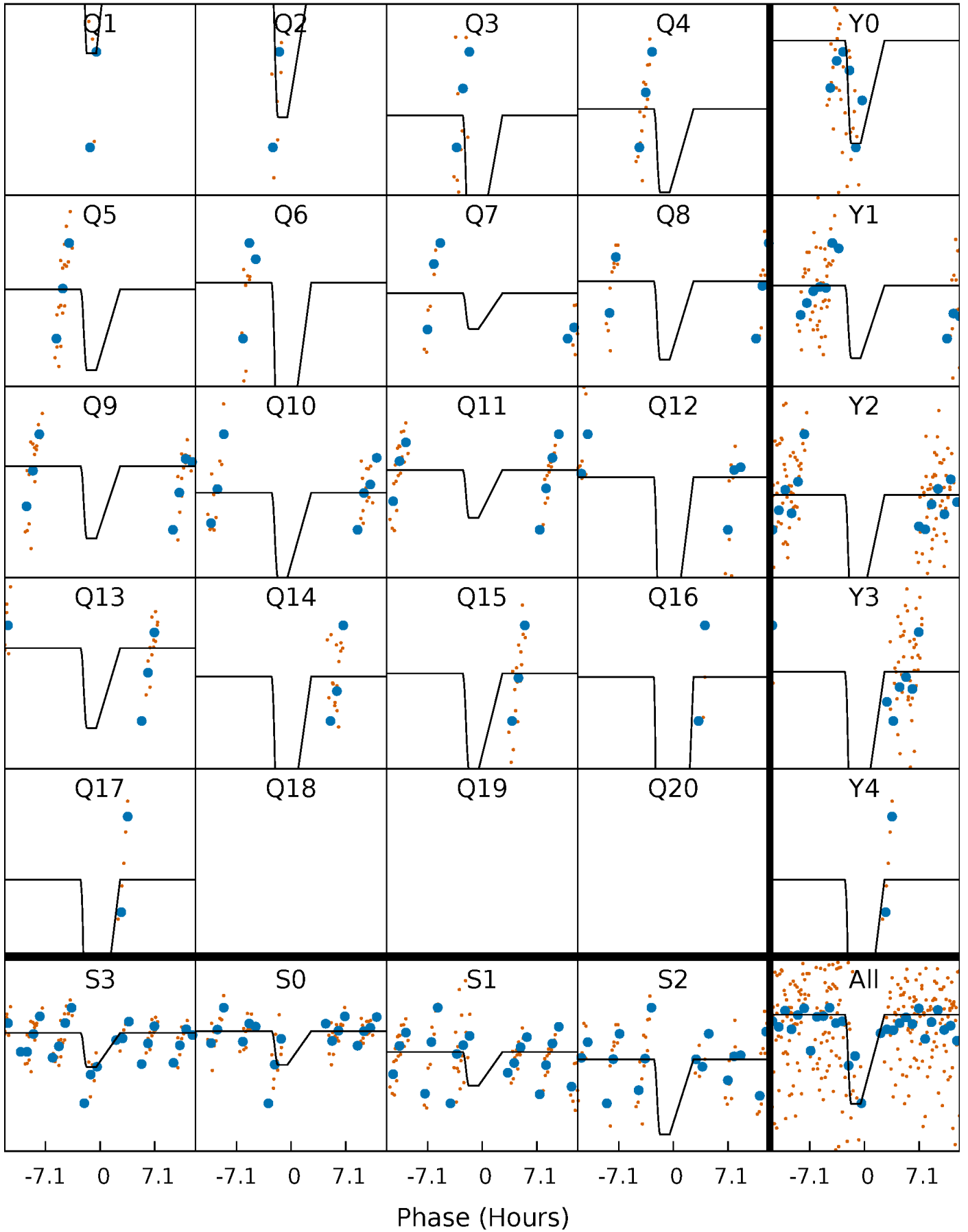
DV Quarter-Phased Transit Curves

TCE 007031714-02 P= 20.364895 Days $T_0=141.217238$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

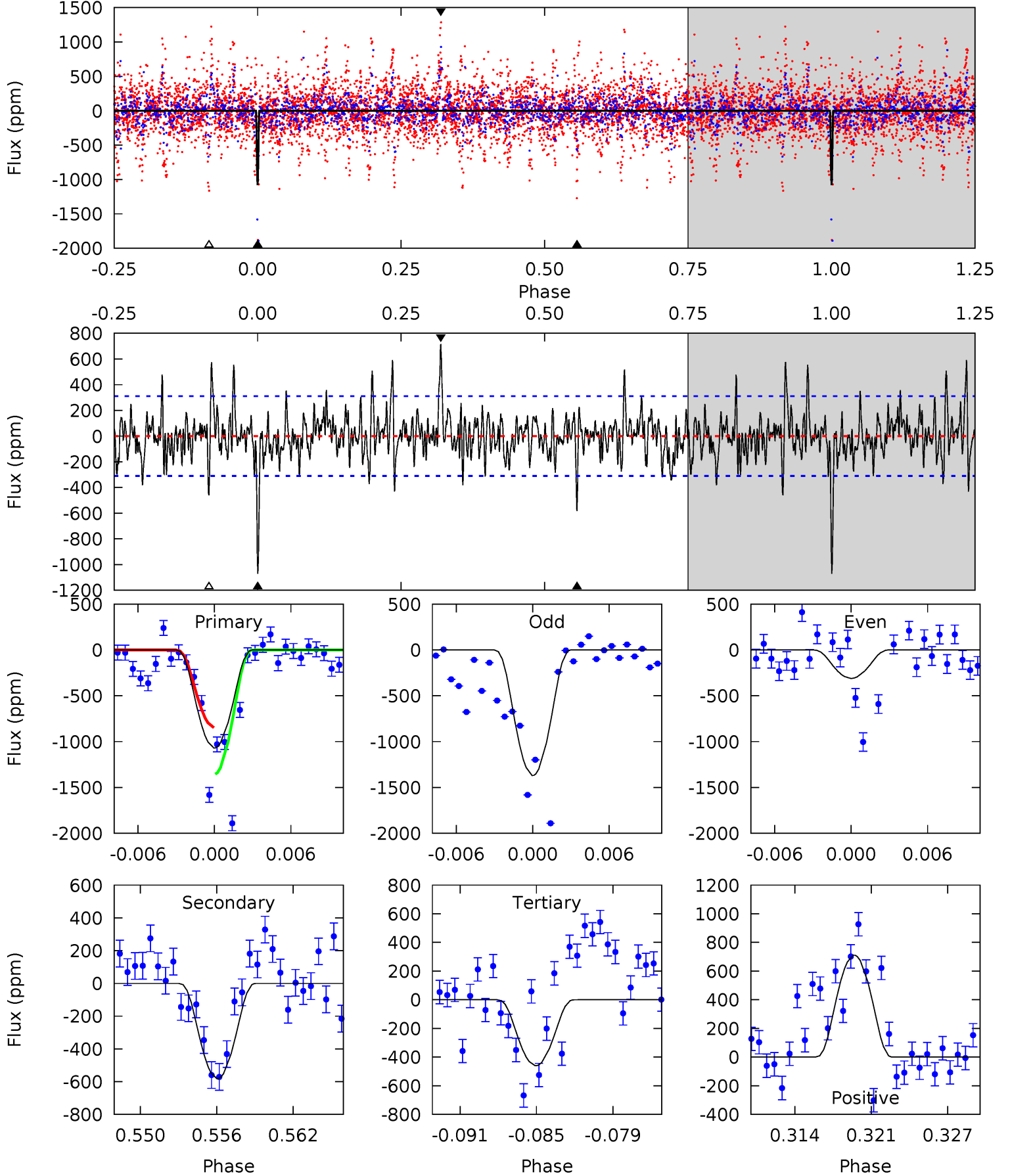
TCE 007031714-02 P= 20.363118 Days $T_0=141.279878$ (BKJD)



DV Model-Shift Uniqueness Test

007031714-02, P = 20.364895 Days, E = 120.852343 Days

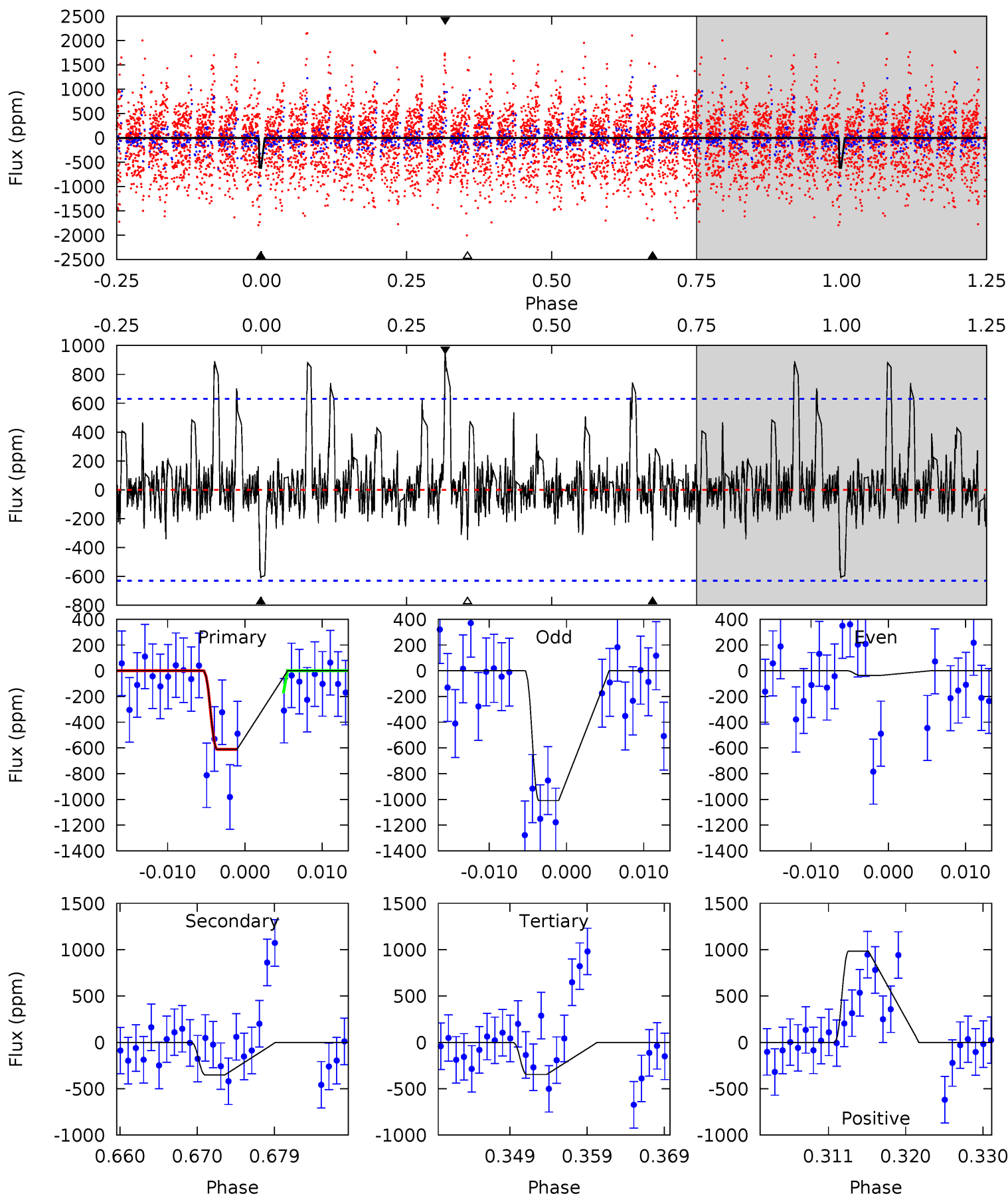
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	9.60	7.59	11.7	5.12	2.75	2.26	10.1	5.92	2.01	-2.13	8.64	0.93	0.40	4.15



Alt Model-Shift Uniqueness Test

007031714-02, P = 20.363118 Days, E = 120.916760 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.89	2.80	2.77	7.86	5.03	2.59	1.18	2.12	-2.98	0.03	-5.06	4.01	0	0.62	2.44



Stellar Parameters For KIC 007031714

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4759^{+56}_{-103}	$2.521^{+0.163}_{-0.100}$	$-0.020^{+0.100}_{-0.200}$	$13.127^{+2.735}_{-4.102}$	$2.088^{+0.959}_{-0.785}$	$0.001^{+0.001}_{-0.000}$
	+1%/-2%	+6%/-4%	+500%/-1000%	+21%/-31%	+46%/-38%	+94%/-30%
Source	SPE74	SPE74	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 007031714-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-582 ± 61	$456.28^{+564.57}_{-325.42}$	2439^{+125}_{-156}	-2600^{+5410}_{-140}	$0.055^{+0.642}_{-0.043}$
Alt.	-350 ± 125	$450.74^{+514.92}_{-300.89}$	2442^{+126}_{-165}	-2641^{+4608}_{-109}	$0.032^{+0.285}_{-0.025}$

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

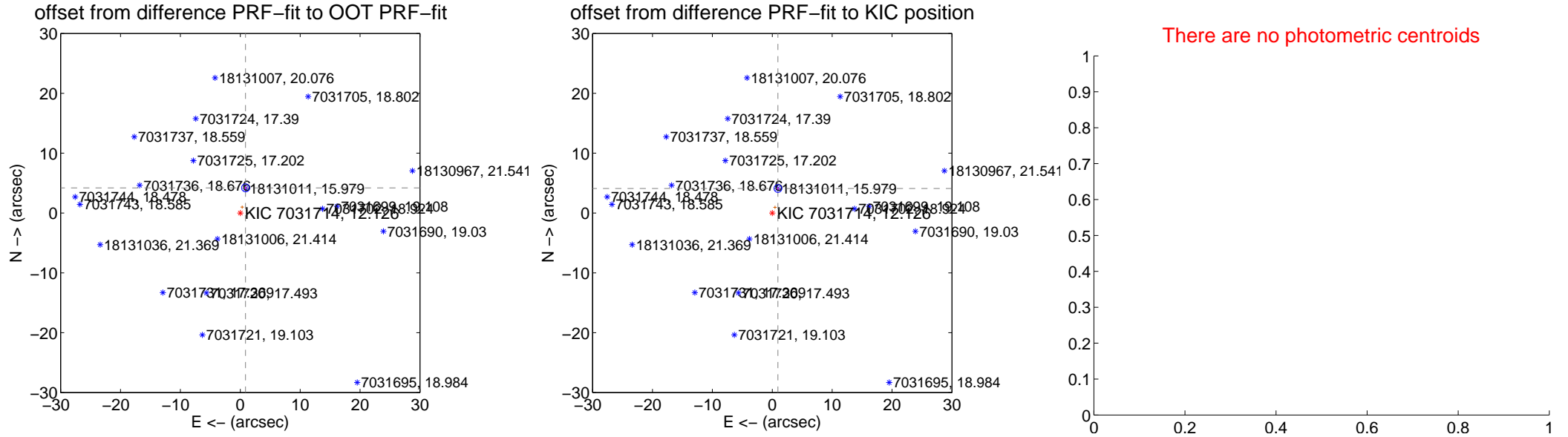
DV Centroid Data

Supplemental centroid analysis for 007031714-02. Kepler magnitude: 12.13. Transit SNR 5.82

There are 6 quarters with good PRF difference image offsets

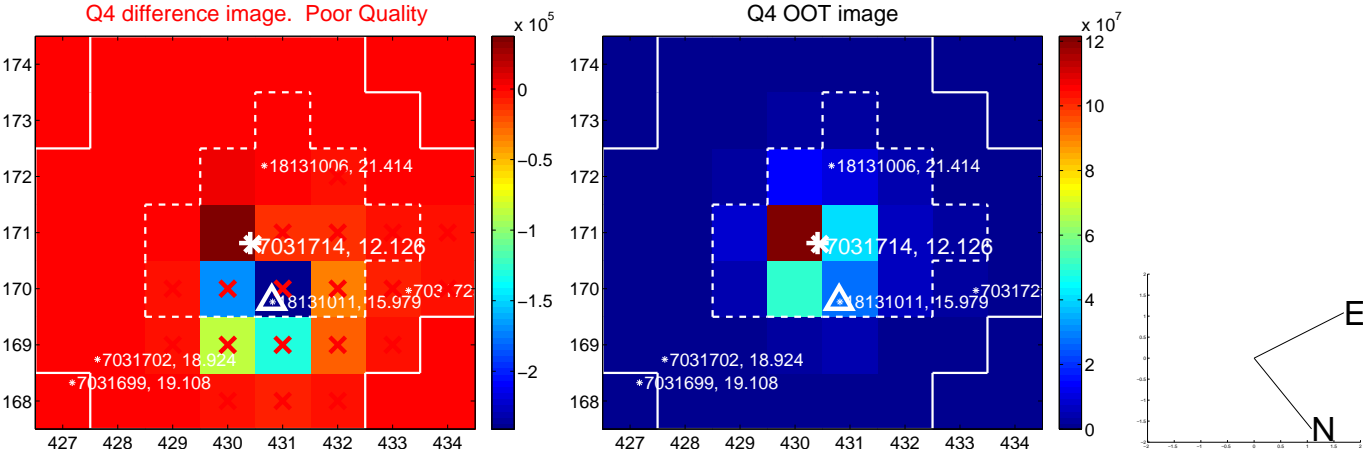
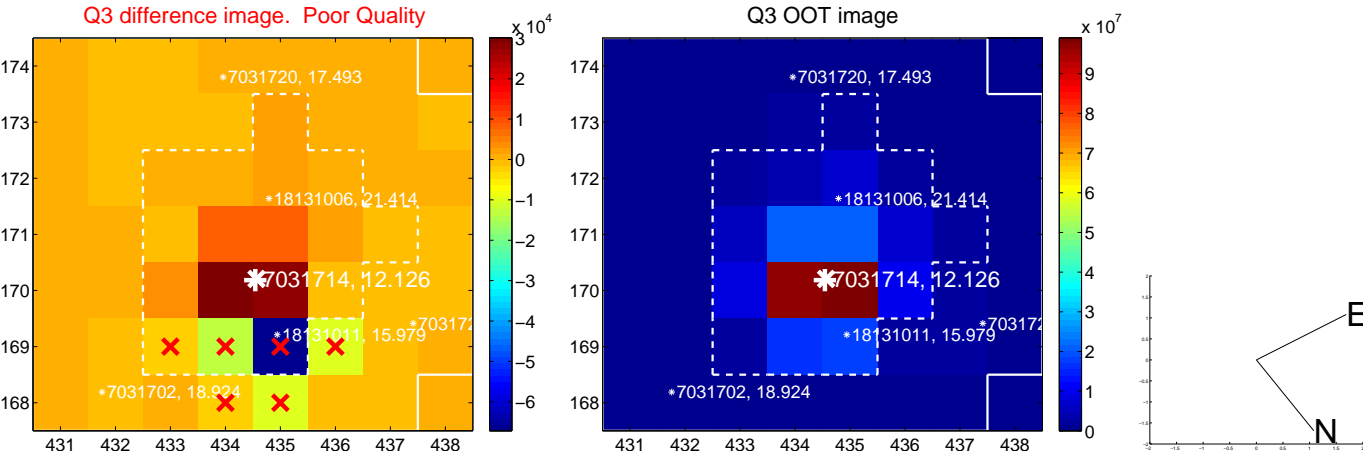
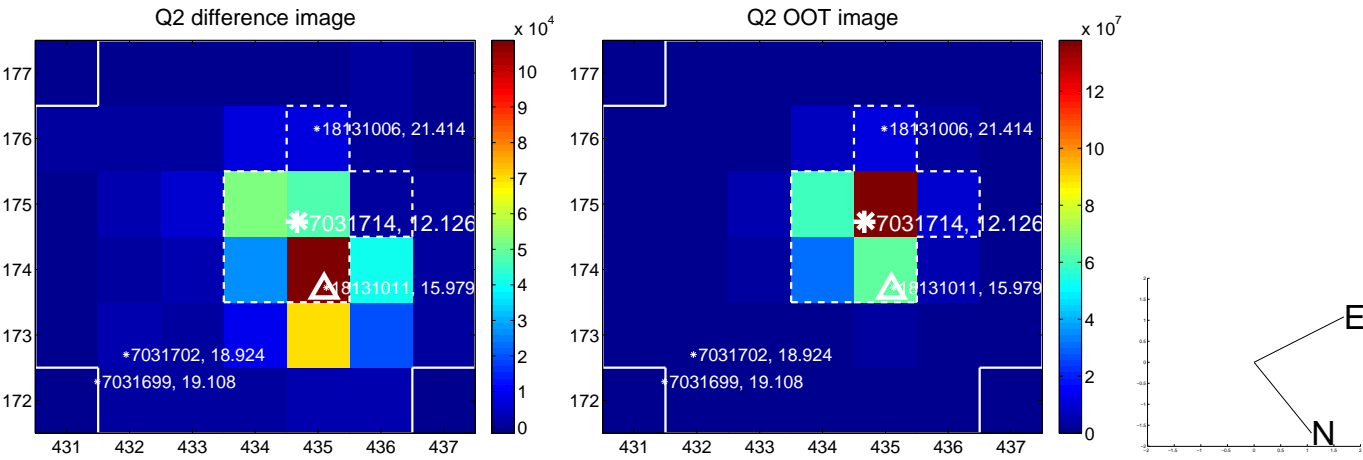
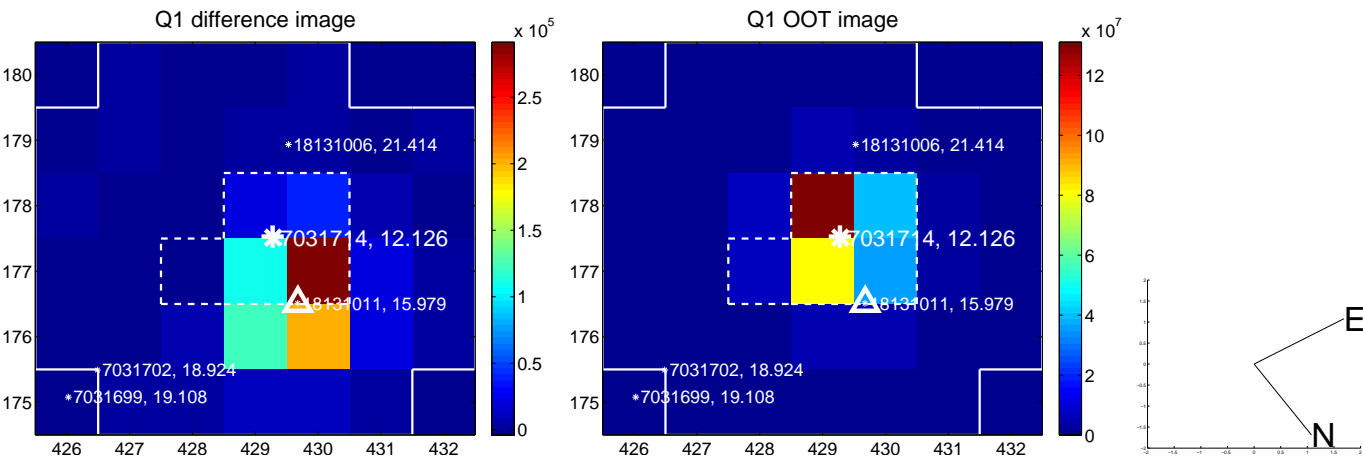
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.293 \pm 0.222	19.32	-0.880 \pm 0.076	4.202 \pm 0.220
PRF-fit source offset from KIC position	4.205 \pm 0.217	19.38	-0.941 \pm 0.075	4.099 \pm 0.216
photometric centroid source offset	—	—	—	—

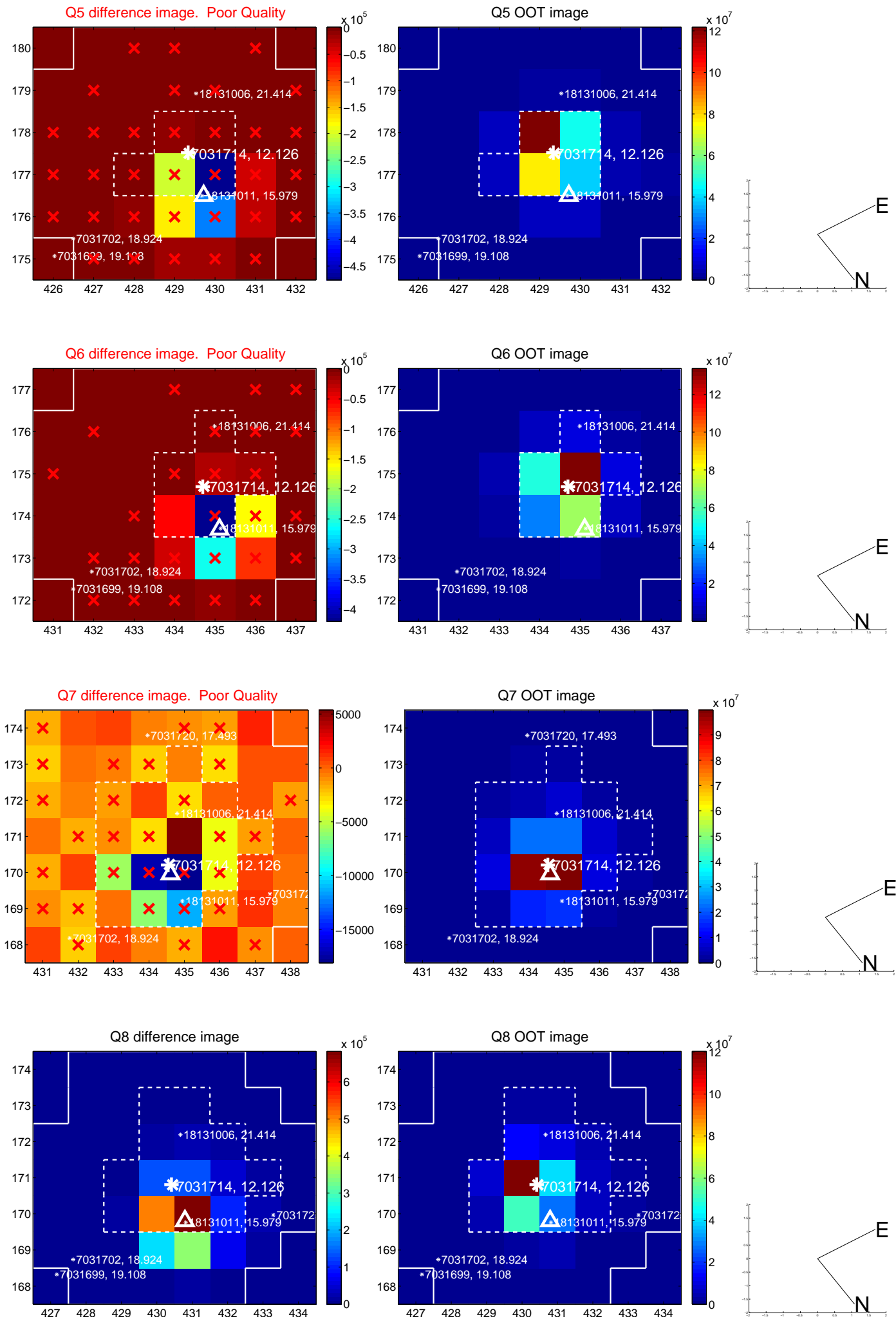


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

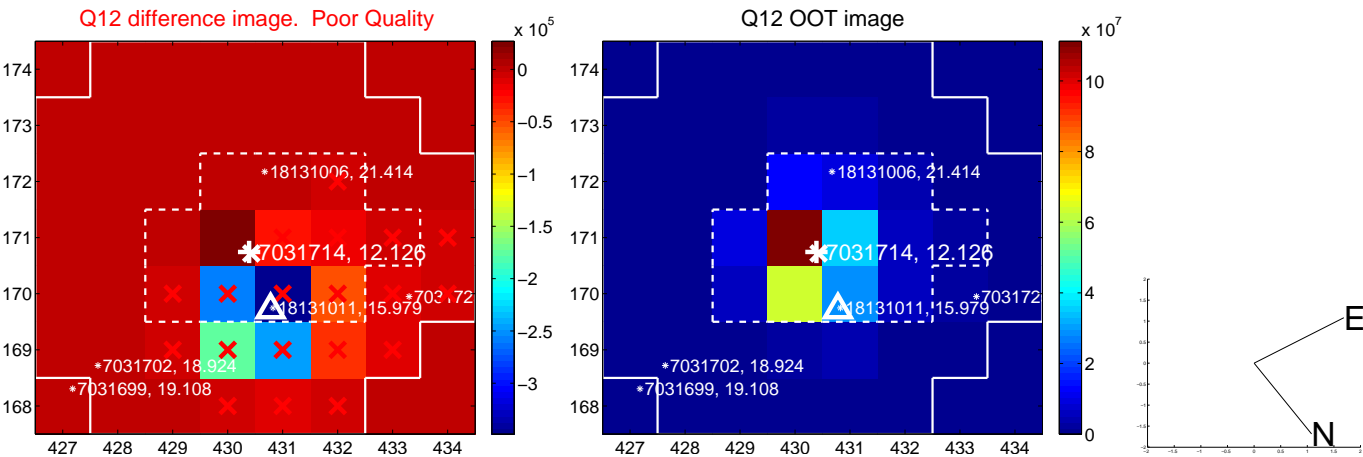
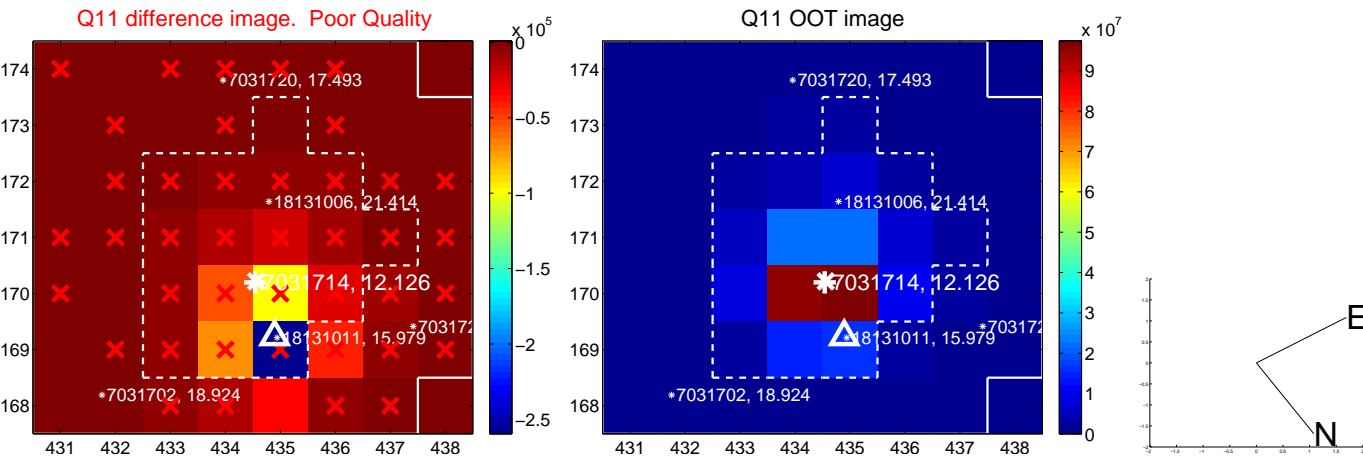
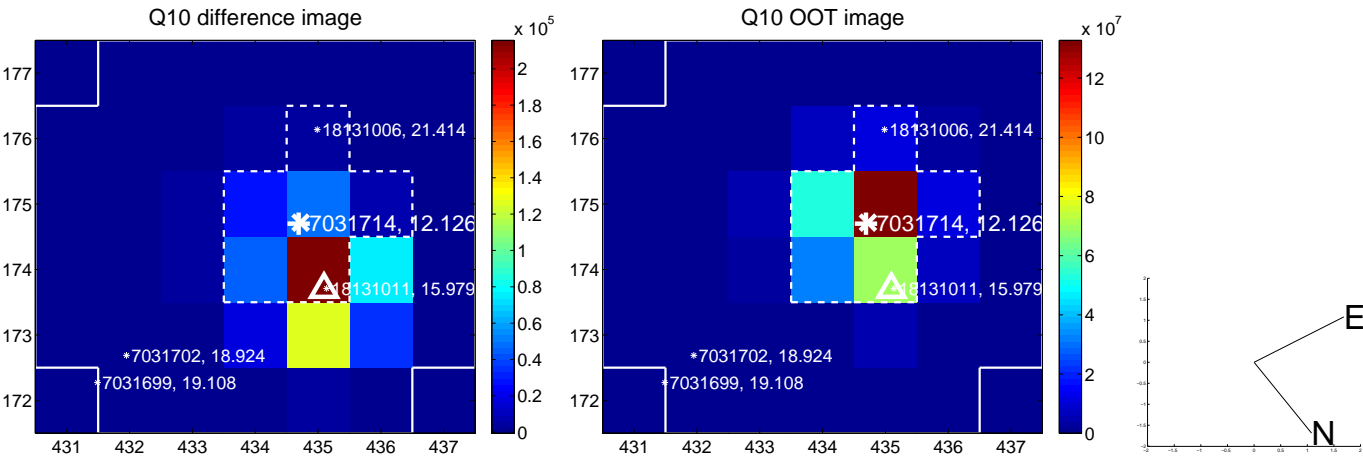
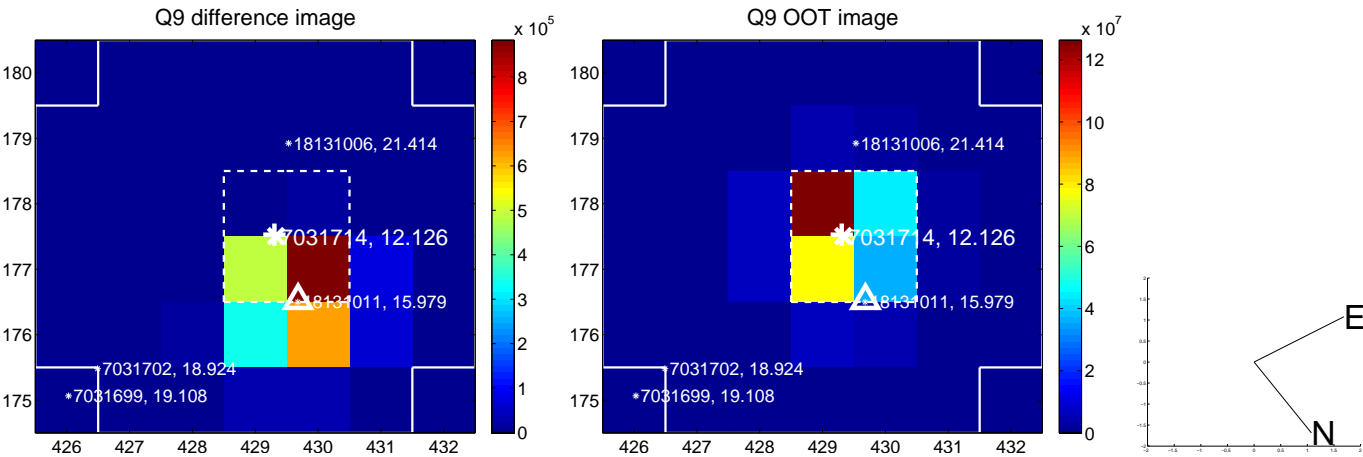
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



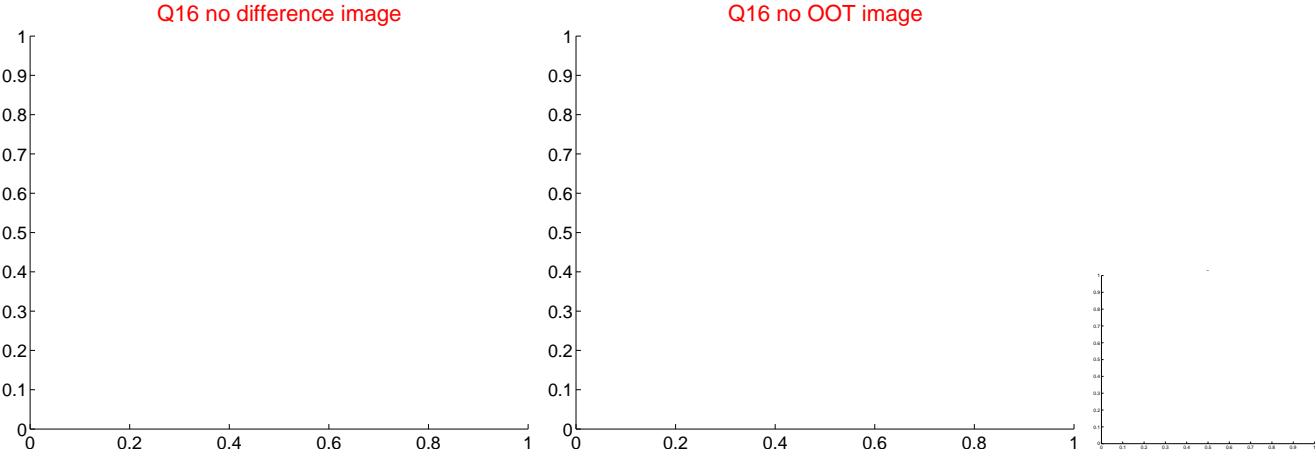
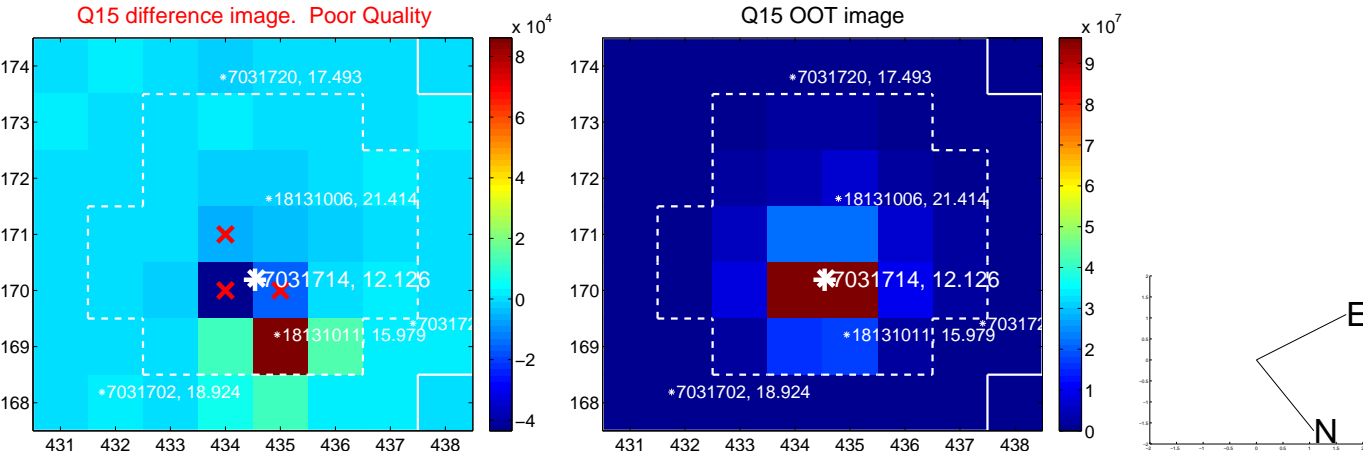
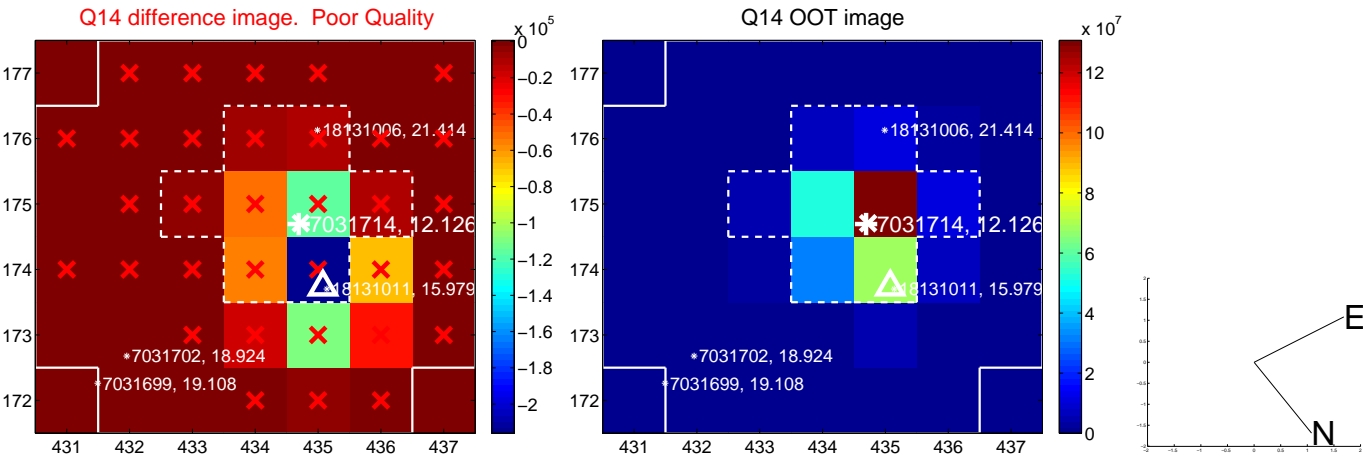
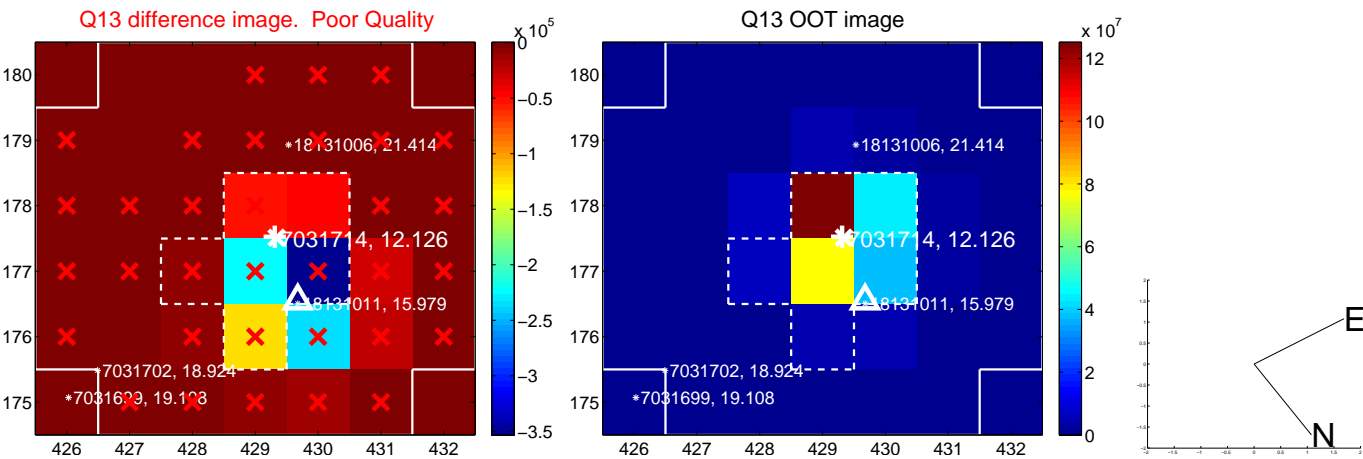
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



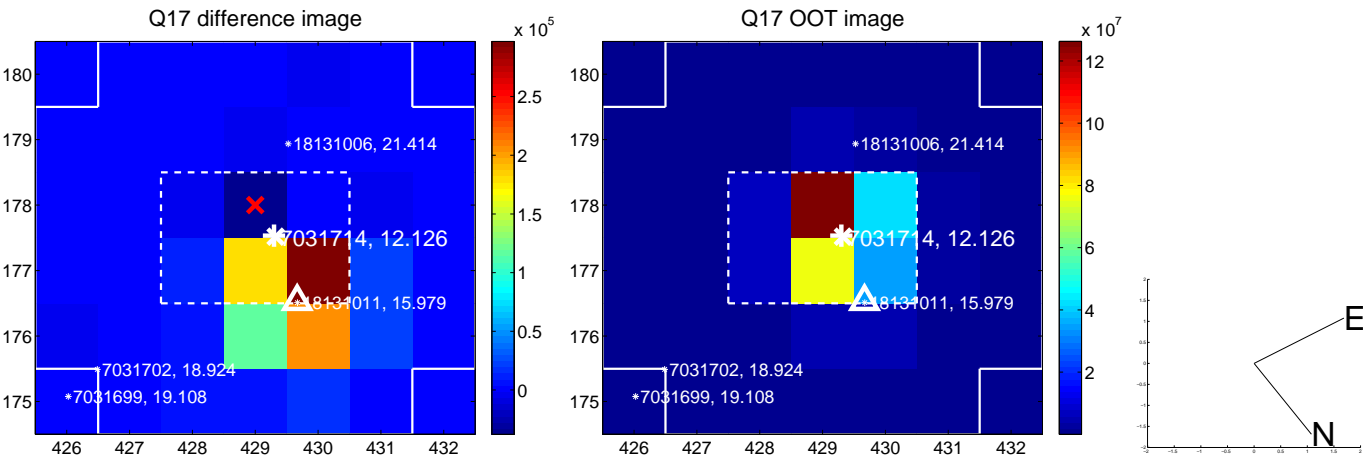
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



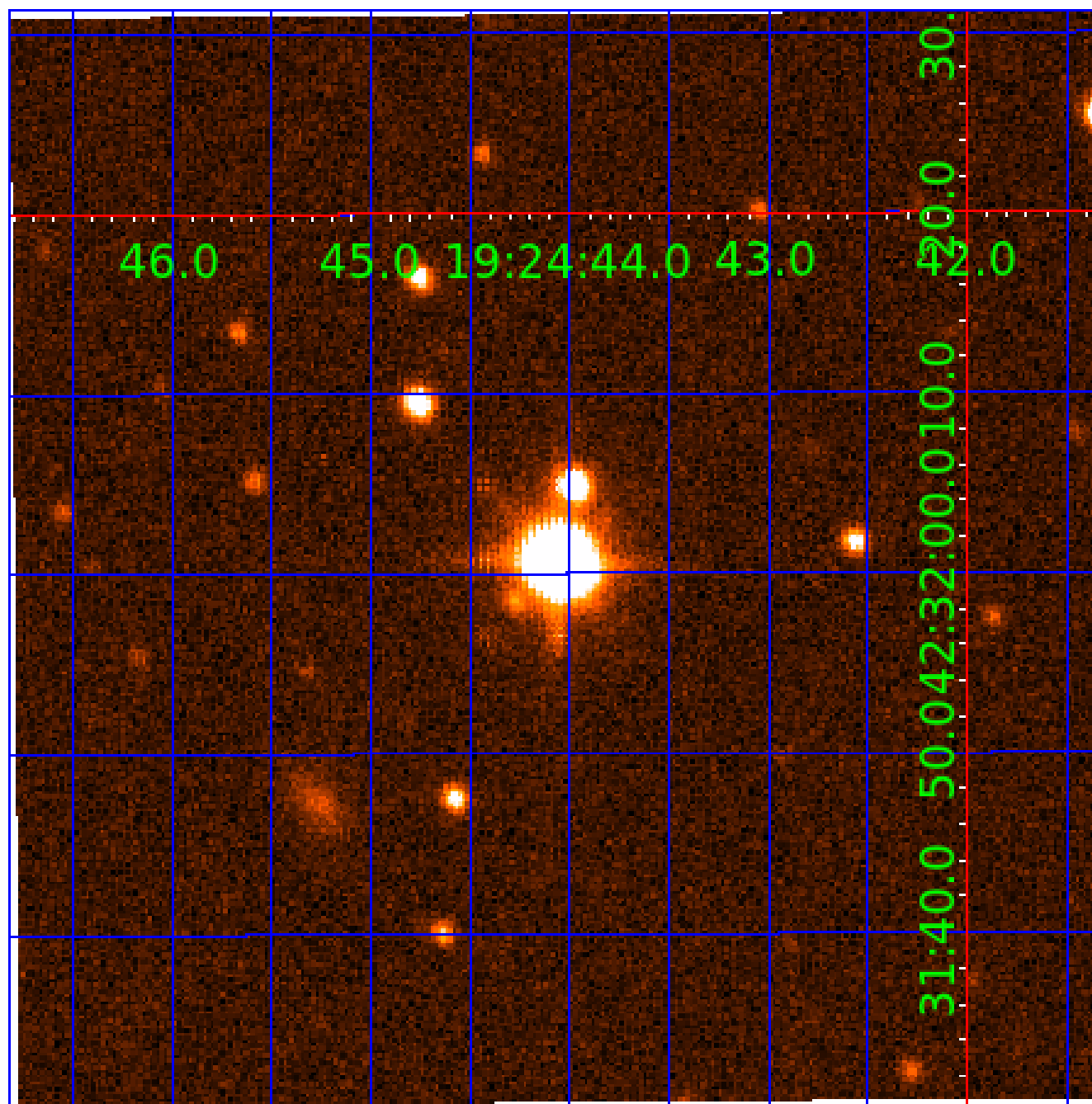
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007031714

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})
007031714-01	OBS	No	0.814160	131.871882	462.3	5.773	749.2	53.8	13.13	4759	30.71	0.00
007031714-02	OBS	No	20.364895	141.217237	564.1	2.491	18.0	5.8	13.13	4759	65.88	2276.27
007031714-03	OBS	No	16.275481	143.673497	429.0	1.500	14.8	-1.0	13.13	4759	26.31	3069.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031714-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—CENT_UNRESOLVED_OFFSET
007031714-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET
007031714-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—CENT_NOFITS

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

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

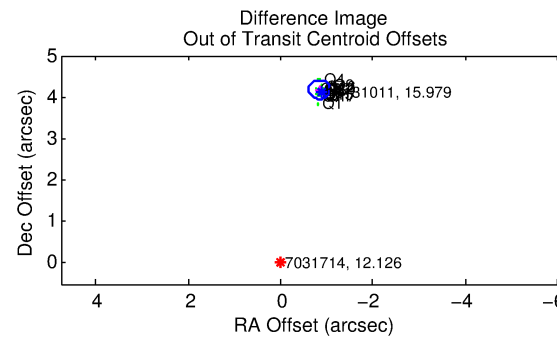
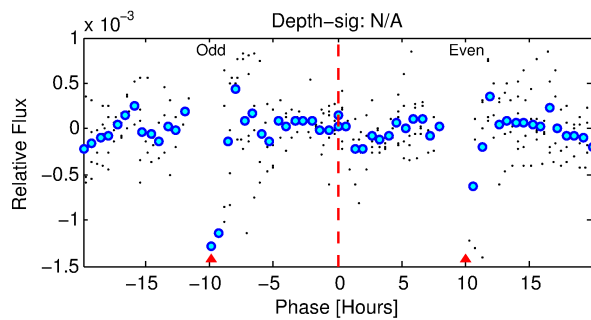
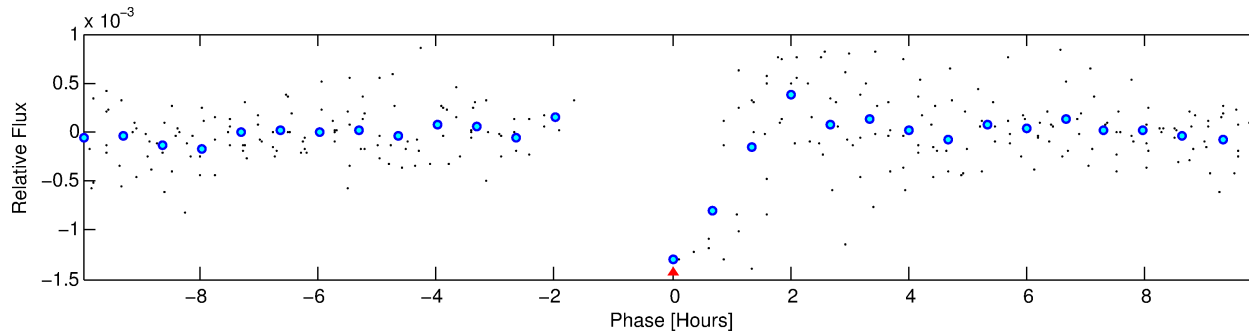
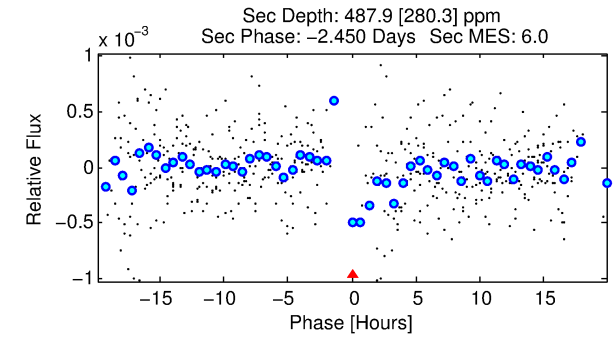
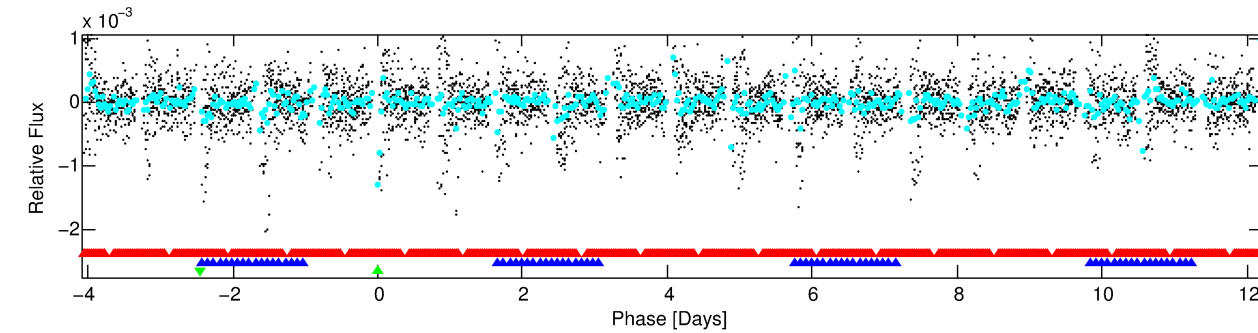
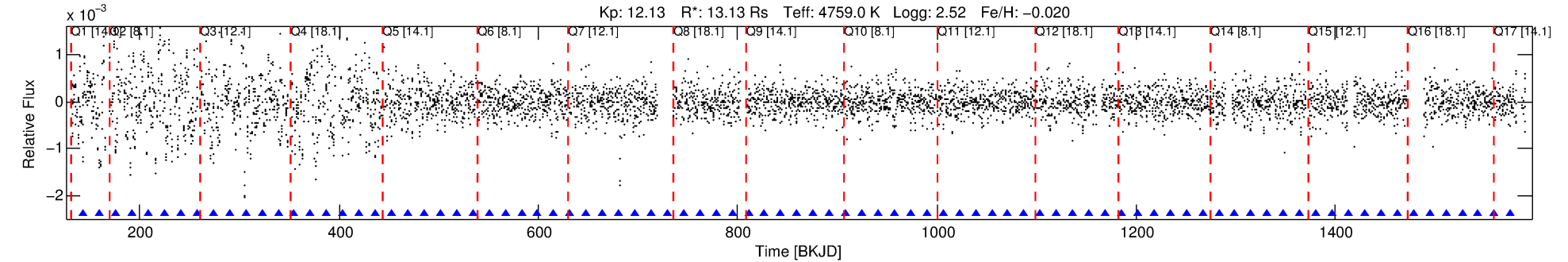
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007031714-03

No Significant Match Found

DV One-Page Summary

KIC: 7031714 Candidate: 3 of 3 Period: 16.275 d



TPS TCE Results:

Period = 16.27548 d
Epoch = 143.6735 BKJD

DV fit results are unavailable

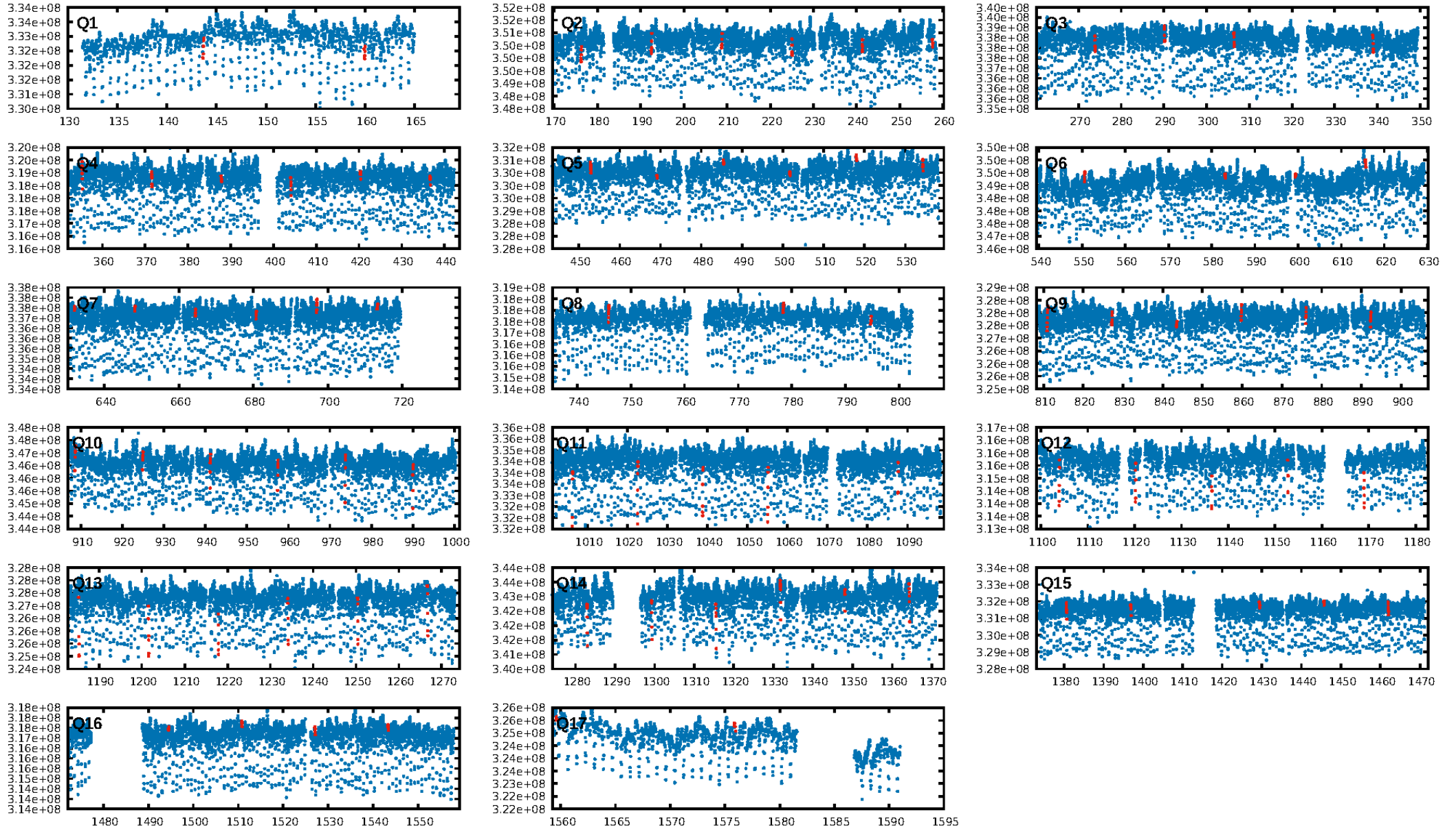
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [62.21 σ]
LongPeriod-sig: 100.0% [33.75 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 4.263 arcsec [56.15 σ]
KicOffset-rm: 4.184 arcsec [56.25 σ]
OotOffset-st: 3/3/4/5 [15]
KicOffset-st: 3/3/4/5 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 0.00 [0/17]

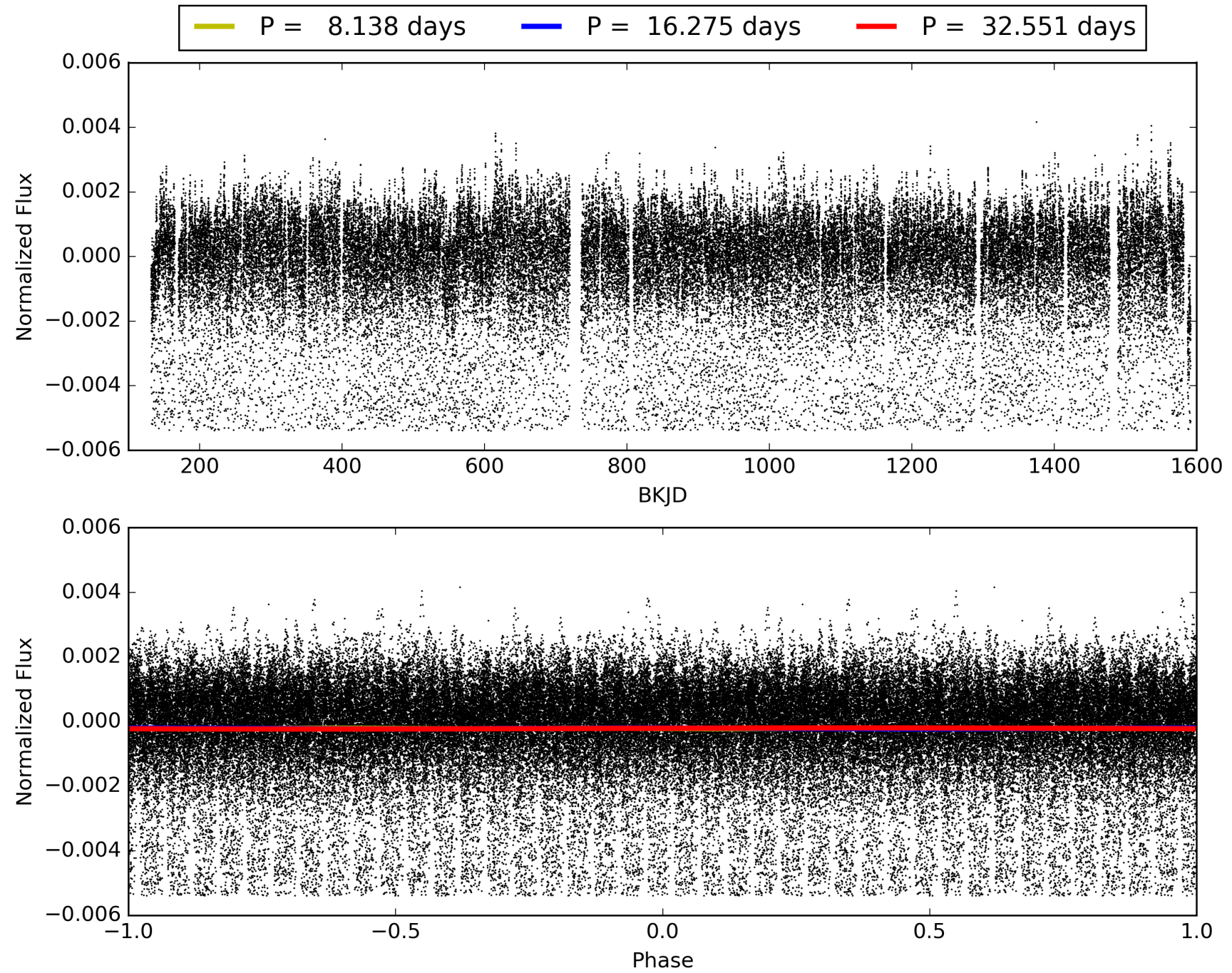
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:53:42 Z

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

TCE 007031714-03, PDC Light Curves

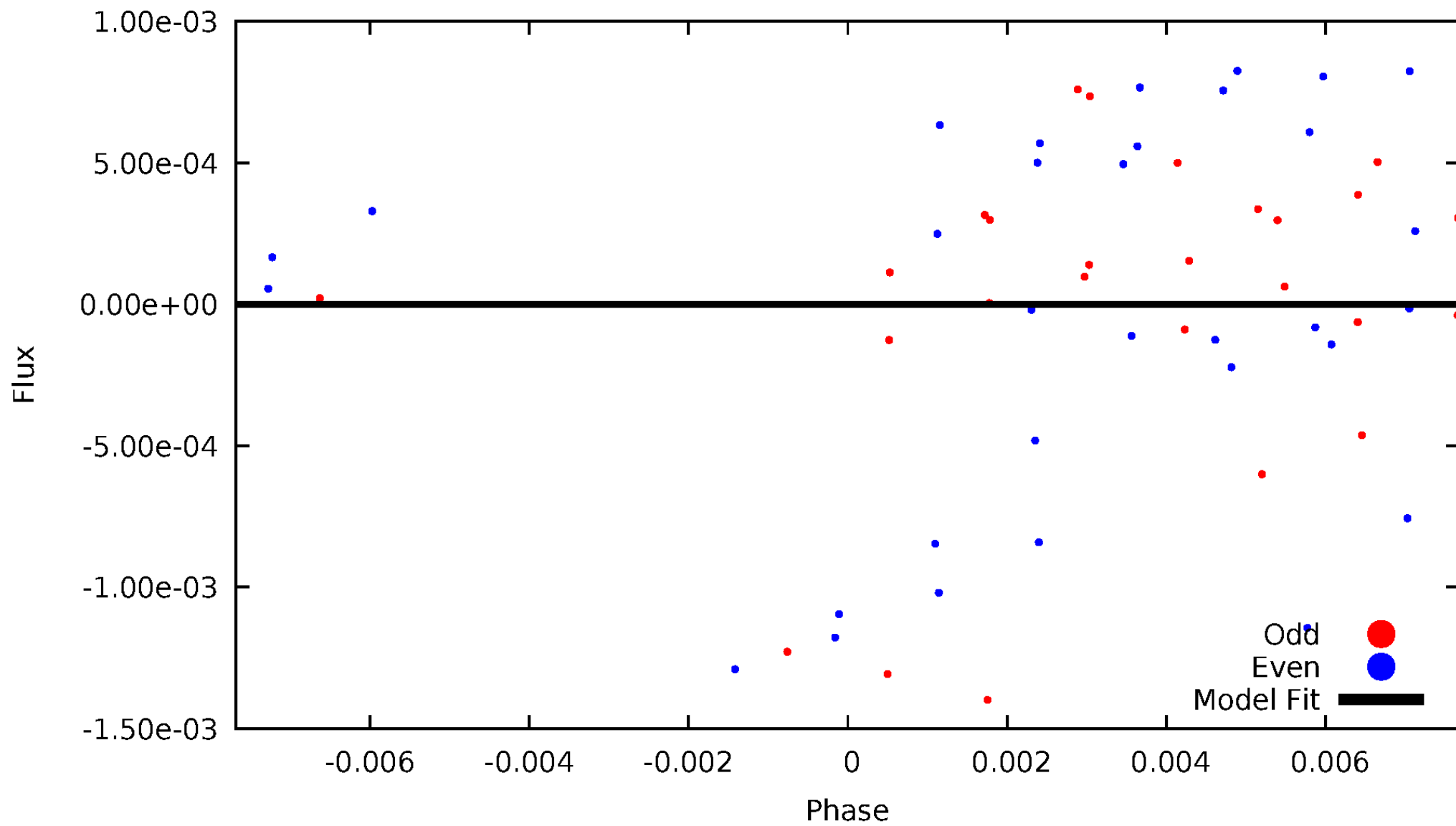


TCE 007031714-03



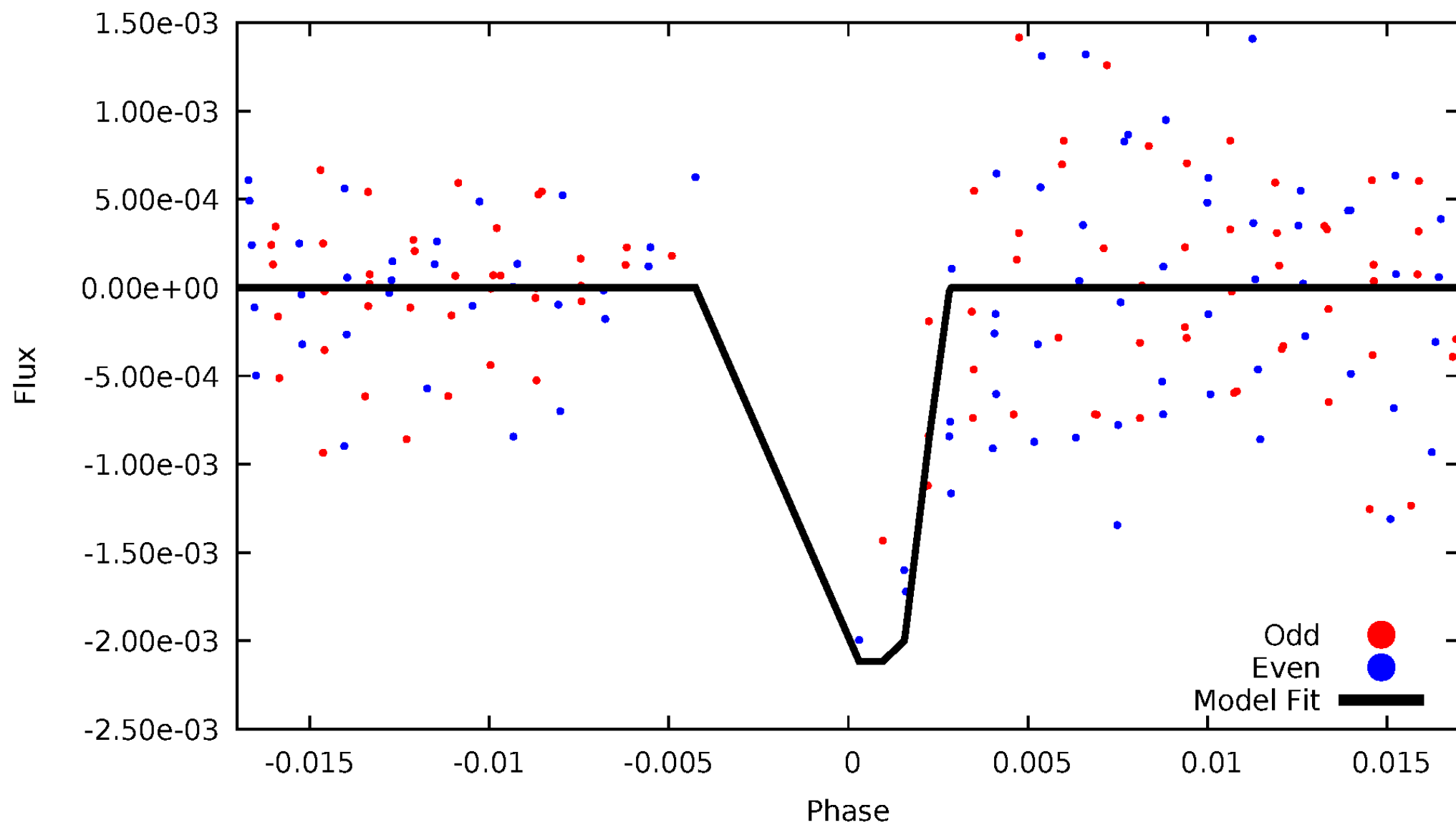
DV Odd/Even

TCE 007031714-03



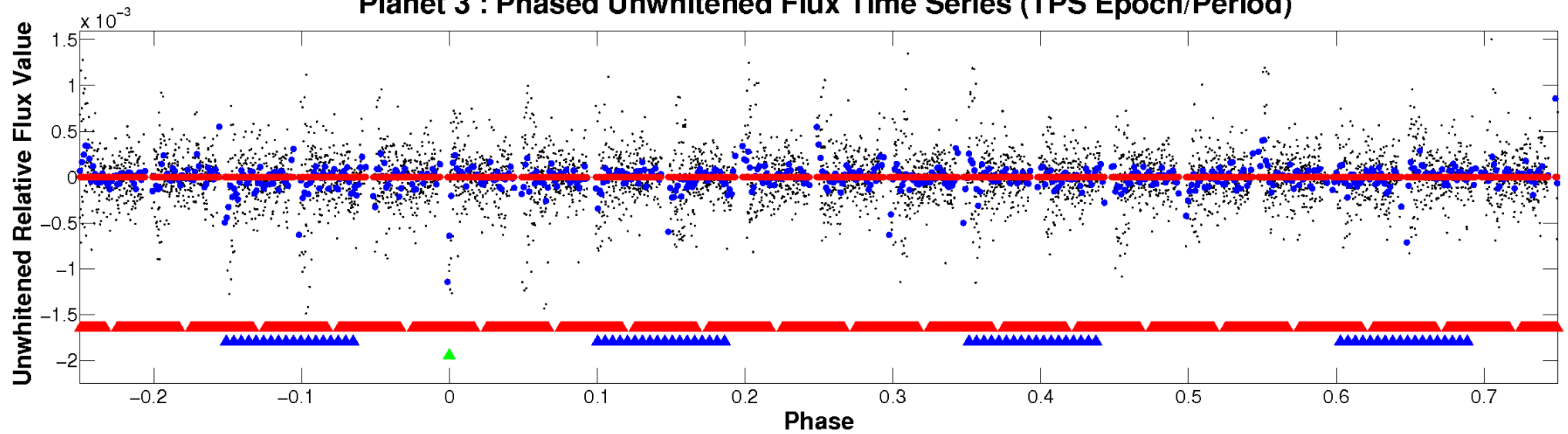
ALT Odd/Even

TCE 007031714-03

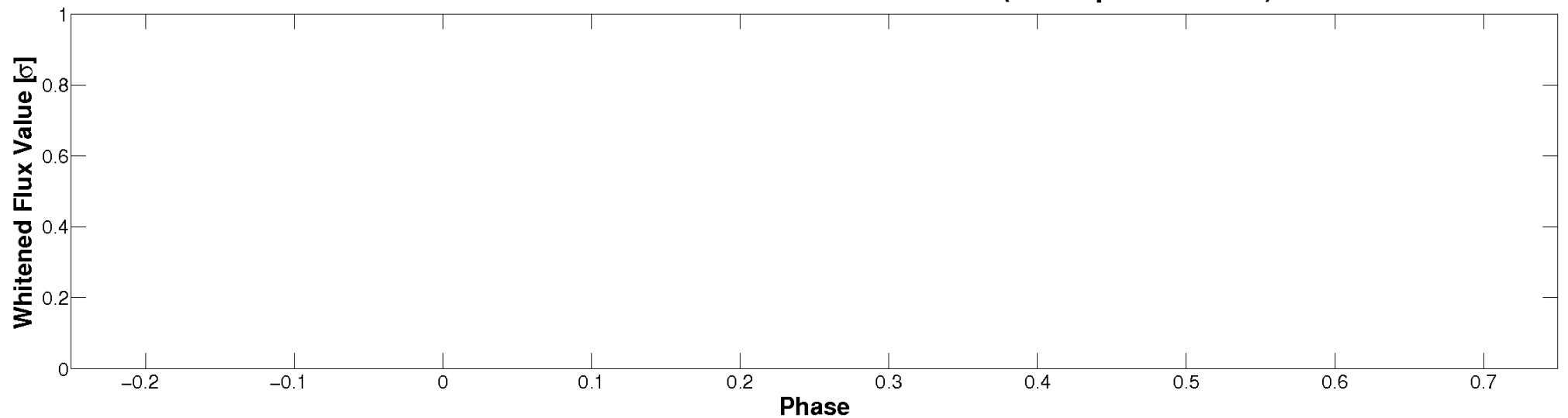


Non-Whitened Vs. Whitened Light Curve

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

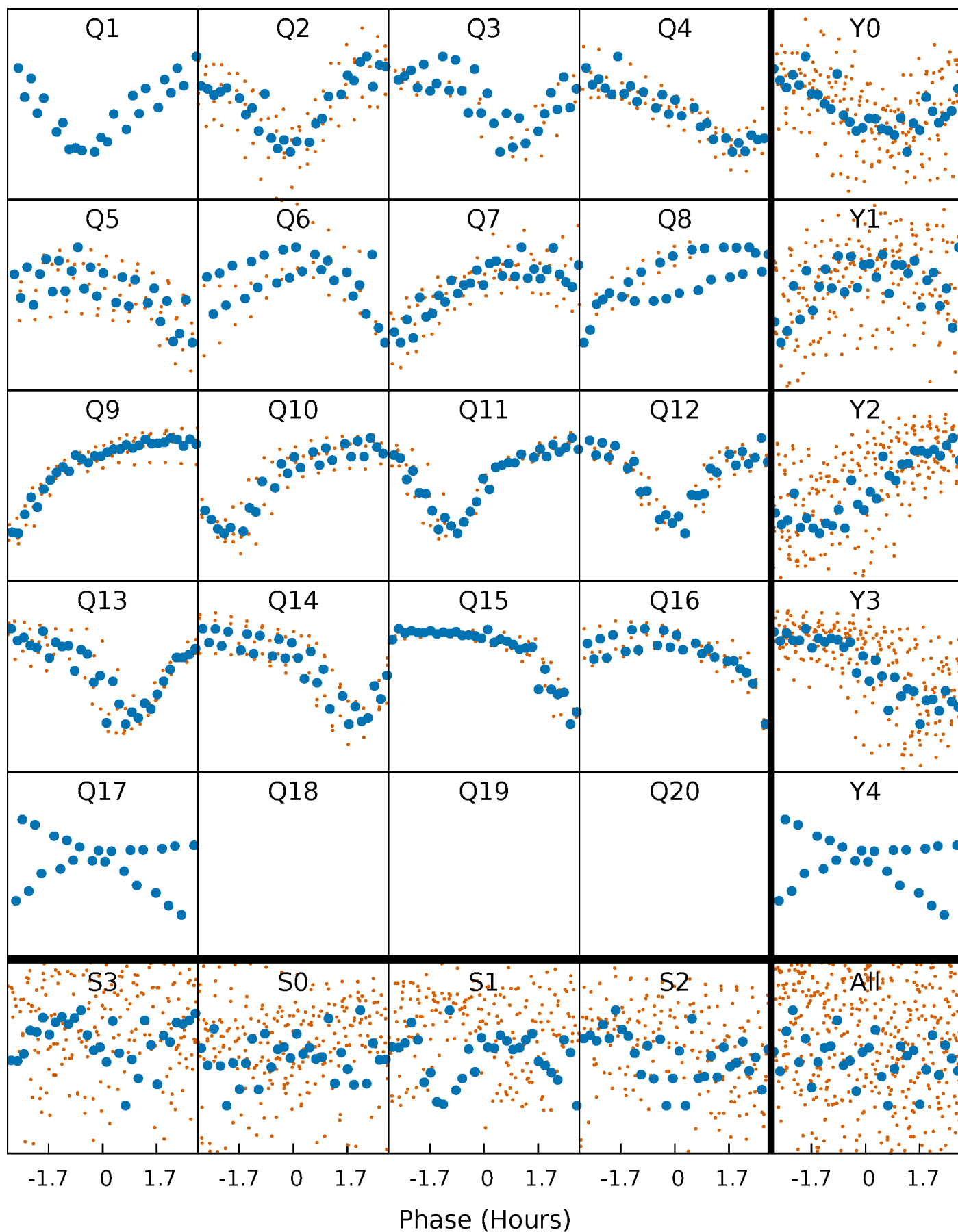


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



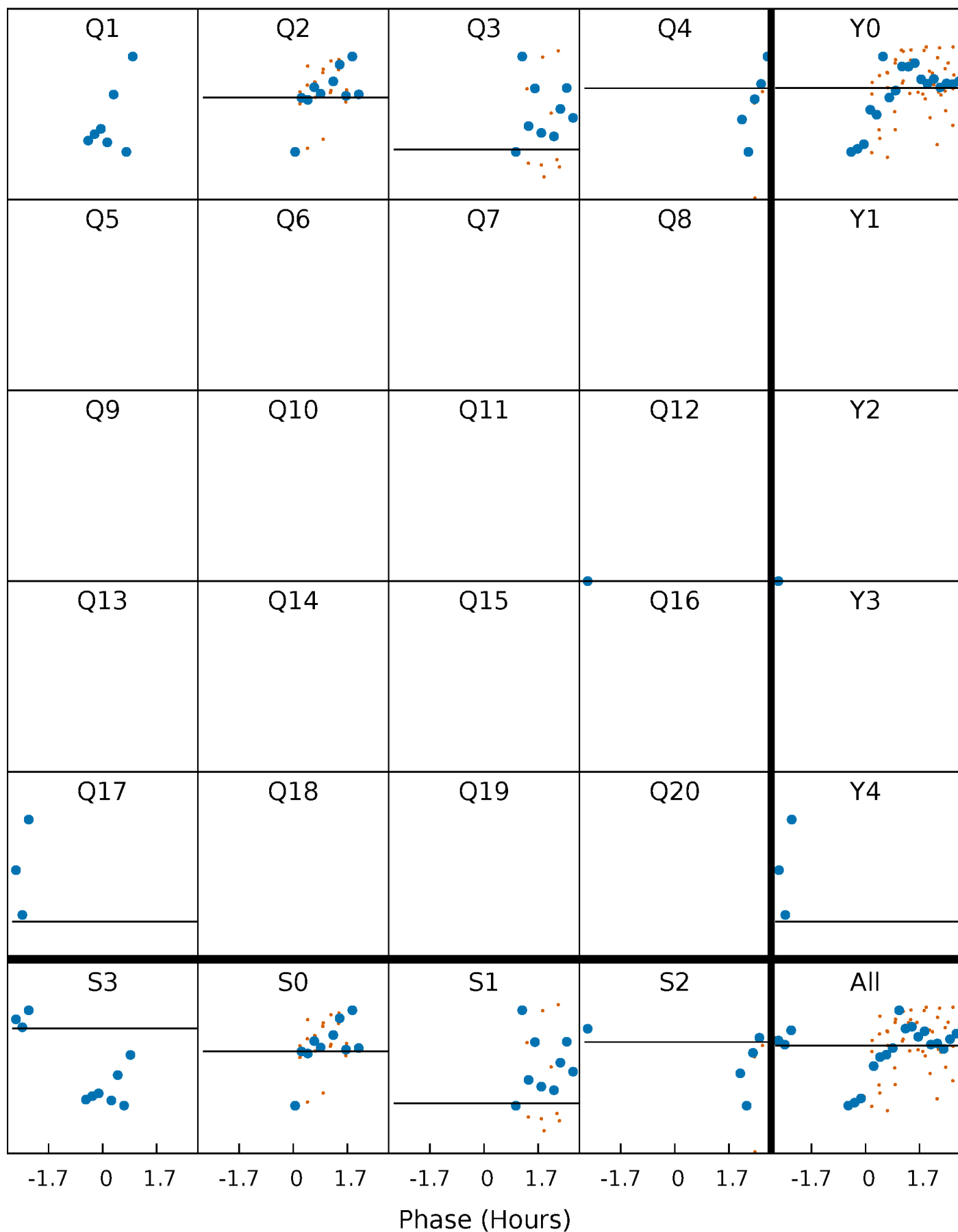
PDC Quarter-Phased Transit Curves

TCE 007031714-03 P= 16.275481 Days $T_0=143.673497$ (BKJD)



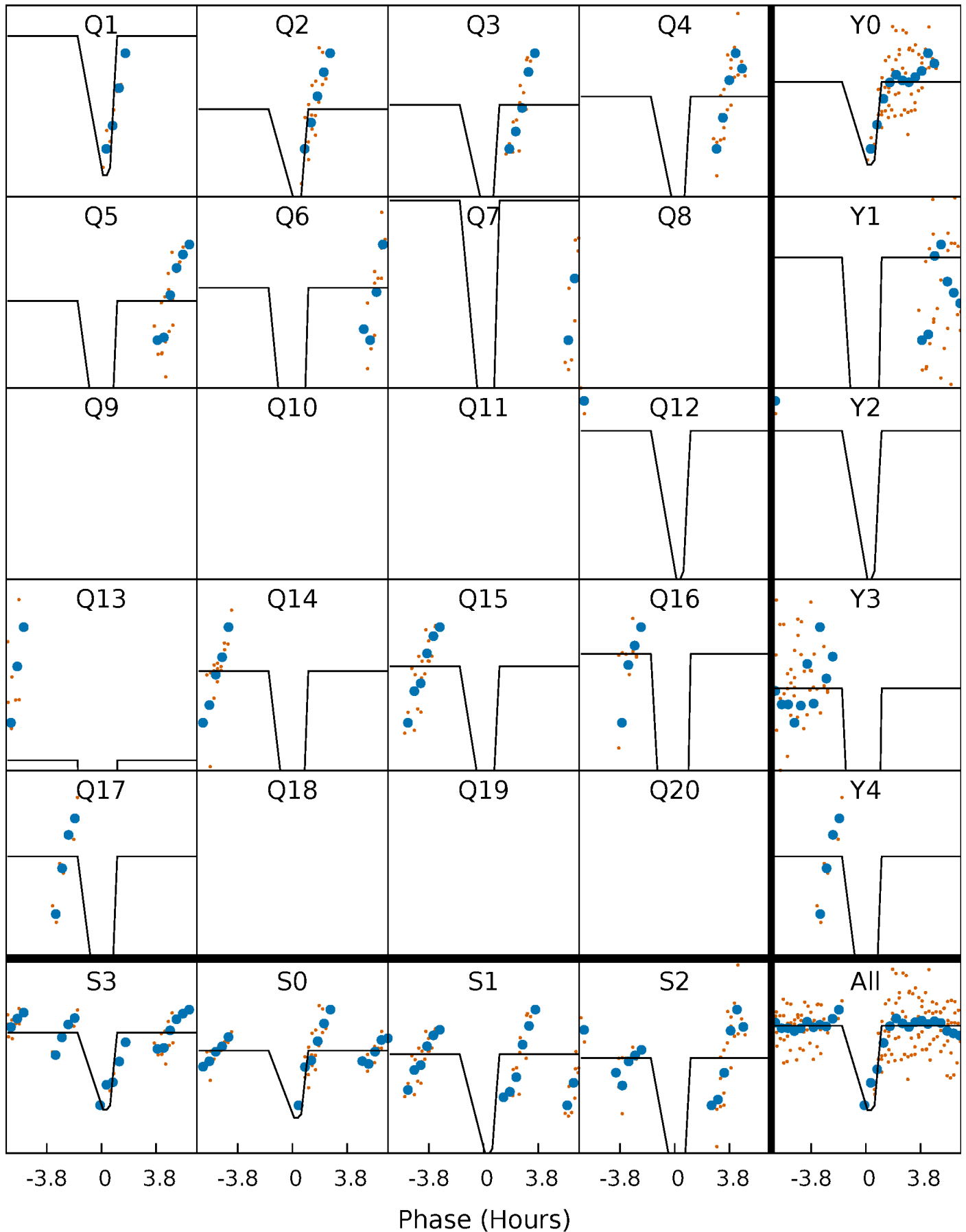
DV Quarter-Phased Transit Curves

TCE 007031714-03 $P = 16.275481$ Days $T_0 = 143.673497$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

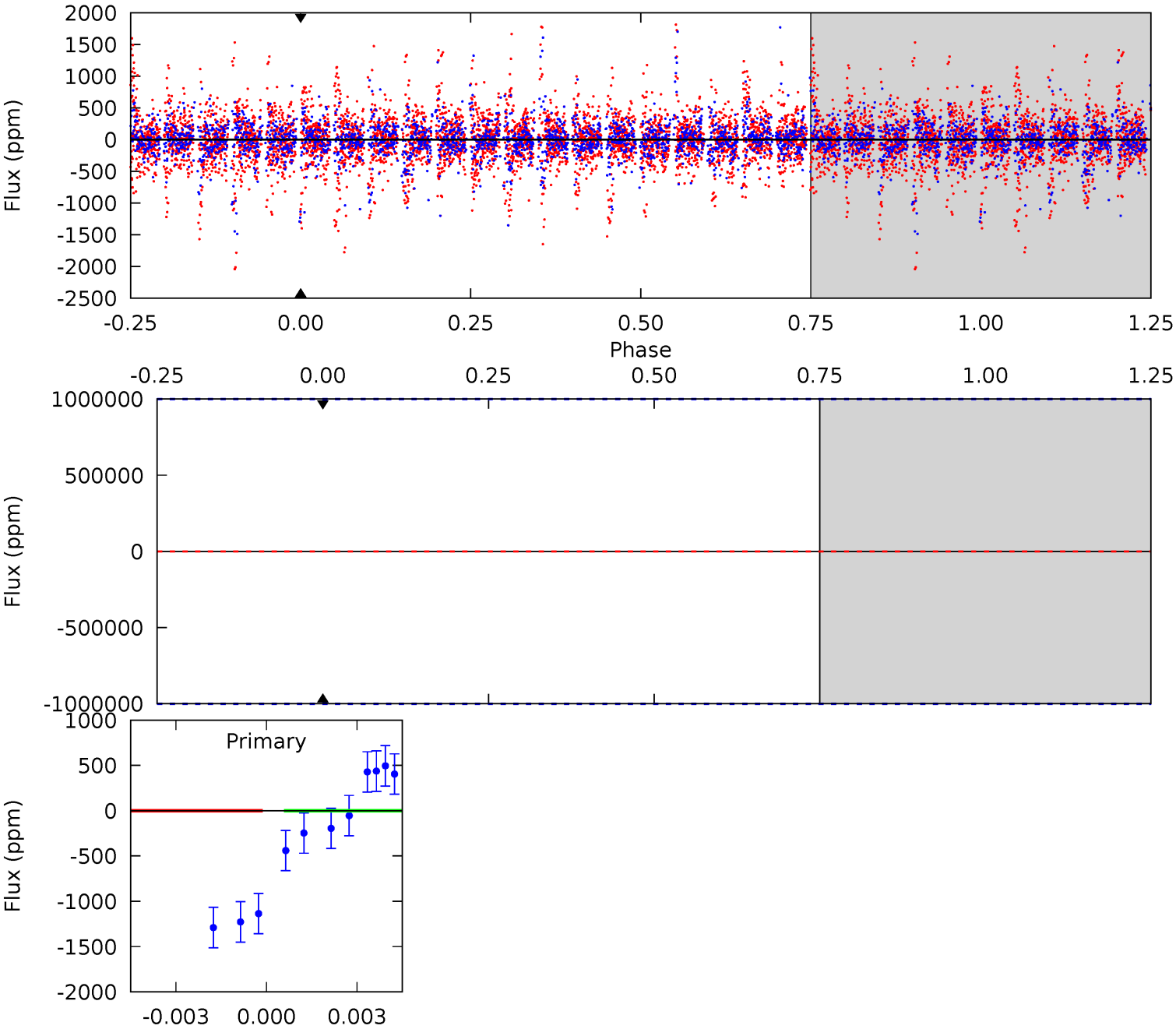
TCE 007031714-03 P= 16.275481 Days $T_0=143.645587$ (BKJD)



DV Model-Shift Uniqueness Test

007031714-03, P = 16.275481 Days, E = 127.398016 Days

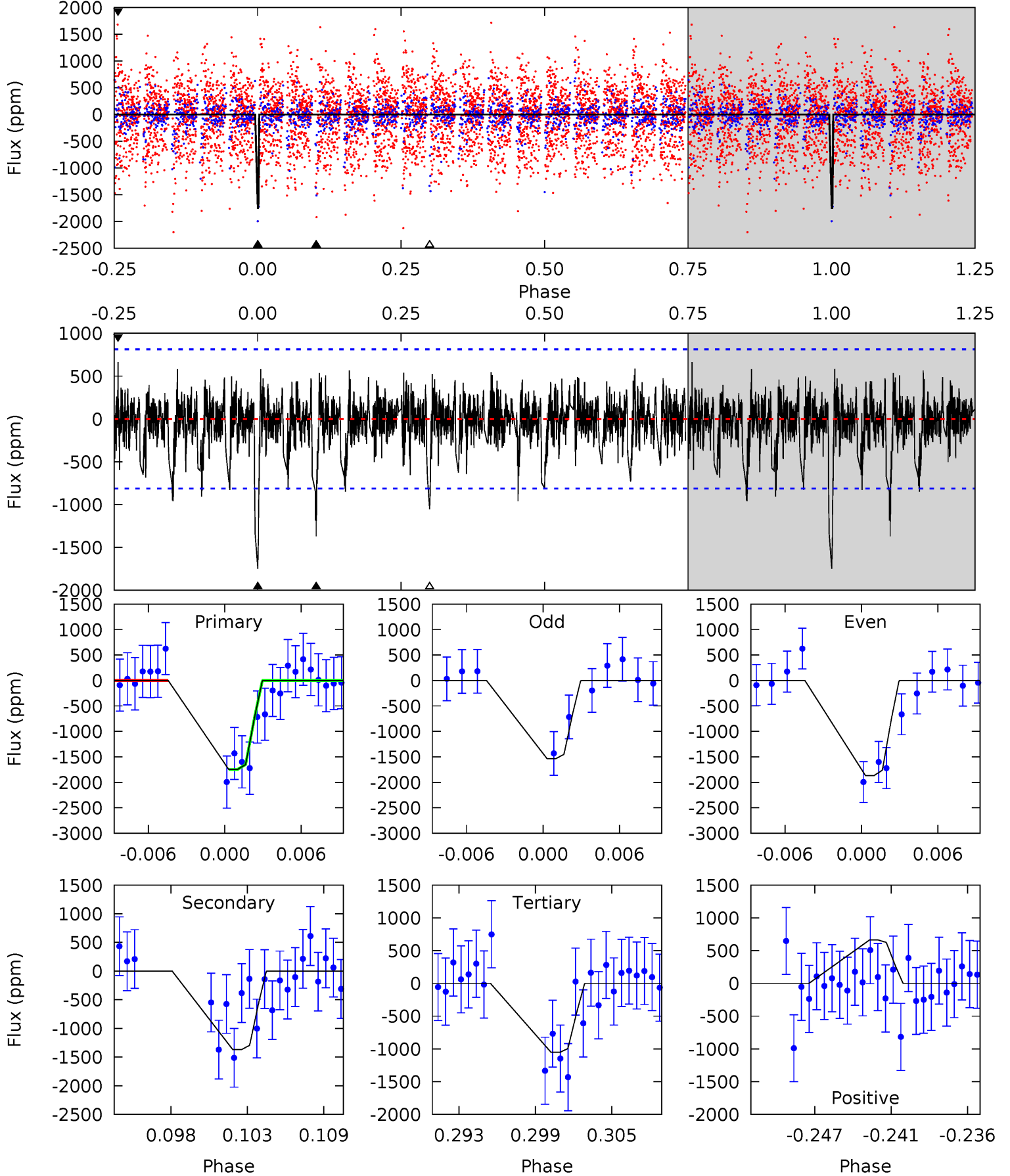
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007031714-03, P = 16.275481 Days, E = 127.370106 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	8.66	6.65	4.18	5.13	2.76	1.24	4.39	6.85	2.01	4.47	1.02	0.96	0.27	0



Stellar Parameters For KIC 007031714

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4759^{+56}_{-103}	$2.521^{+0.163}_{-0.100}$	$-0.020^{+0.100}_{-0.200}$	$13.127^{+2.735}_{-4.102}$	$2.088^{+0.959}_{-0.785}$	$0.001^{+0.001}_{-0.000}$
	+1%/-2%	+6%/-4%	+500%/-1000%	+21%/-31%	+46%/-38%	+94%/-30%
Source	SPE74	SPE74	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 007031714-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$111.74^{+111.85}_{-76.18}$	2624^{+138}_{-181}	-3074^{+16181}_{-7844}	$-0.218^{+257.817}_{-150.837}$
Alt.	-1370 ± 158	$123.13^{+119.83}_{-83.09}$	2619^{+138}_{-157}	3353^{+1905}_{-1193}	$1.356^{+11.711}_{-1.019}$

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

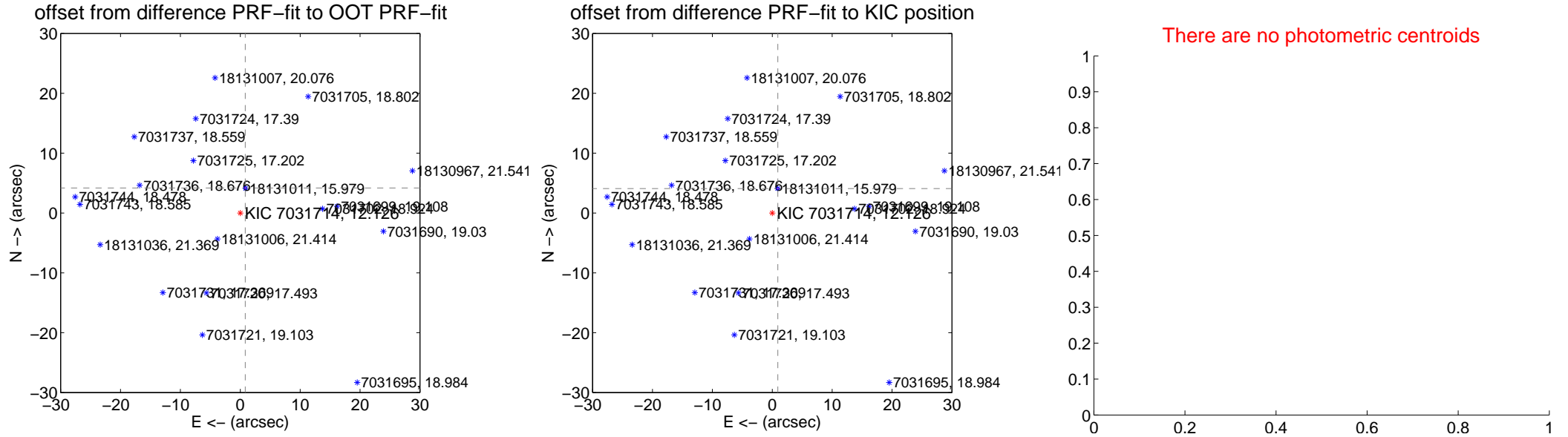
DV Centroid Data

Supplemental centroid analysis for 007031714-03. Kepler magnitude: 12.13. Transit SNR -1.00

There are 7 quarters with good PRF difference image offsets

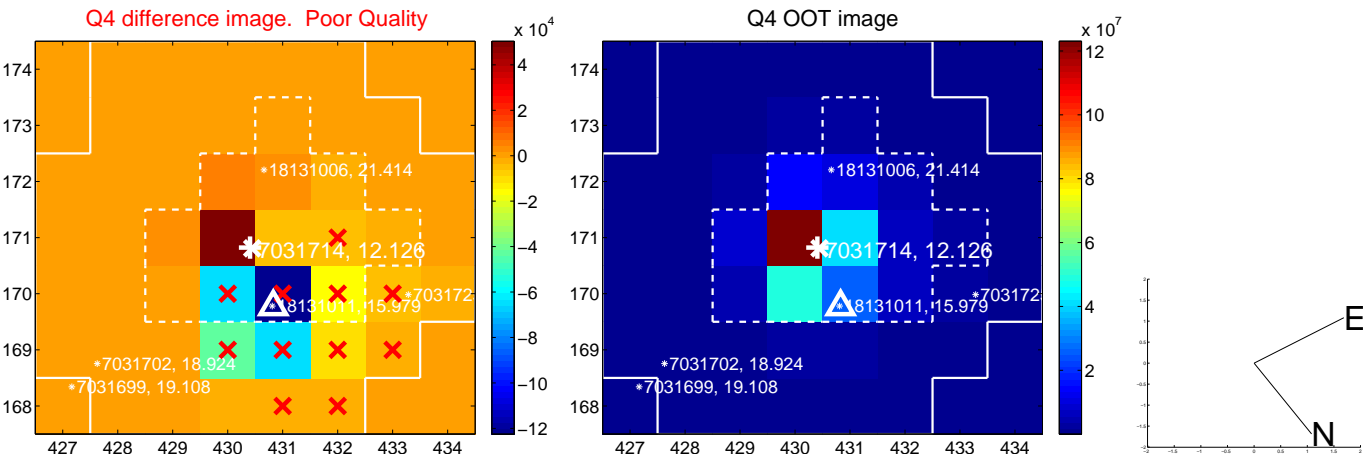
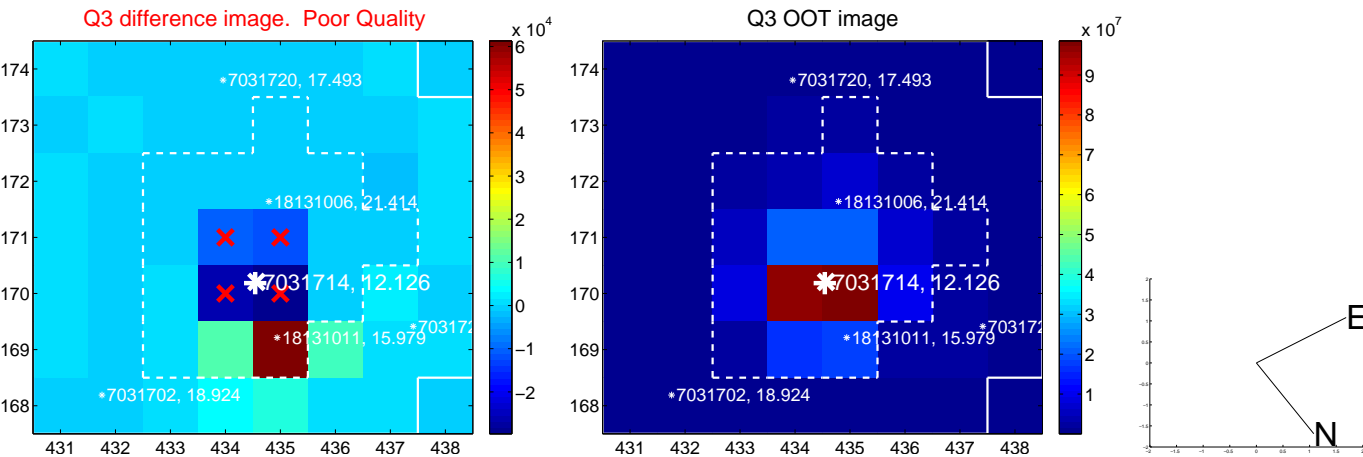
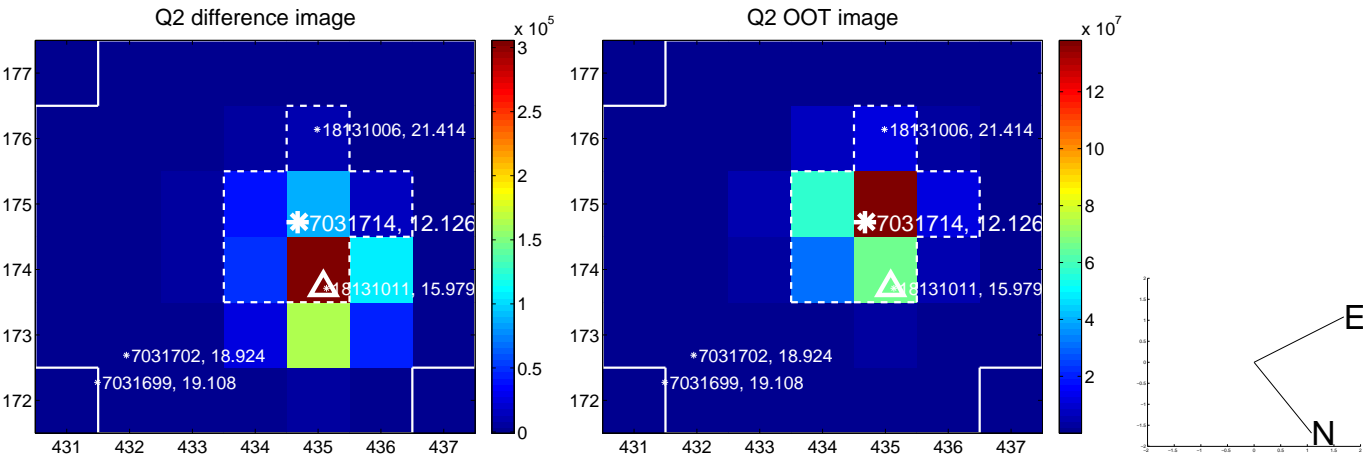
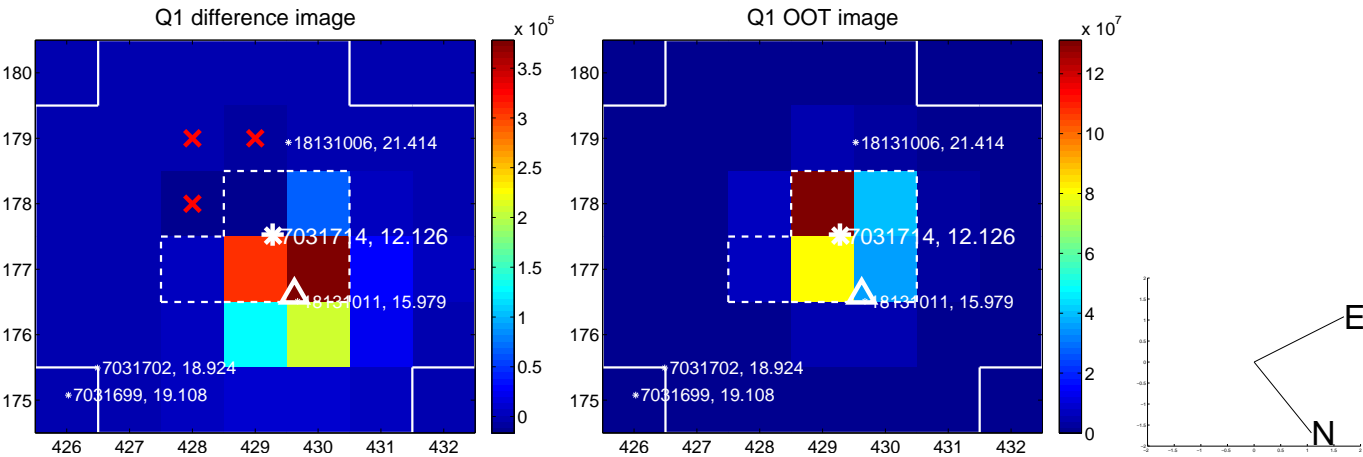
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.263 \pm 0.076	56.15	-0.836 \pm 0.069	4.180 \pm 0.076
PRF-fit source offset from KIC position	4.184 \pm 0.074	56.25	-0.924 \pm 0.069	4.081 \pm 0.074
photometric centroid source offset	—	—	—	—

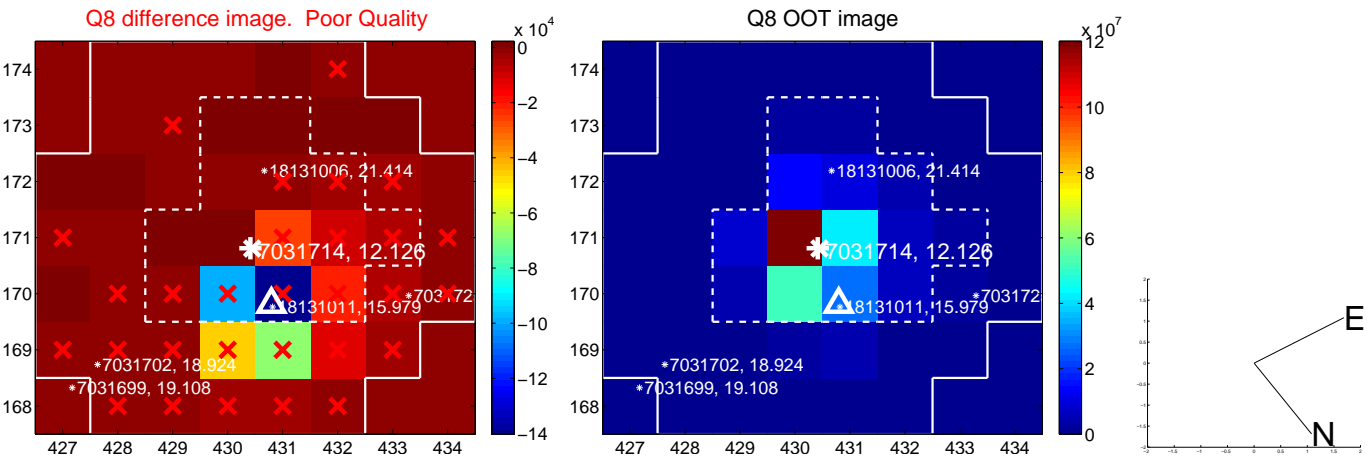
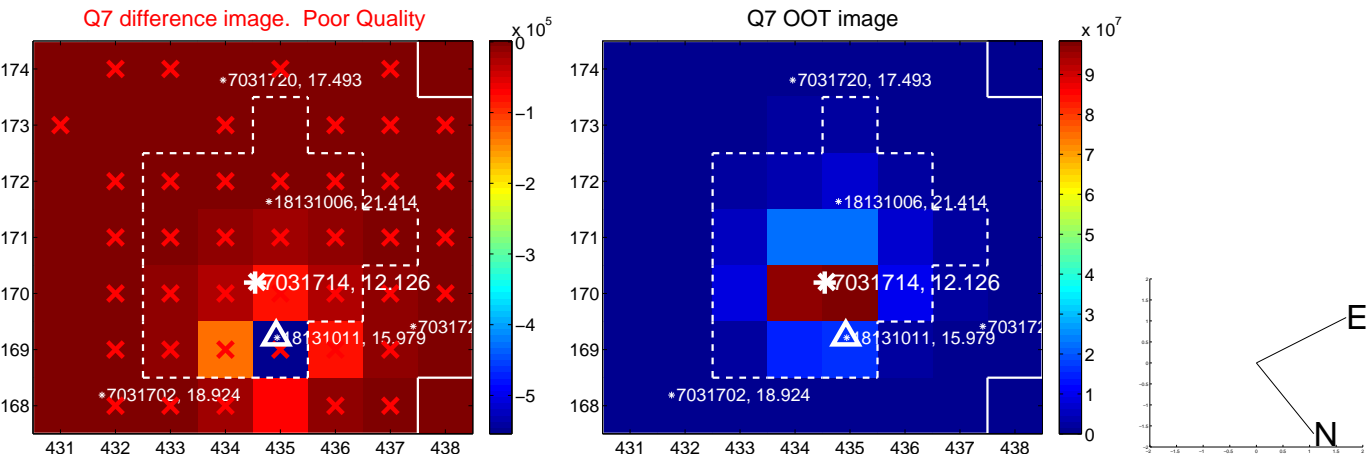
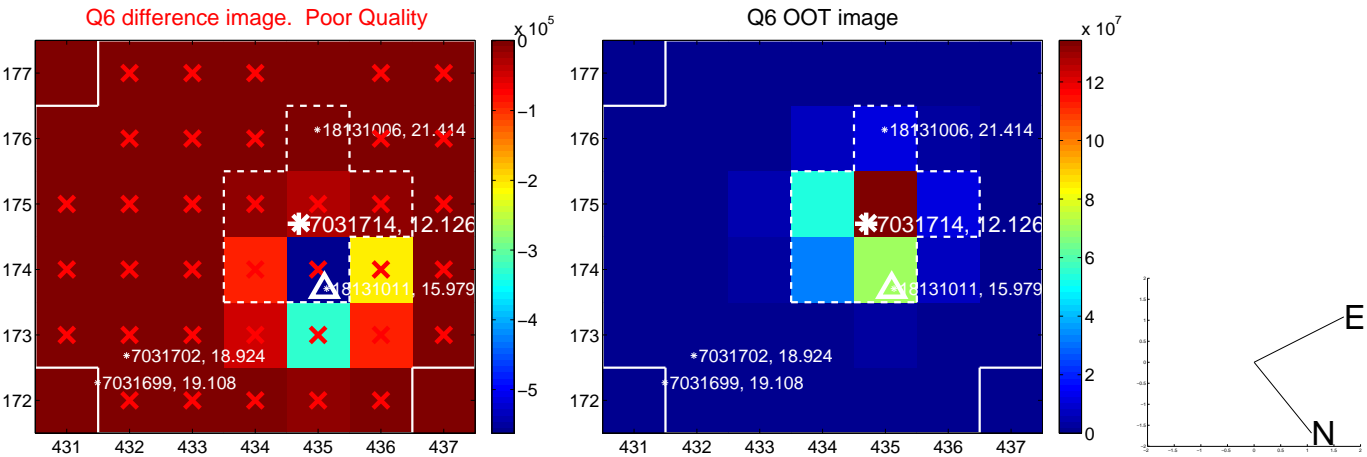
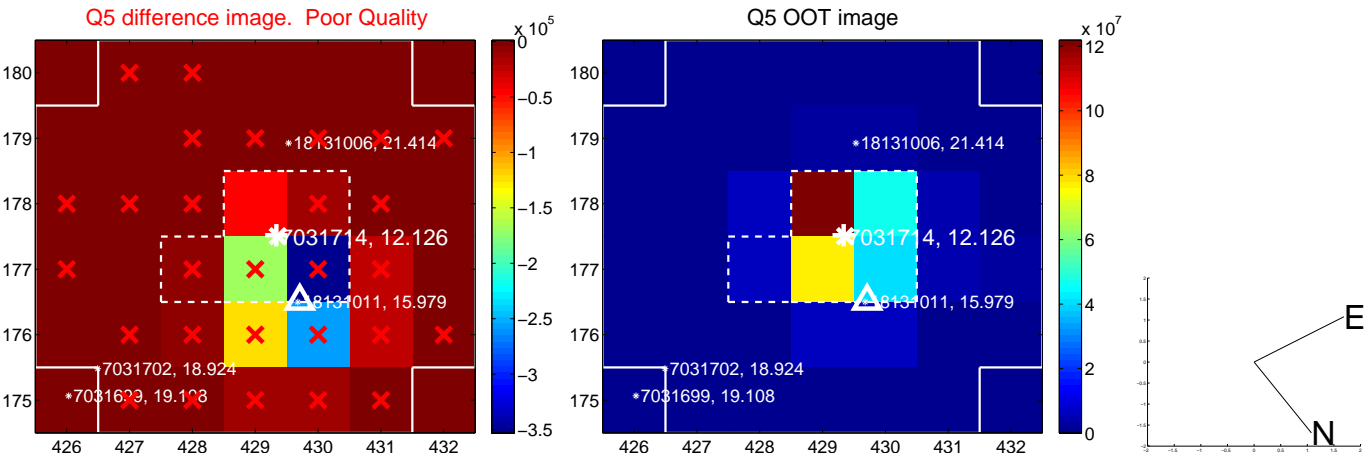


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

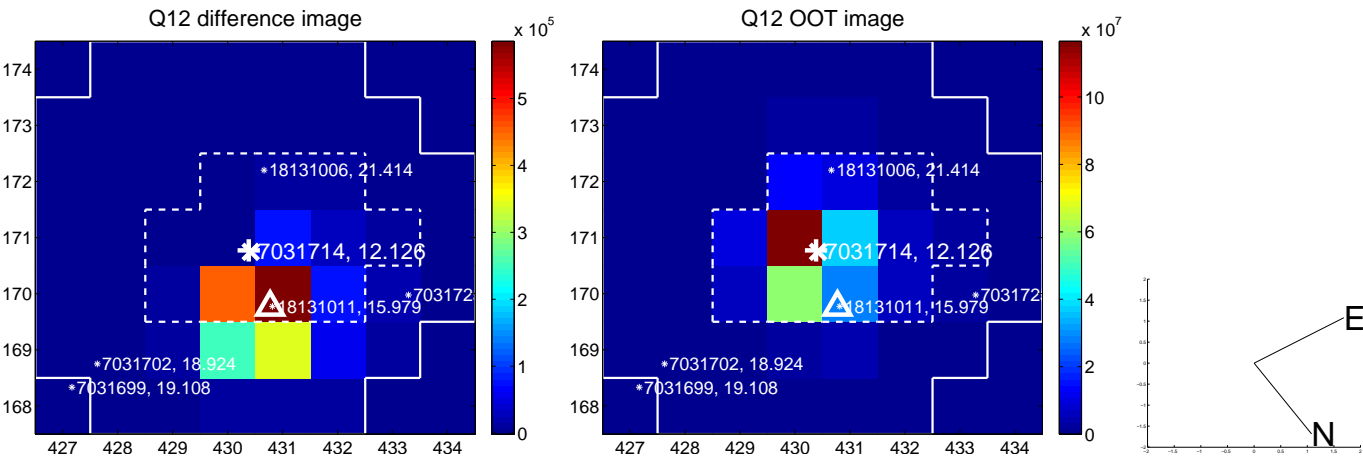
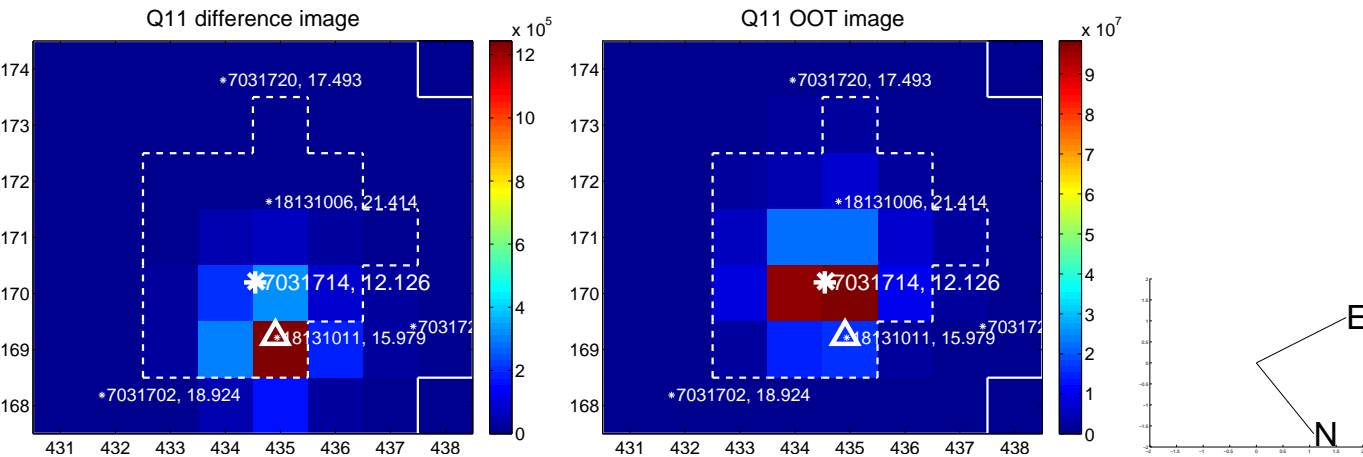
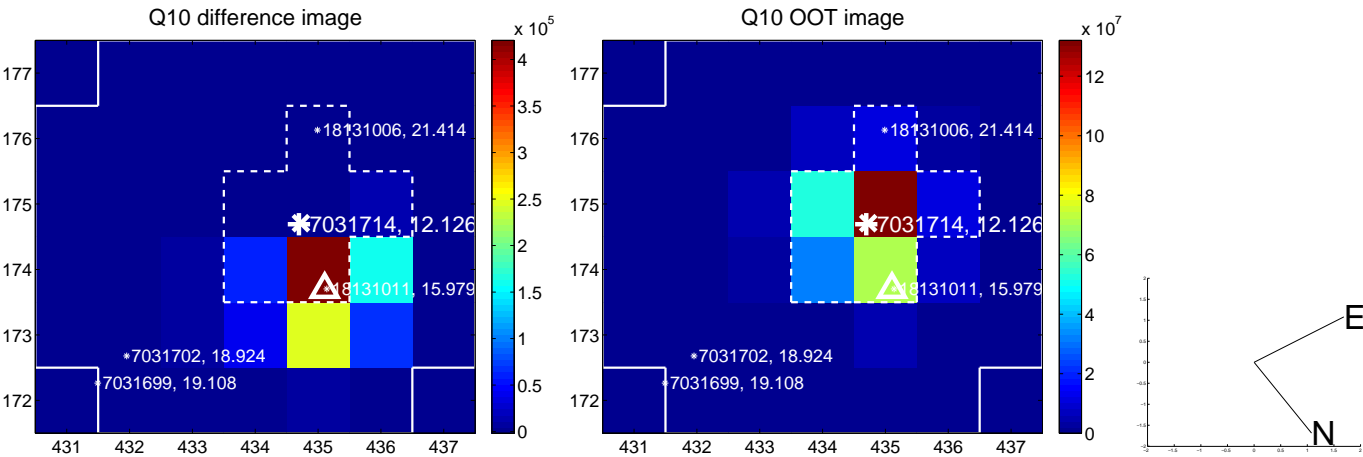
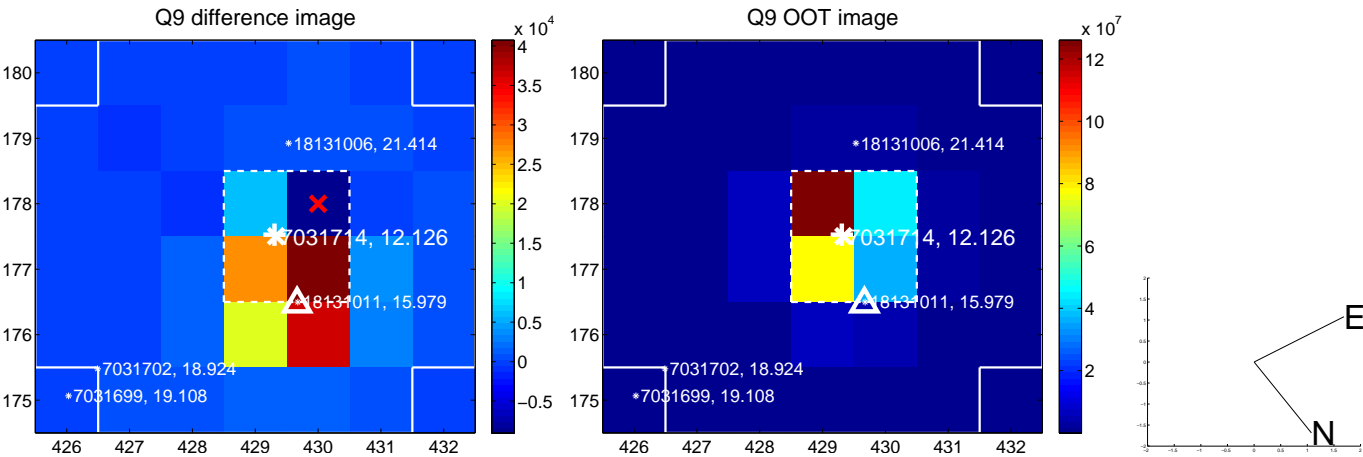
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



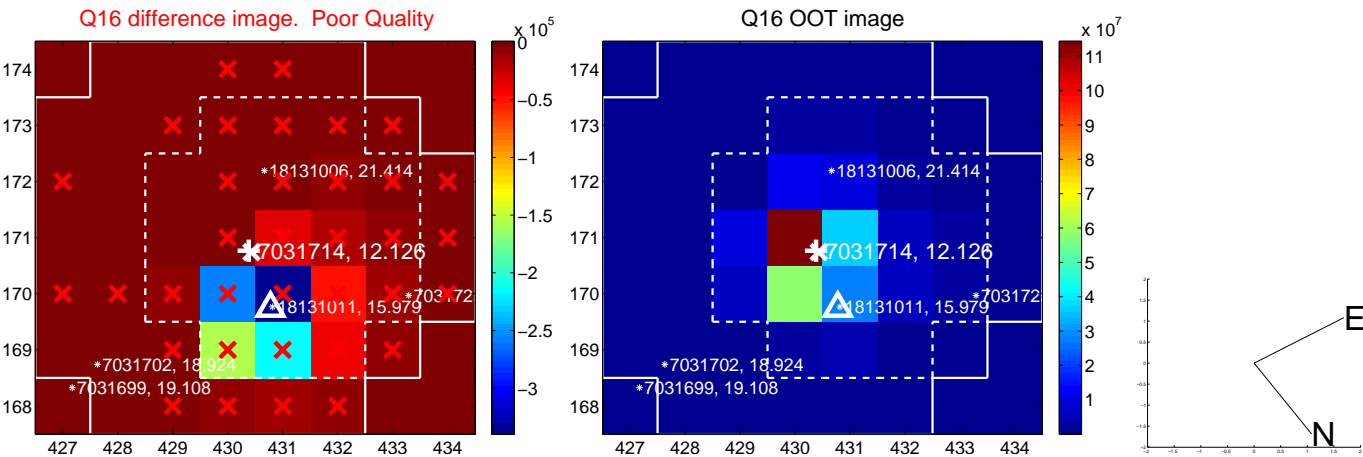
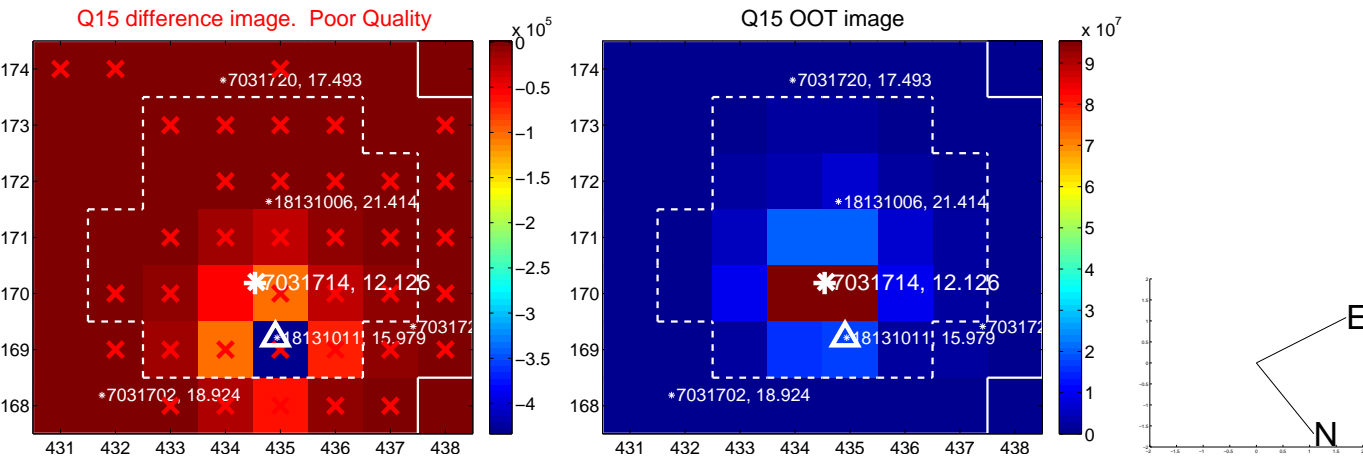
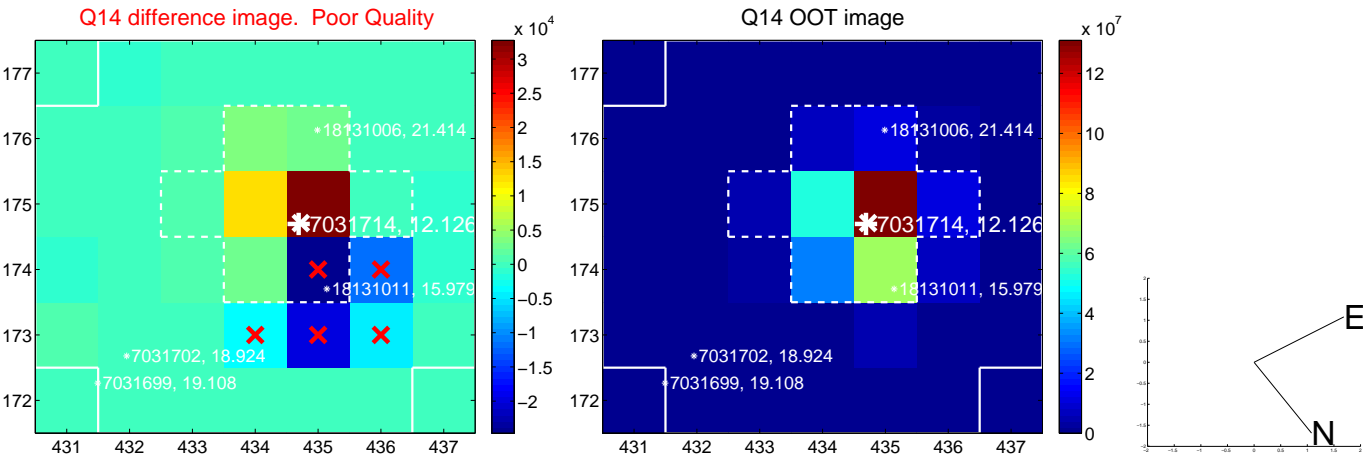
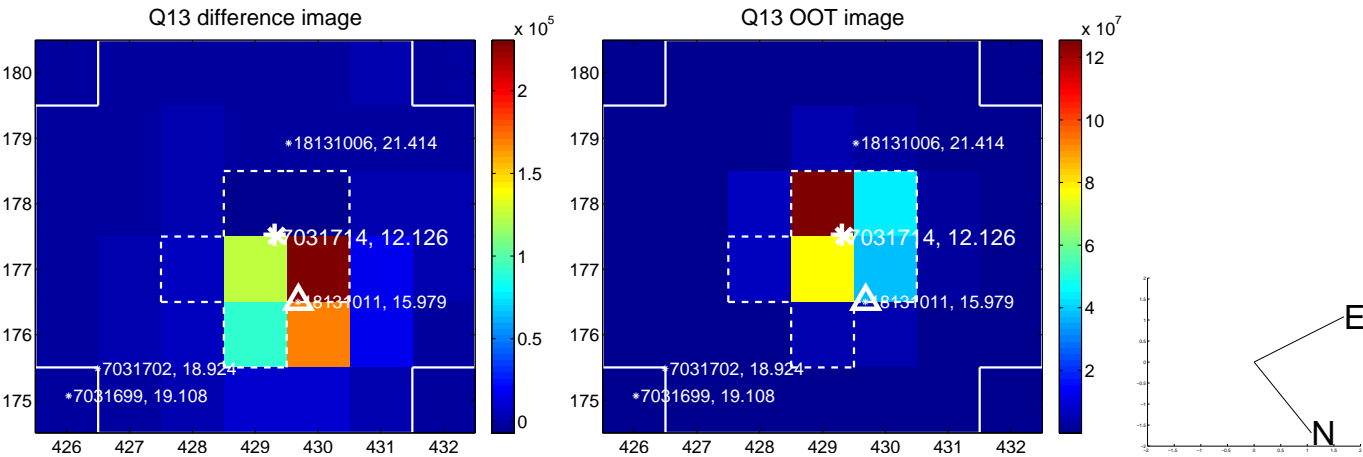
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



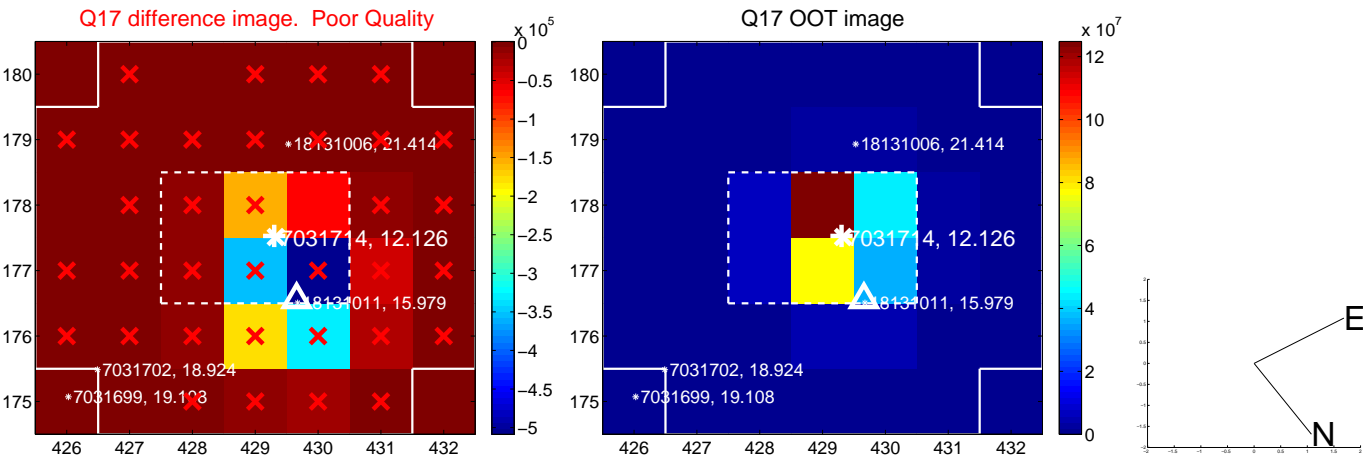
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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

