

KIC 008058082

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})
008058082-01	OBS	No	5.177929	136.660530	64.2	6.686	9.3	9.4	2.20	6032	2.13	1538.42
008058082-02	OBS	No	2.591245	131.819275	18.5	18.727	9.2	4.9	2.20	6032	0.95	3872.04
008058082-03	OBS	No	31.051041	141.142256	245.0	3.742	10.7	11.2	2.20	6032	3.91	141.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008058082-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
008058082-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008058082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

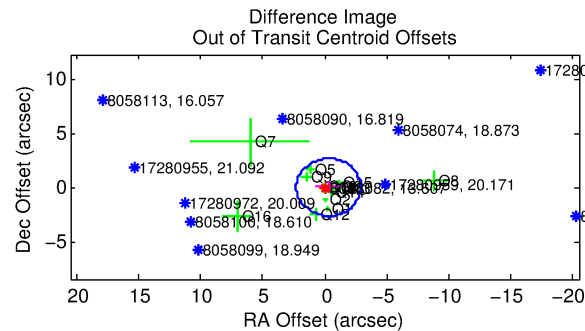
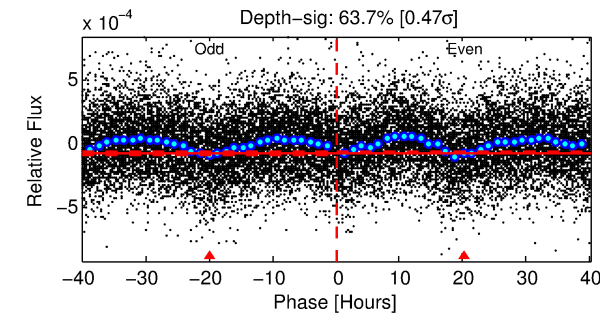
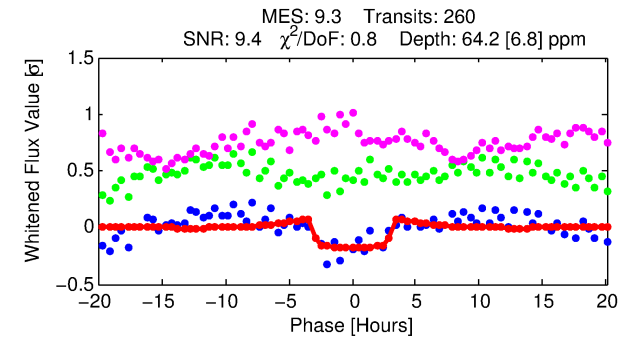
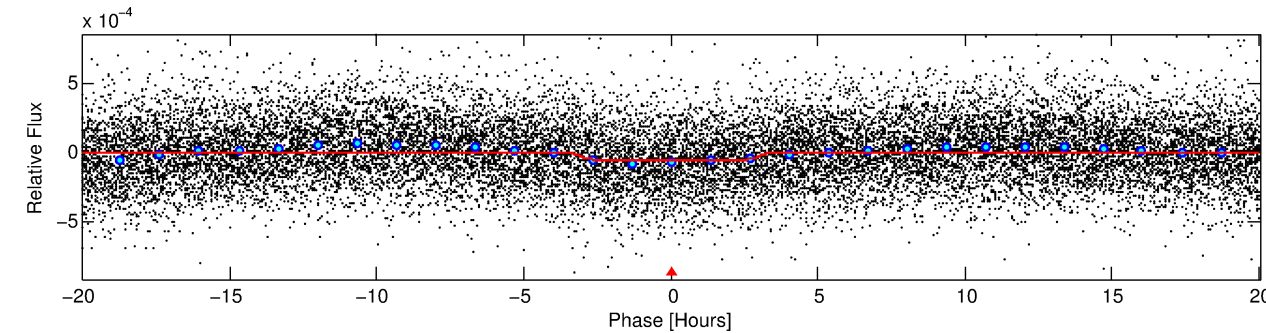
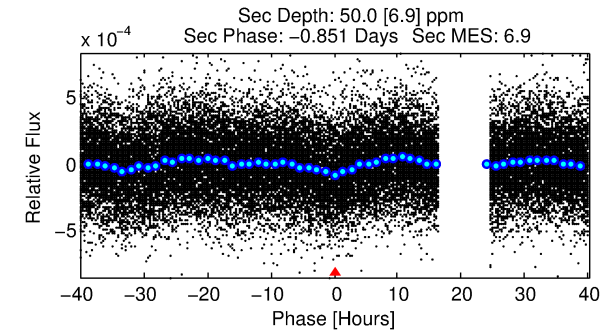
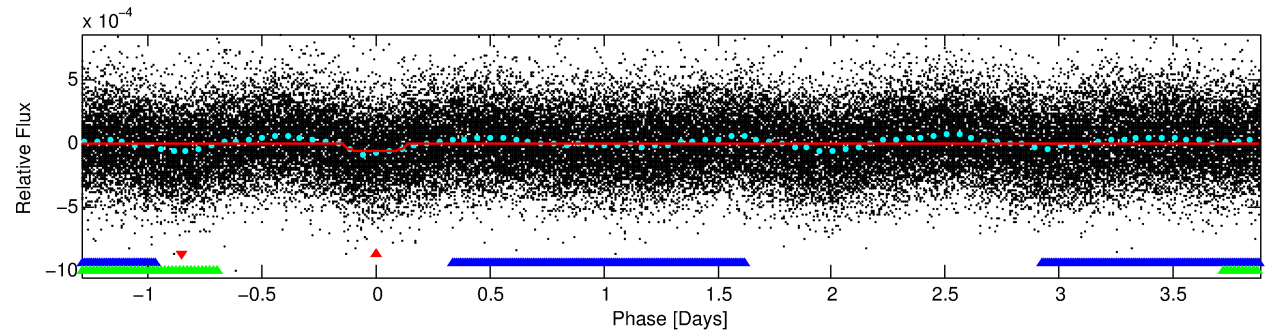
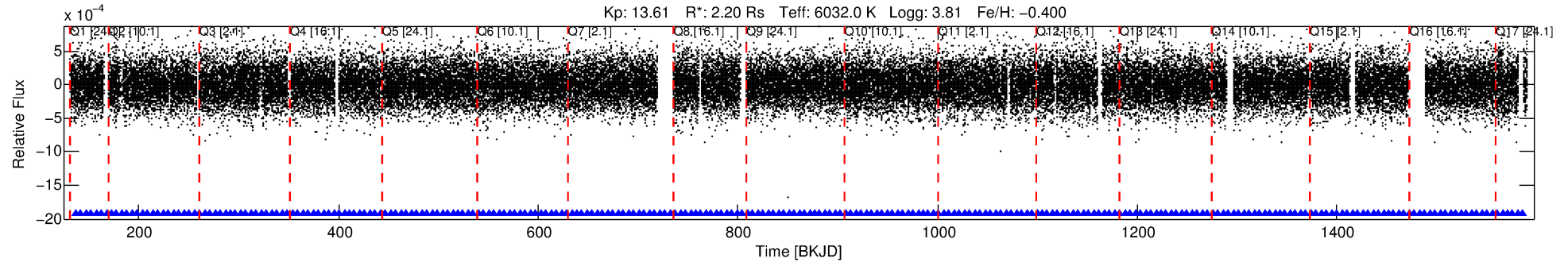
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008058082-01

No Significant Match Found

DV One-Page Summary

KIC: 8058082 Candidate: 1 of 3 Period: 5.178 d



DV Fit Results:

Period = 5.17793 [0.00005] d
Epoch = 136.6605 [0.0066] BKJD
Rp/R* = 0.0089 [0.0016]
a/R* = 2.54 [1.98]
b = 0.93 [0.14]
Seff = 1538.43 [1500.51]
Teq = 1597 [389] K
Rp = 2.13 [1.21] Re
a = 0.0611 [0.0352] AU
Ag = 22.71 [23.57] [0.92σ]
Teffp = 5390 [541] K [5.69σ]

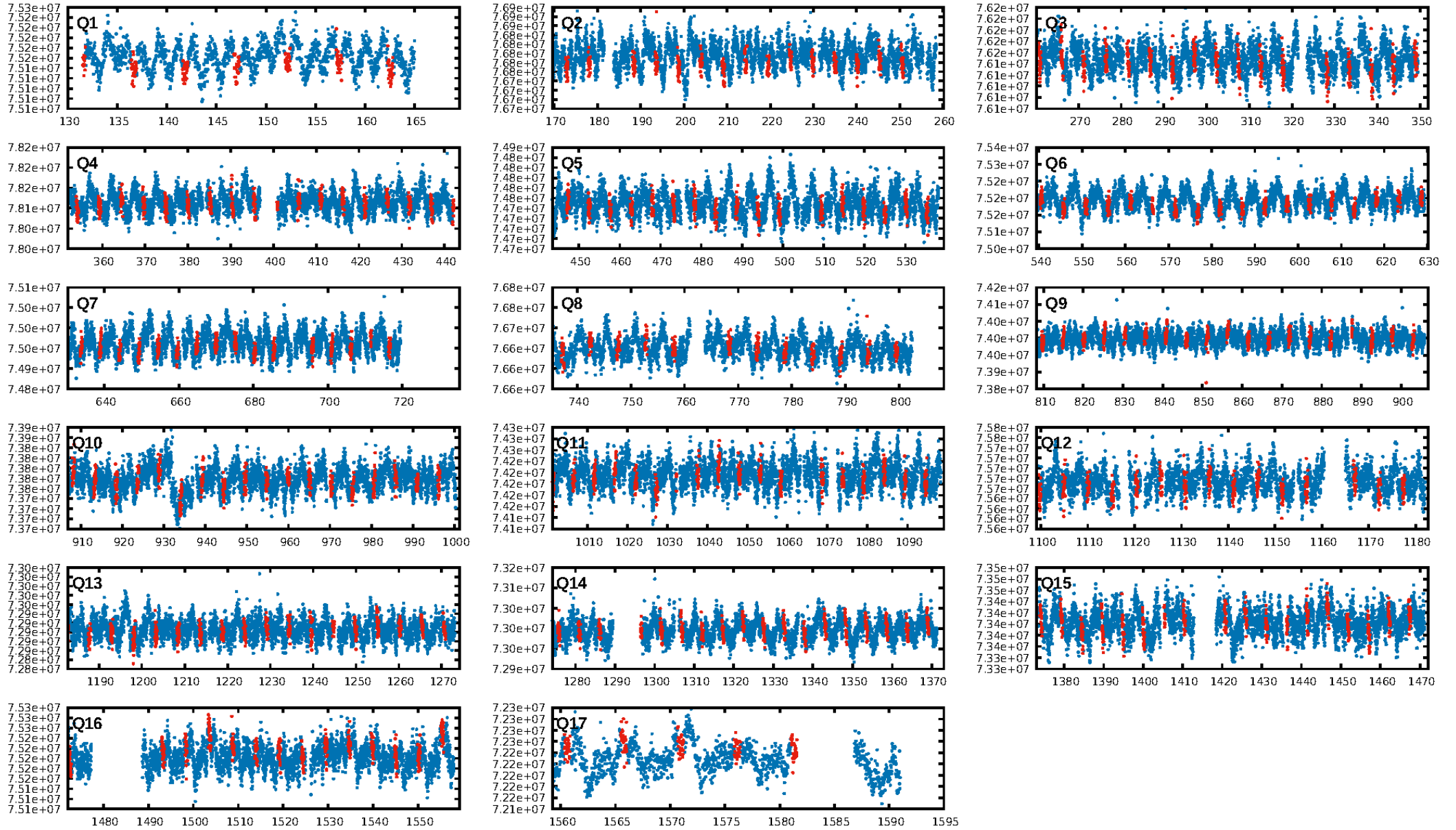
DV Diagnostic Results:

ShortPeriod-sig: 99.8% [3.12σ]
LongPeriod-sig: 100.0% [81.04σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.45e-11
RollingBand-fgt: 1.00 [248/248]
GhostDiagnostic-chr: 5.359
Centroid-sig: 1.6%
Centroid-so: 1.642 arcsec [1.68σ]
OotOffset-rm: 0.332 arcsec [0.38σ]
KicOffset-rm: 0.494 arcsec [0.97σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.60 [9/15]
DiffImageOverlap-fno: 0.53 [9/17]

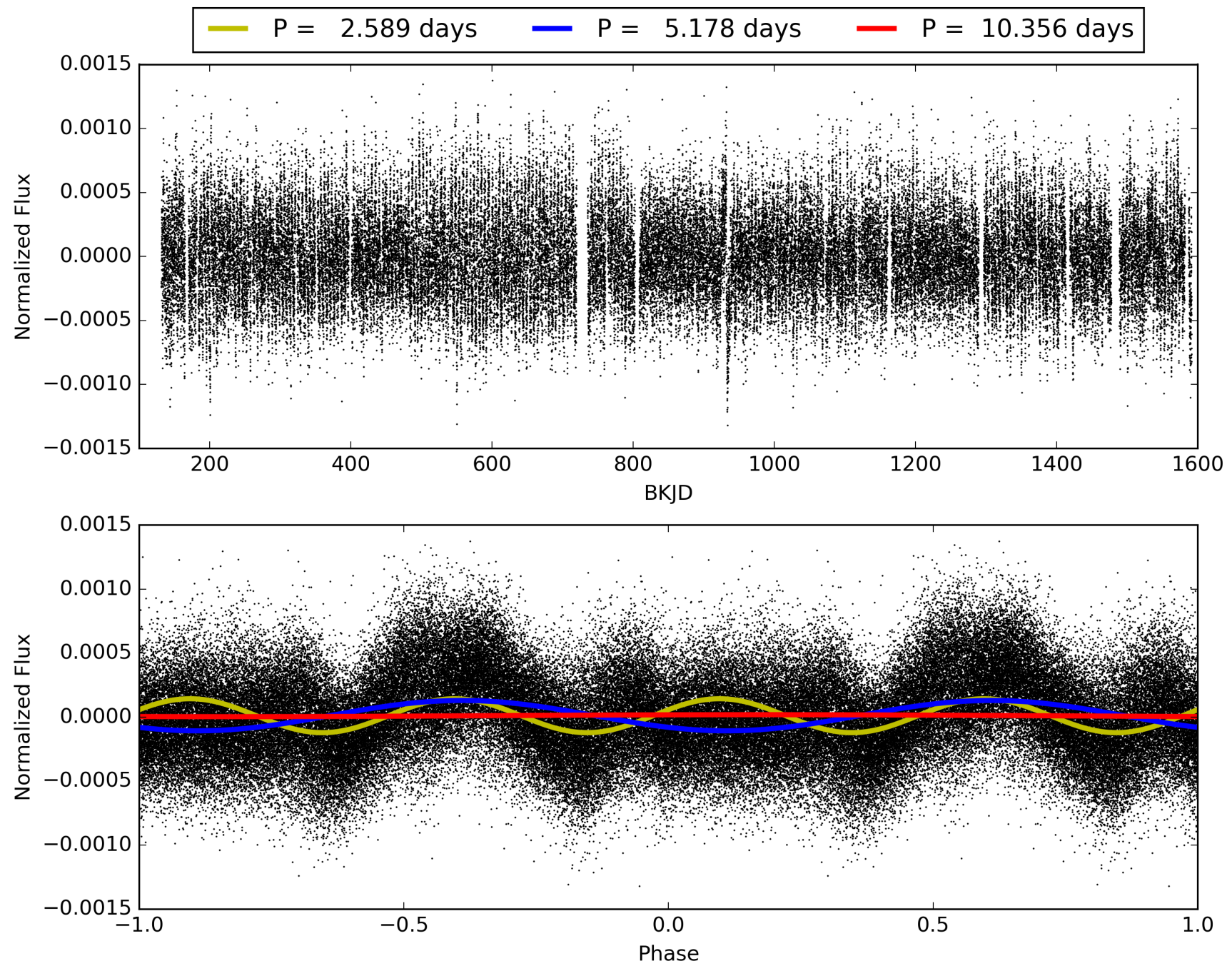
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:22:05 Z

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

TCE 008058082-01, PDC Light Curves

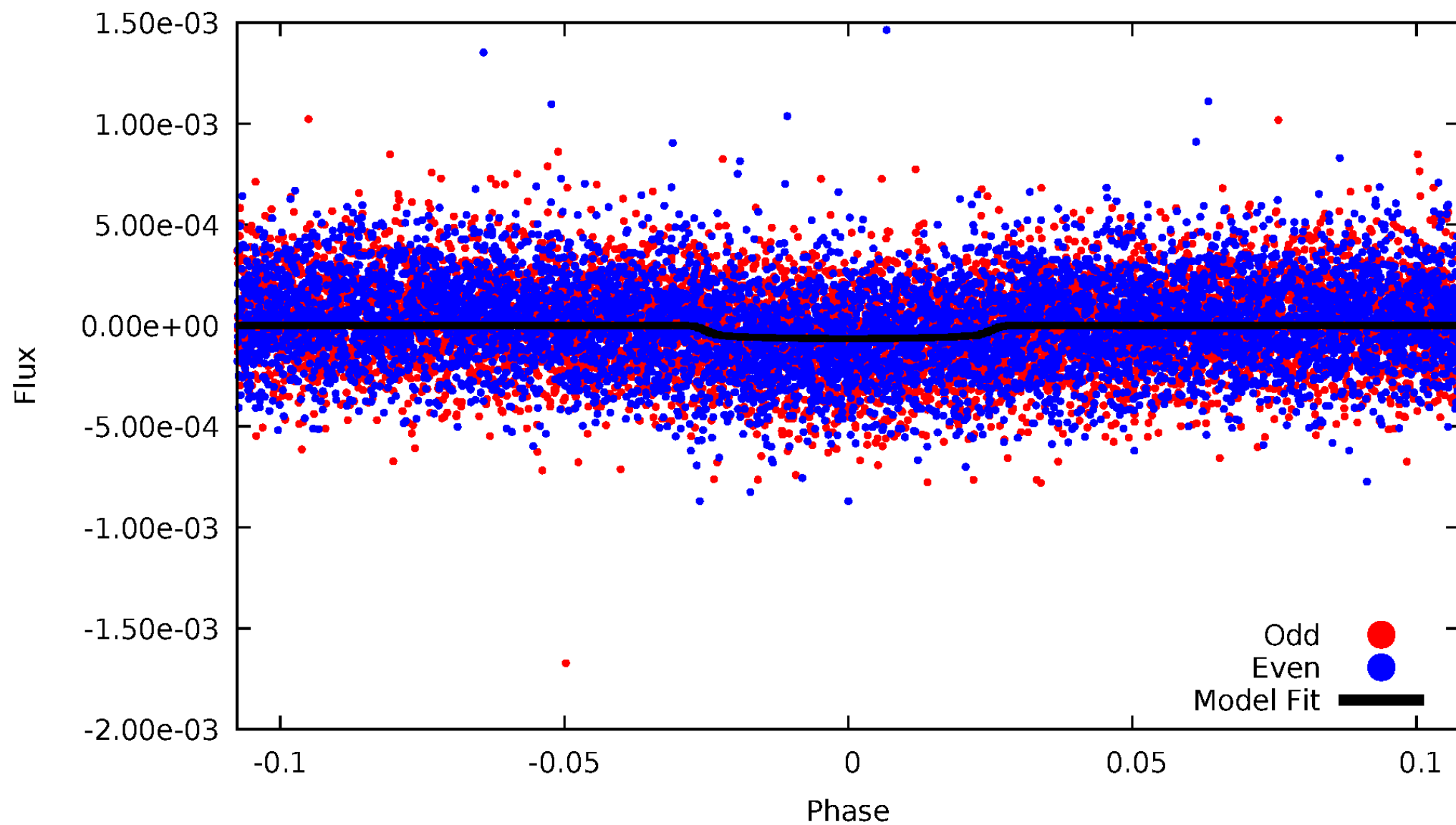


TCE 008058082-01



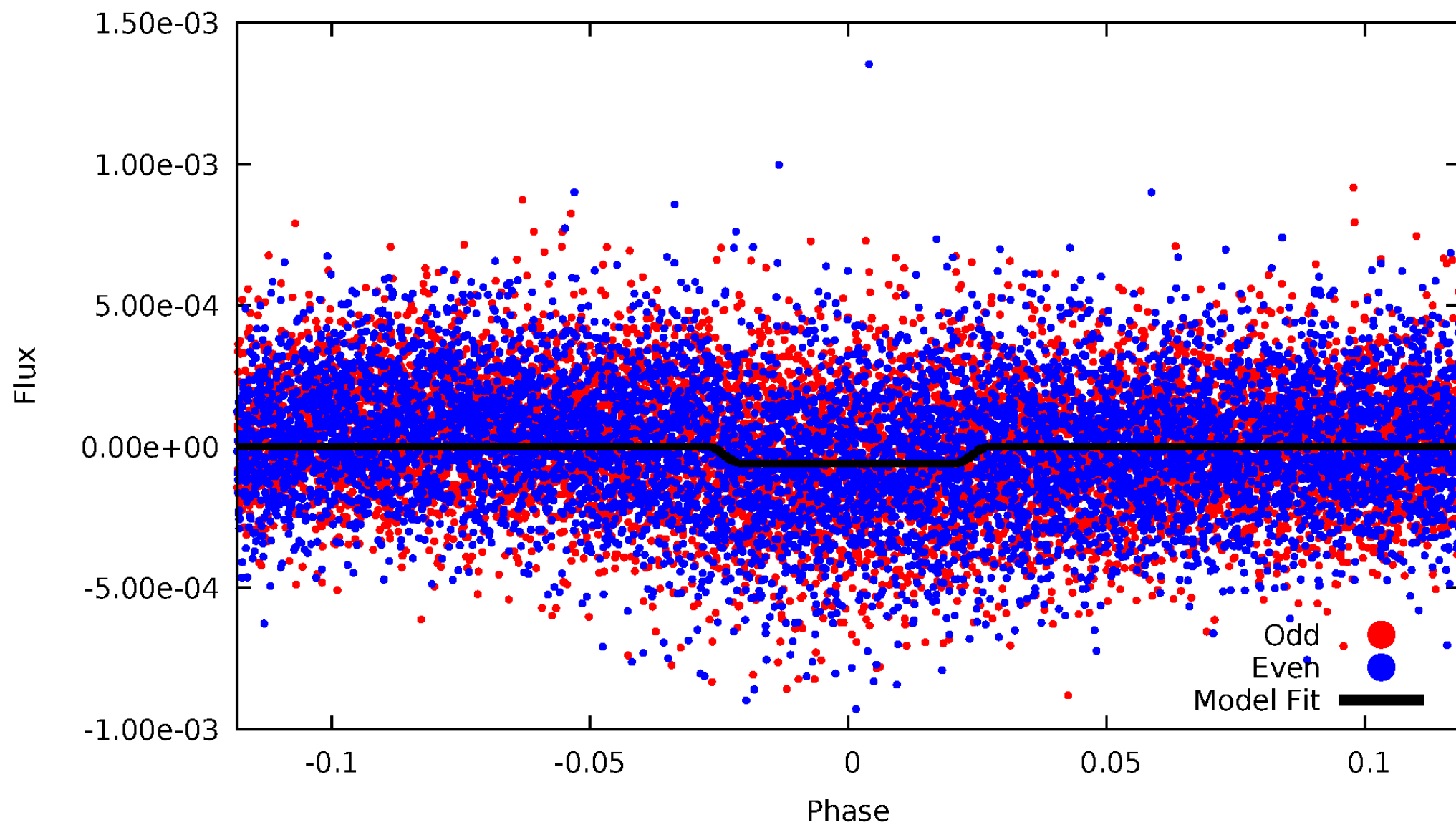
DV Odd/Even

TCE 008058082-01

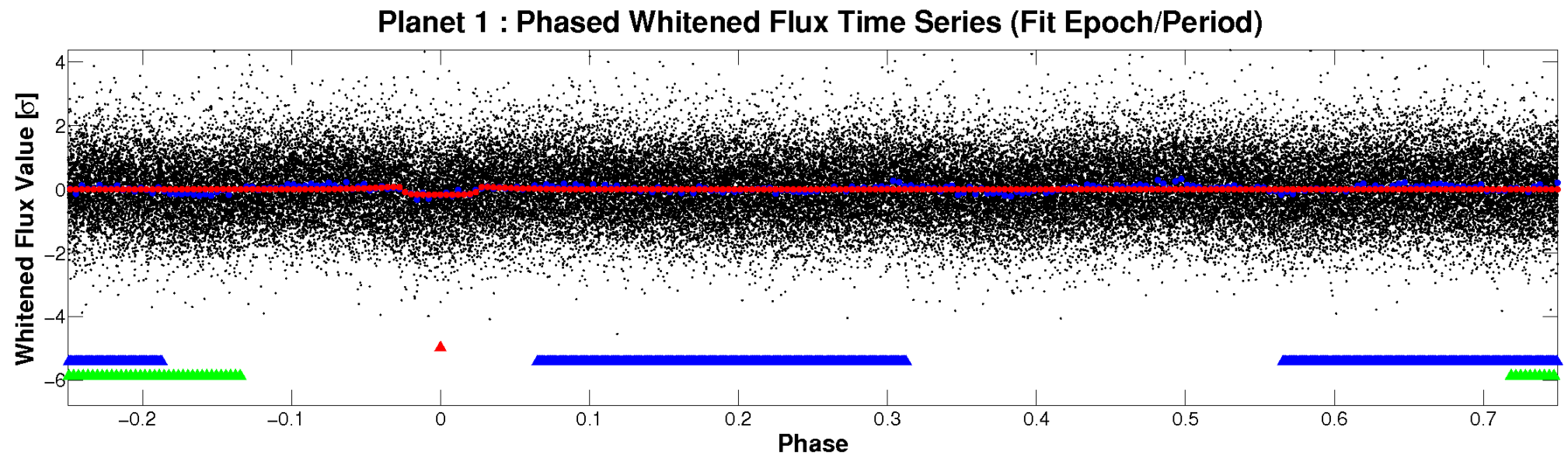
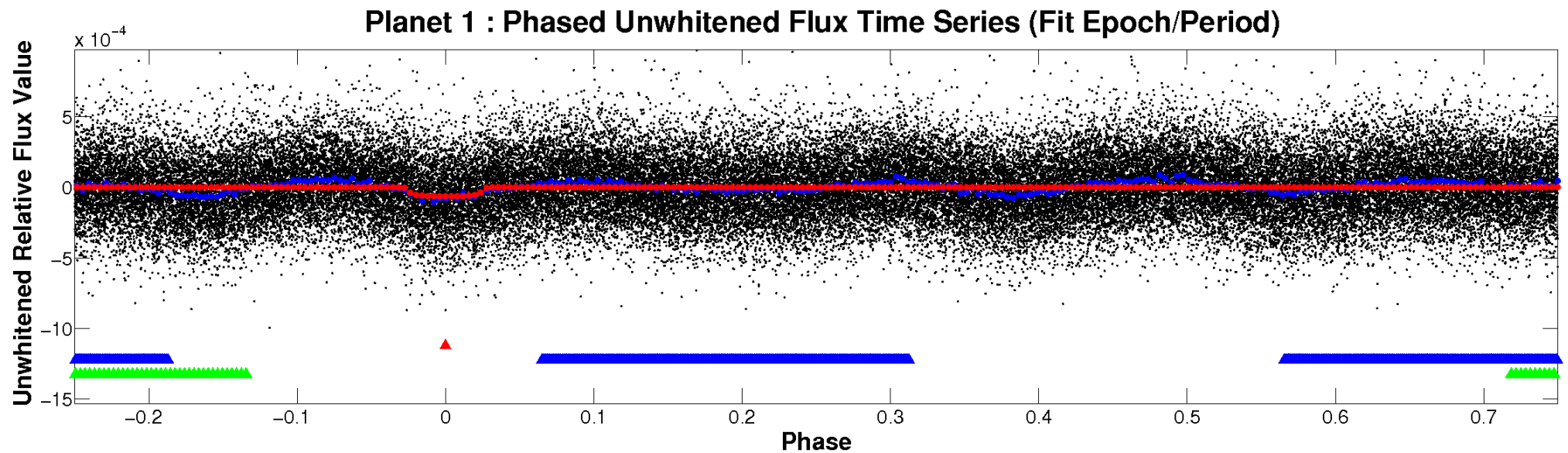


ALT Odd/Even

TCE 008058082-01

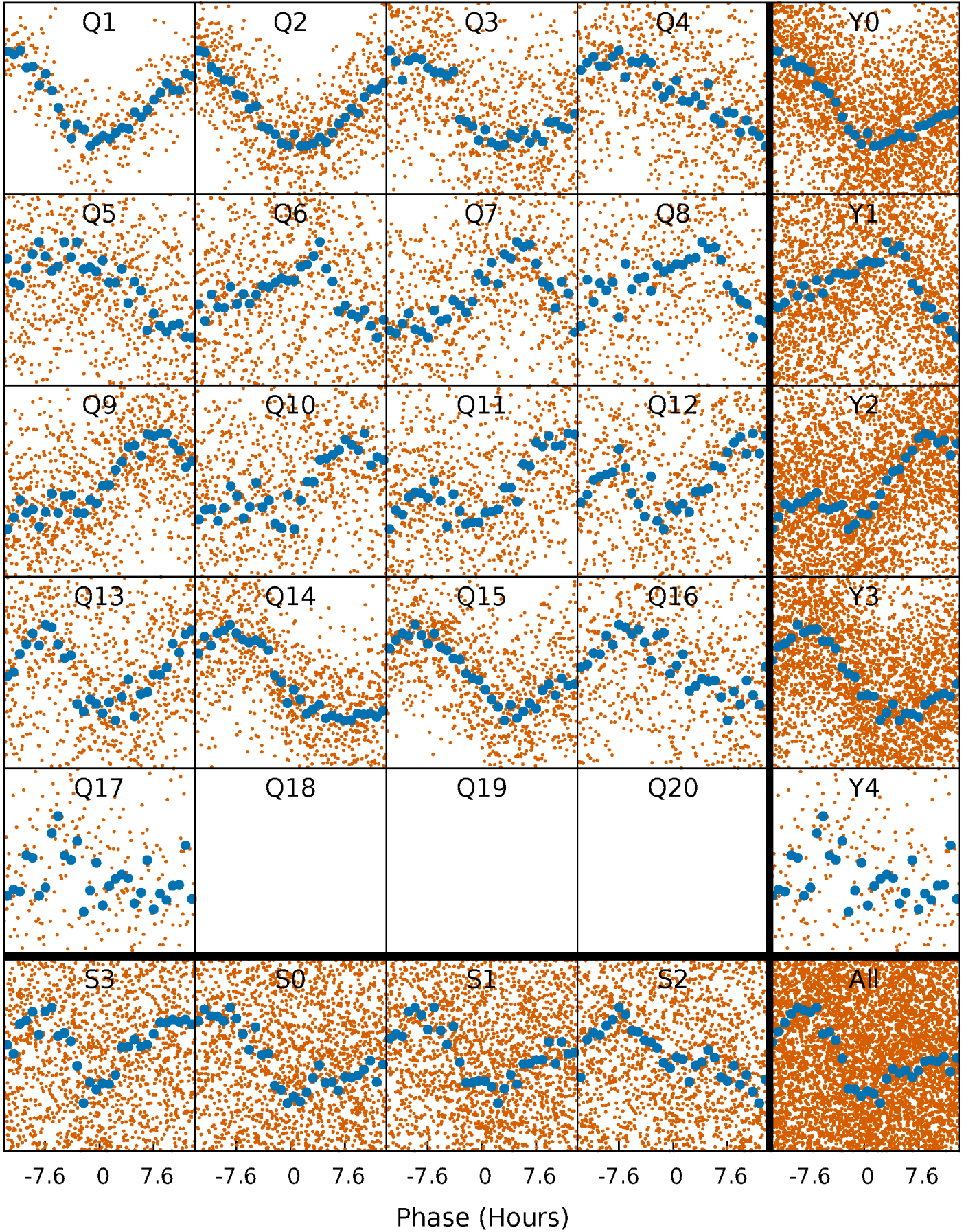


Non-Whitened Vs. Whitened Light Curve



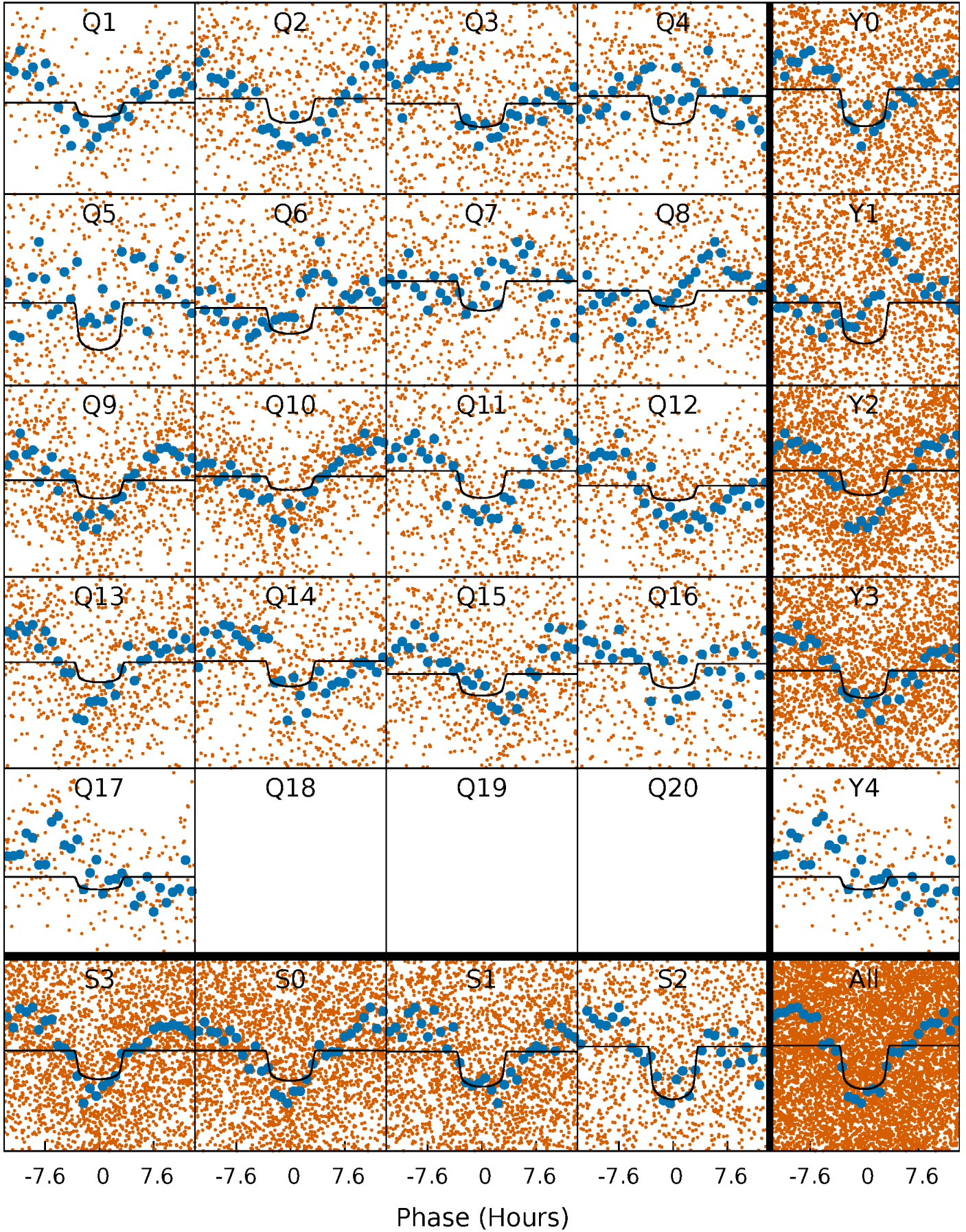
PDC Quarter-Phased Transit Curves

TCE 008058082-01 P= 5.177929 Days $T_0=136.660530$ (BKJD)



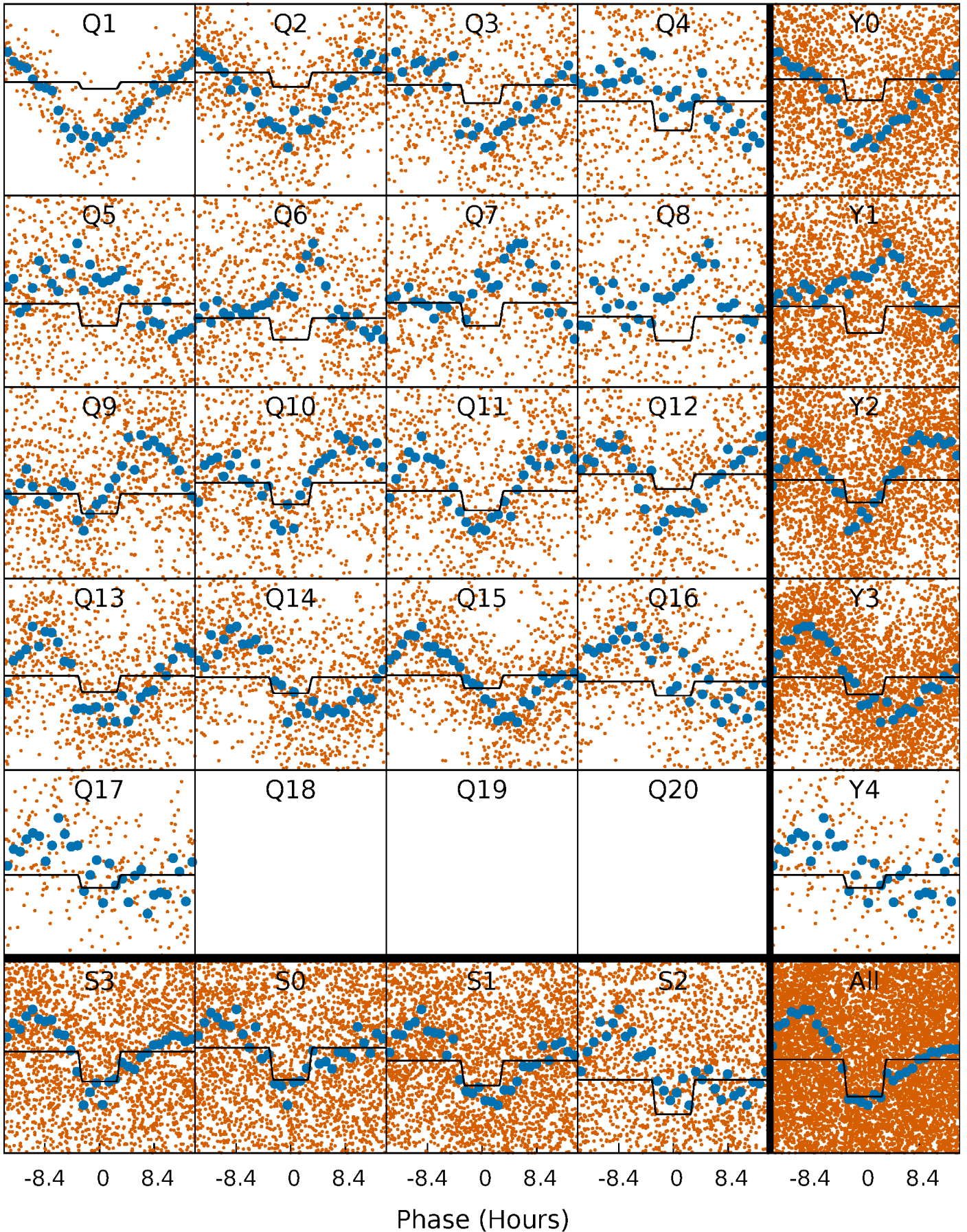
DV Quarter-Phased Transit Curves

TCE 008058082-01 P= 5.177929 Days $T_0=136.660530$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

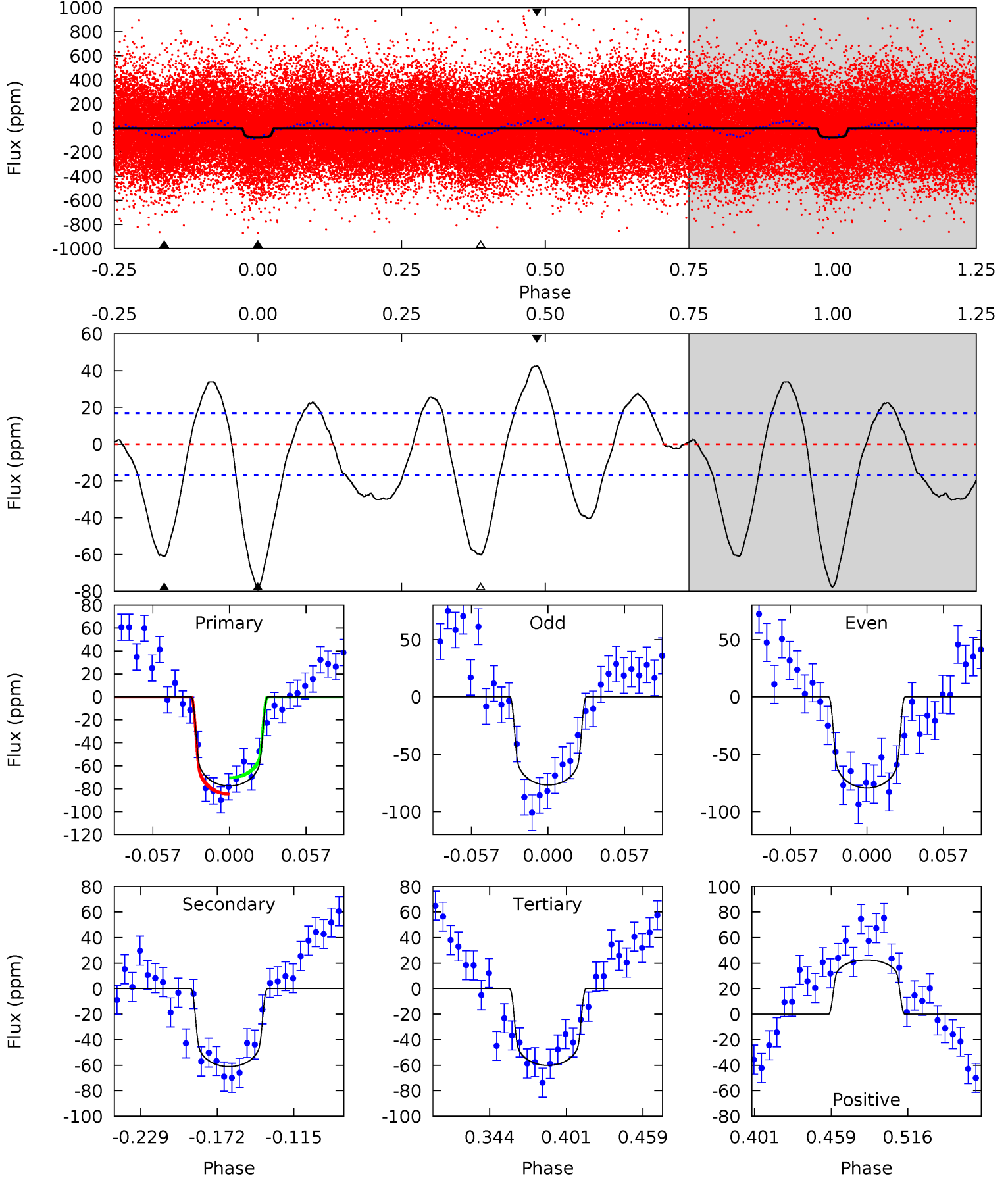
TCE 008058082-01 P= 5.177923 Days $T_0=136.674729$ (BKJD)



DV Model-Shift Uniqueness Test

008058082-01, P = 5.177929 Days, E = 131.482601 Days

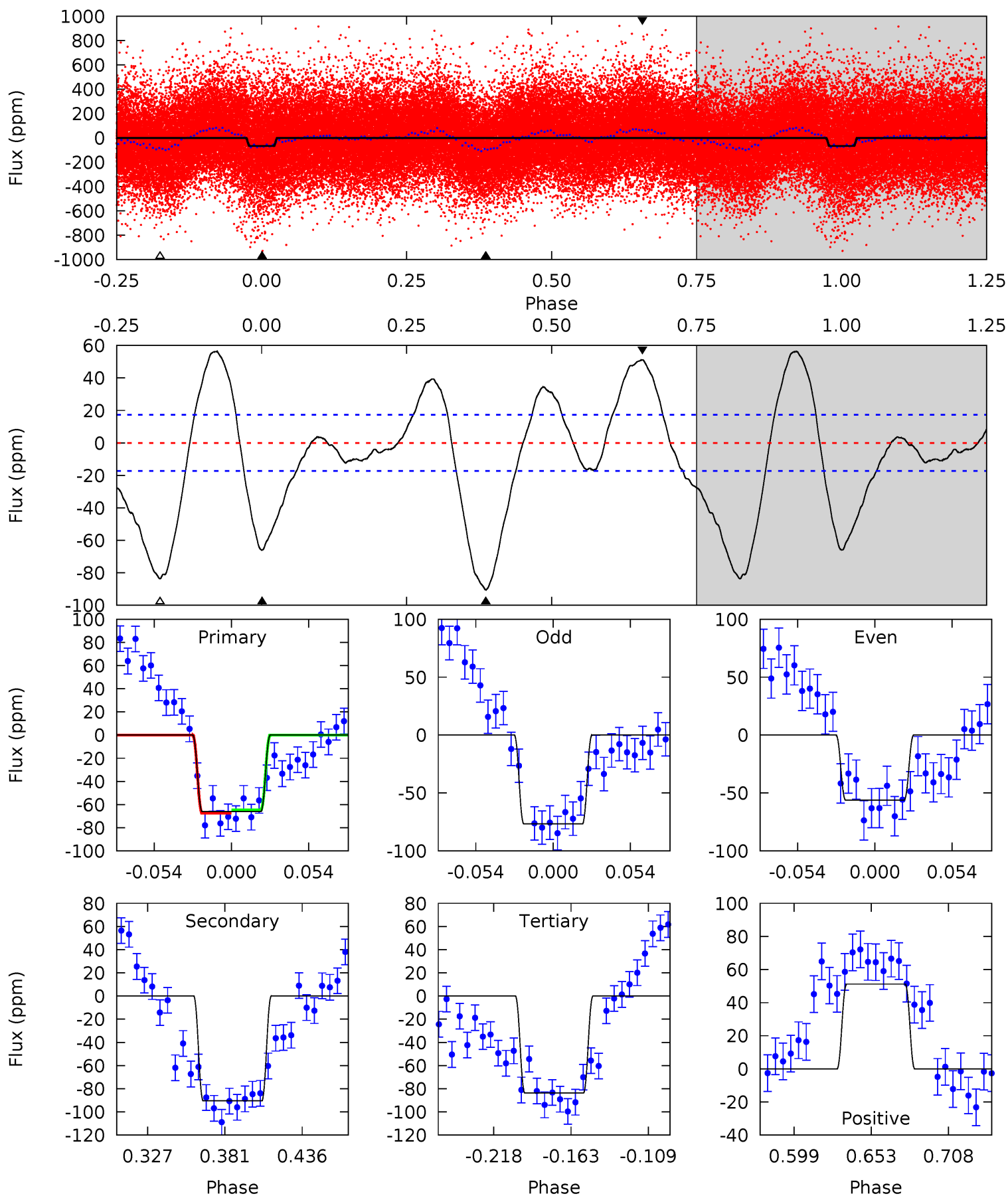
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.4	16.9	16.6	11.8	4.68	1.90	7.05	4.81	9.67	0.26	5.12	0.35	0.90	0.35	1.96



Alt Model-Shift Uniqueness Test

008058082-01, P = 5.177923 Days, E = 131.496806 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	24.5	22.7	13.9	4.69	1.92	8.83	-4.79	4.01	1.85	10.7	2.79	1.06	0.38	0.36



Stellar Parameters For KIC 008058082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6032^{+199}_{-181}	$3.808^{+0.584}_{-0.146}$	$-0.400^{+0.300}_{-0.300}$	$2.202^{+0.511}_{-1.192}$	$1.136^{+0.166}_{-0.250}$	$0.150^{+1.036}_{-0.058}$
	+3%/-3%	+15%/-4%	+75%/-75%	+23%/-54%	+15%/-22%	+692%/-39%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008058082-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-61 ± 4	$1.98^{+0.58}_{-0.62}$	2187^{+196}_{-323}	5669^{+640}_{-415}	32^{+34}_{-13}
Alt.	-91 ± 4	$1.65^{+0.56}_{-0.55}$	2184^{+175}_{-333}	6764^{+1092}_{-624}	69^{+85}_{-31}

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

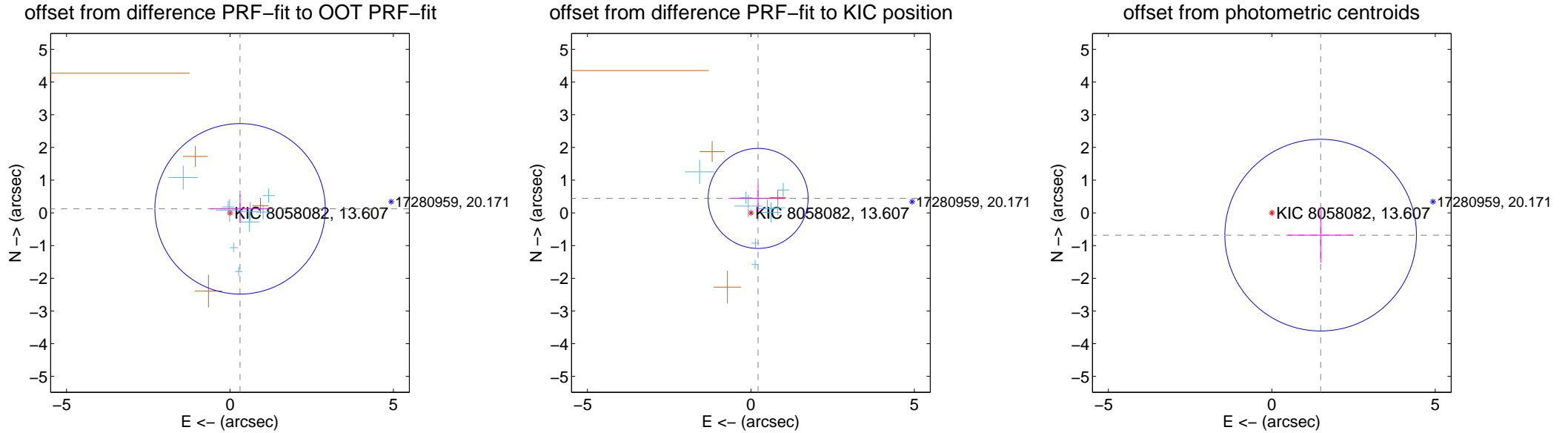
DV Centroid Data

Supplemental centroid analysis for 008058082-01. Kepler magnitude: 13.61. Transit SNR 9.43

There are 9 quarters with good PRF difference image offsets

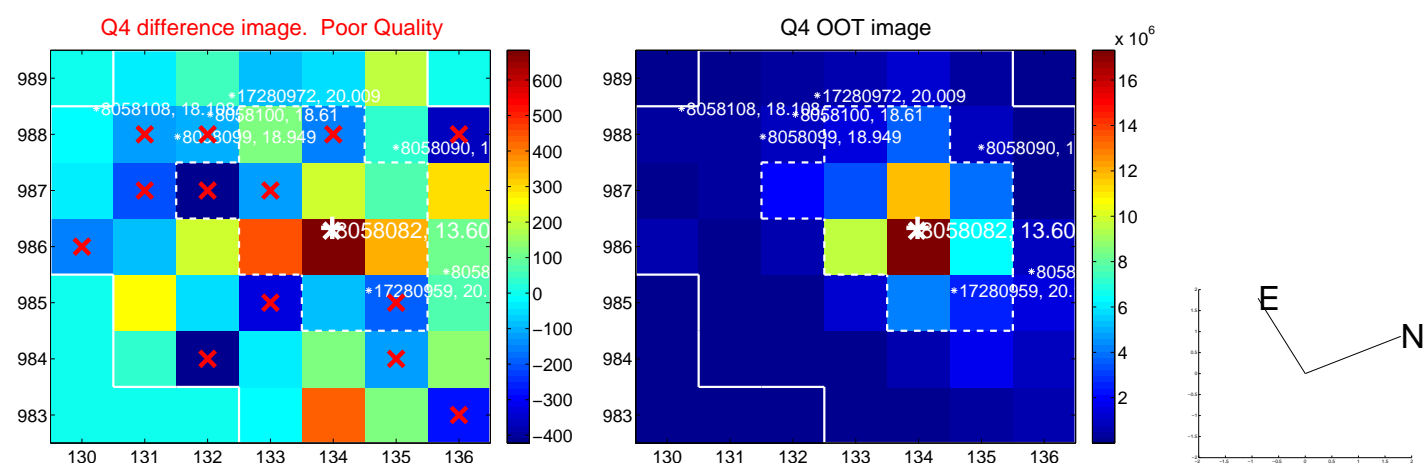
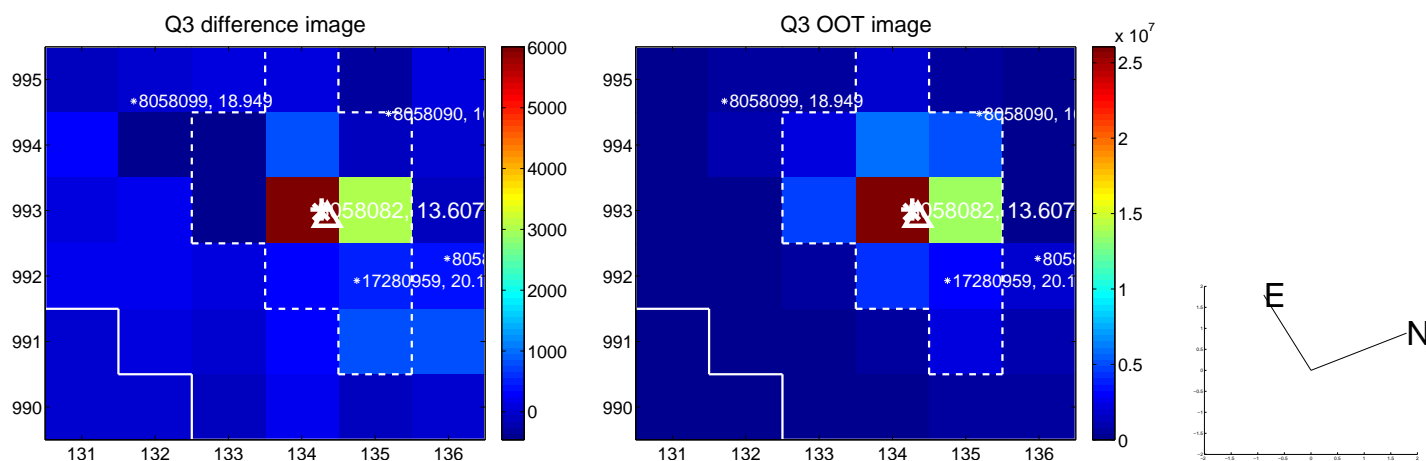
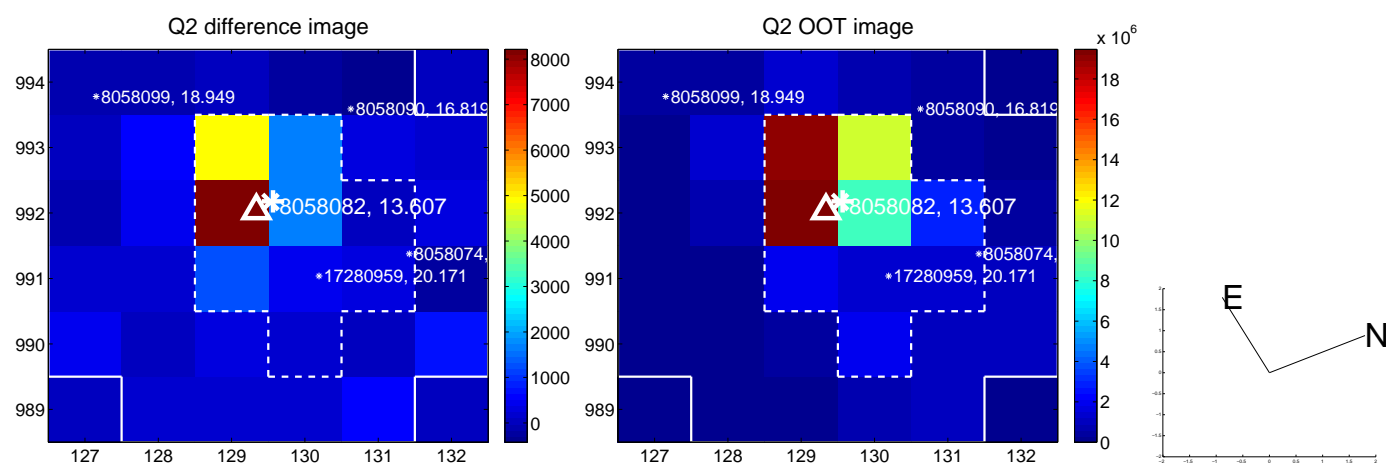
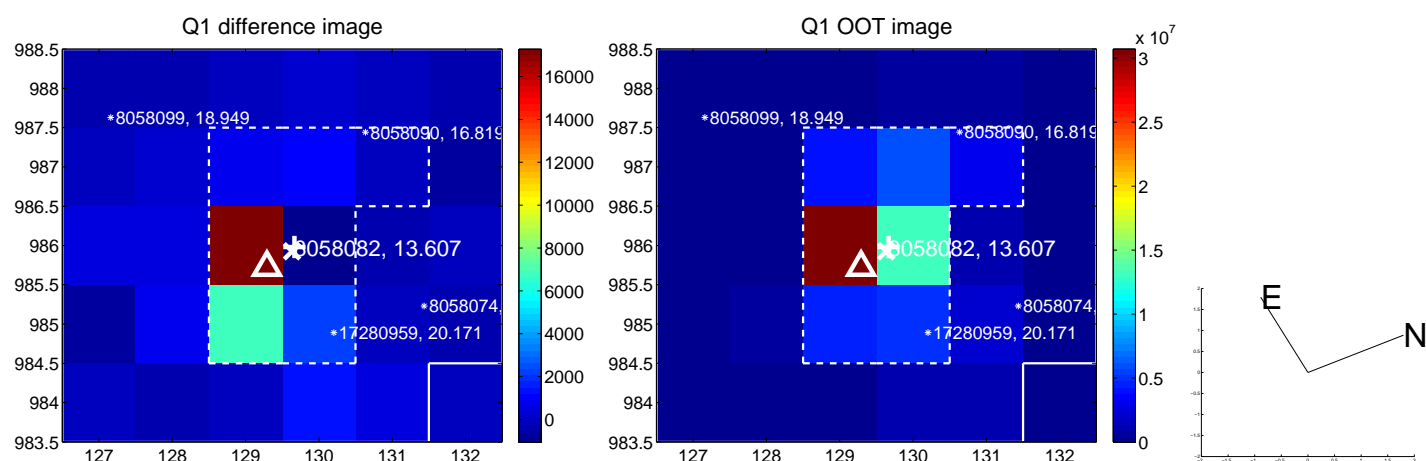
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.332 ± 0.869	0.38	-0.309 ± 0.917	0.123 ± 0.436
PRF-fit source offset from KIC position	0.494 ± 0.510	0.97	-0.220 ± 0.838	0.442 ± 0.426
photometric centroid source offset	1.64 ± 0.98	1.68	-1.49 ± 1.00	-0.68 ± 0.84

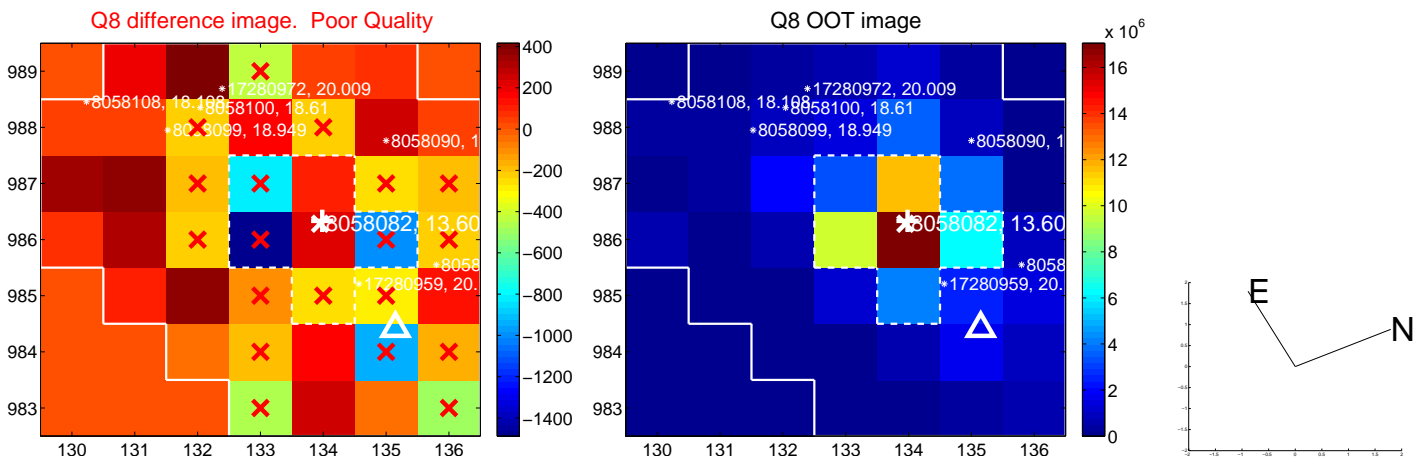
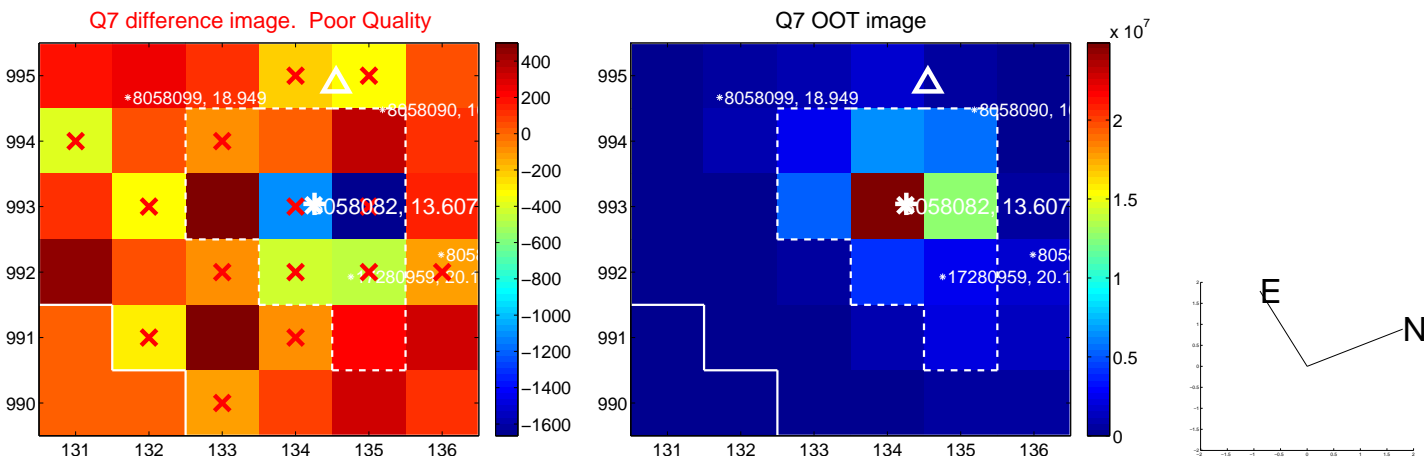
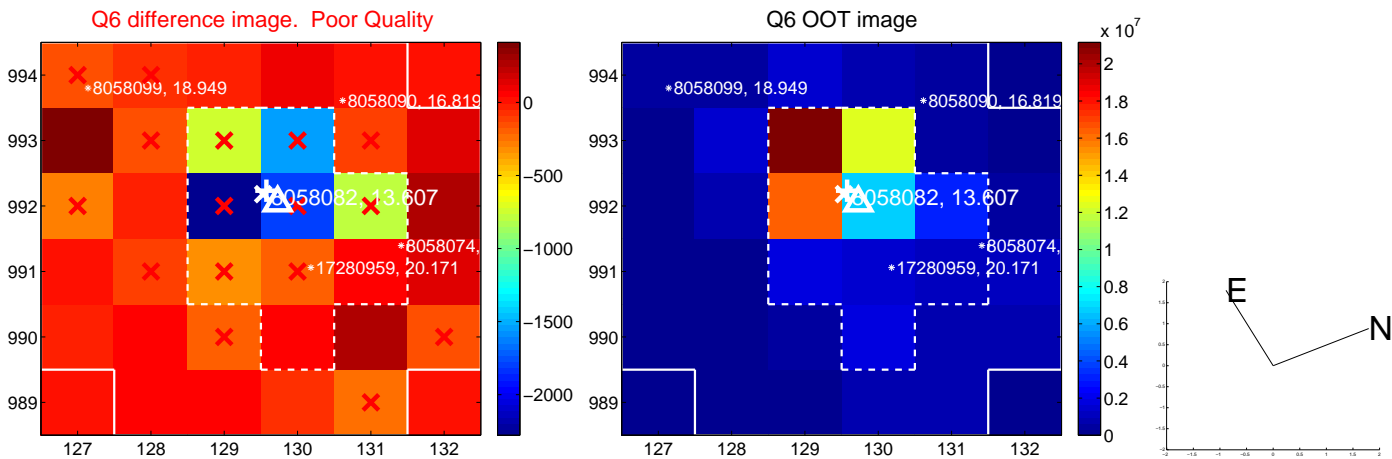
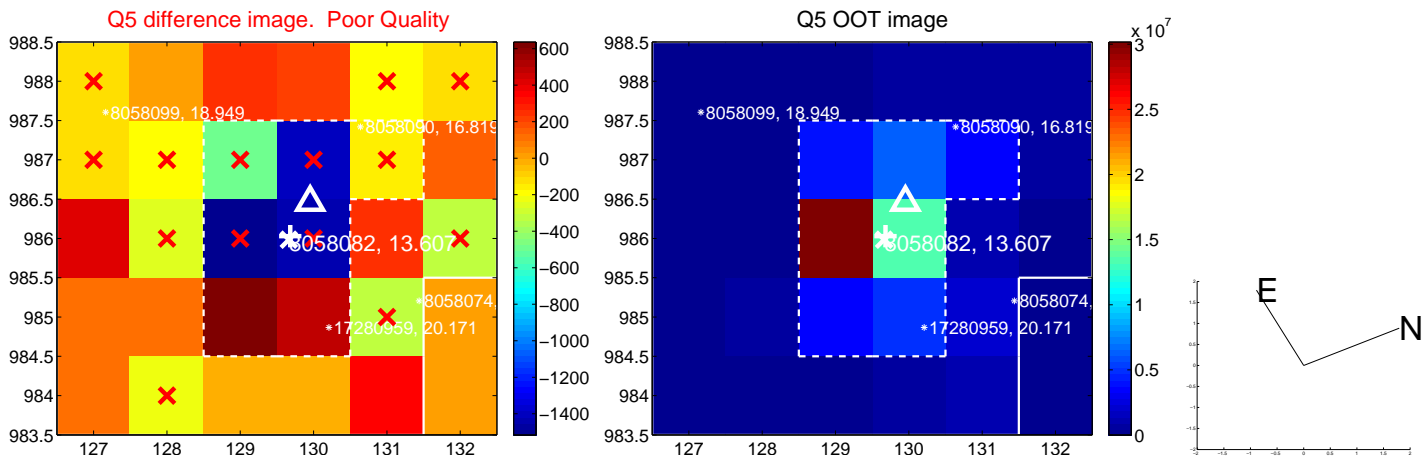


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

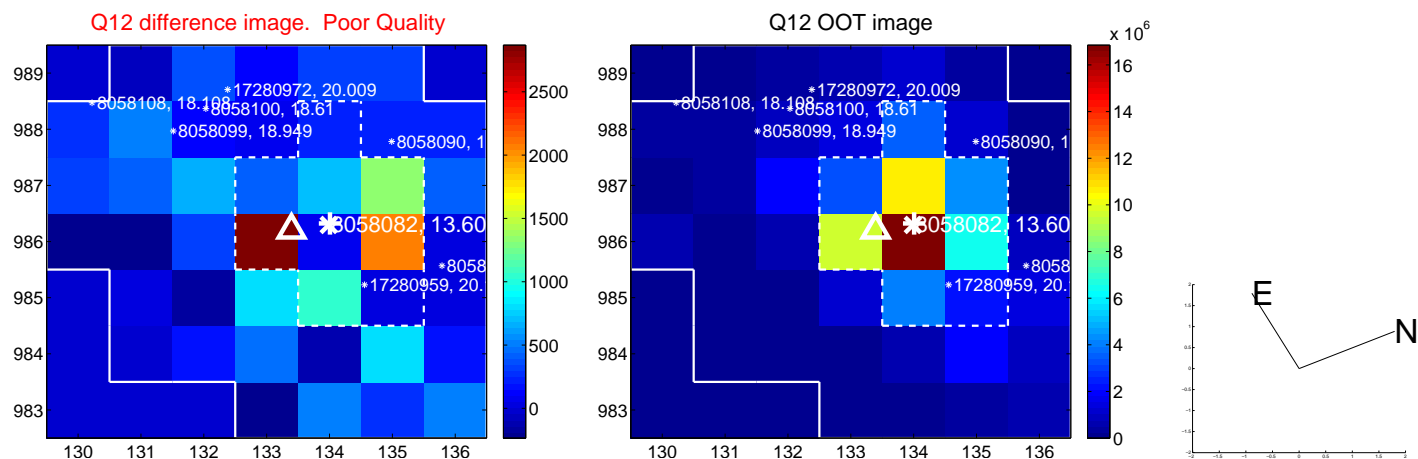
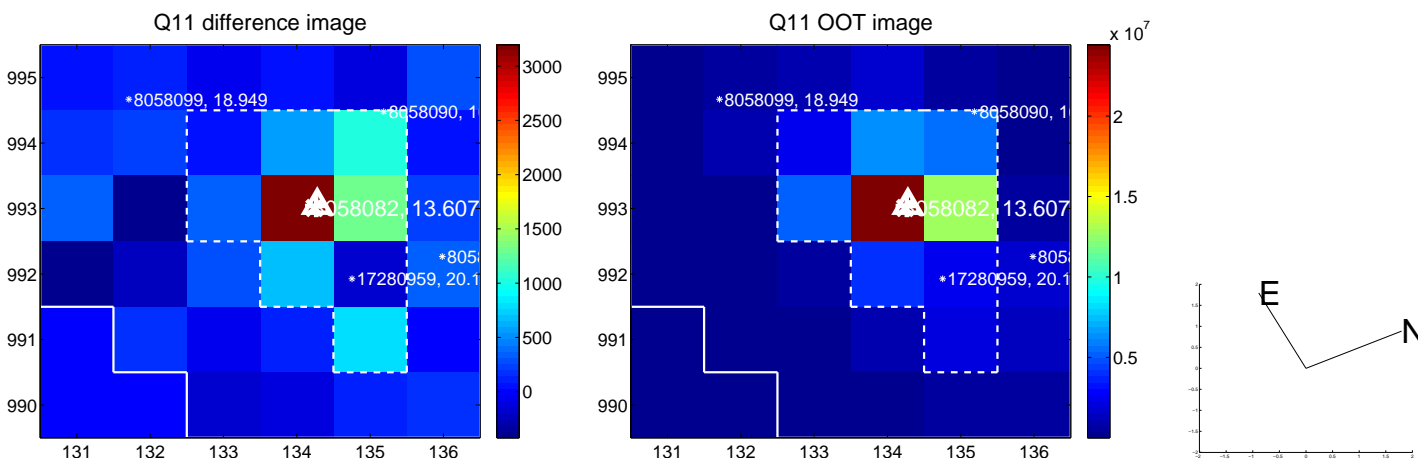
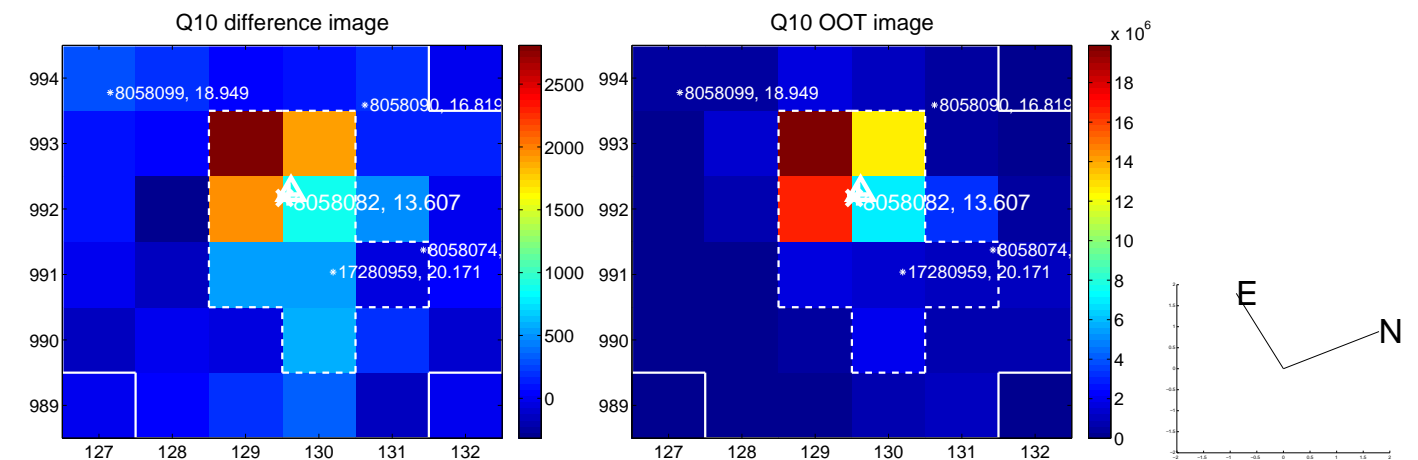
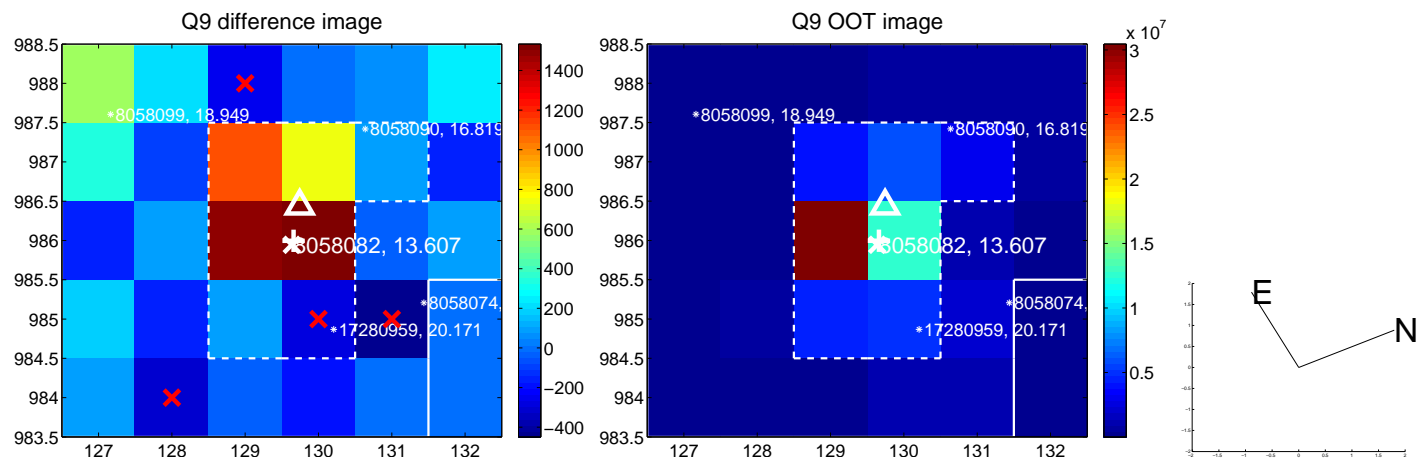
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



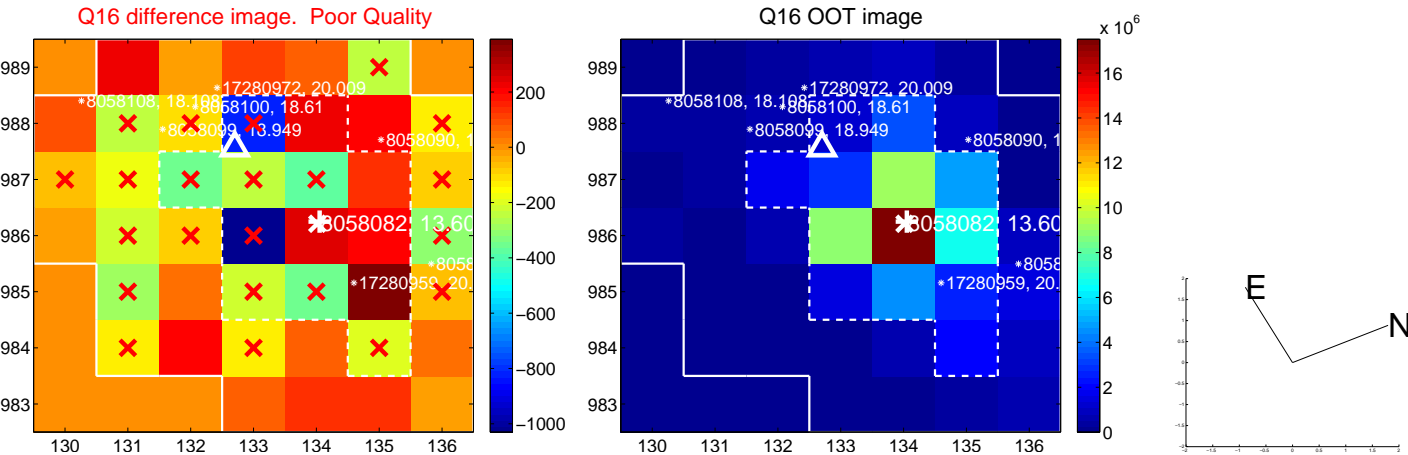
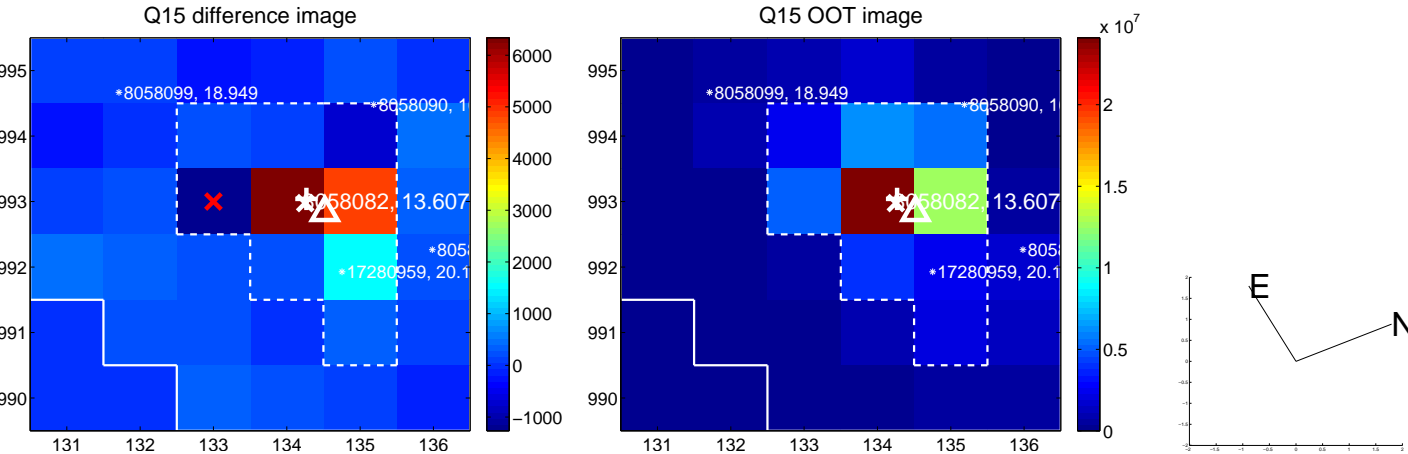
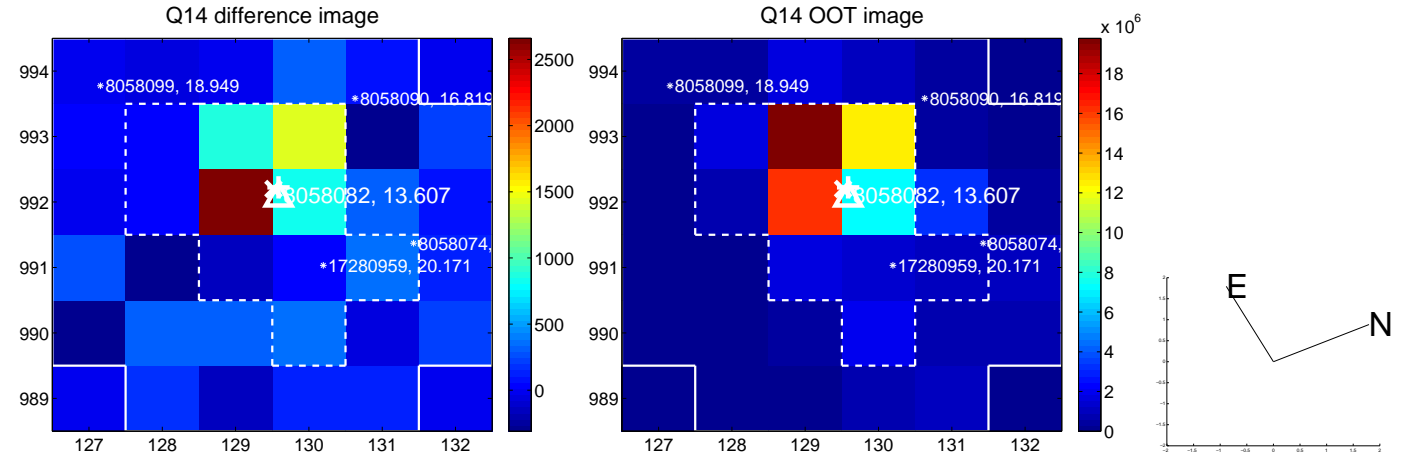
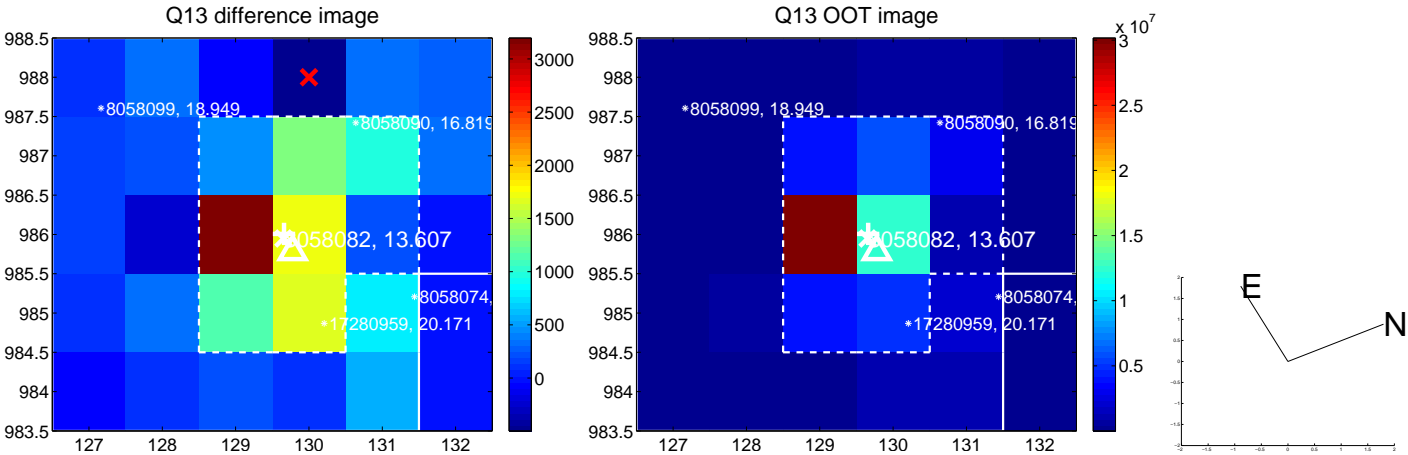
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



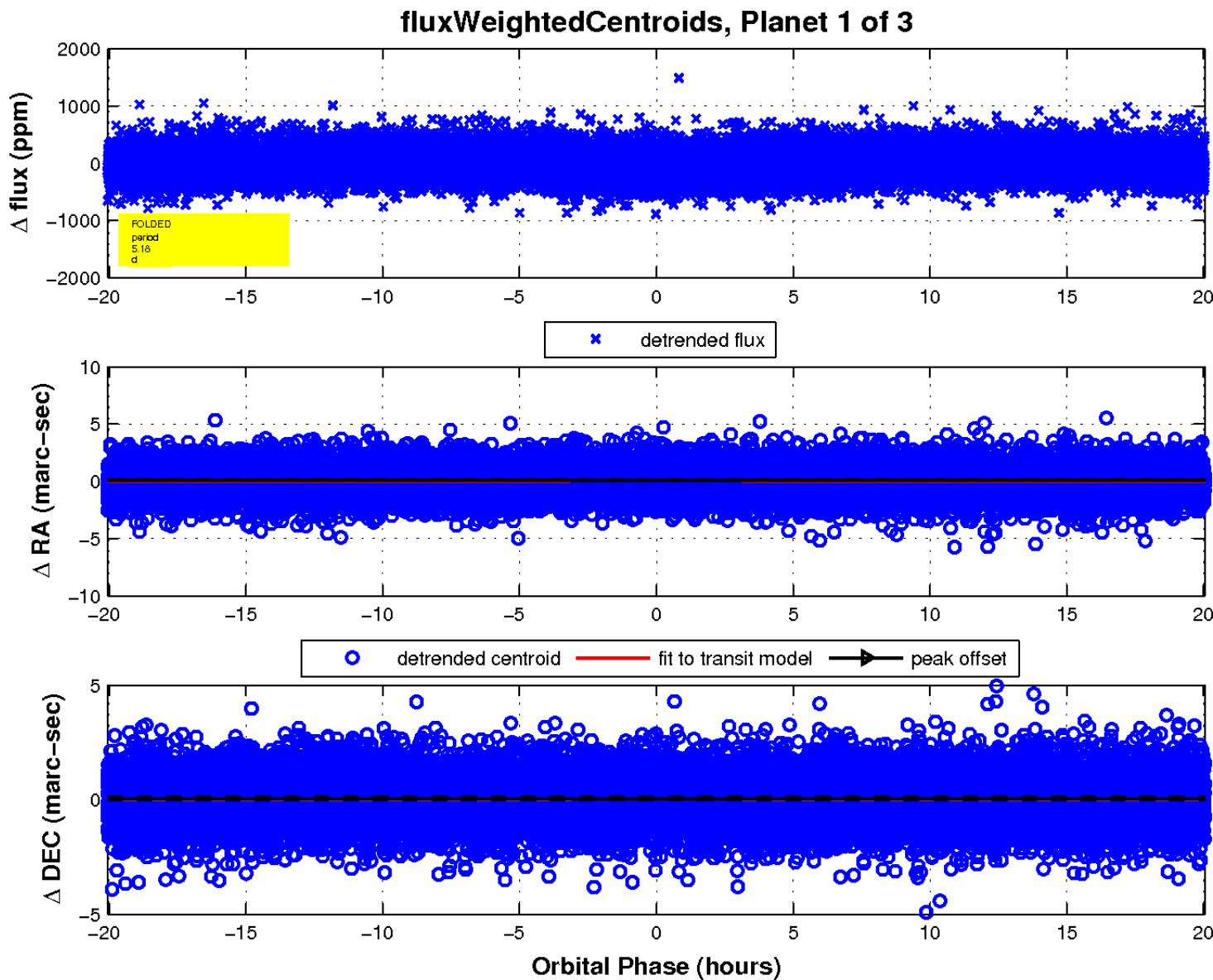
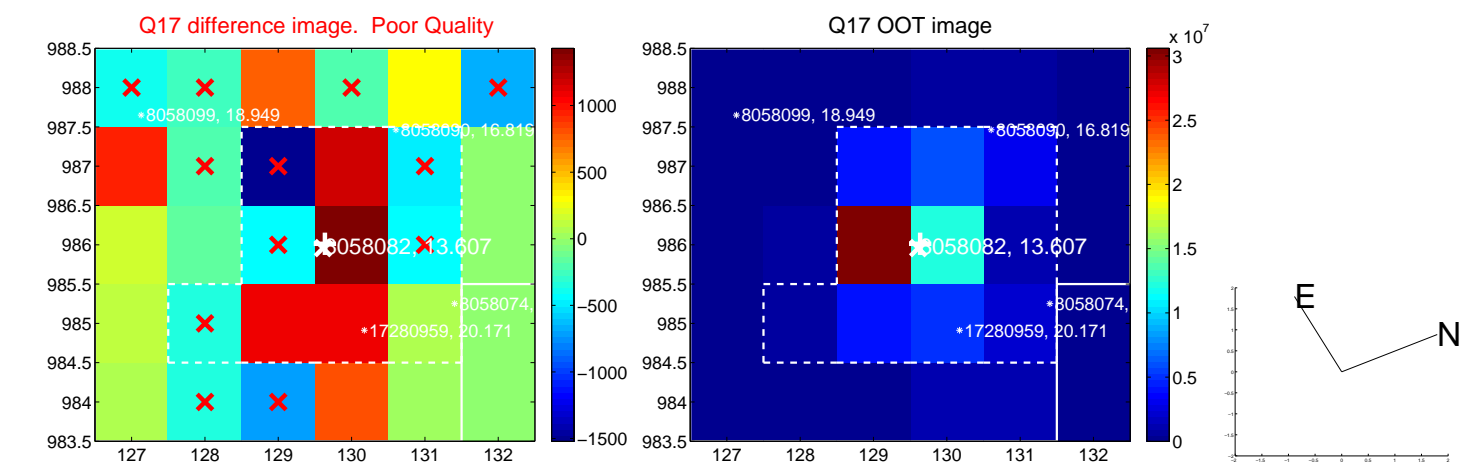
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

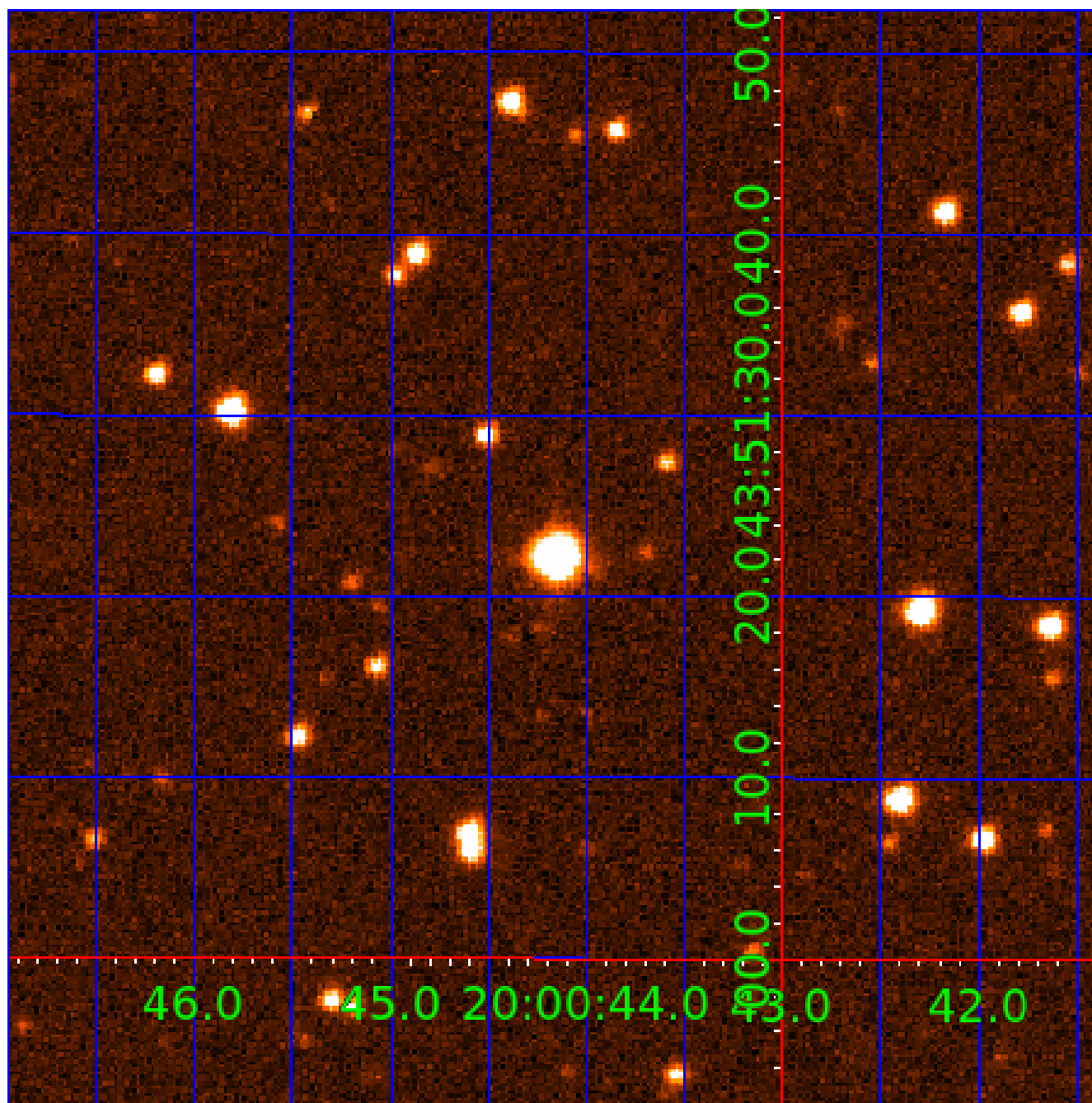


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008058082

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})
008058082-01	OBS	No	5.177929	136.660530	64.2	6.686	9.3	9.4	2.20	6032	2.13	1538.42
008058082-02	OBS	No	2.591245	131.819275	18.5	18.727	9.2	4.9	2.20	6032	0.95	3872.04
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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008058082-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008058082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

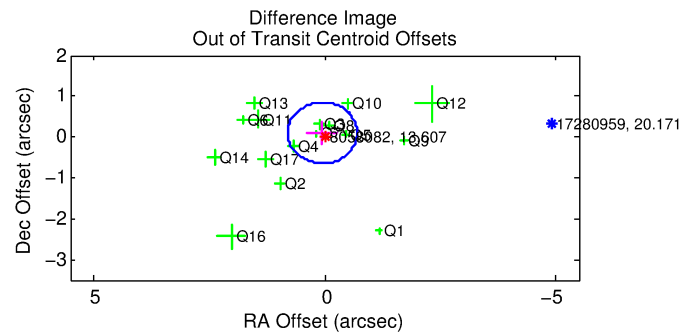
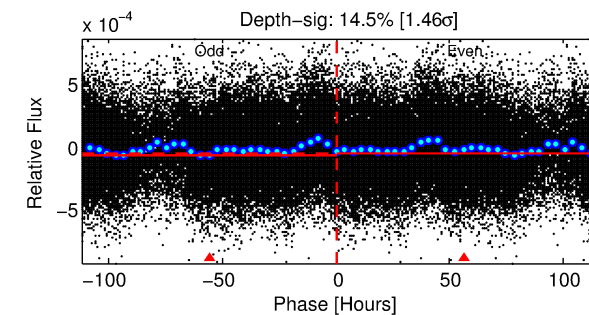
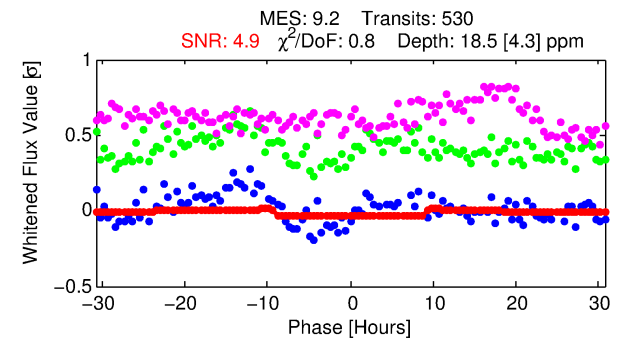
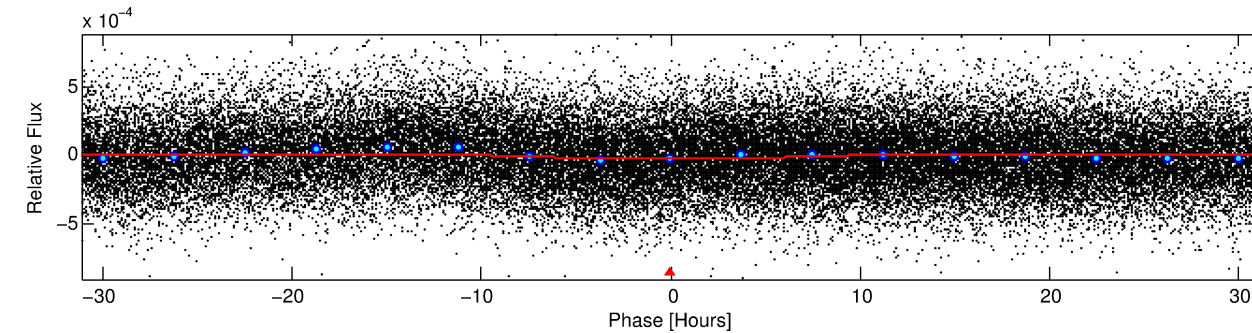
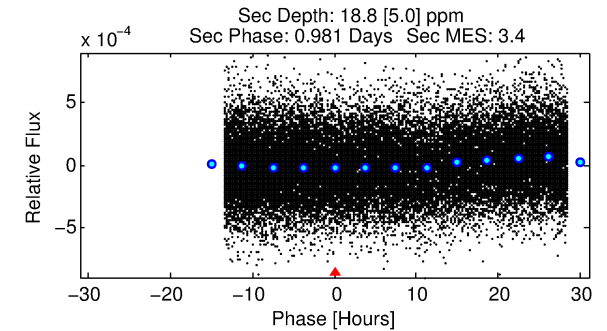
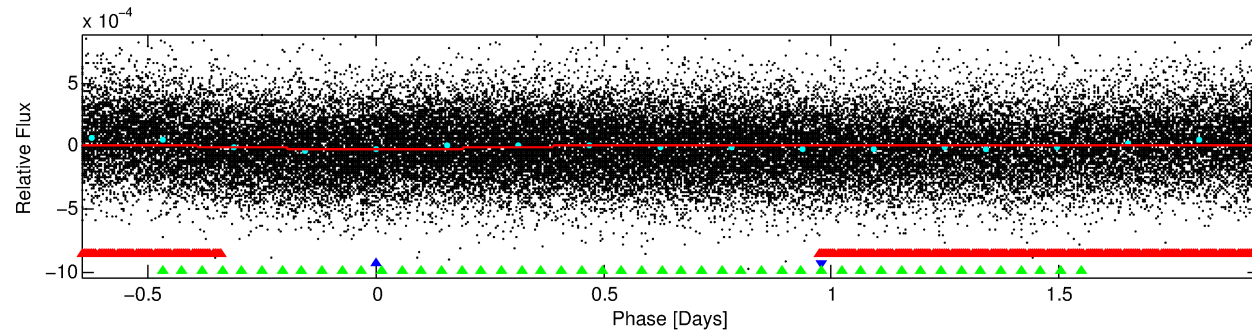
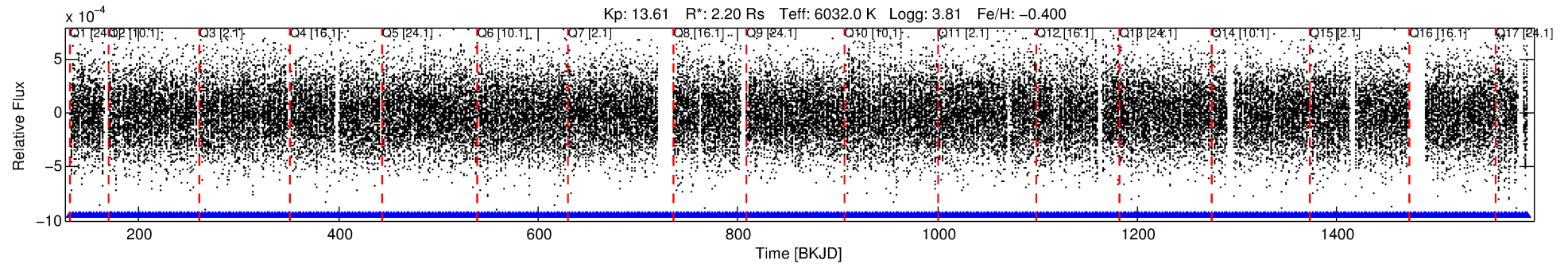
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008058082-02

No Significant Match Found

DV One-Page Summary

KIC: 8058082 Candidate: 2 of 3 Period: 2.591 d



DV Fit Results:

Period = 2.59125 [0.00008] d
Epoch = 131.8193 [0.0172] BKJD
Rp/R* = 0.0039 [0.0057]
a/R* = 1.24 [3.12]
b = 0.03 [291.69]
Seff = 3872.04 [3776.61]
Teq = 2011 [490] K
Rp = 0.95 [1.47] Re
a = 0.0385 [0.0222] AU
Ag = 17.15 [52.73] [0.31σ]
Teffp = 6329 [4623] K [0.93σ]

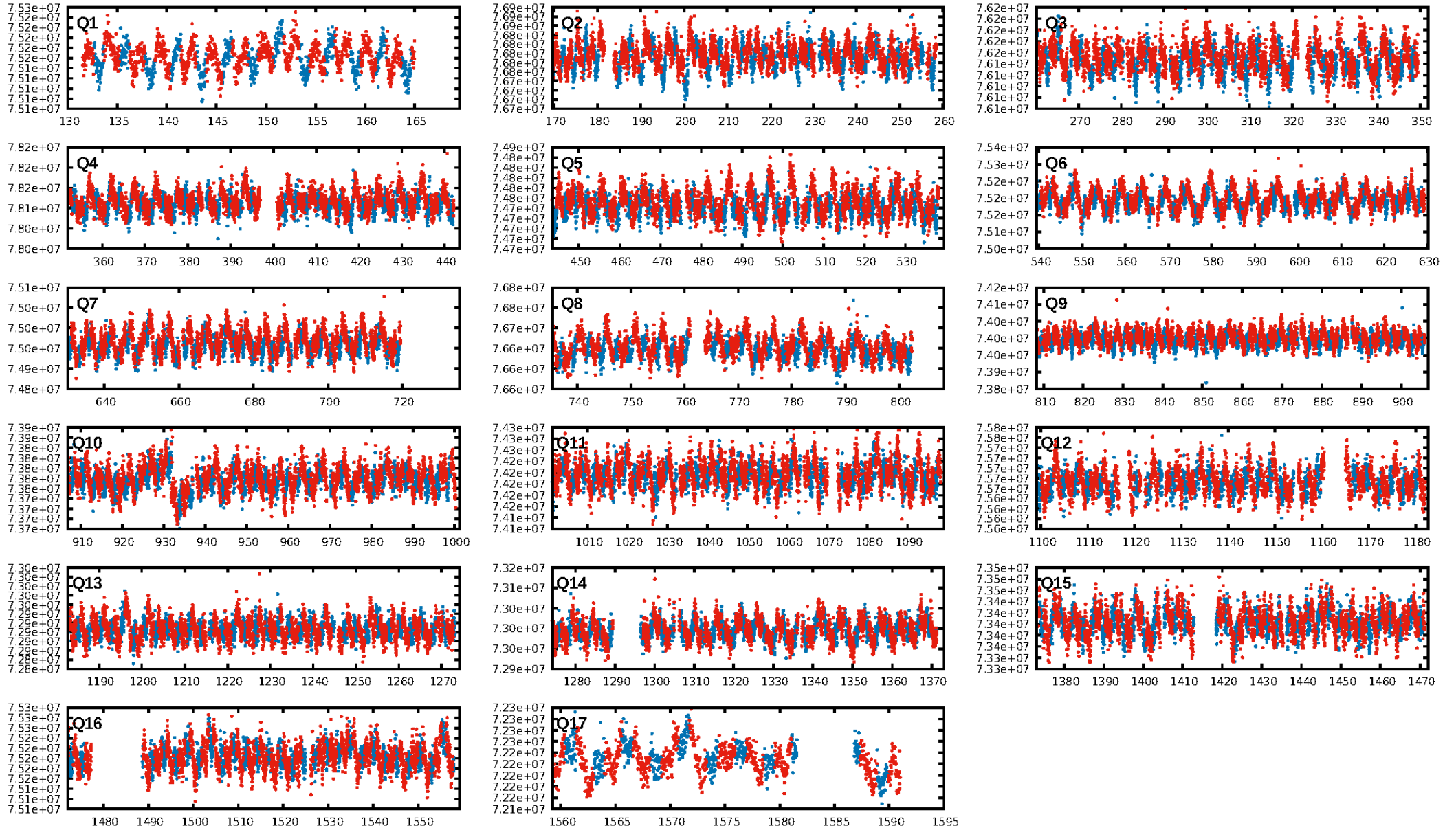
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.8% [3.12σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.70e-19
RollingBand-fgt: 1.00 [506/506]
GhostDiagnostic-chr: 2.783
Centroid-sig: 0.0%
Centroid-so: 4.083 arcsec [2.86σ]
OotOffset-rm: 0.115 arcsec [0.46σ]
KicOffset-rm: 0.299 arcsec [1.25σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
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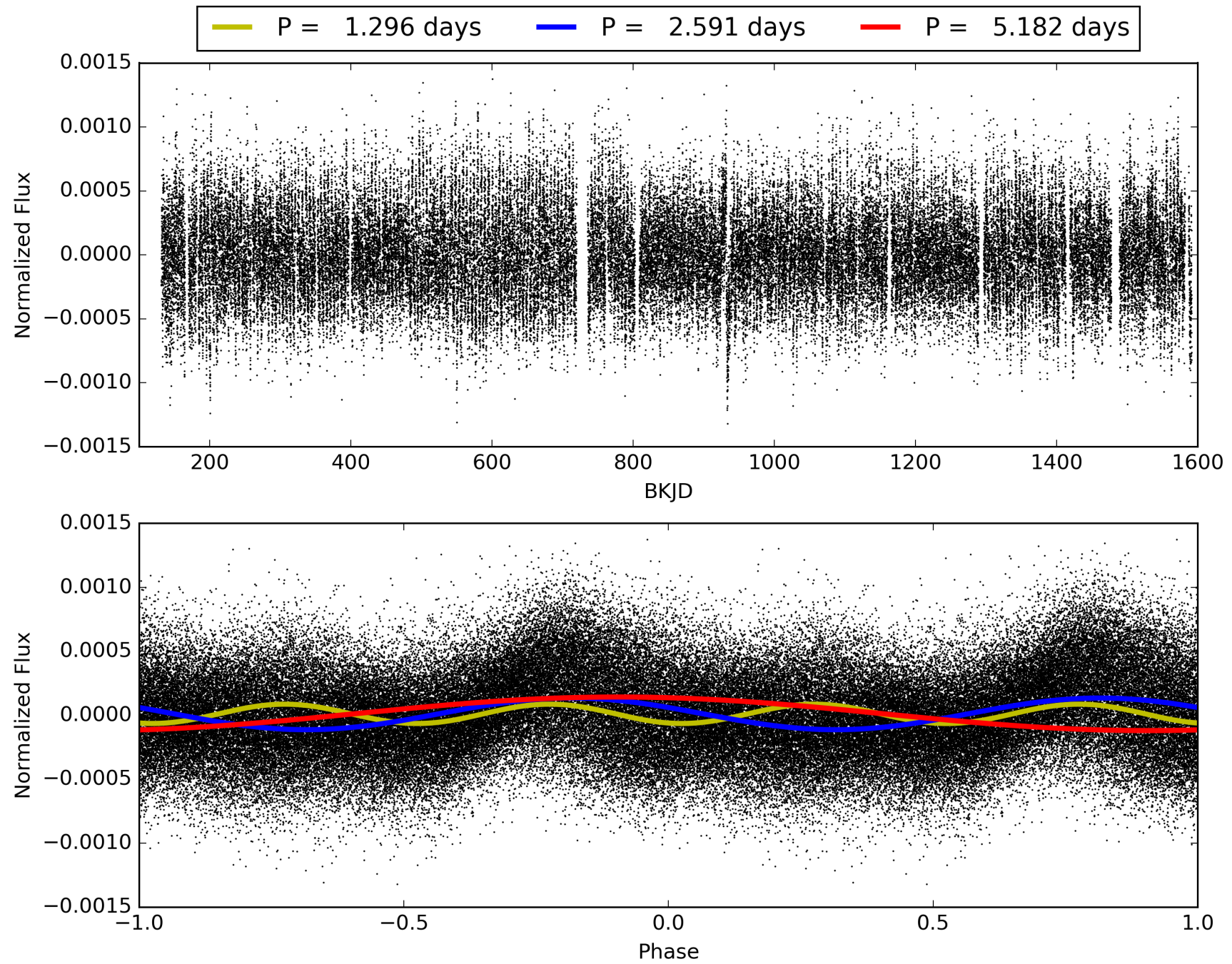
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:22:18 Z

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

TCE 008058082-02, PDC Light Curves

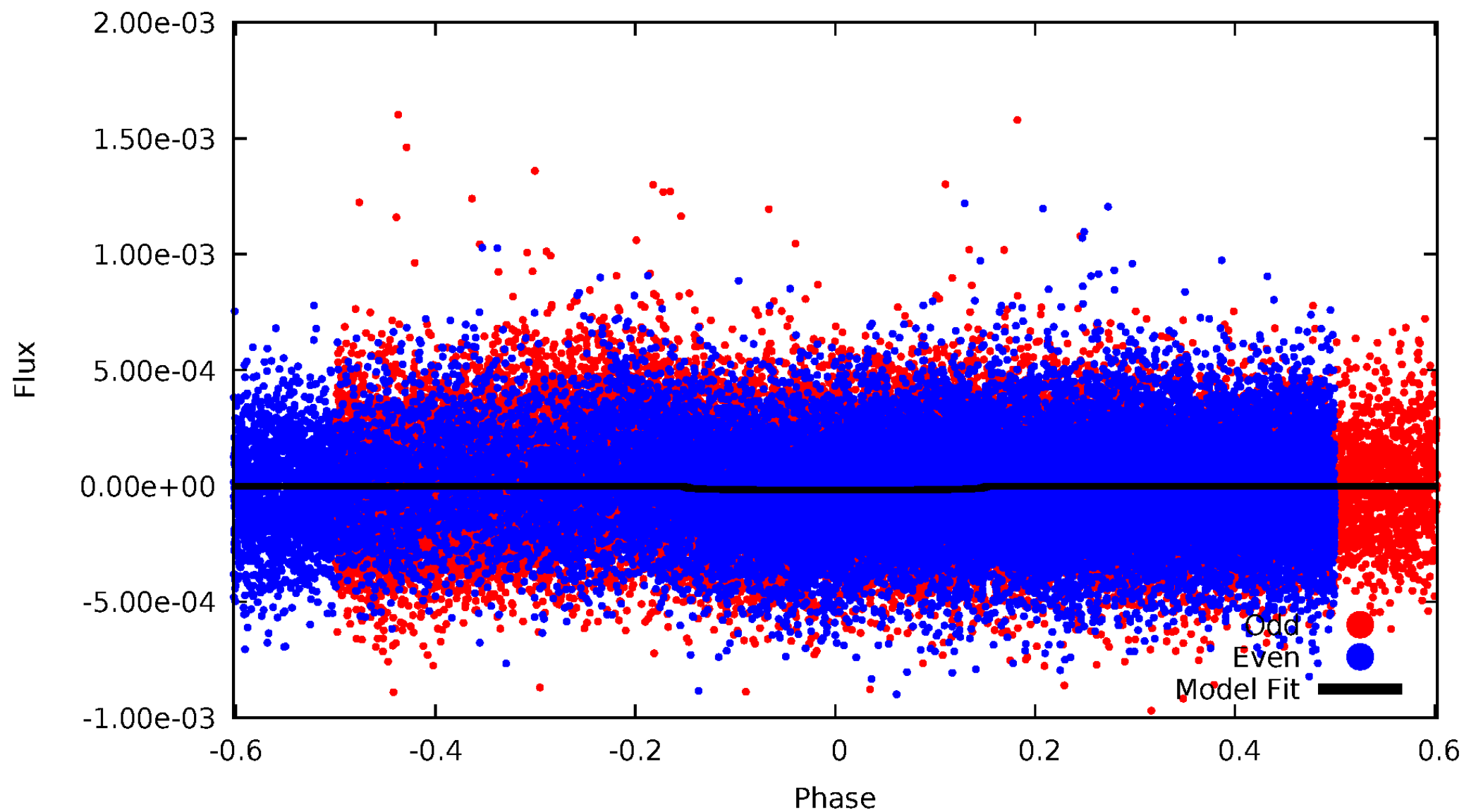


TCE 008058082-02



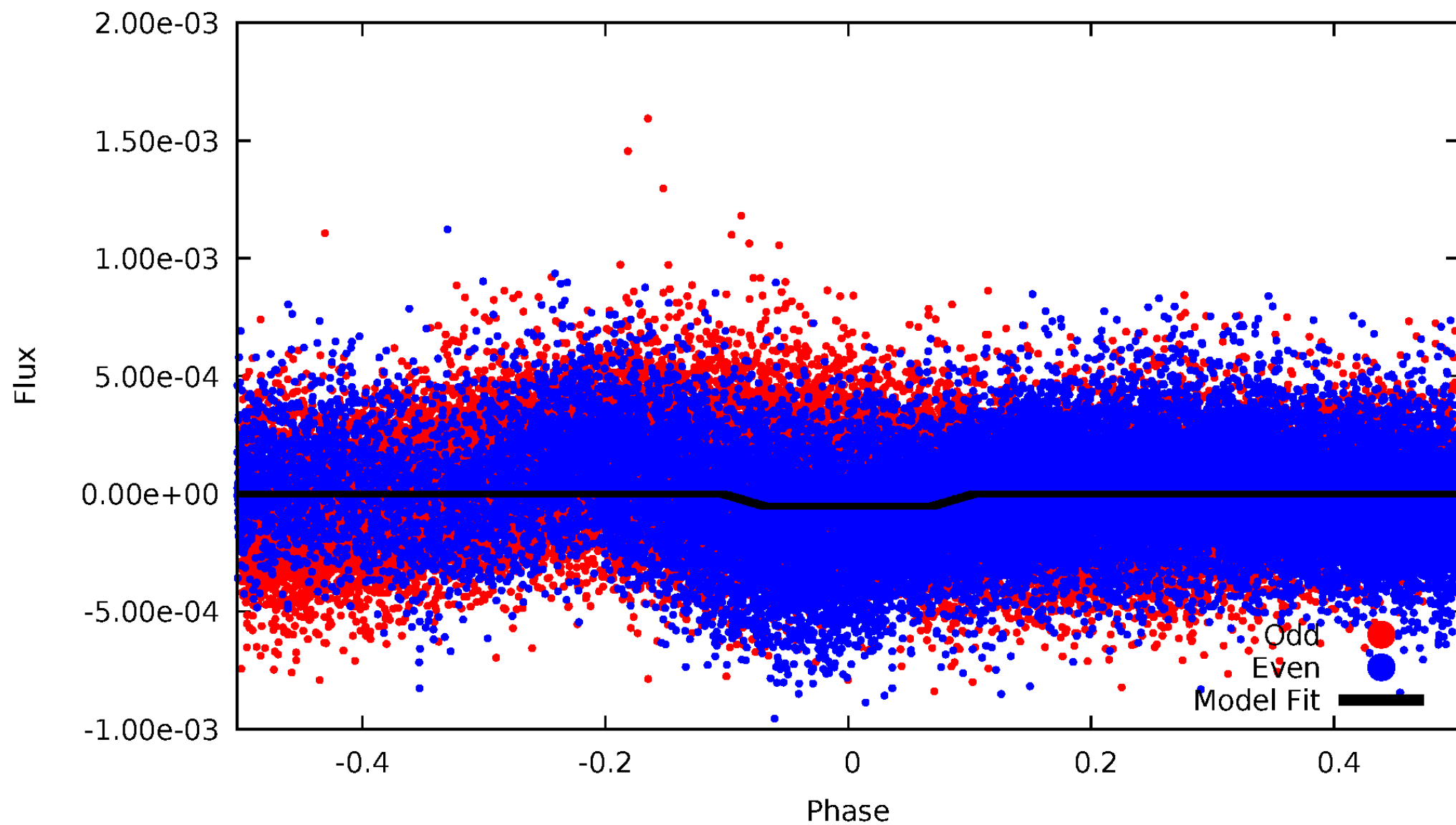
DV Odd/Even

TCE 008058082-02



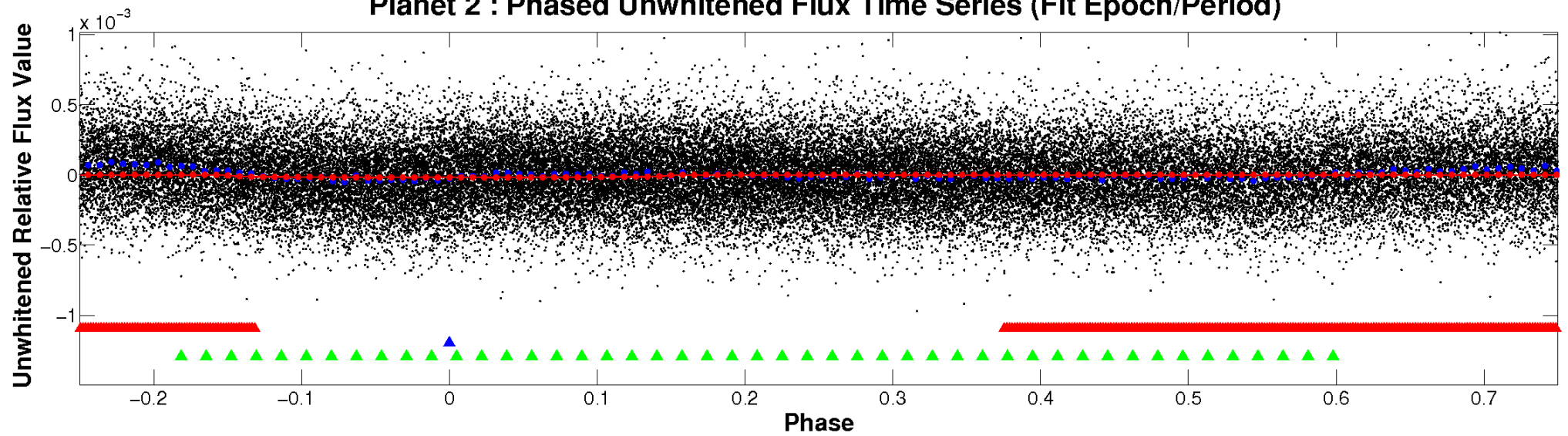
ALT Odd/Even

TCE 008058082-02

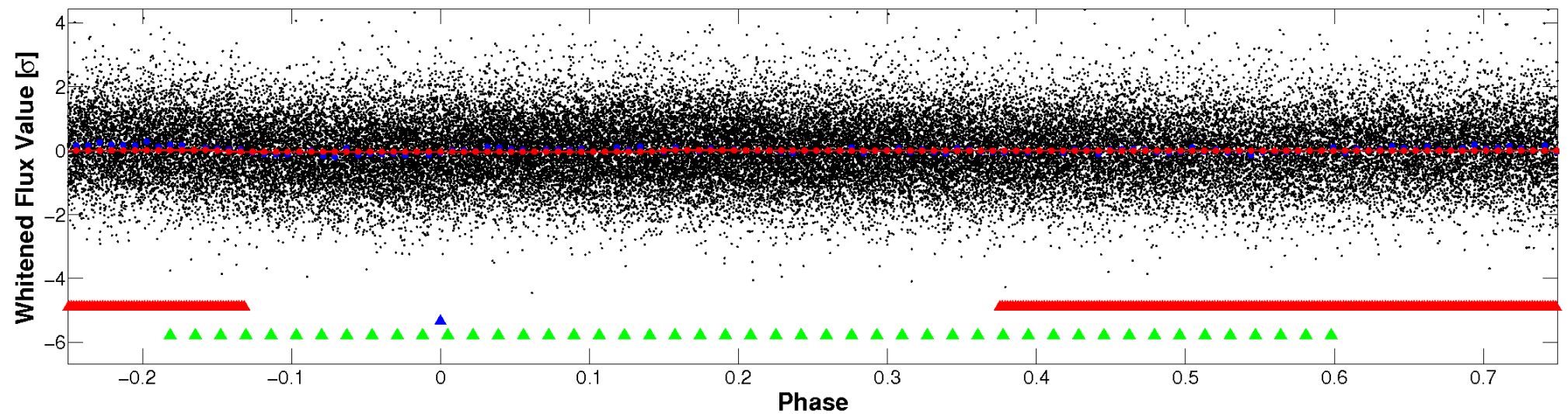


Non-Whitened Vs. Whitened Light Curve

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

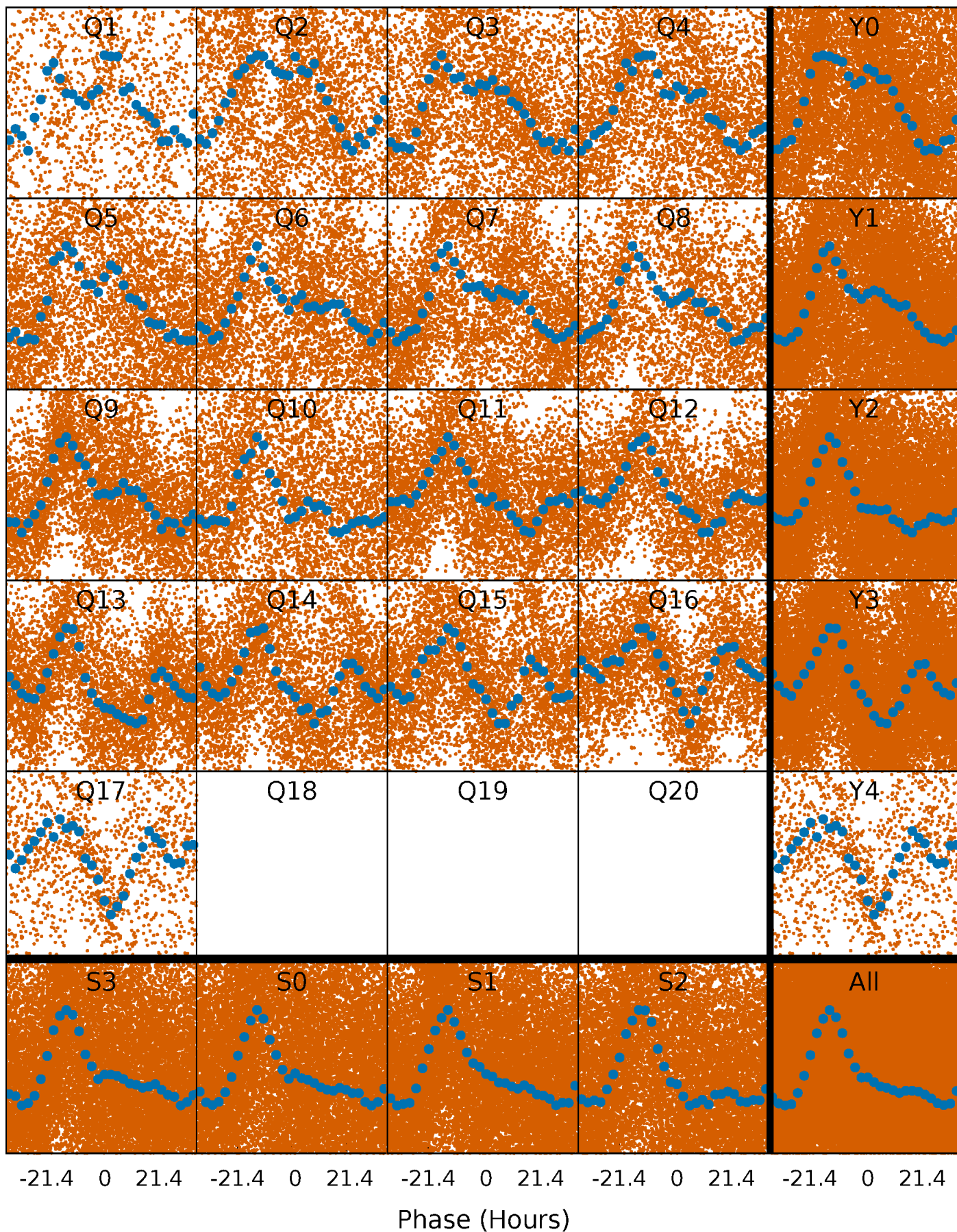


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



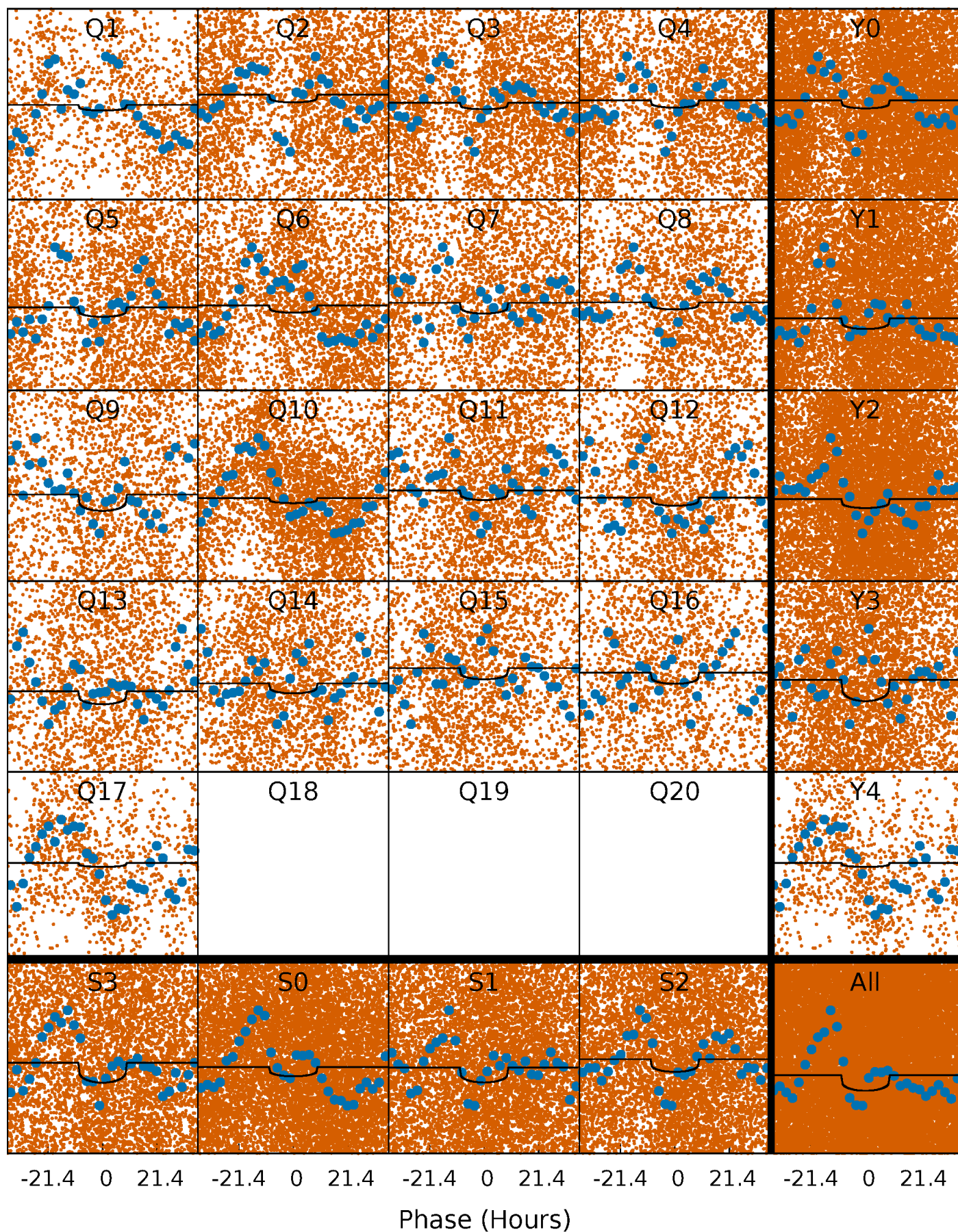
PDC Quarter-Phased Transit Curves

TCE 008058082-02 P= 2.591245 Days $T_0=131.819275$ (BKJD)



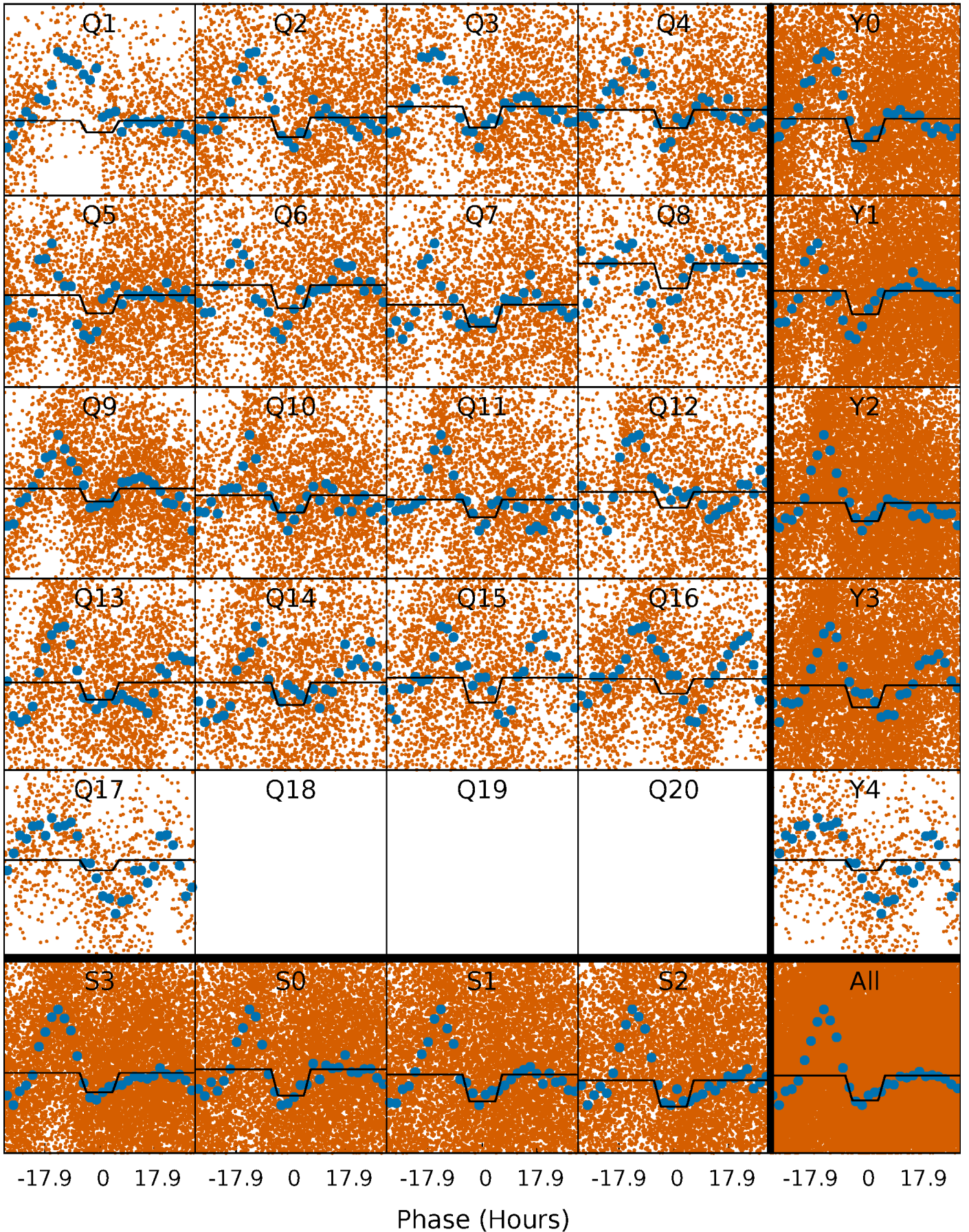
DV Quarter-Phased Transit Curves

TCE 008058082-02 P= 2.591245 Days $T_0=131.819275$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

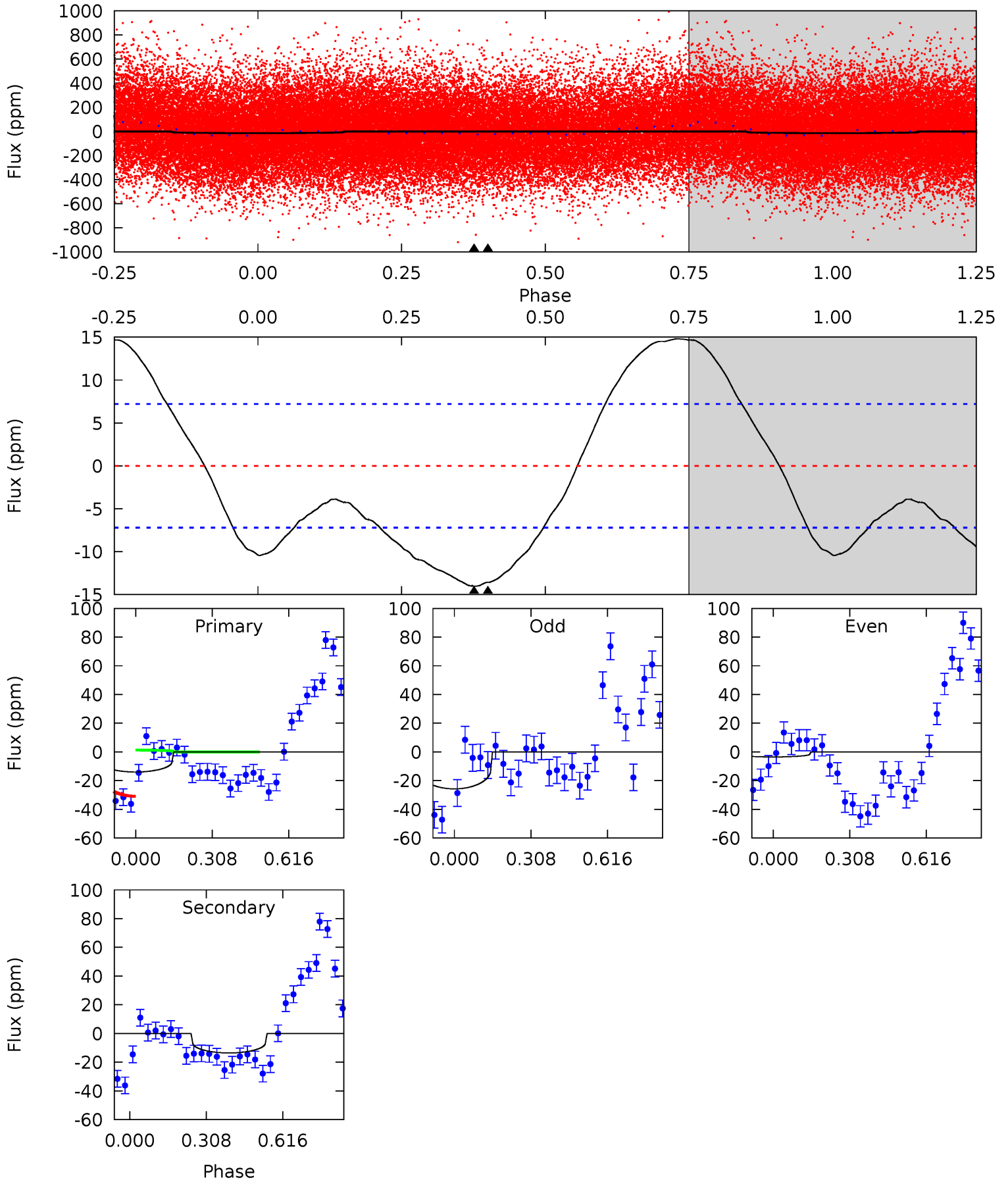
TCE 008058082-02 P= 2.591082 Days $T_0=131.887405$ (BKJD)



DV Model-Shift Uniqueness Test

008058082-02, P = 2.591245 Days, E = 131.819275 Days

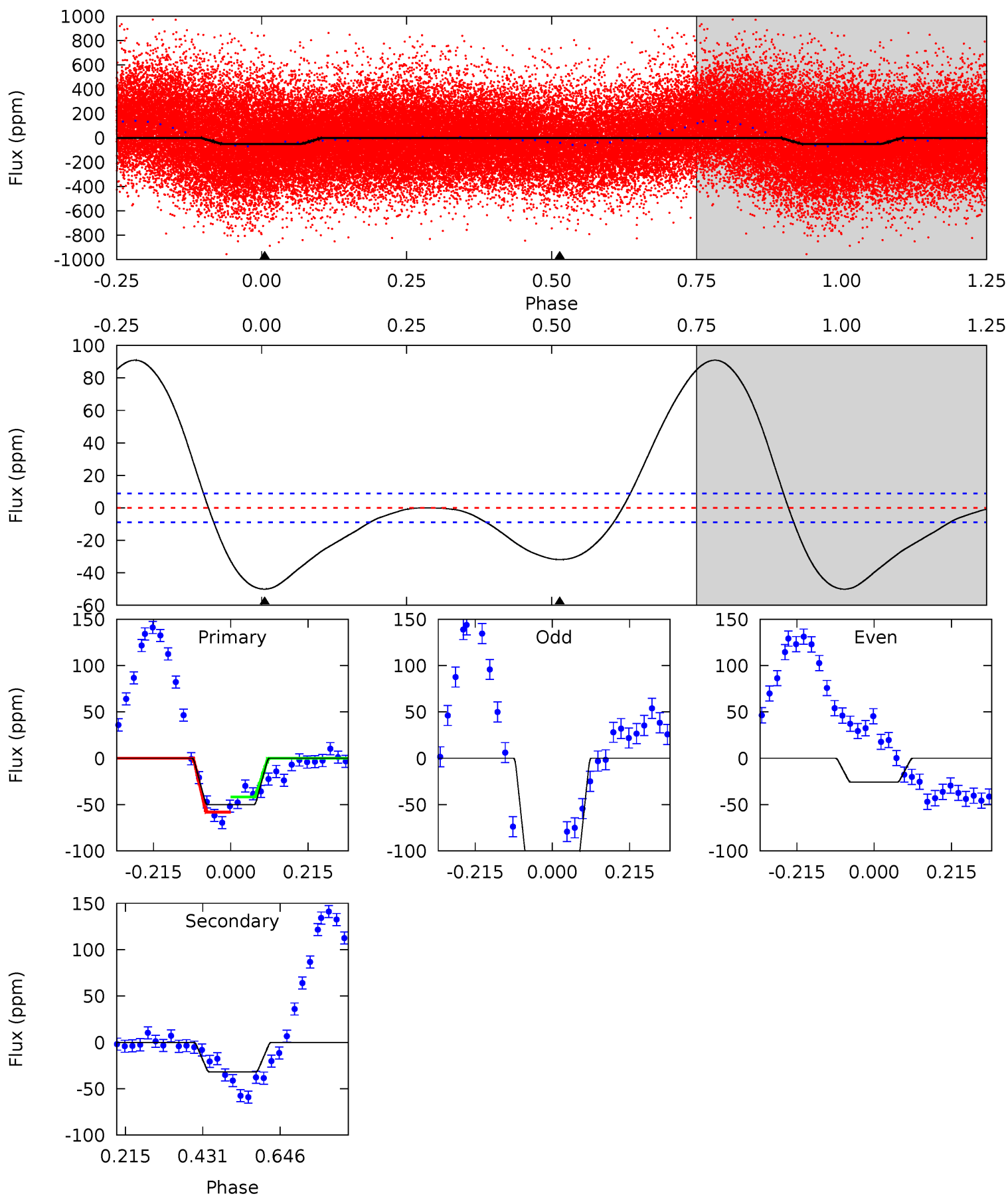
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	8.14	0	0	4.32	1.02	5.62	8.40	8.40	8.14	8.14	6.57	0.92	0.51	9.00



Alt Model-Shift Uniqueness Test

008058082-02, P = 2.591082 Days, E = 131.887405 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.9	15.8	0	0	4.40	1.24	21.0	24.9	24.9	15.8	15.8	26.2	0.94	0.64	3.85



Stellar Parameters For KIC 008058082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6032^{+199}_{-181}	$3.808^{+0.584}_{-0.146}$	$-0.400^{+0.300}_{-0.300}$	$2.202^{+0.511}_{-1.192}$	$1.136^{+0.166}_{-0.250}$	$0.150^{+1.036}_{-0.058}$
	+3%/-3%	+15%/-4%	+75%/-75%	+23%/-54%	+15%/-22%	+692%/-39%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008058082-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 2	$1.26^{+1.15}_{-0.87}$	2729^{+231}_{-389}	4838^{+3817}_{-1092}	$6.839^{+64.206}_{-5.004}$
Alt.	-32 ± 2	$1.69^{+1.44}_{-1.01}$	2737^{+239}_{-380}	5113^{+2796}_{-1065}	$9.238^{+49.241}_{-6.491}$

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 $A_{obs} \gg 1.0$

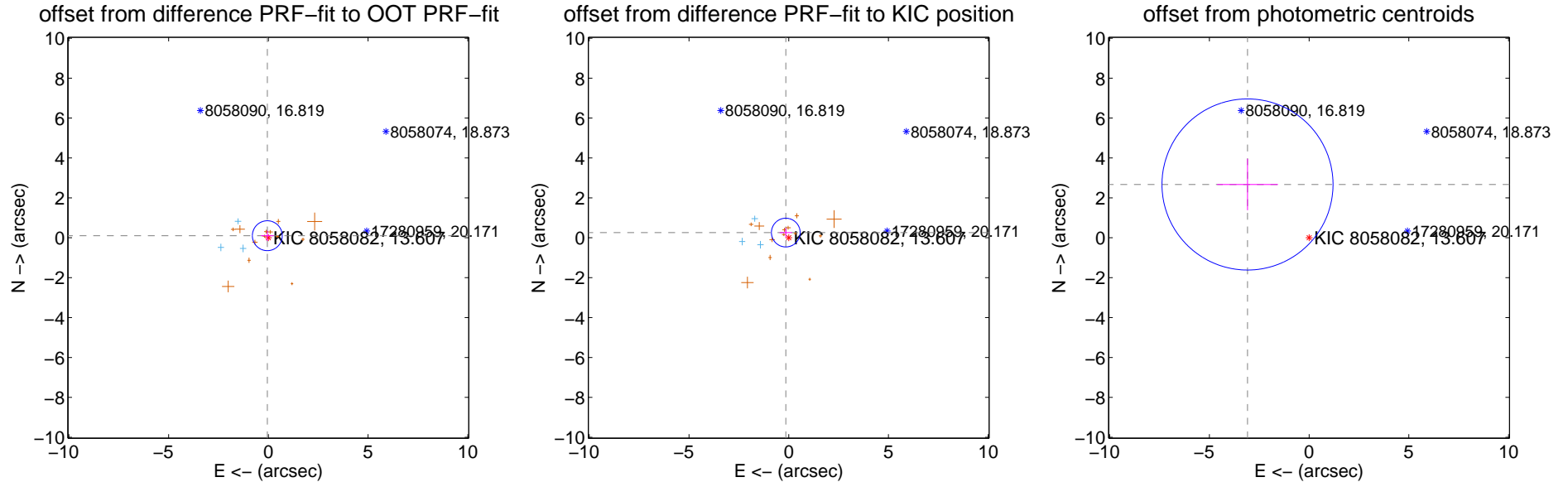
DV Centroid Data

Supplemental centroid analysis for 008058082-02. Kepler magnitude: 13.61. Transit SNR 4.93

There are 3 quarters with good PRF difference image offsets

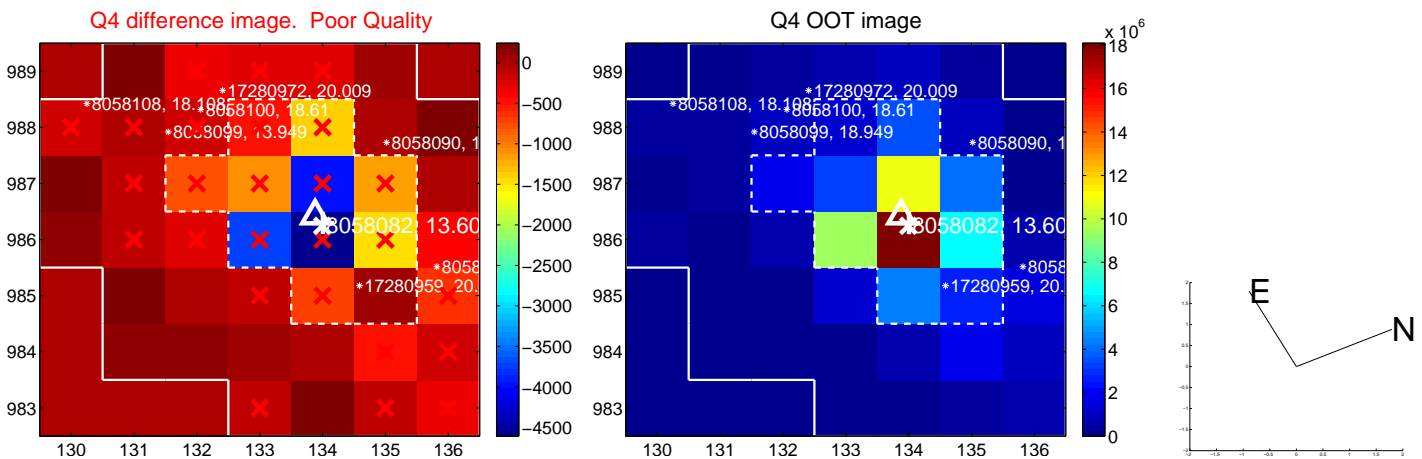
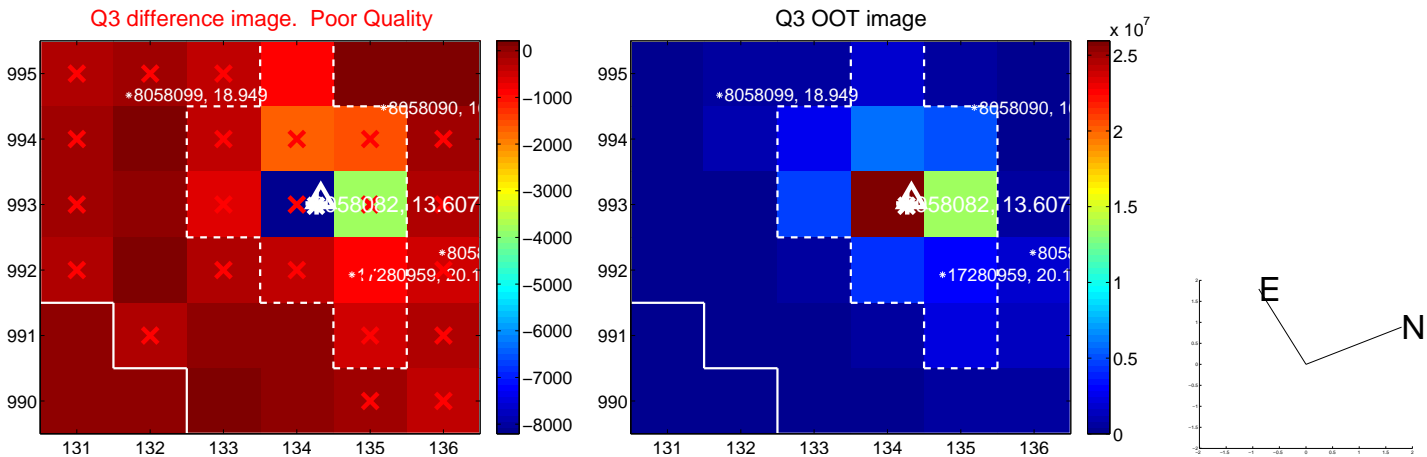
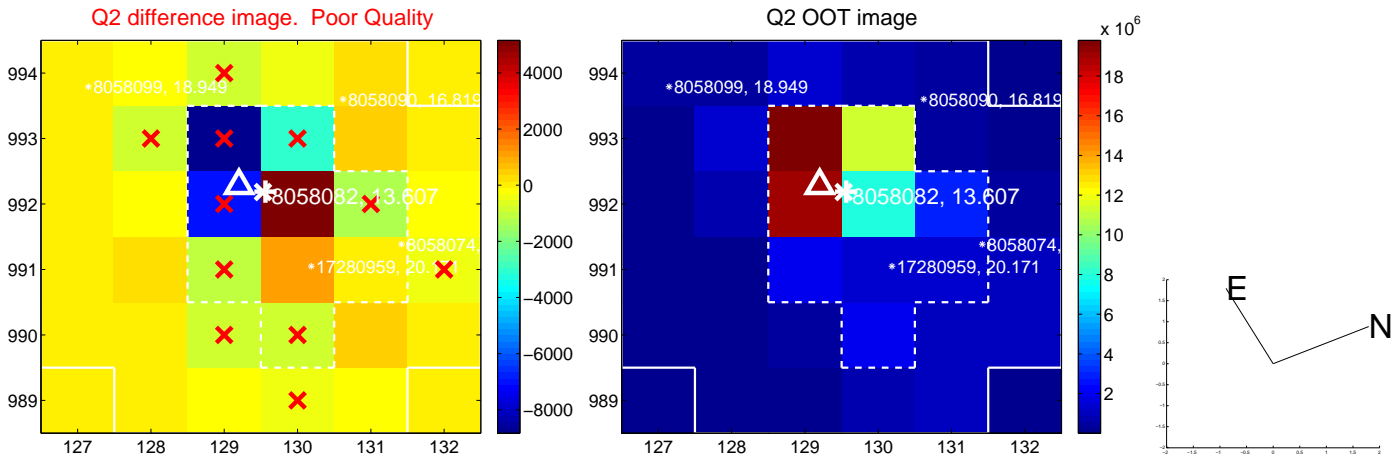
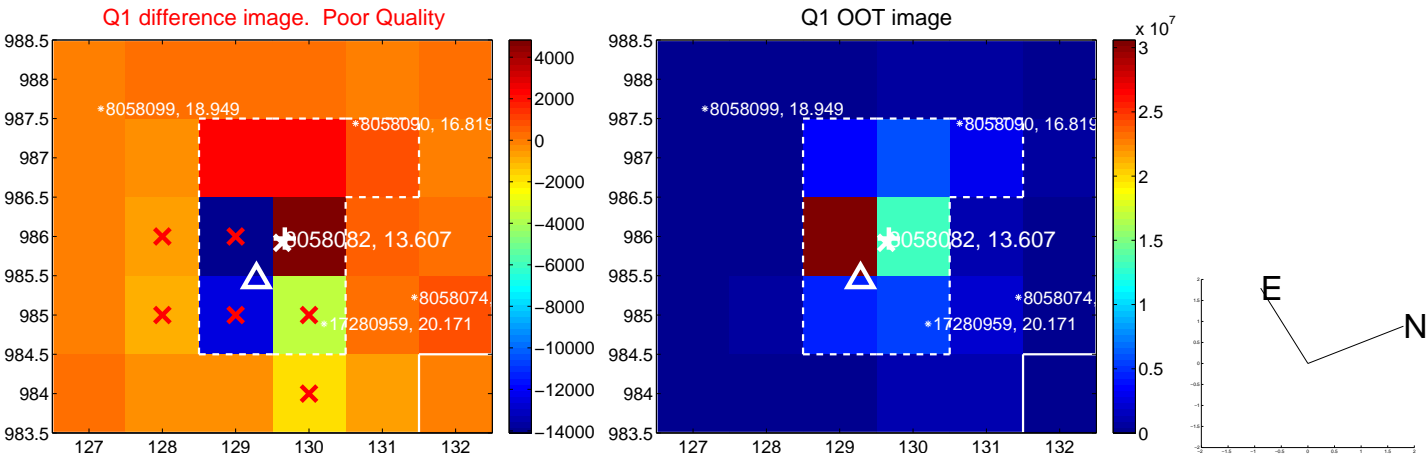
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.115 ± 0.250	0.46	0.052 ± 0.322	0.103 ± 0.260
PRF-fit source offset from KIC position	0.299 ± 0.240	1.25	0.147 ± 0.311	0.260 ± 0.233
photometric centroid source offset	4.08 ± 1.43	2.86	3.09 ± 1.53	2.67 ± 1.29

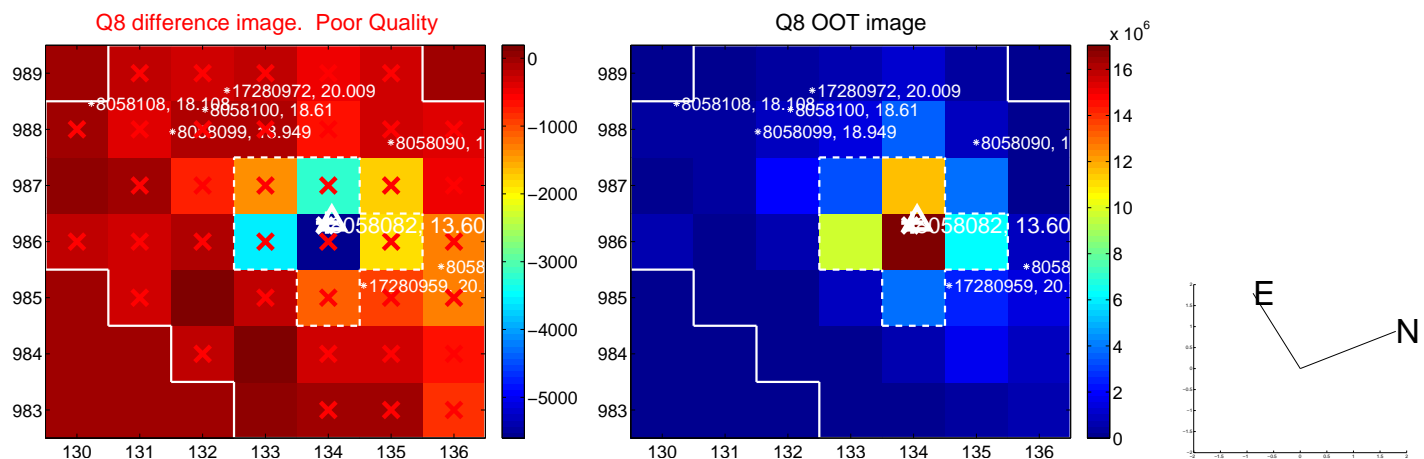
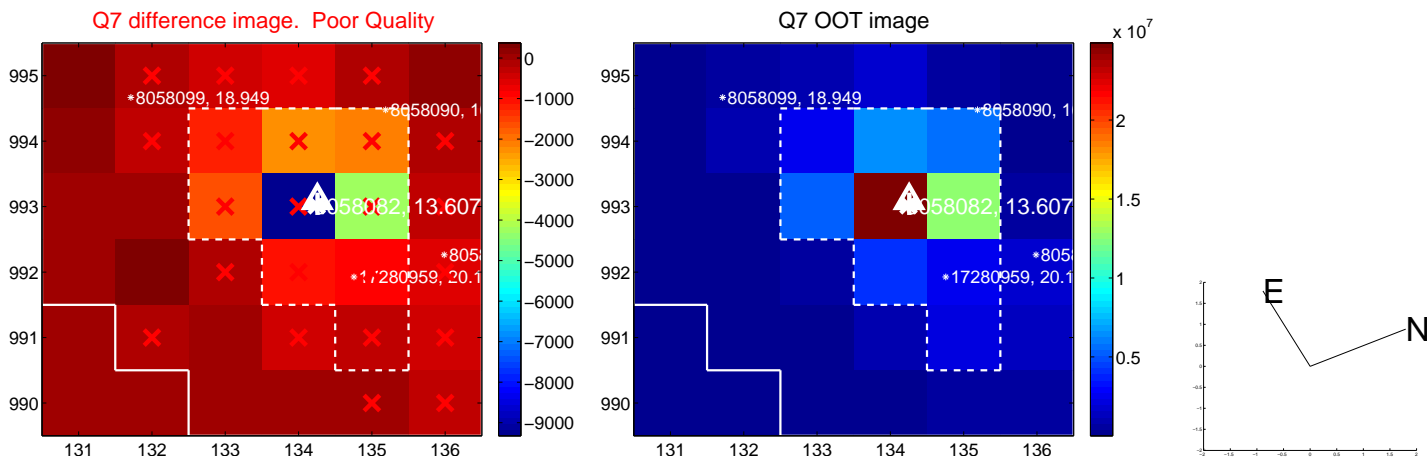
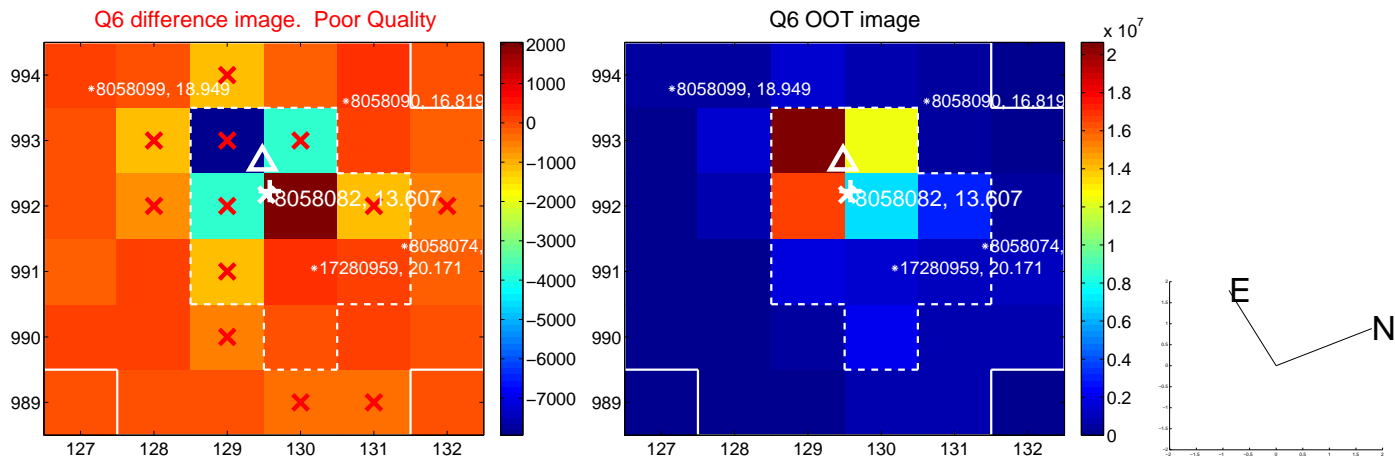
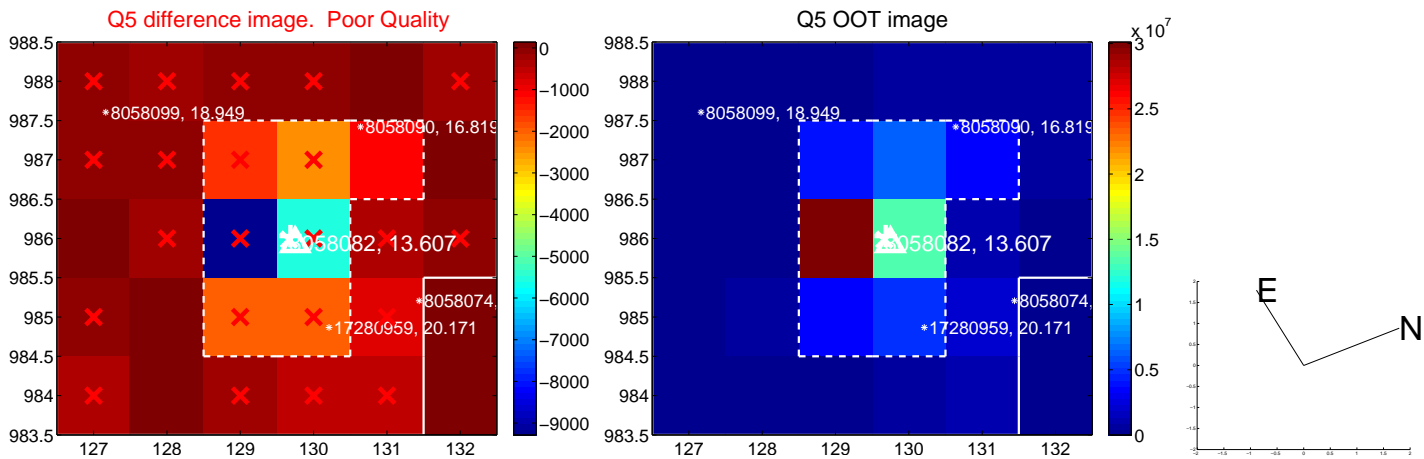


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

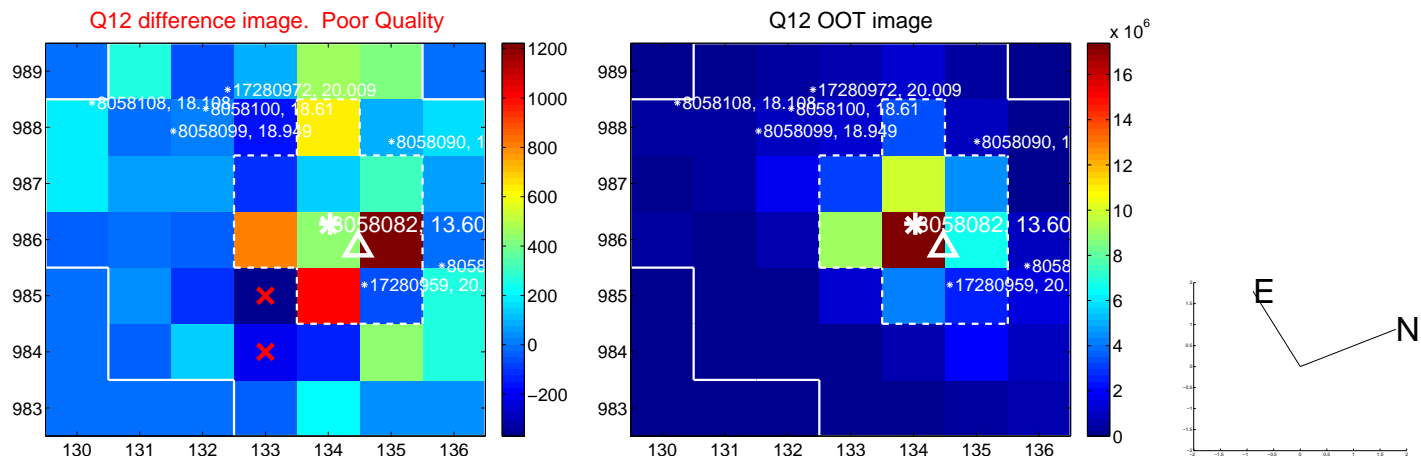
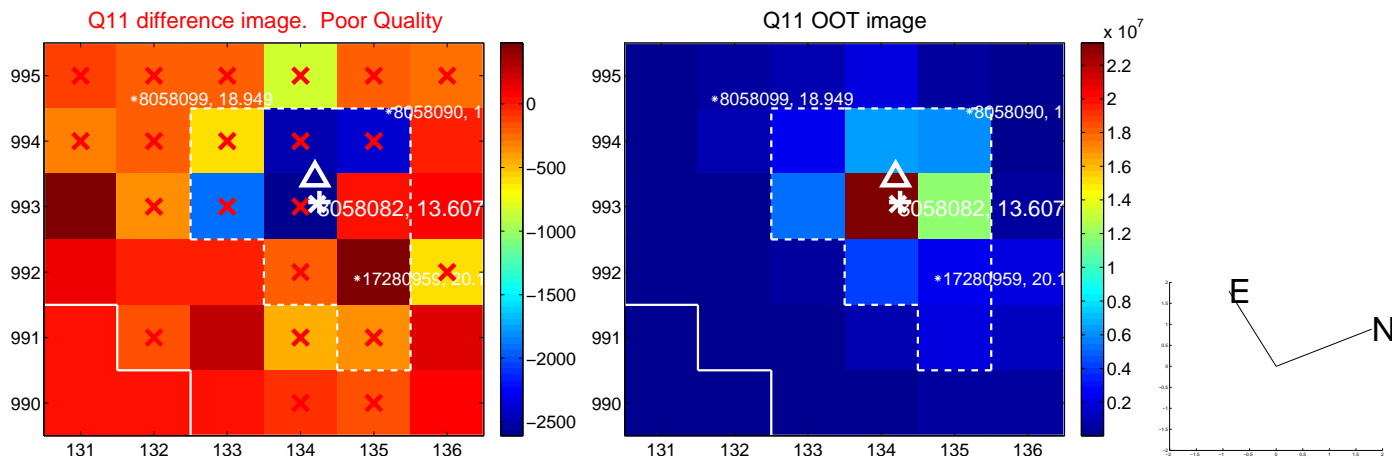
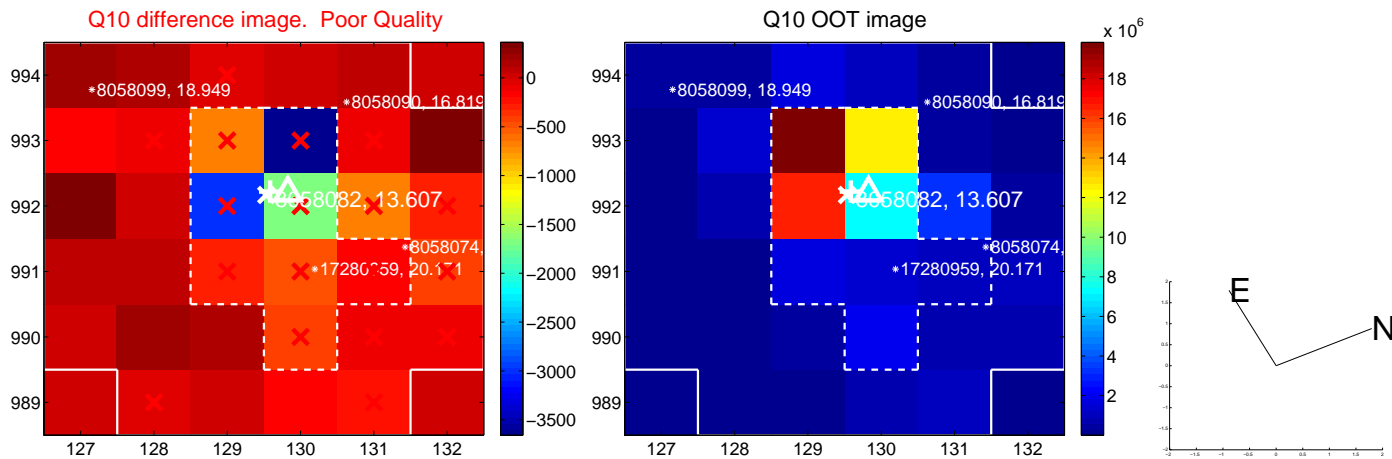
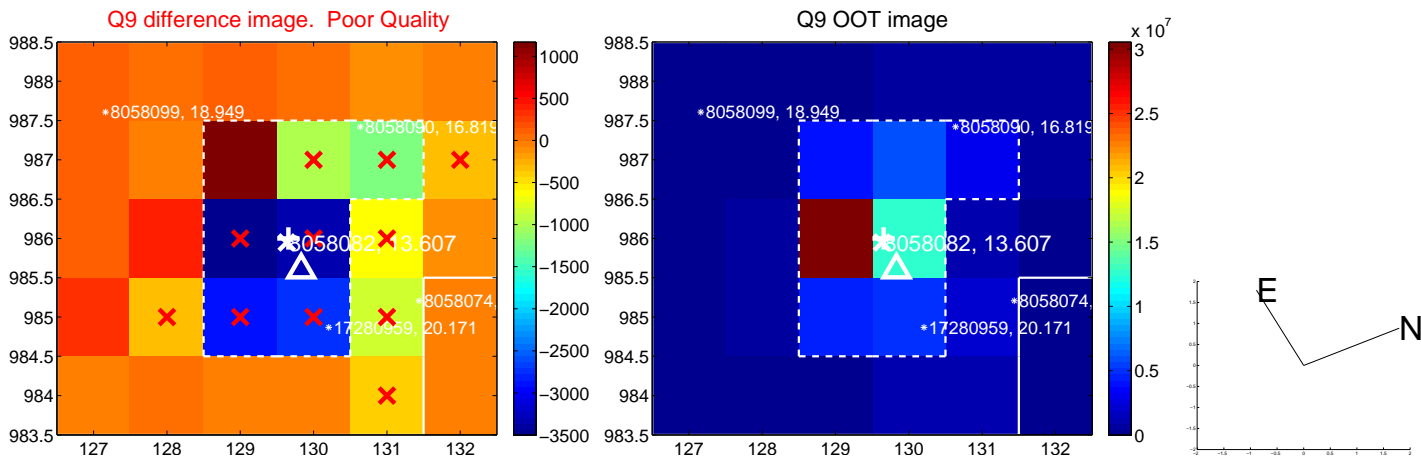
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



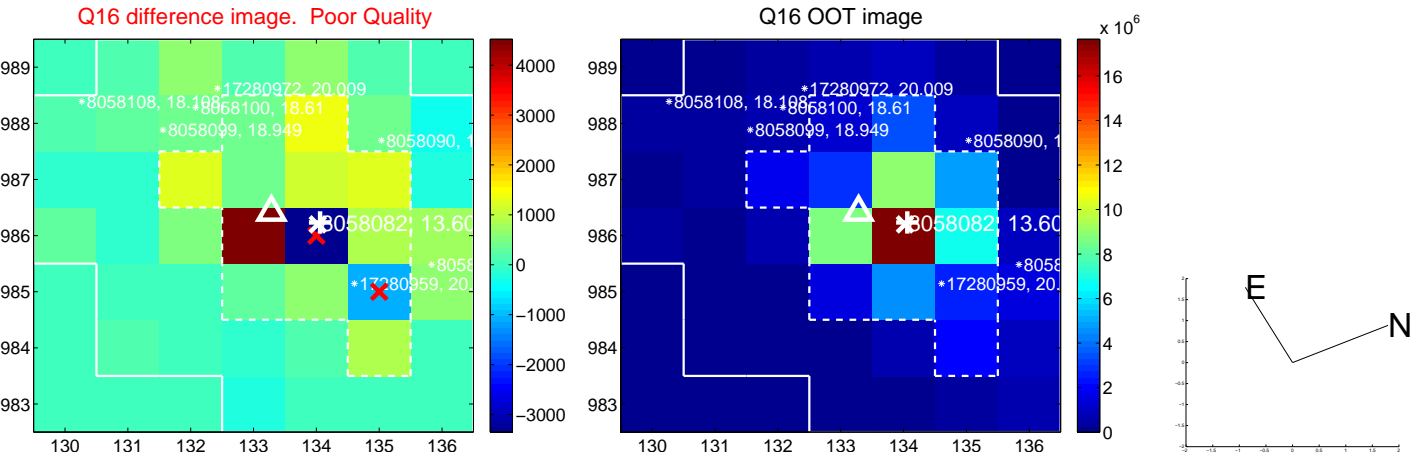
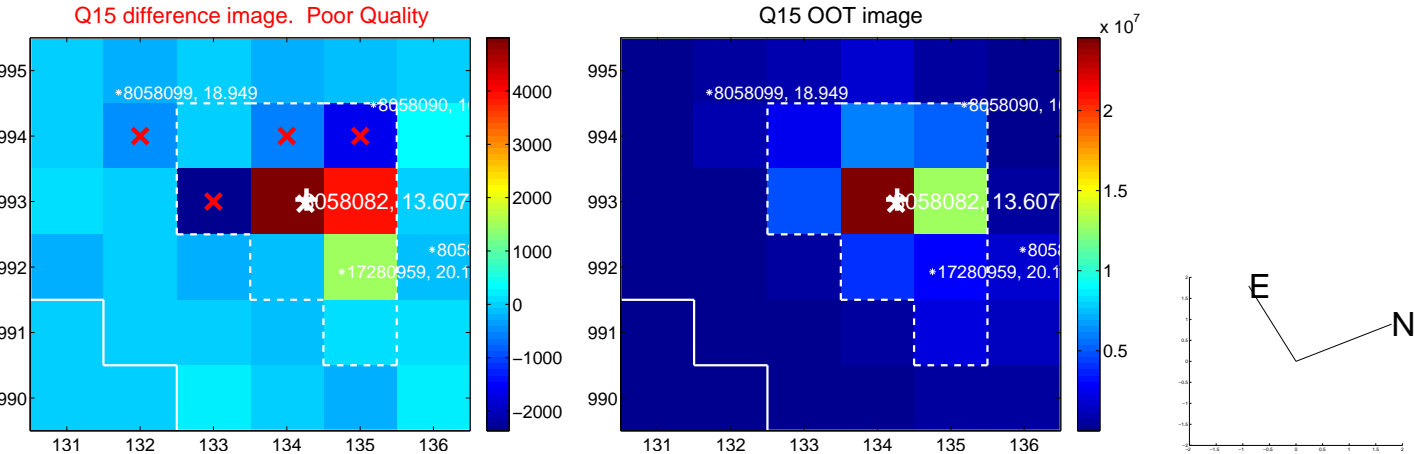
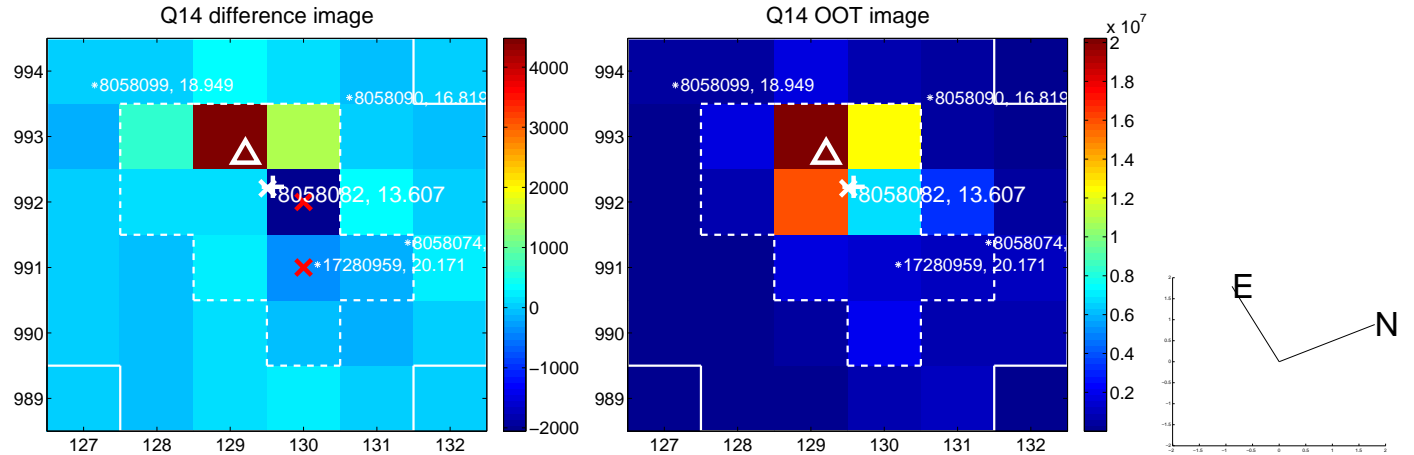
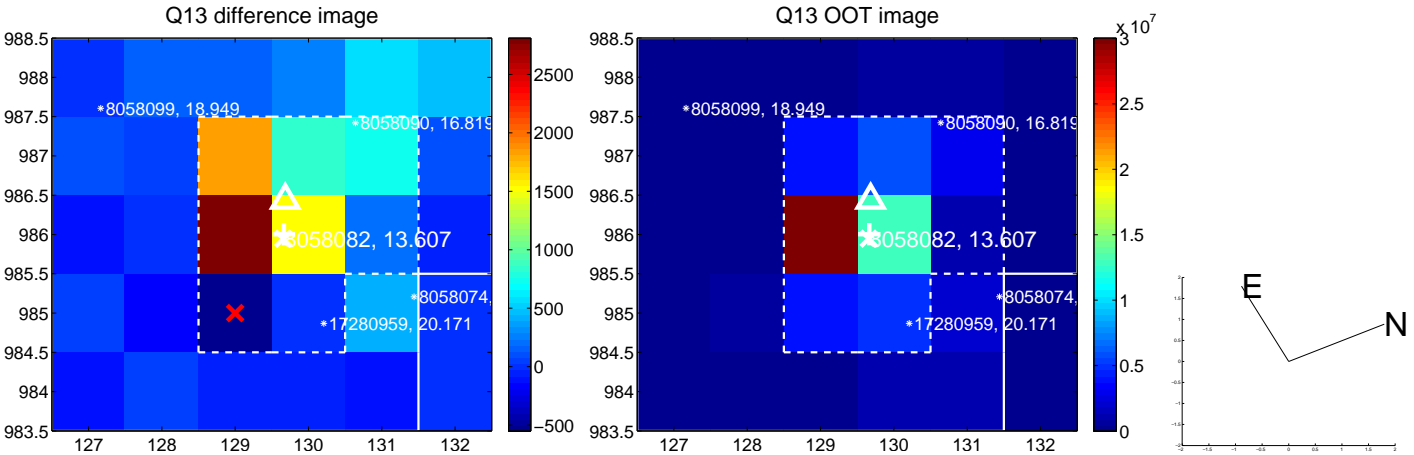
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



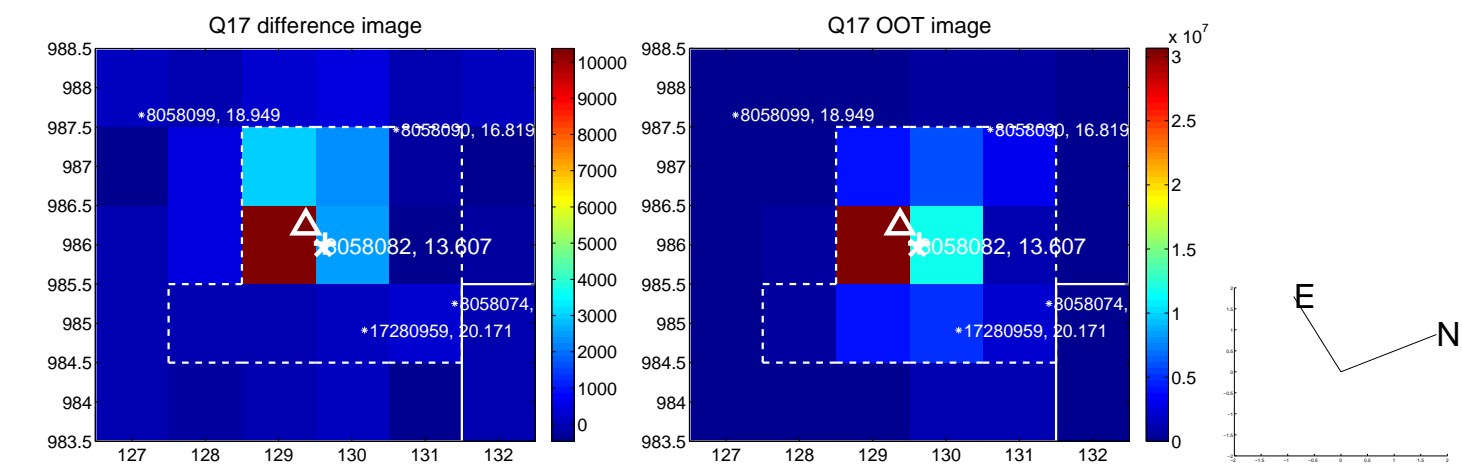
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



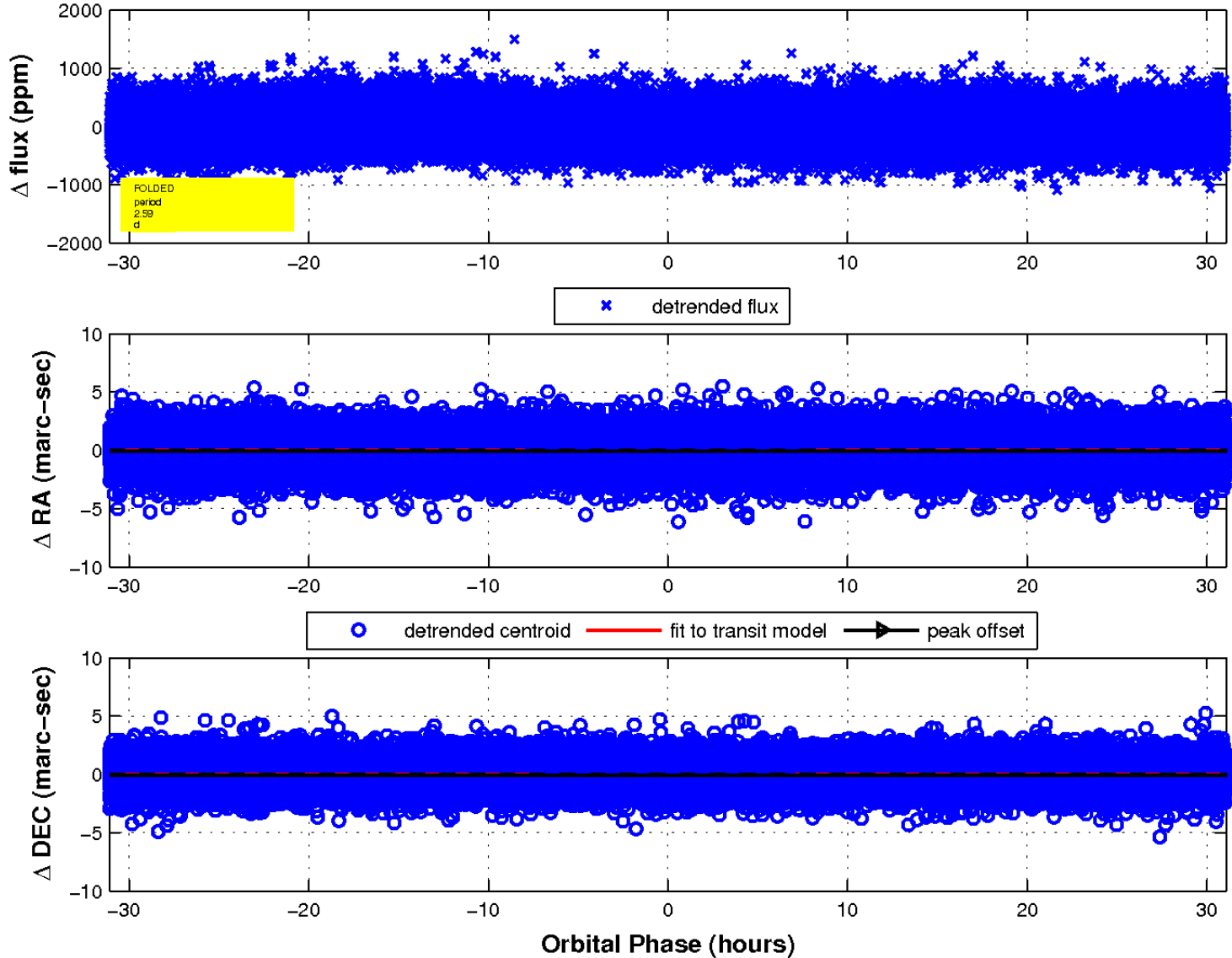
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

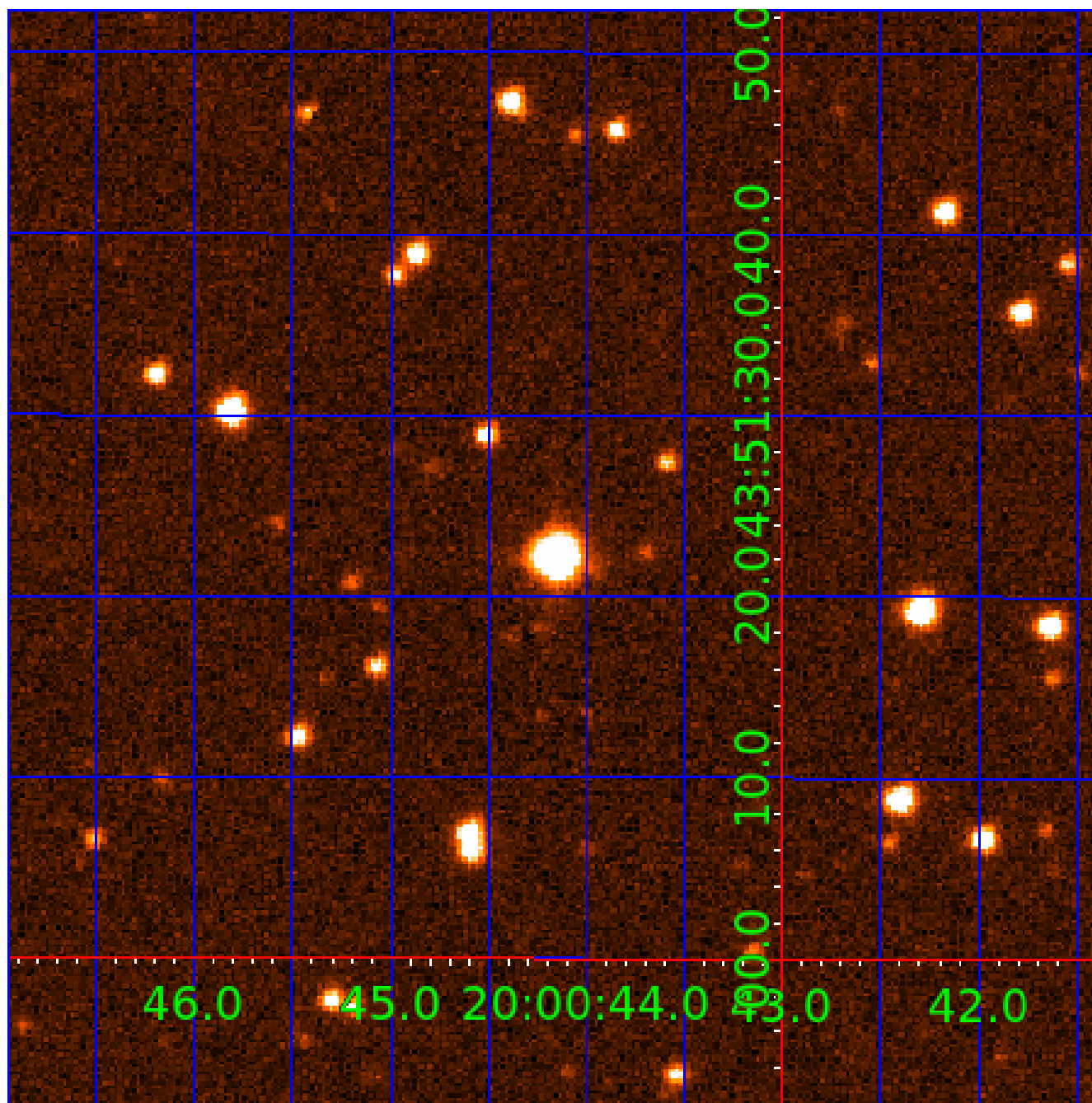


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 008058082

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})
008058082-01	OBS	No	5.177929	136.660530	64.2	6.686	9.3	9.4	2.20	6032	2.13	1538.42
008058082-02	OBS	No	2.591245	131.819275	18.5	18.727	9.2	4.9	2.20	6032	0.95	3872.04
008058082-03	OBS	No	31.051041	141.142256	245.0	3.742	10.7	11.2	2.20	6032	3.91	141.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008058082-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
008058082-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008058082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

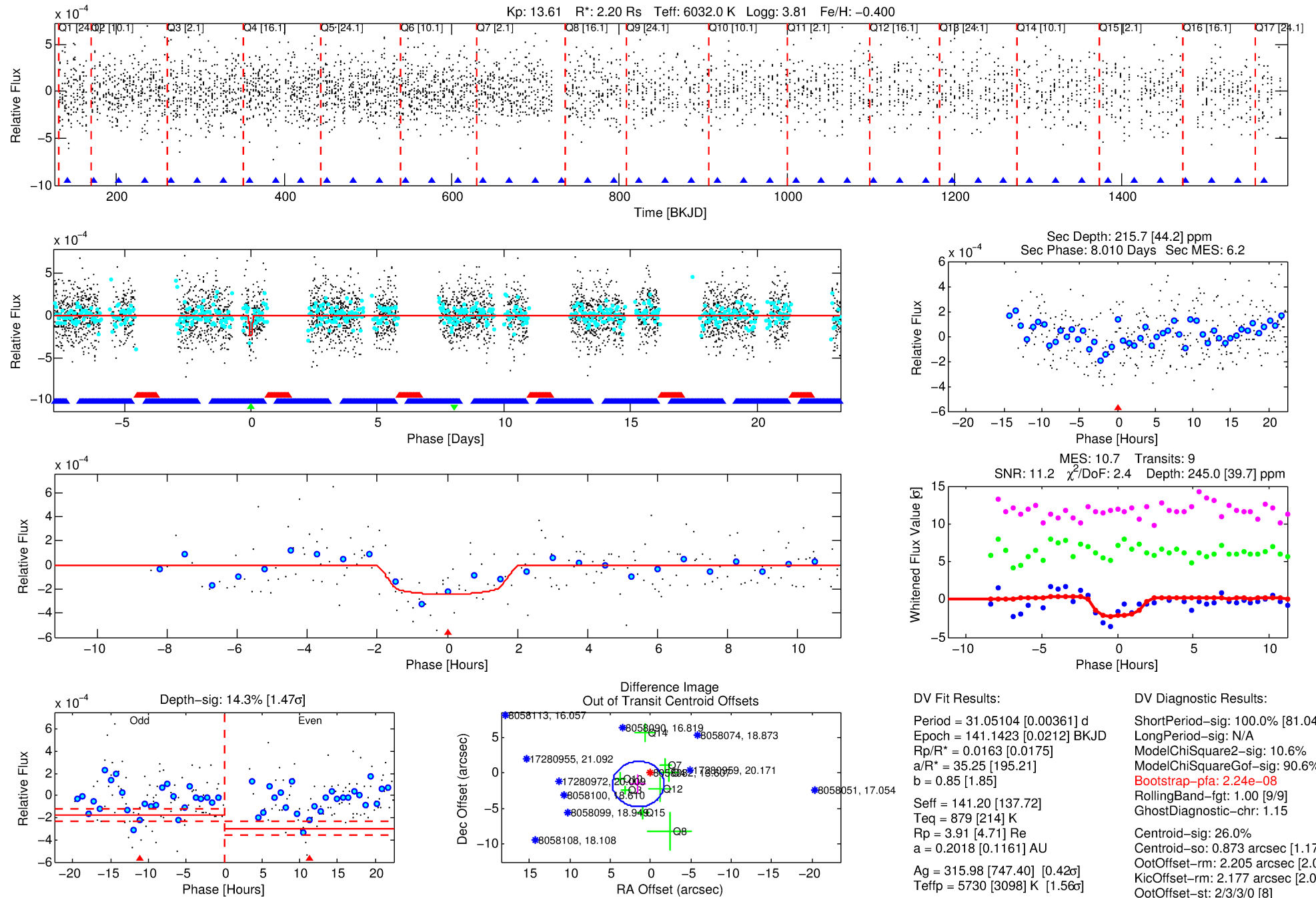
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008058082-03

No Significant Match Found

DV One-Page Summary

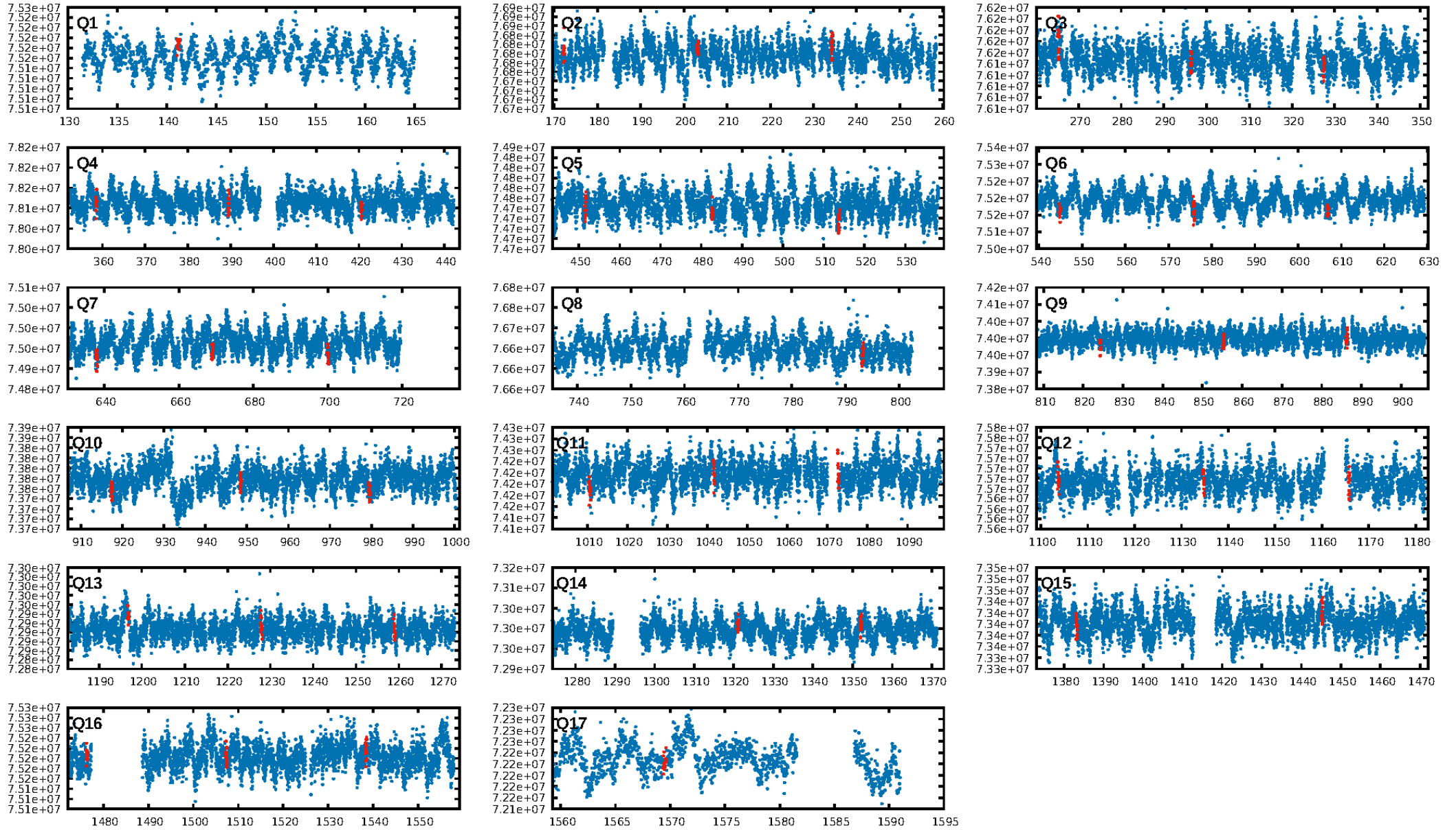
KIC: 8058082 Candidate: 3 of 3 Period: 31.051 d



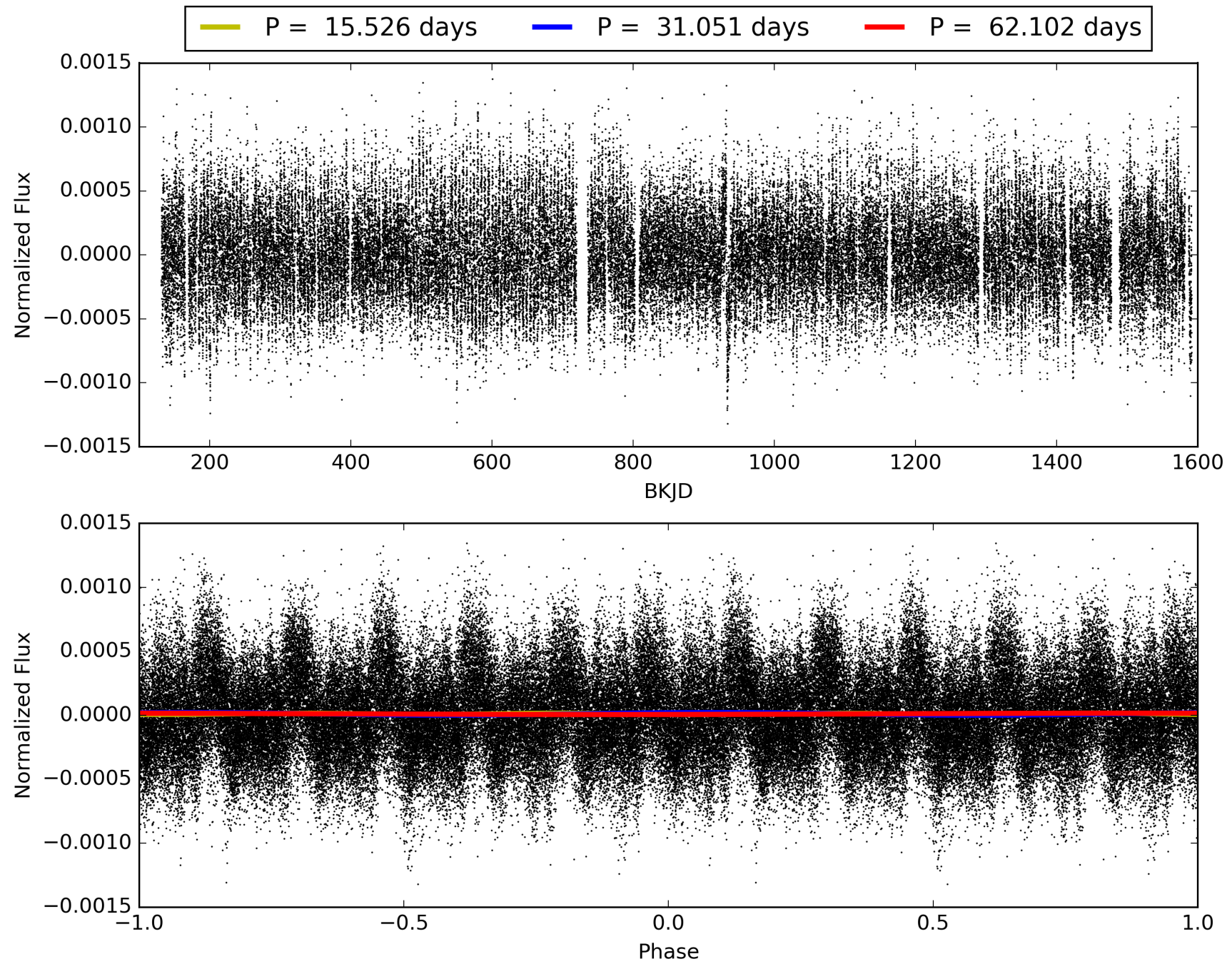
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:22:28 Z

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

TCE 008058082-03, PDC Light Curves

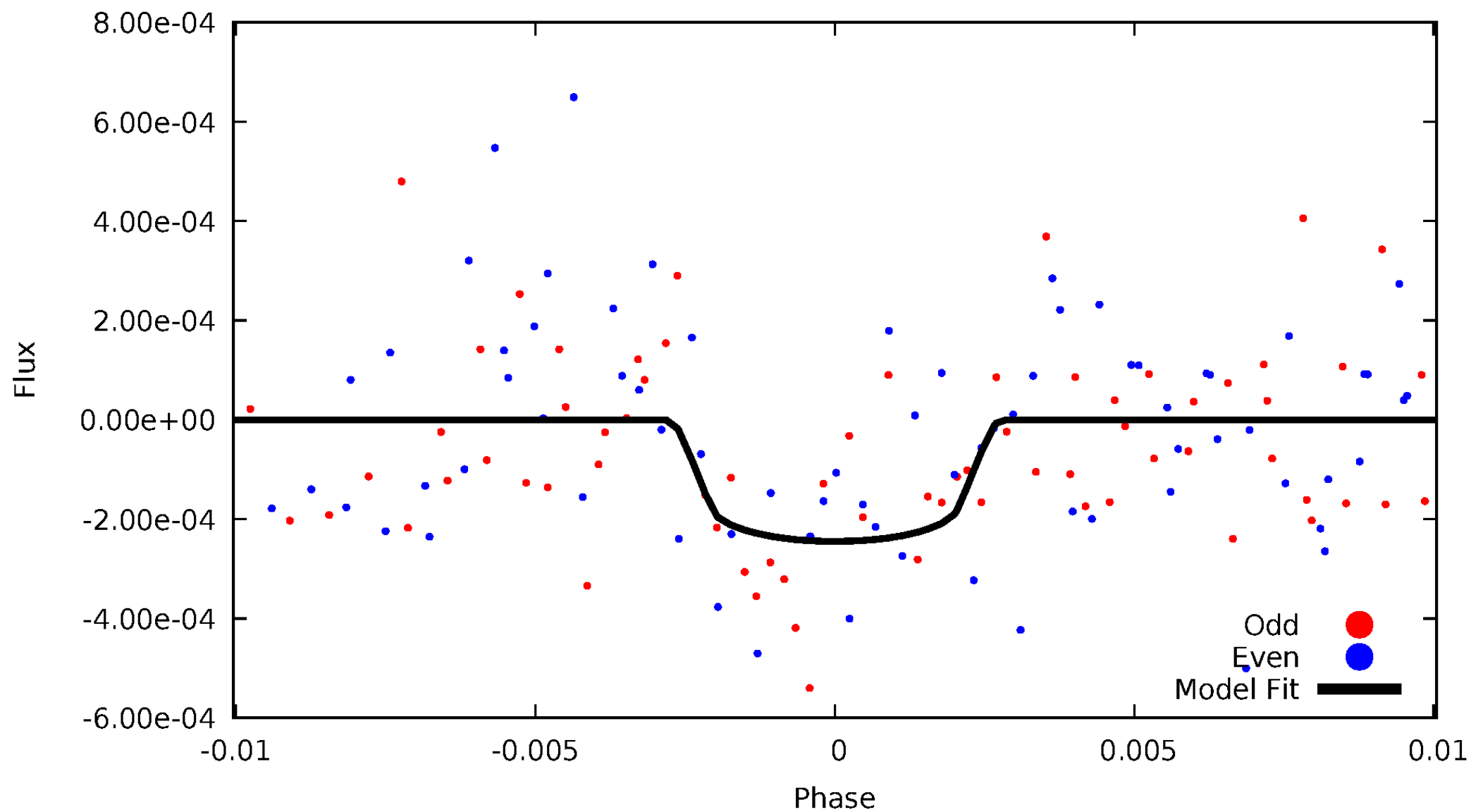


TCE 008058082-03



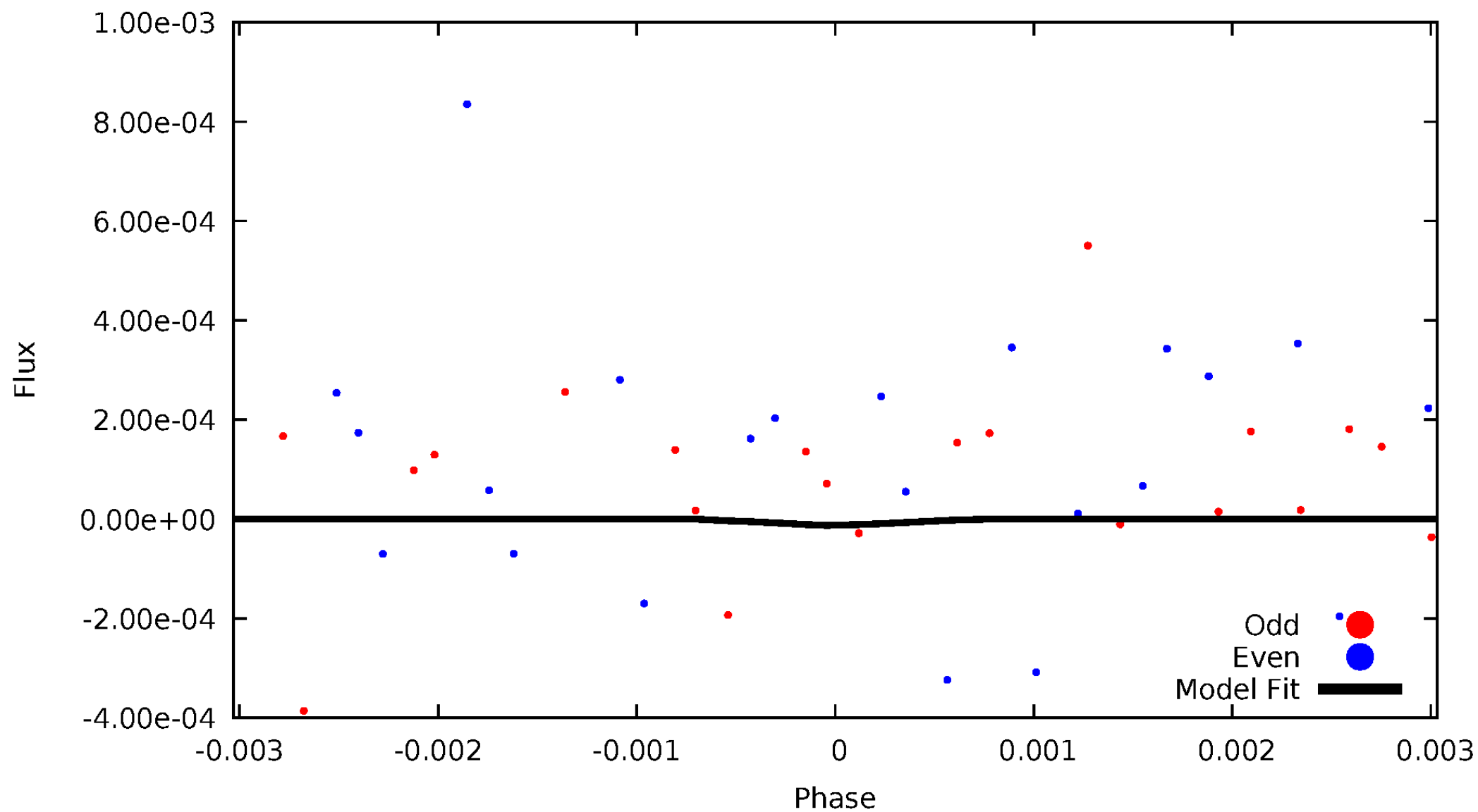
DV Odd/Even

TCE 008058082-03

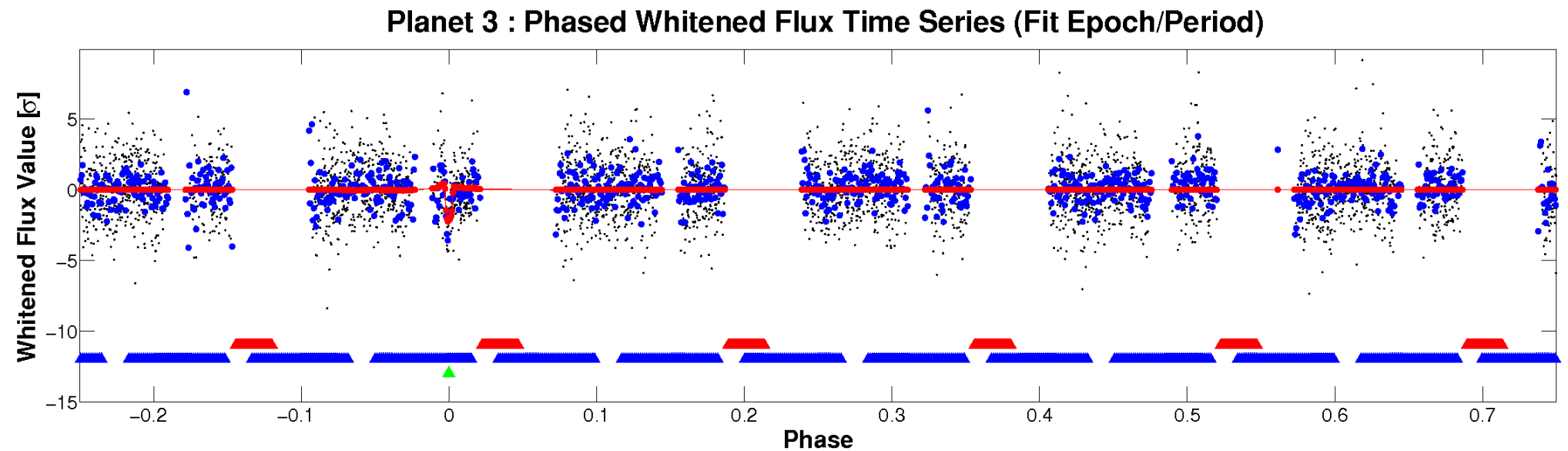
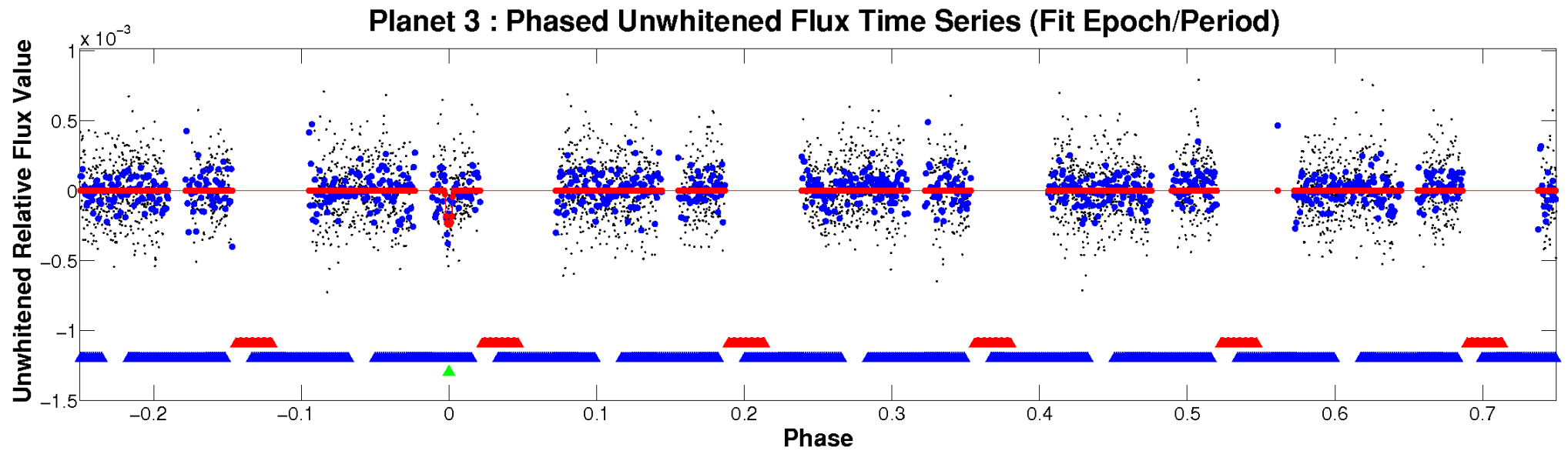


ALT Odd/Even

TCE 008058082-03

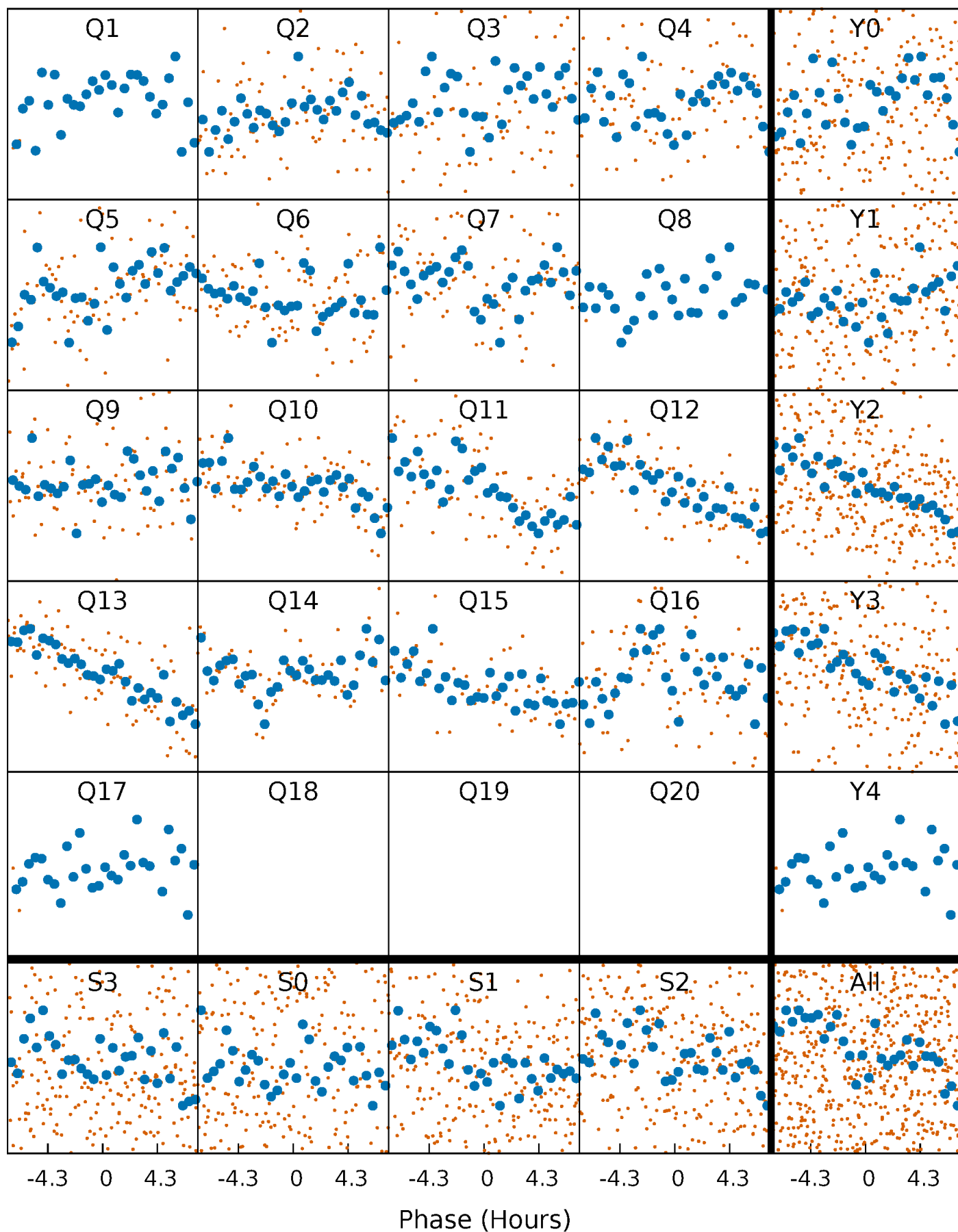


Non-Whitened Vs. Whitened Light Curve



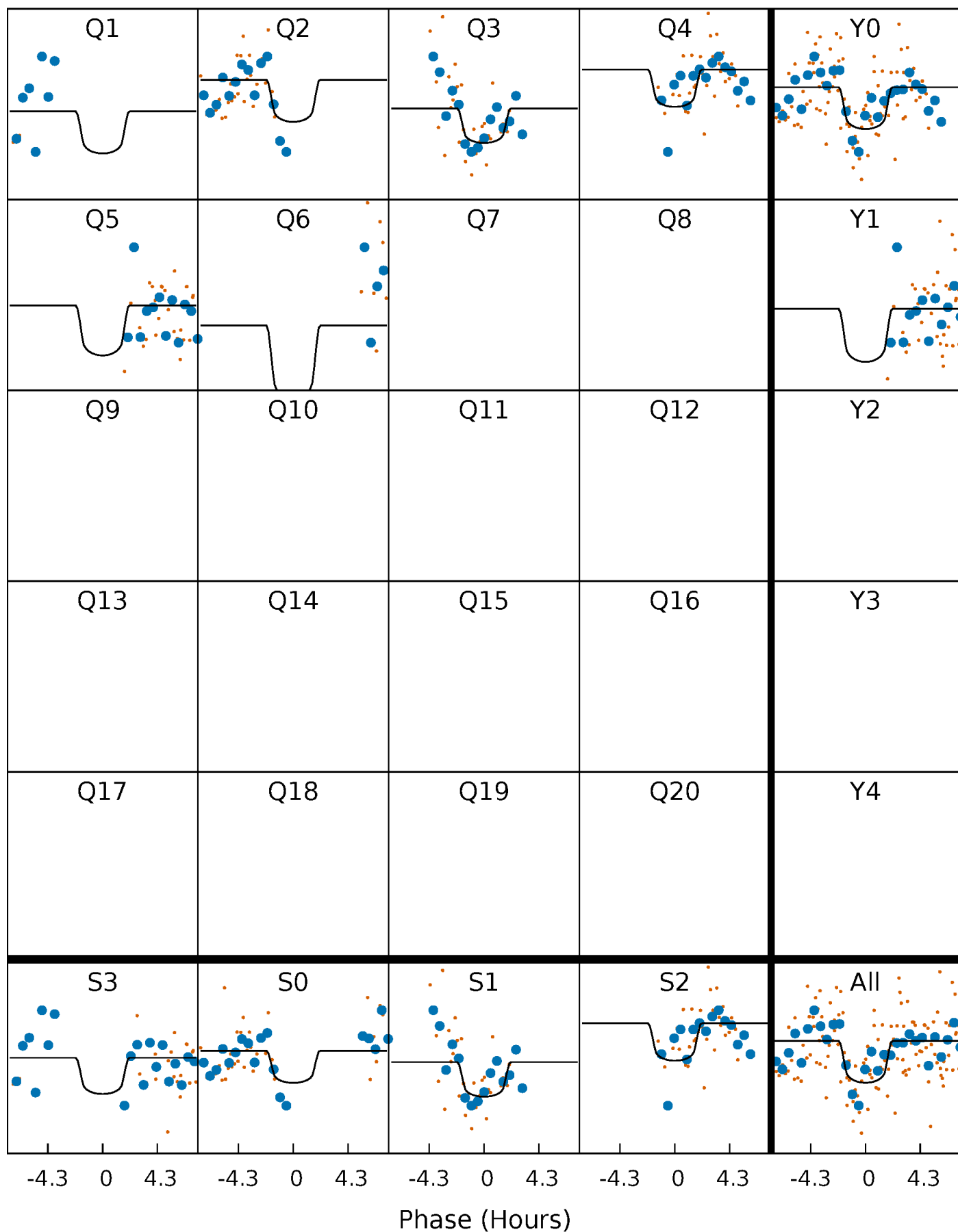
PDC Quarter-Phased Transit Curves

TCE 008058082-03 P= 31.051041 Days $T_0=141.142256$ (BKJD)



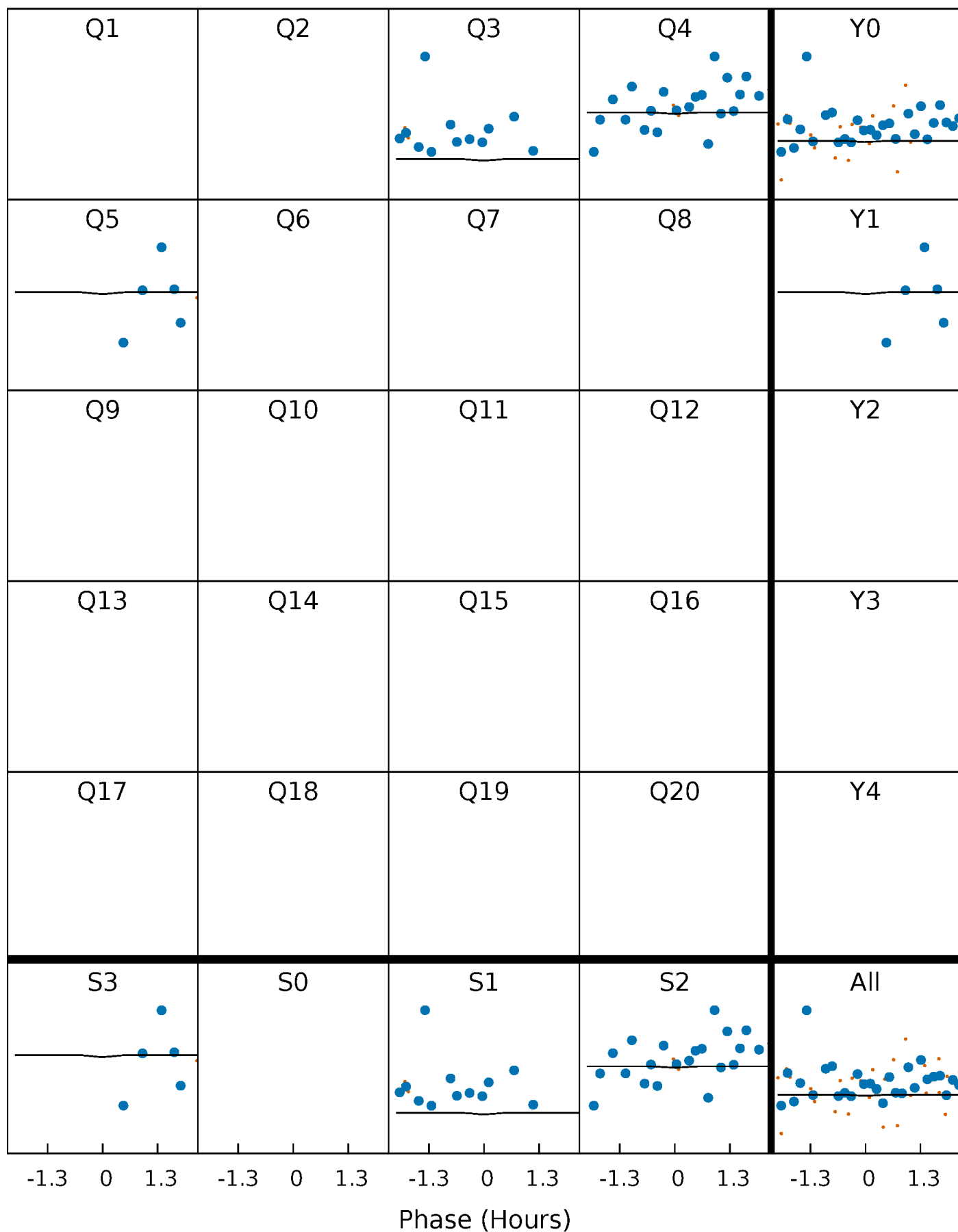
DV Quarter-Phased Transit Curves

TCE 008058082-03 P= 31.051041 Days $T_0=141.142256$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

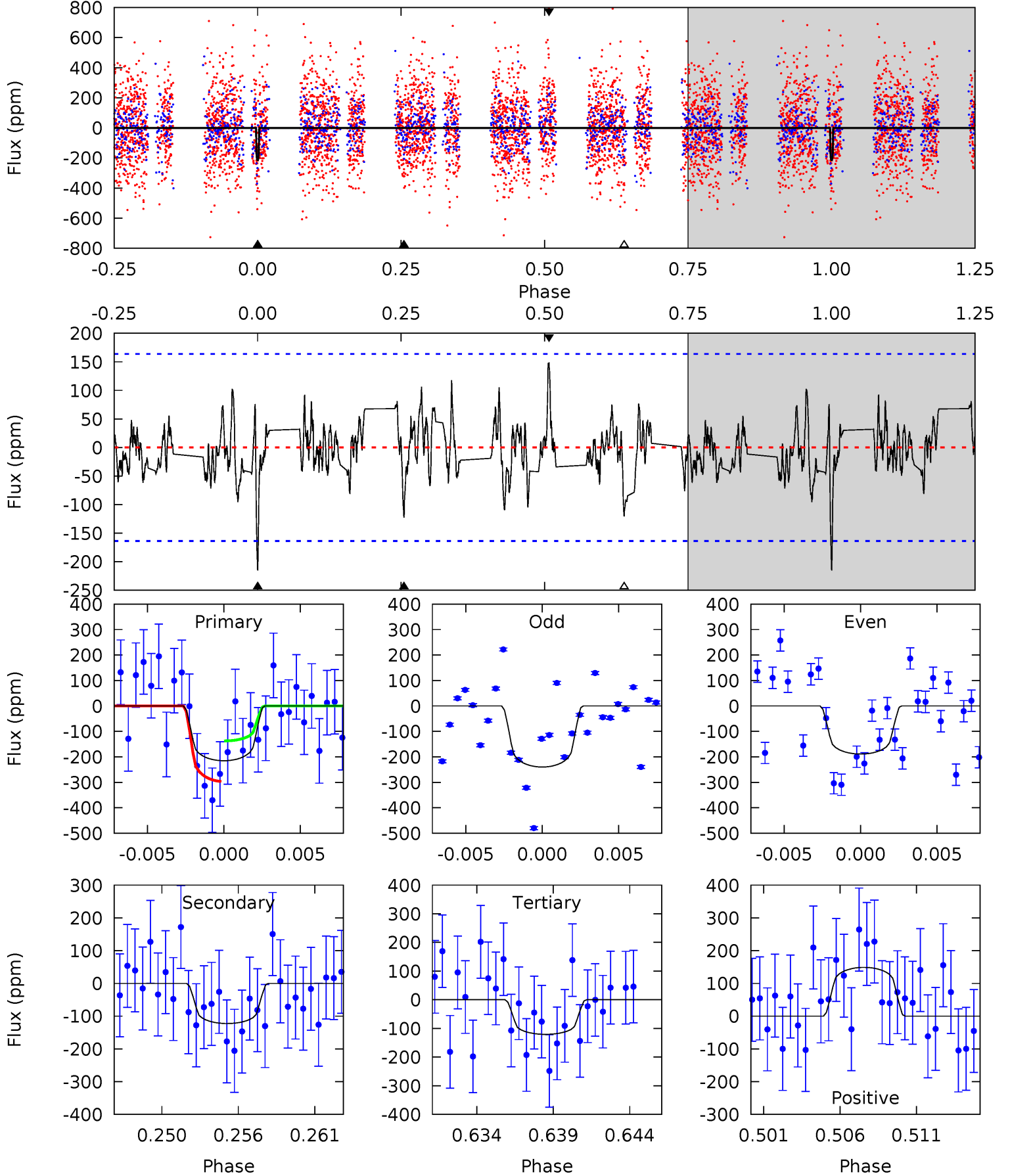
TCE 008058082-03 $P = 31.045846$ Days $T_0 = 141.248651$ (BKJD)



DV Model-Shift Uniqueness Test

008058082-03, P = 31.051041 Days, E = 110.091215 Days

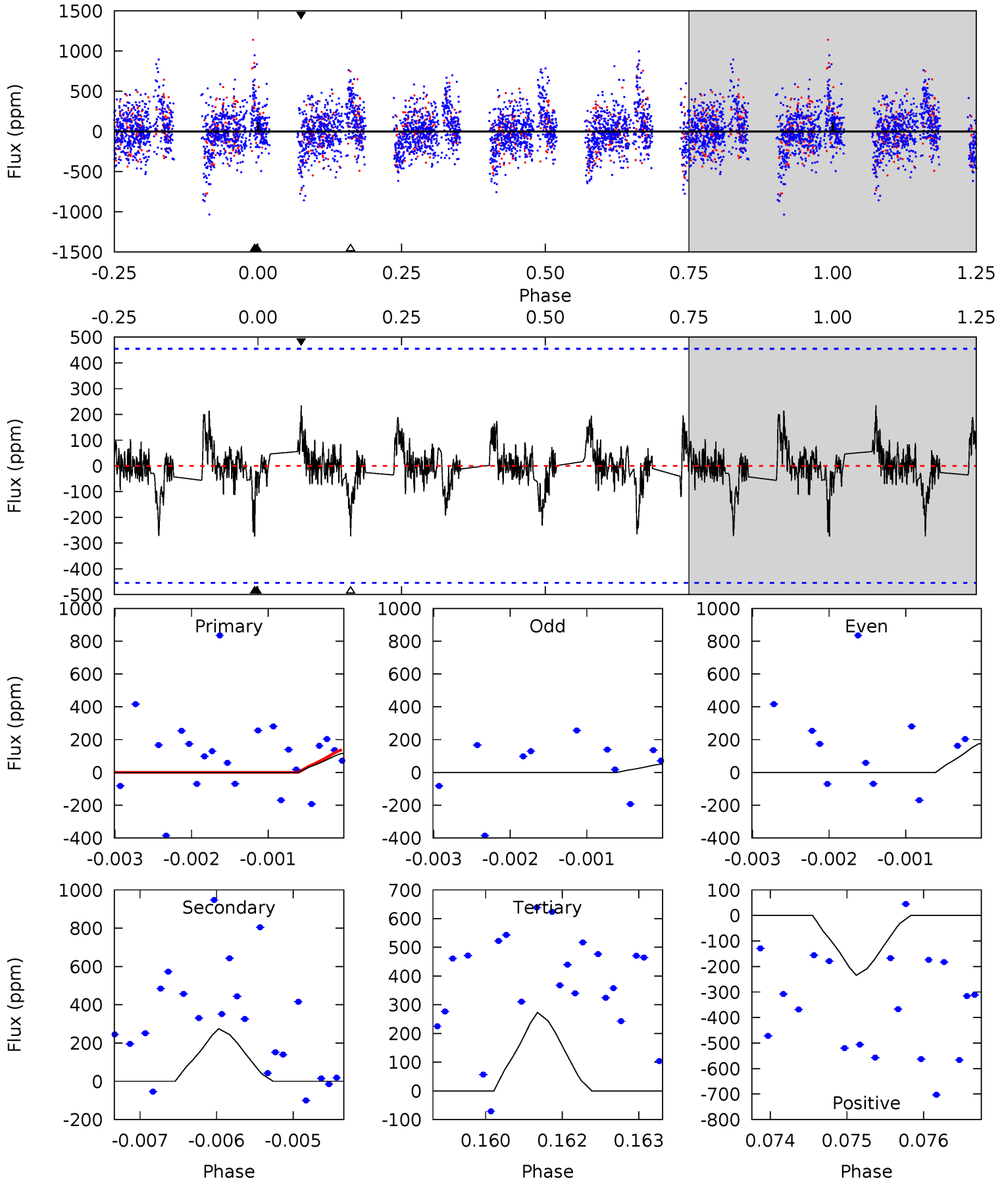
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.77	3.85	3.79	4.68	5.15	2.79	1.27	2.97	2.08	0.06	-0.83	0.81	0.96	0.41	2.52



Alt Model-Shift Uniqueness Test

008058082-03, P = 31.045846 Days, E = 110.202805 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.39	3.28	3.27	2.80	5.43	3.25	0.86	-1.88	-1.41	0.02	0.48	0.73	0.90	0.46	0.38



Stellar Parameters For KIC 008058082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6032^{+199}_{-181}	$3.808^{+0.584}_{-0.146}$	$-0.400^{+0.300}_{-0.300}$	$2.202^{+0.511}_{-1.192}$	$1.136^{+0.166}_{-0.250}$	$0.150^{+1.036}_{-0.058}$
	+3%/-3%	+15%/-4%	+75%/-75%	+23%/-54%	+15%/-22%	+692%/-39%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008058082-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-123 ± 32	$4.06^{+3.93}_{-2.57}$	1202^{+102}_{-161}	4667^{+3011}_{-963}	155^{+1070}_{-115}
Alt.	-275 ± 84	$2.72^{+3.49}_{-1.89}$	1199^{+102}_{-184}	6742^{+10764}_{-1989}	780^{+8255}_{-622}

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

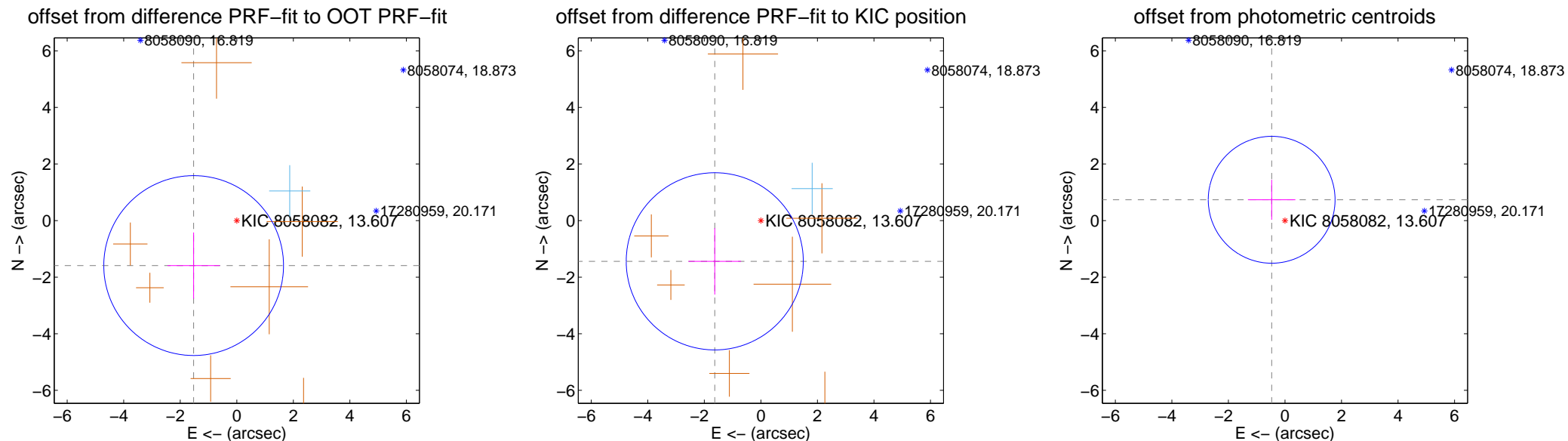
DV Centroid Data

Supplemental centroid analysis for 008058082-03. Kepler magnitude: 13.61. Transit SNR 11.24

There are 1 quarters with good PRF difference image offsets

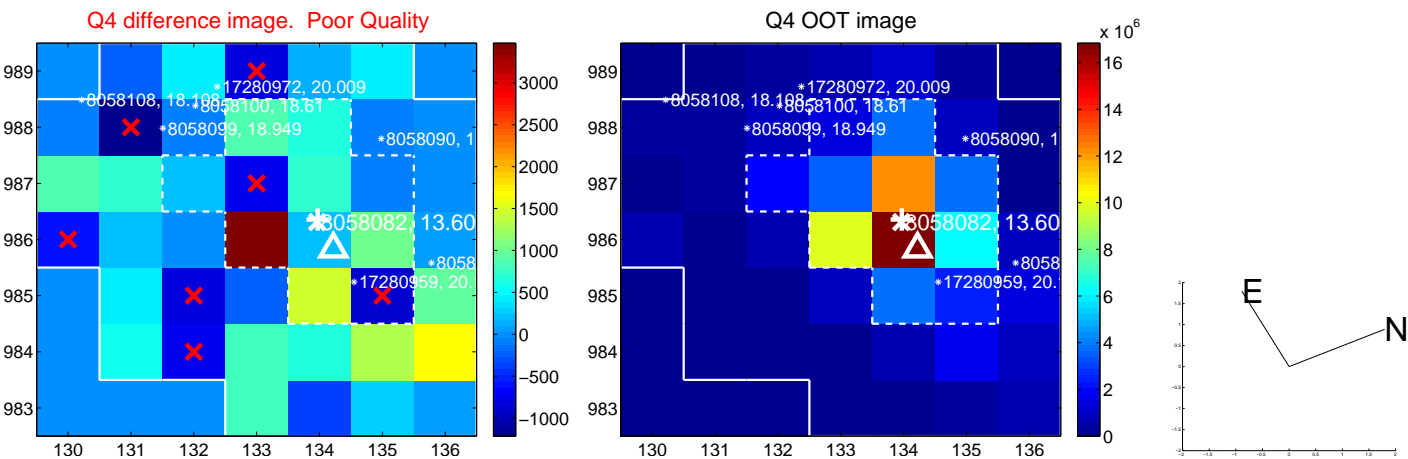
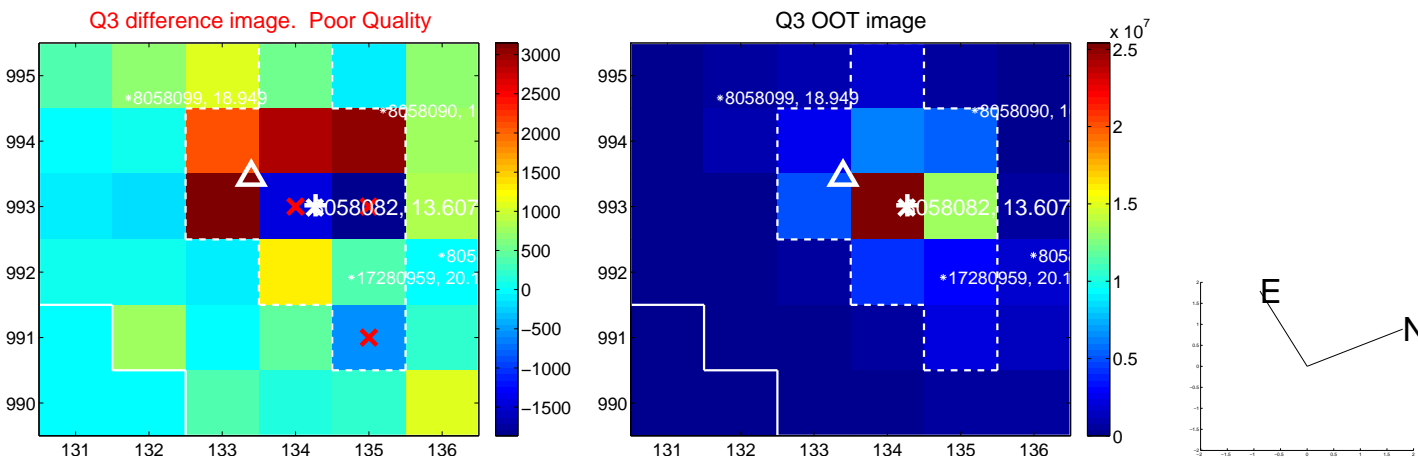
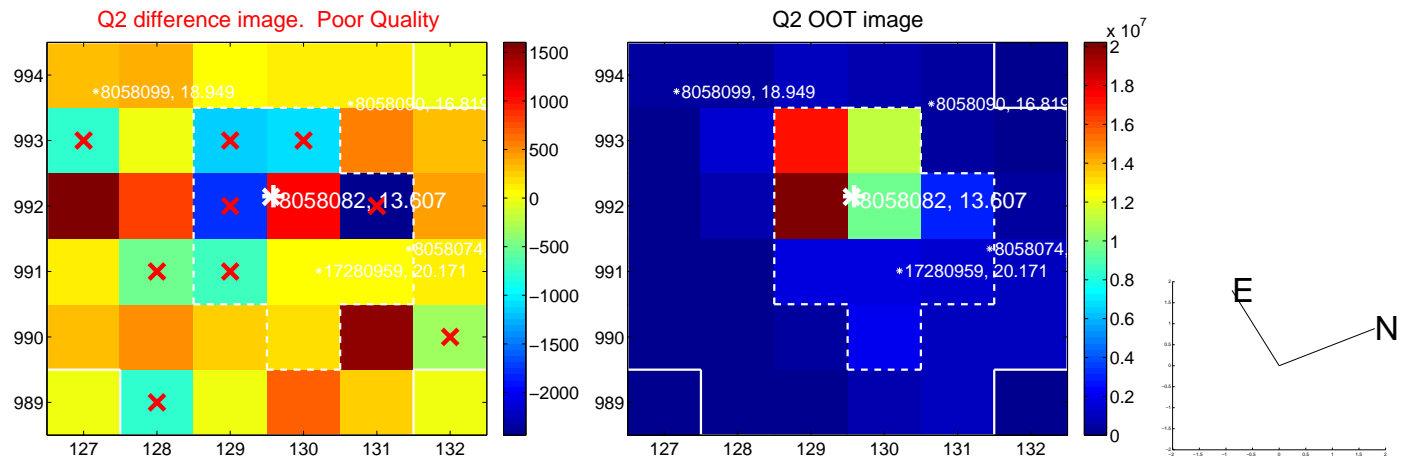
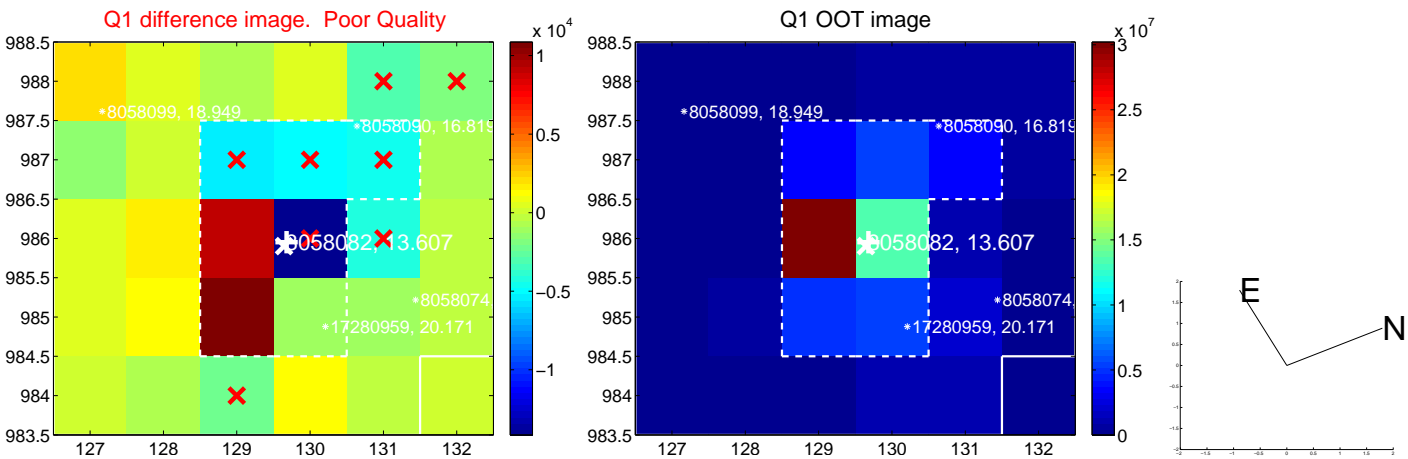
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.205 ± 1.060	2.08	1.527 ± 0.925	-1.591 ± 1.170
PRF-fit source offset from KIC position	2.177 ± 1.044	2.09	1.632 ± 0.930	-1.441 ± 1.174
photometric centroid source offset	0.87 ± 0.75	1.17	0.47 ± 0.84	0.74 ± 0.71

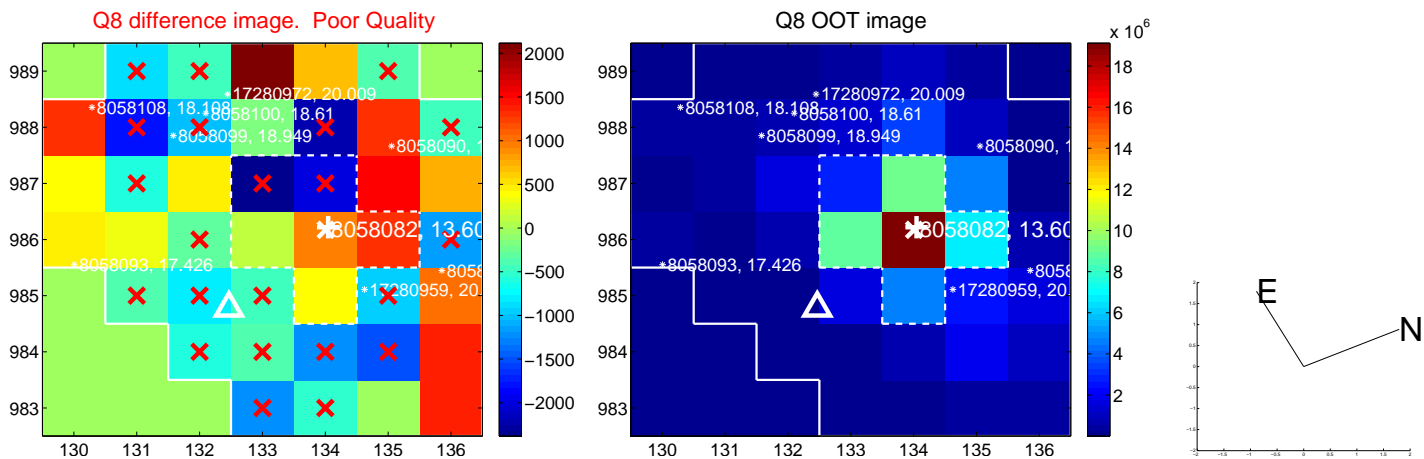
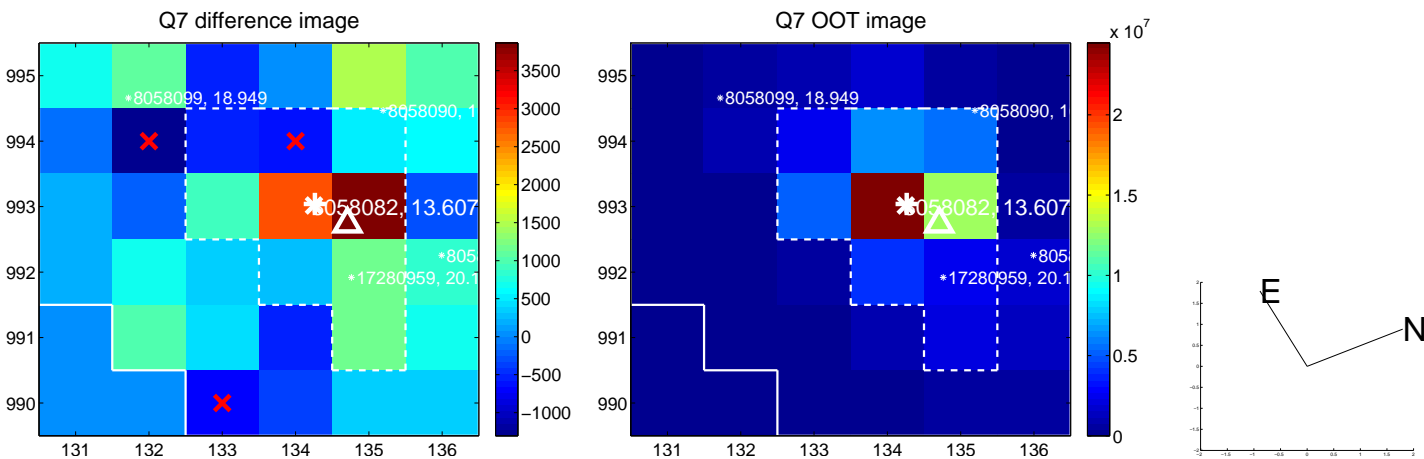
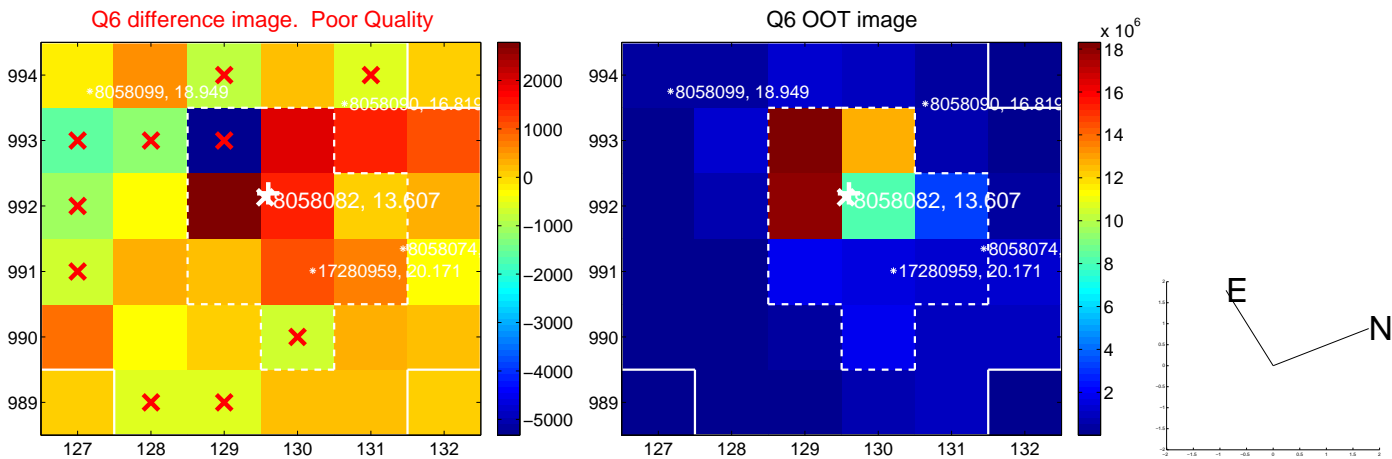
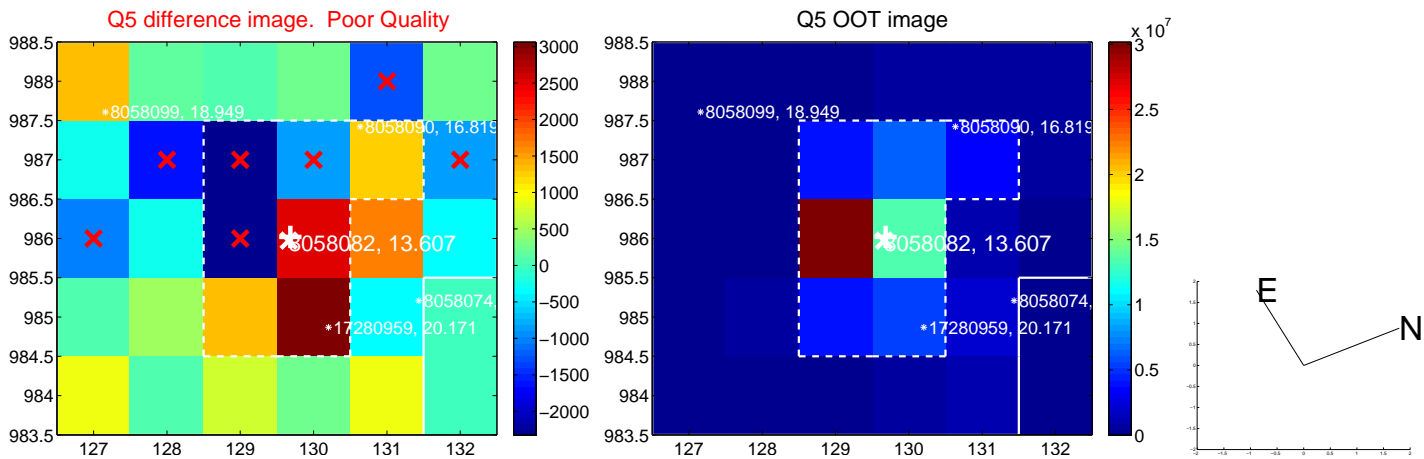


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

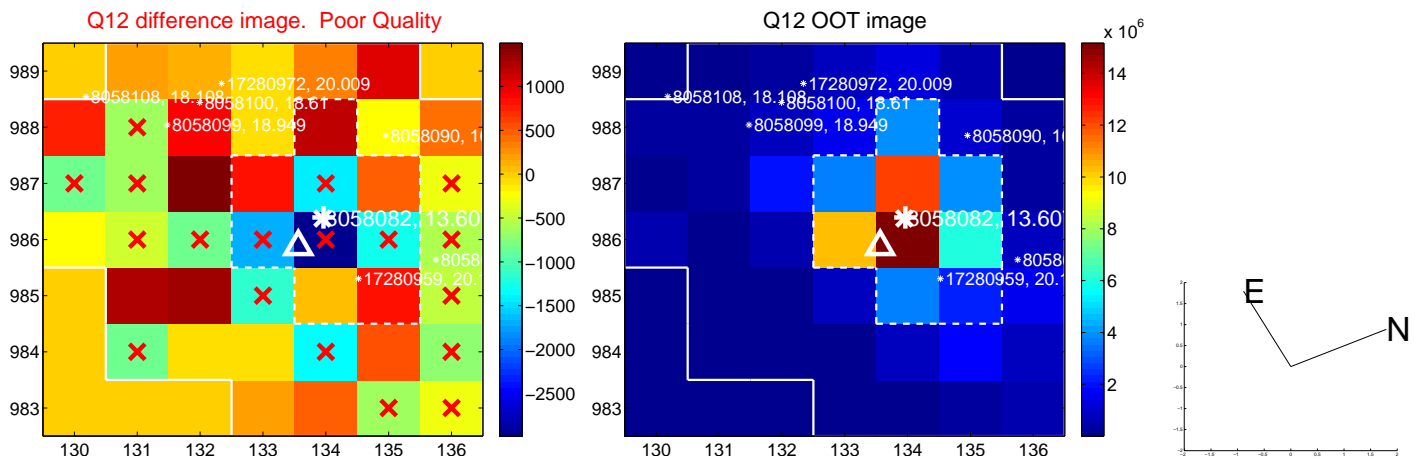
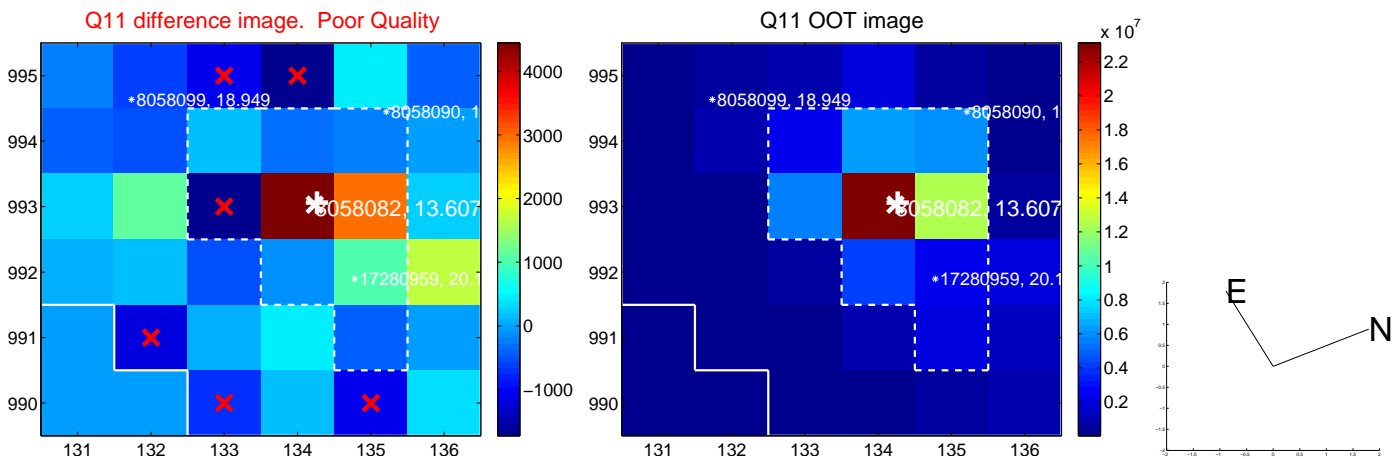
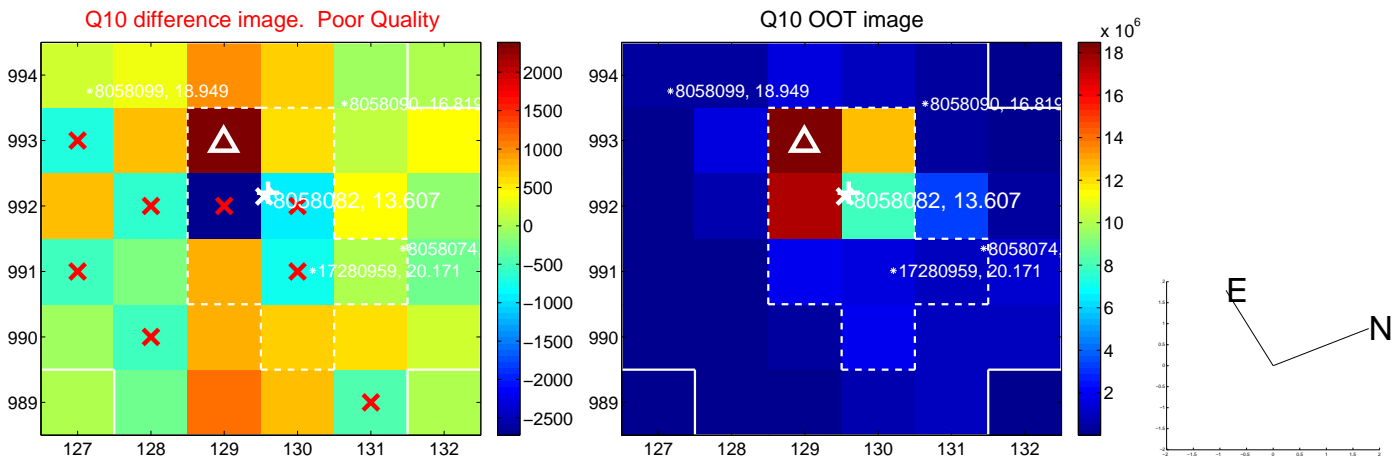
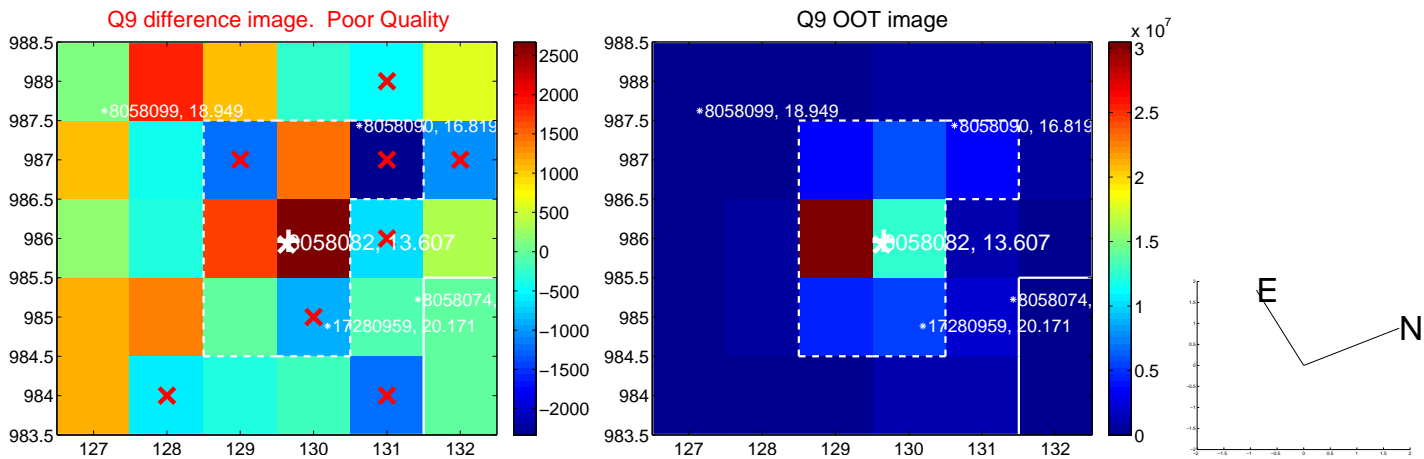
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



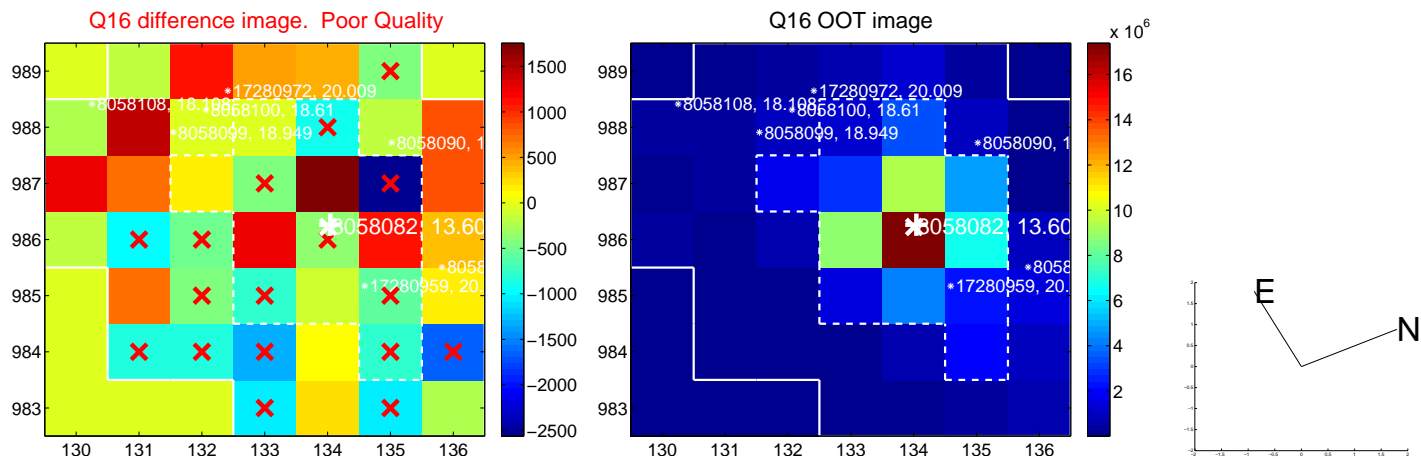
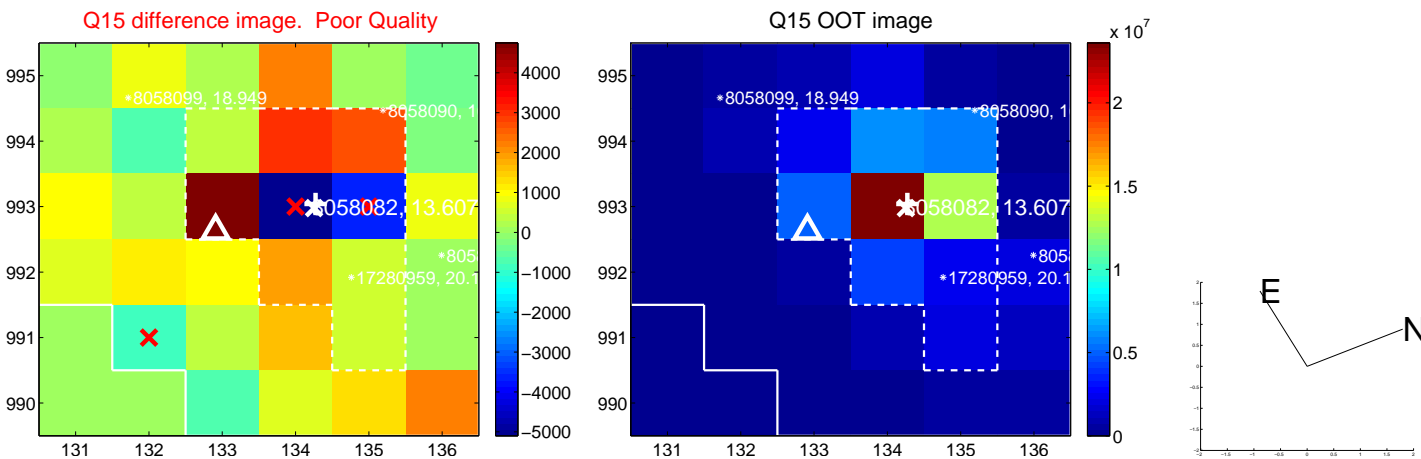
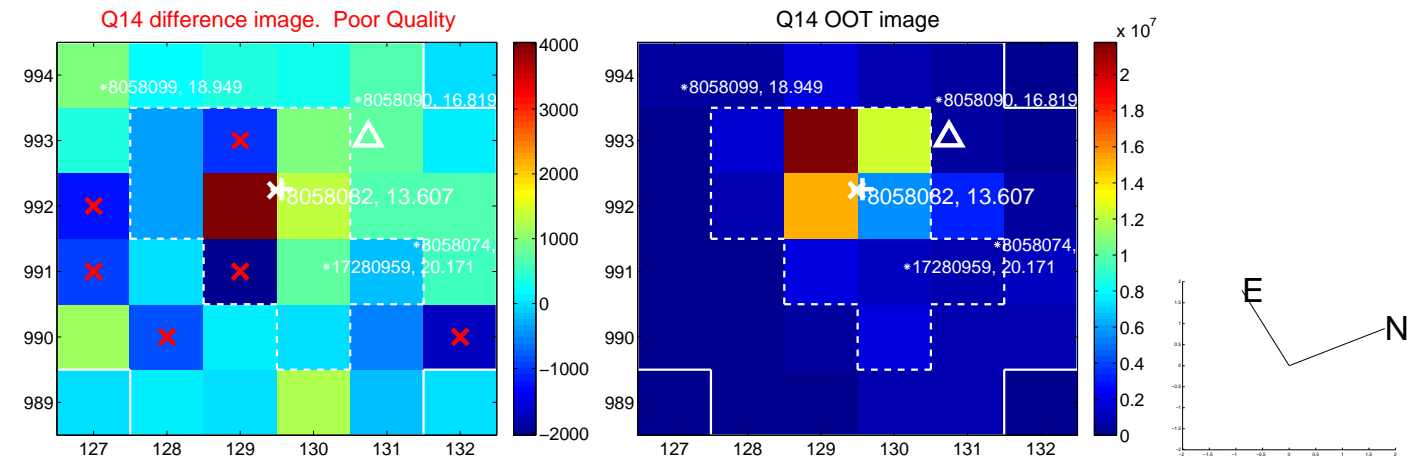
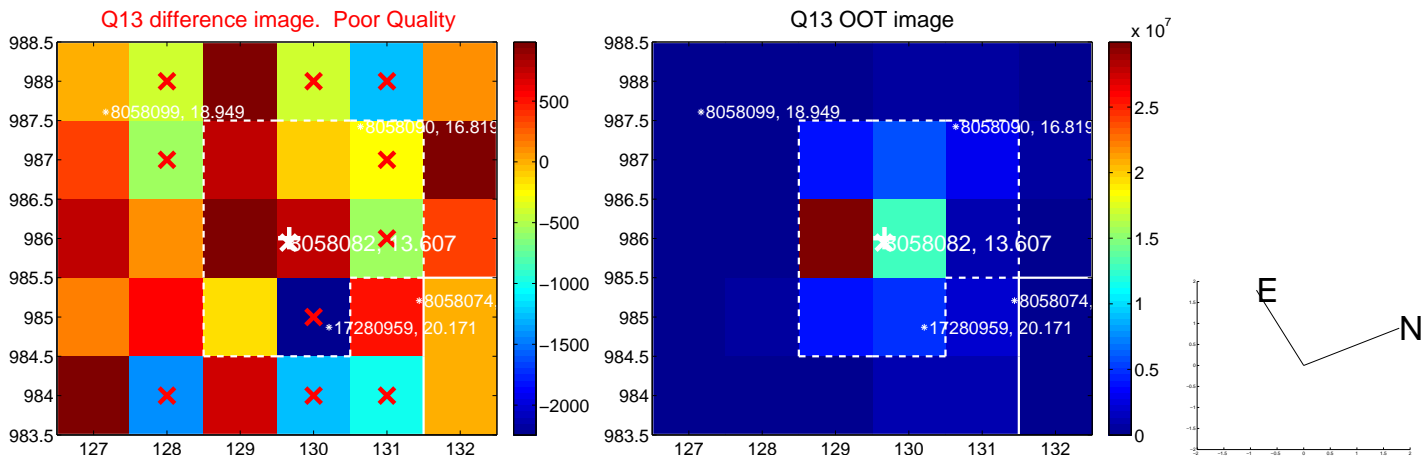
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



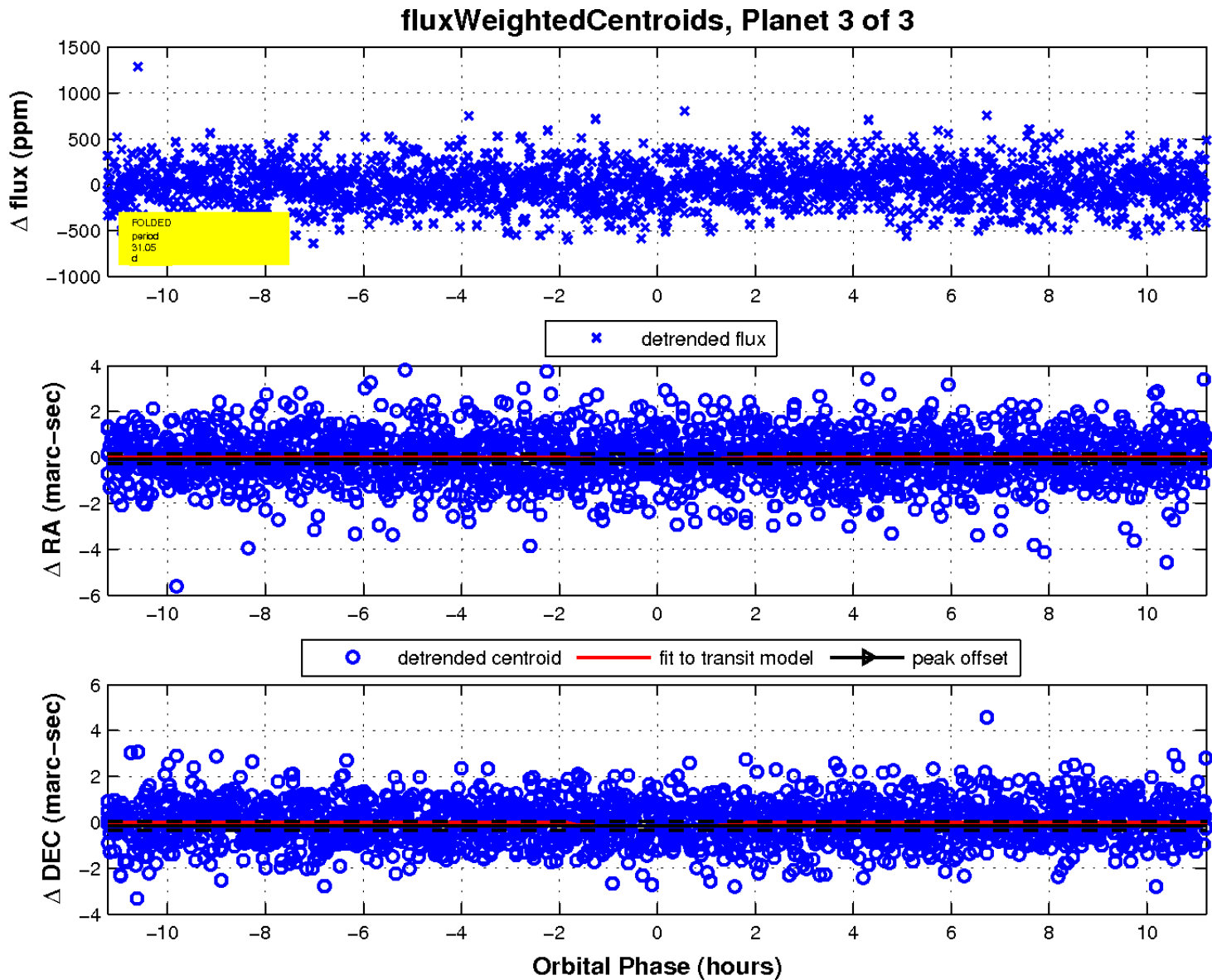
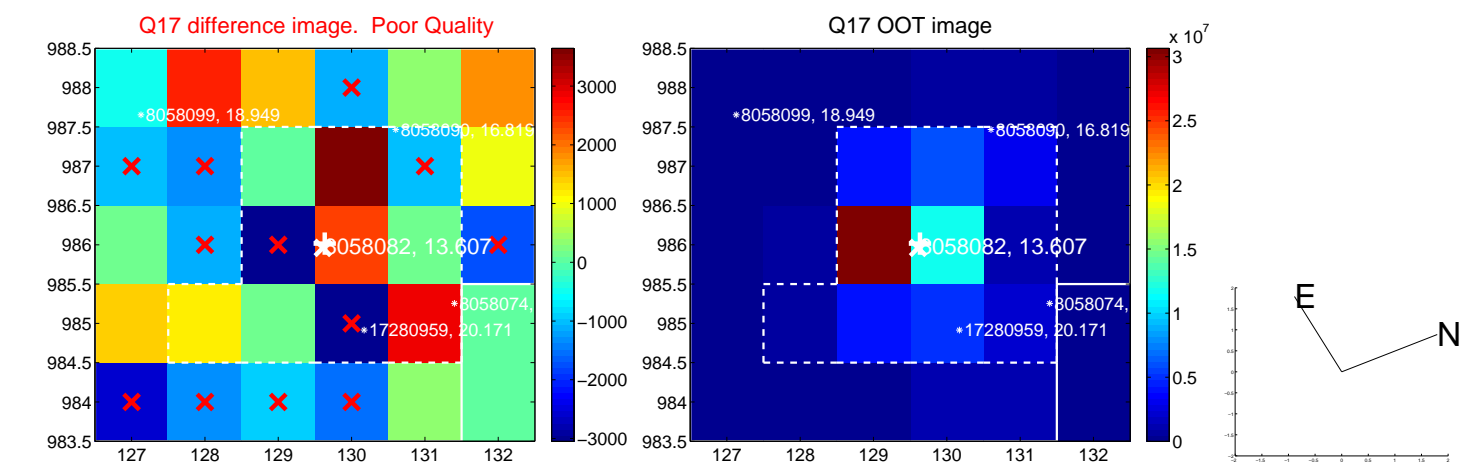
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

