

KIC 005510843

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})
005510843-01	OBS	No	1.038106	132.395655	1.7	7.492	9.2	0.1	0.63	5161	0.09	865.60
005510843-02	OBS	No	31.676904	134.192149	818.1	16.477	8.9	3.8	0.63	5161	1.97	9.08
005510843-03	OBS	No	37.281320	154.704522	2347.7	1.841	8.5	9.5	0.63	5161	5.96	7.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005510843-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005510843-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
005510843-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_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.

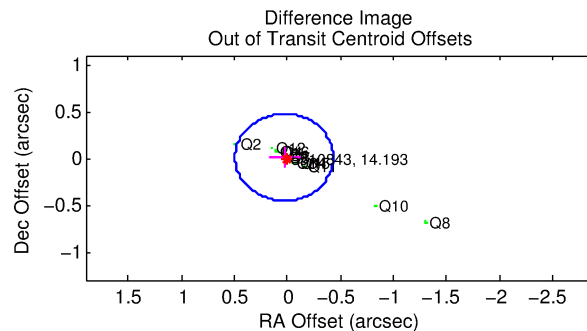
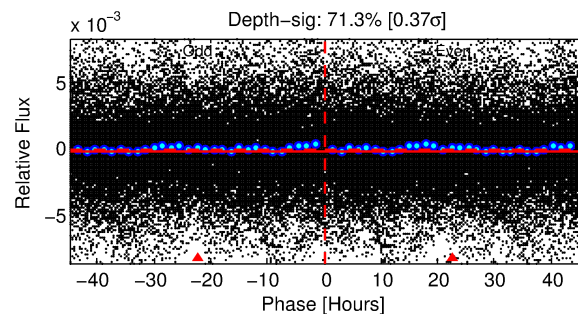
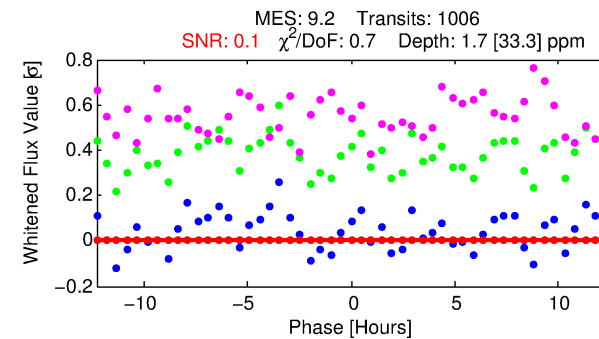
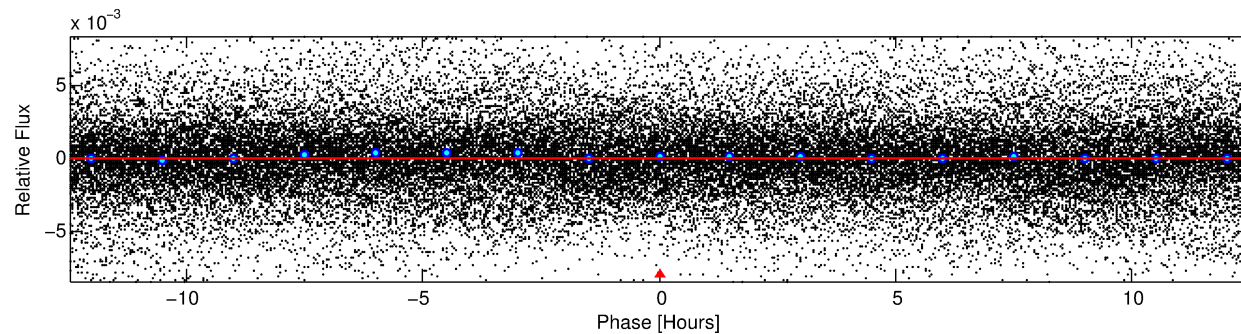
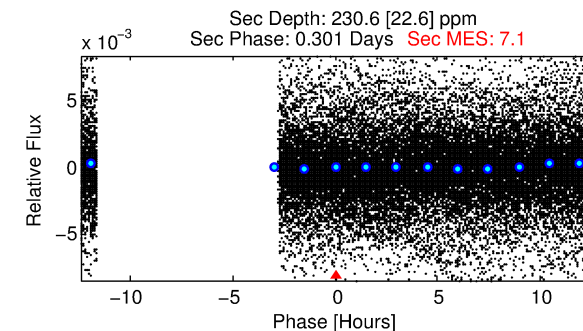
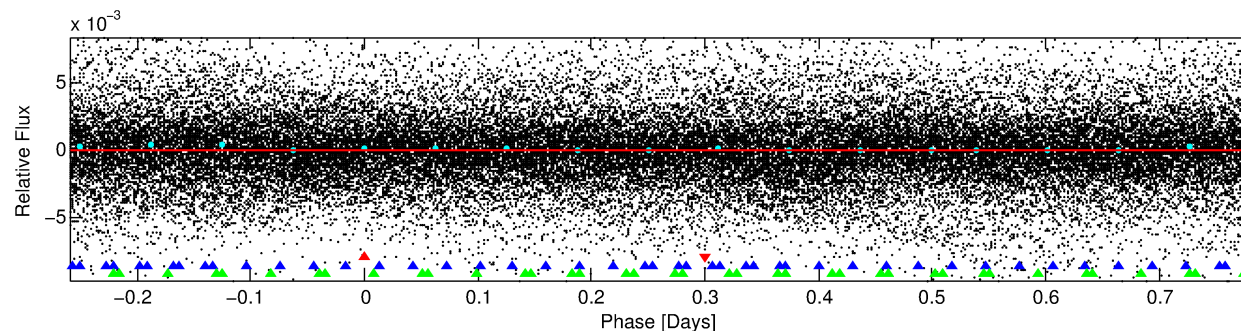
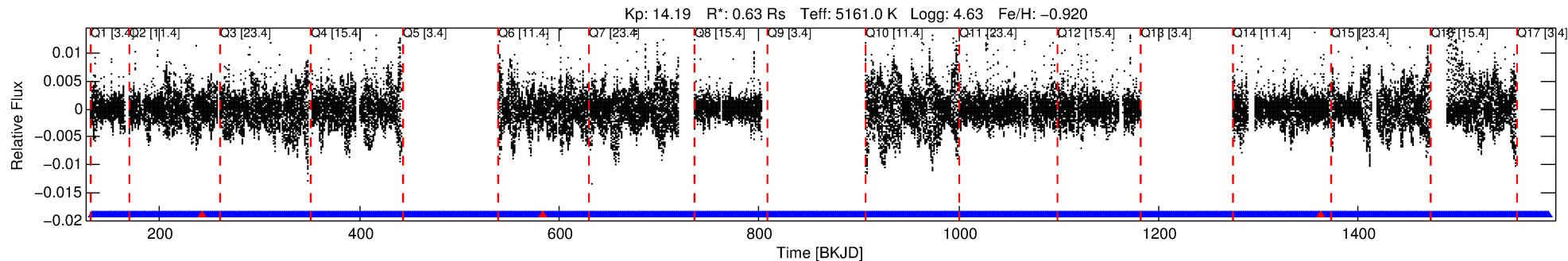
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005510843-01

No Significant Match Found

DV One-Page Summary

KIC: 5510843 Candidate: 1 of 3 Period: 1.038 d



DV Fit Results:

Period = 1.03811 [0.00163] d
Epoch = 132.3957 [0.2428] BKJD
Rp/R* = 0.0012 [0.0161]
a/R* = 1.16 [12.02]
b = 0.58 [45.65]
Seff = 865.60 [143.01]
Teq = 1383 [57] K
Rp = 0.09 [1.11] Re
a = 0.0171 [0.0013] AU
Ag = 5012.11 [129409.60] [0.04σ]
Teffp = 17993 [116146] K [0.14σ]

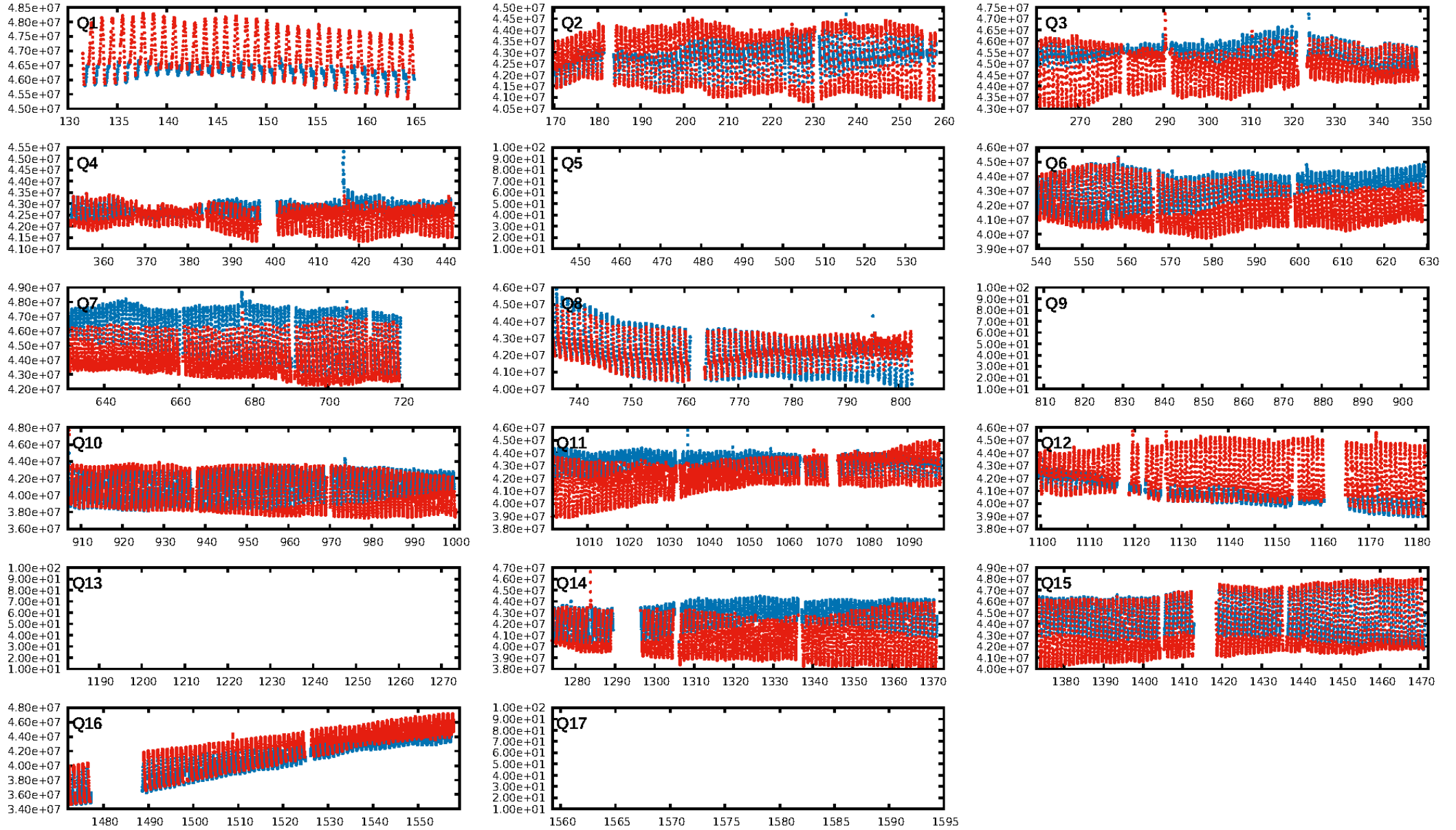
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [40.63σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.28e-18
RollingBand-fgt: 1.00 [970/973]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.030 arcsec [0.20σ]
KicOffset-rm: 0.249 arcsec [2.01σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [13/13]

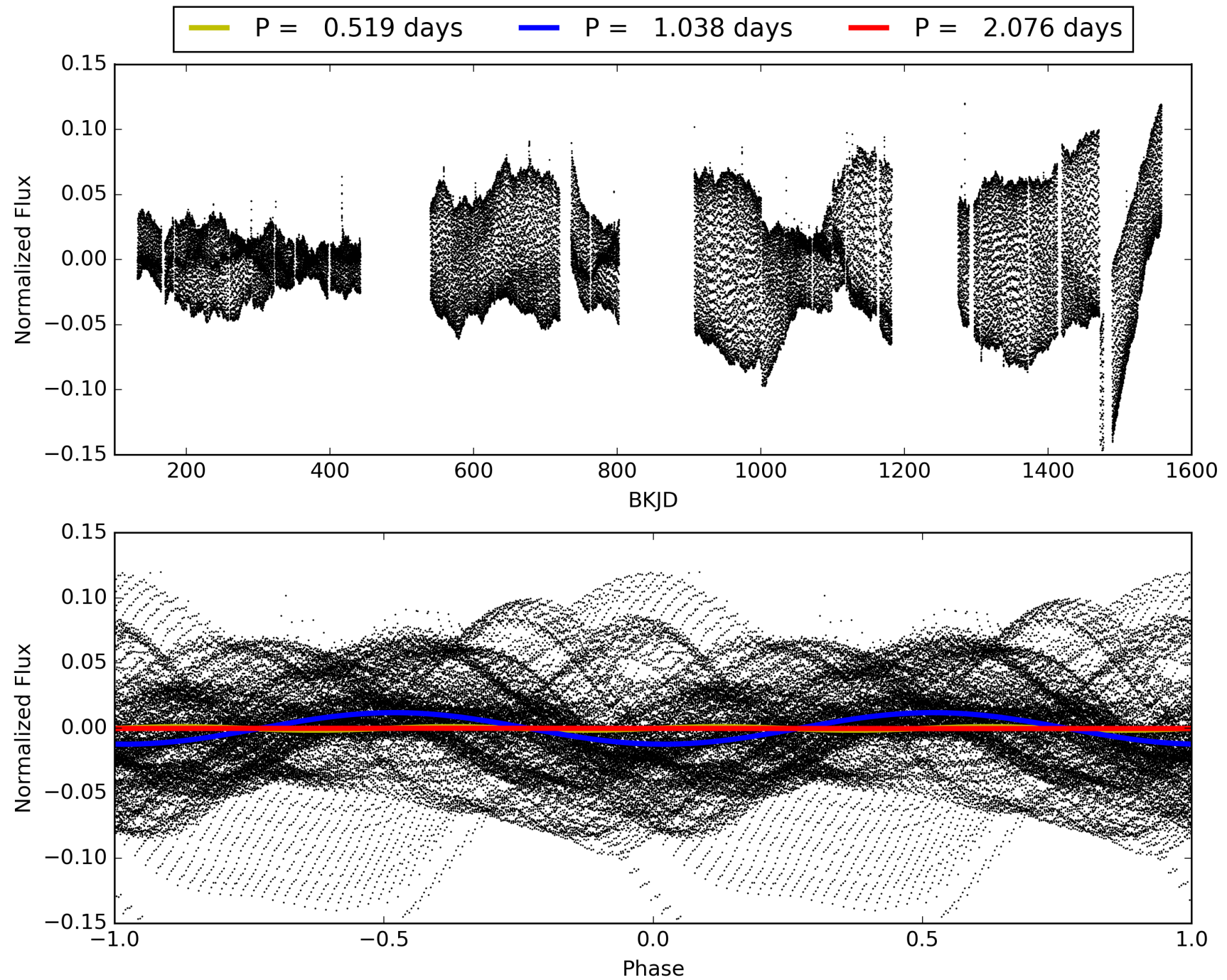
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:55:09 Z

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

TCE 005510843-01, PDC Light Curves

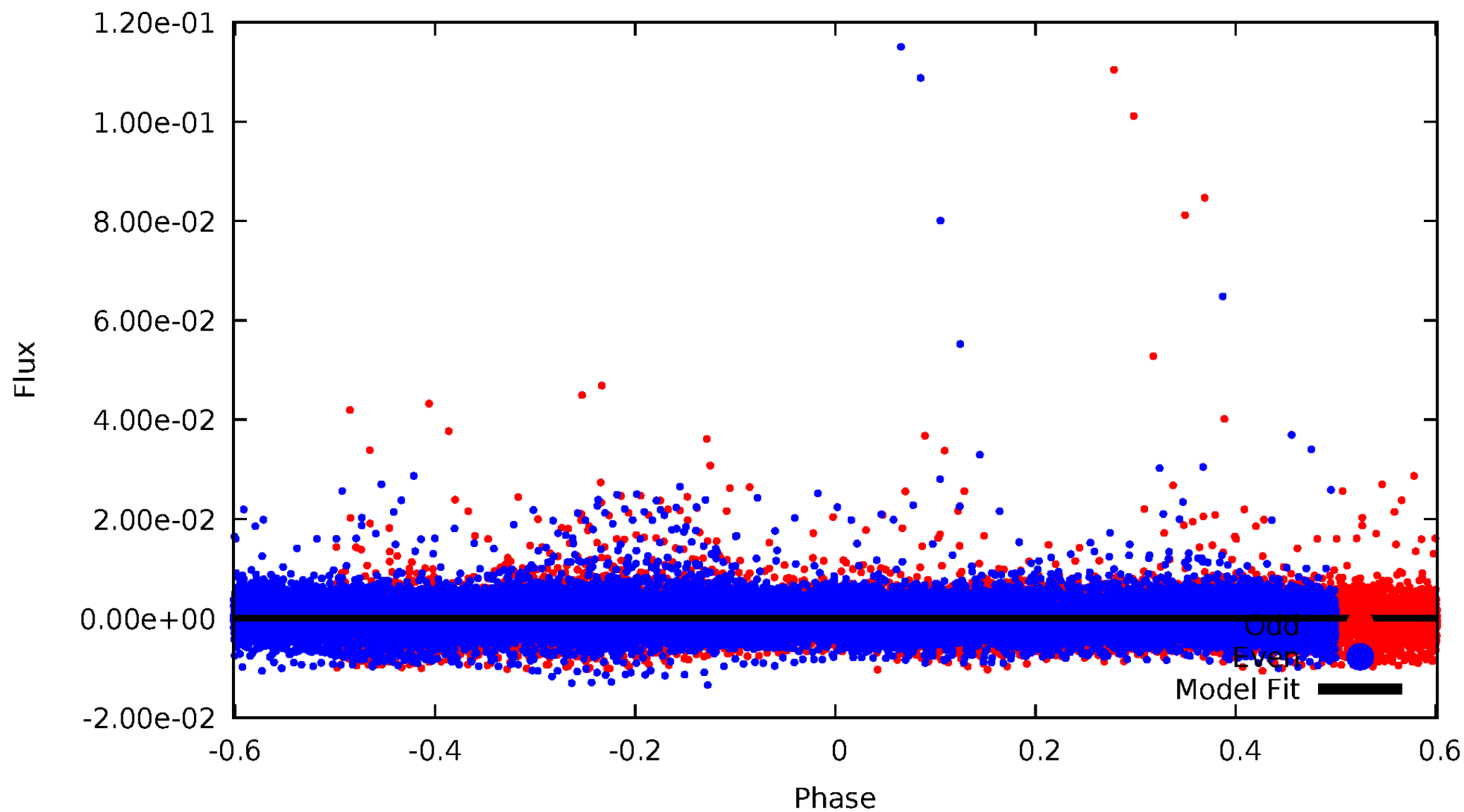


TCE 005510843-01



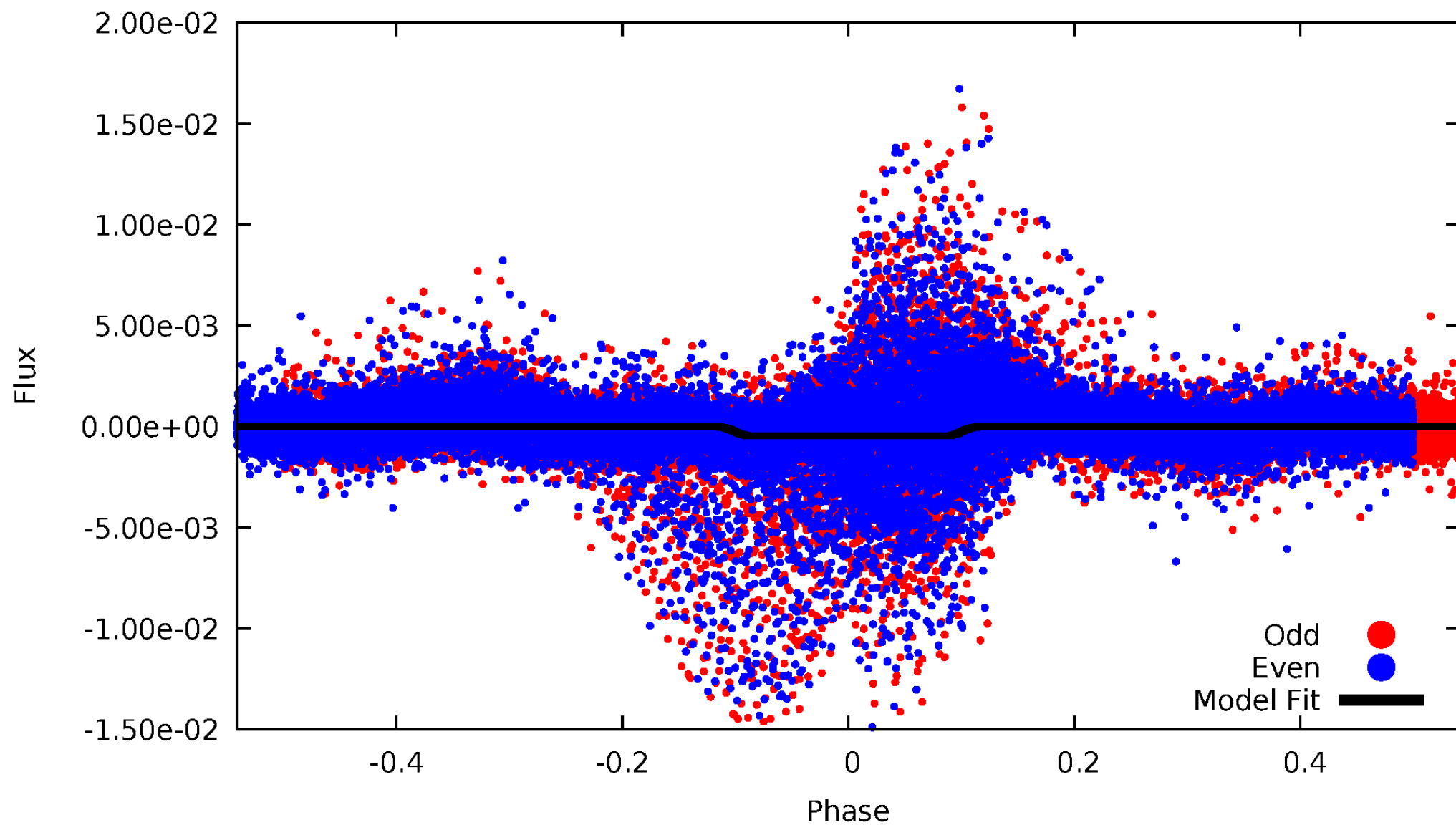
DV Odd/Even

TCE 005510843-01



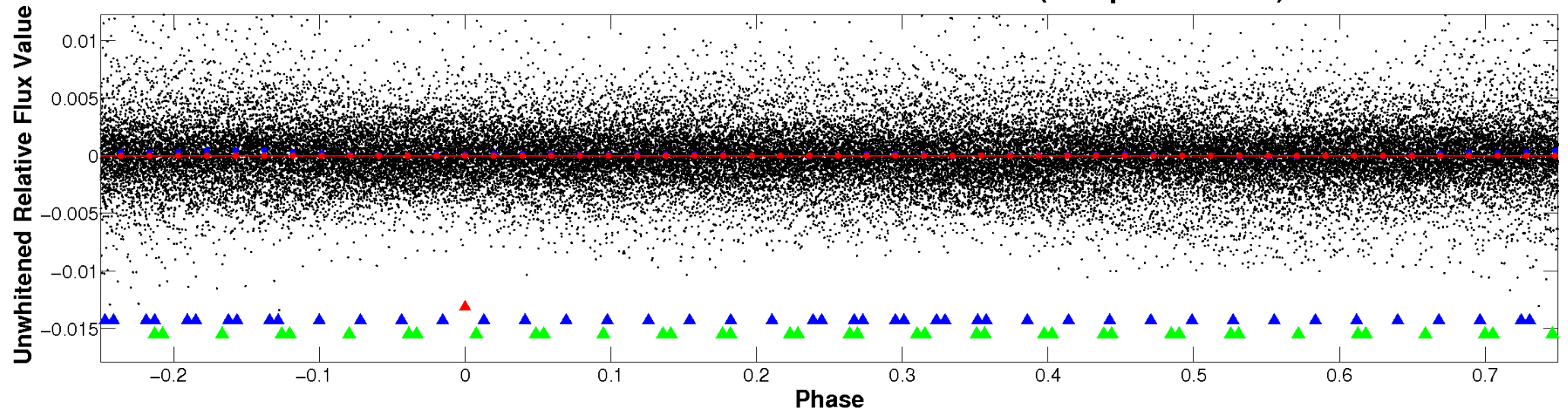
ALT Odd/Even

TCE 005510843-01

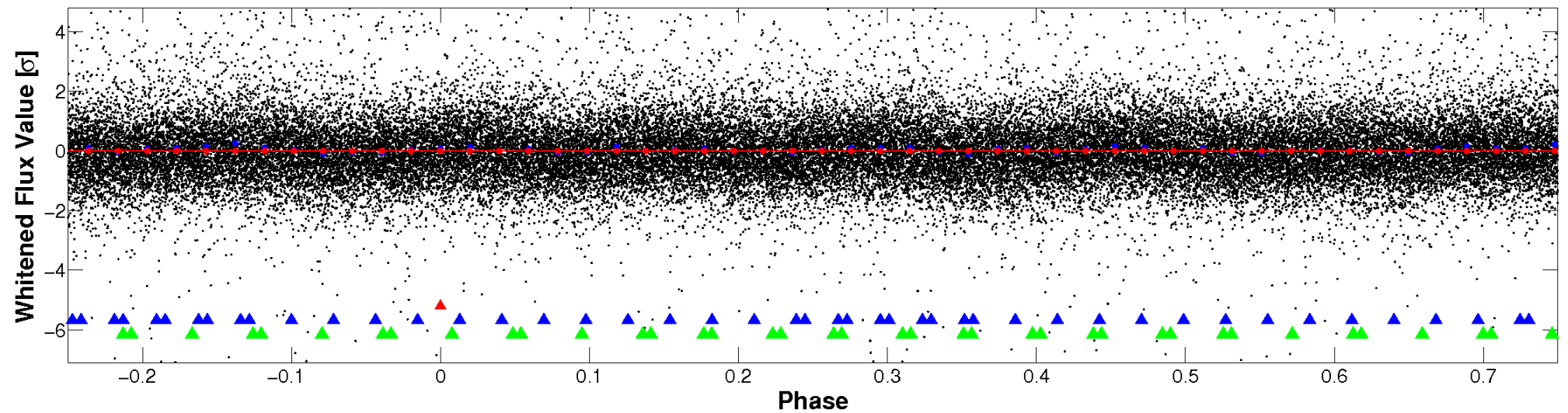


Non-Whitened Vs. Whitened Light Curve

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

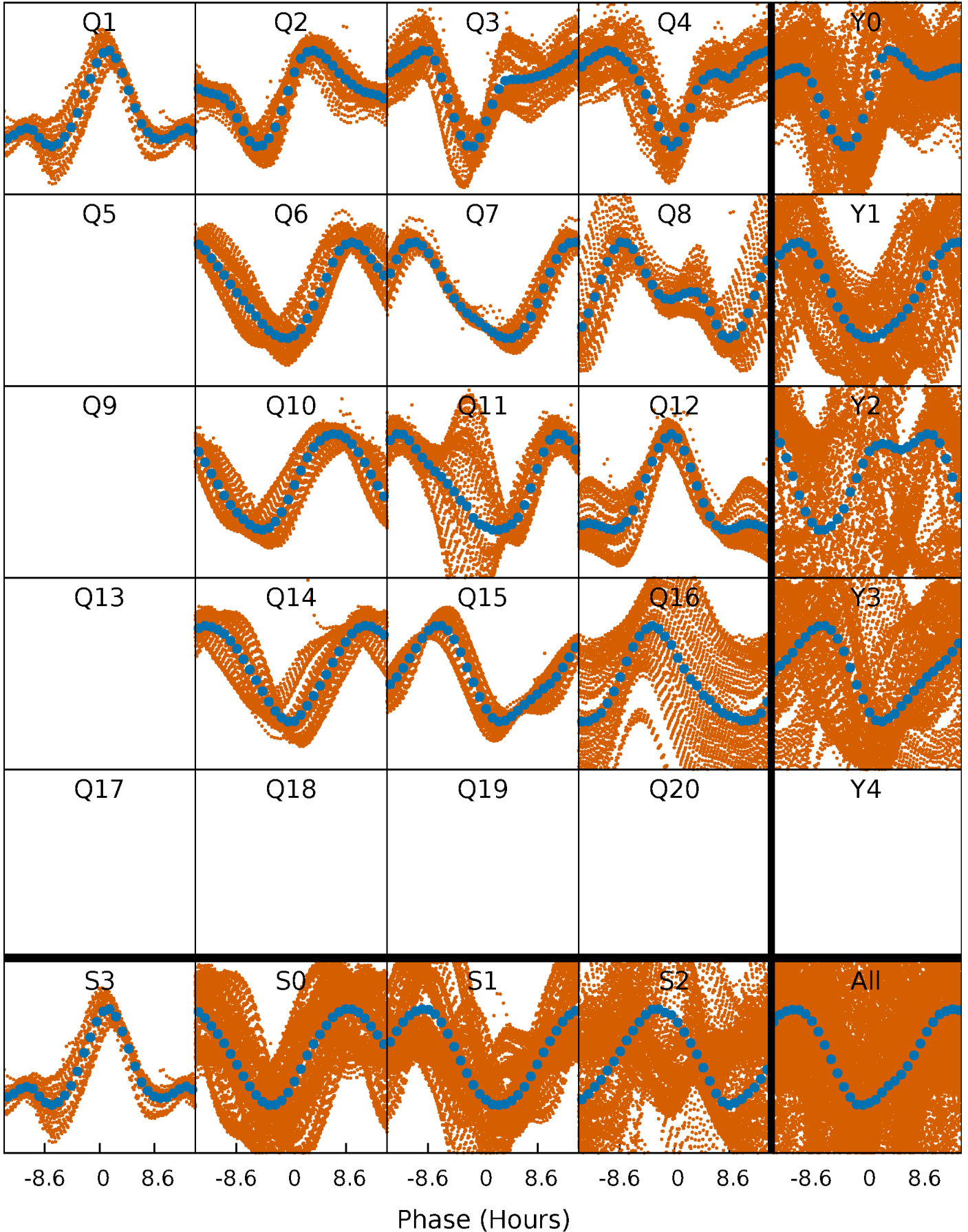


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



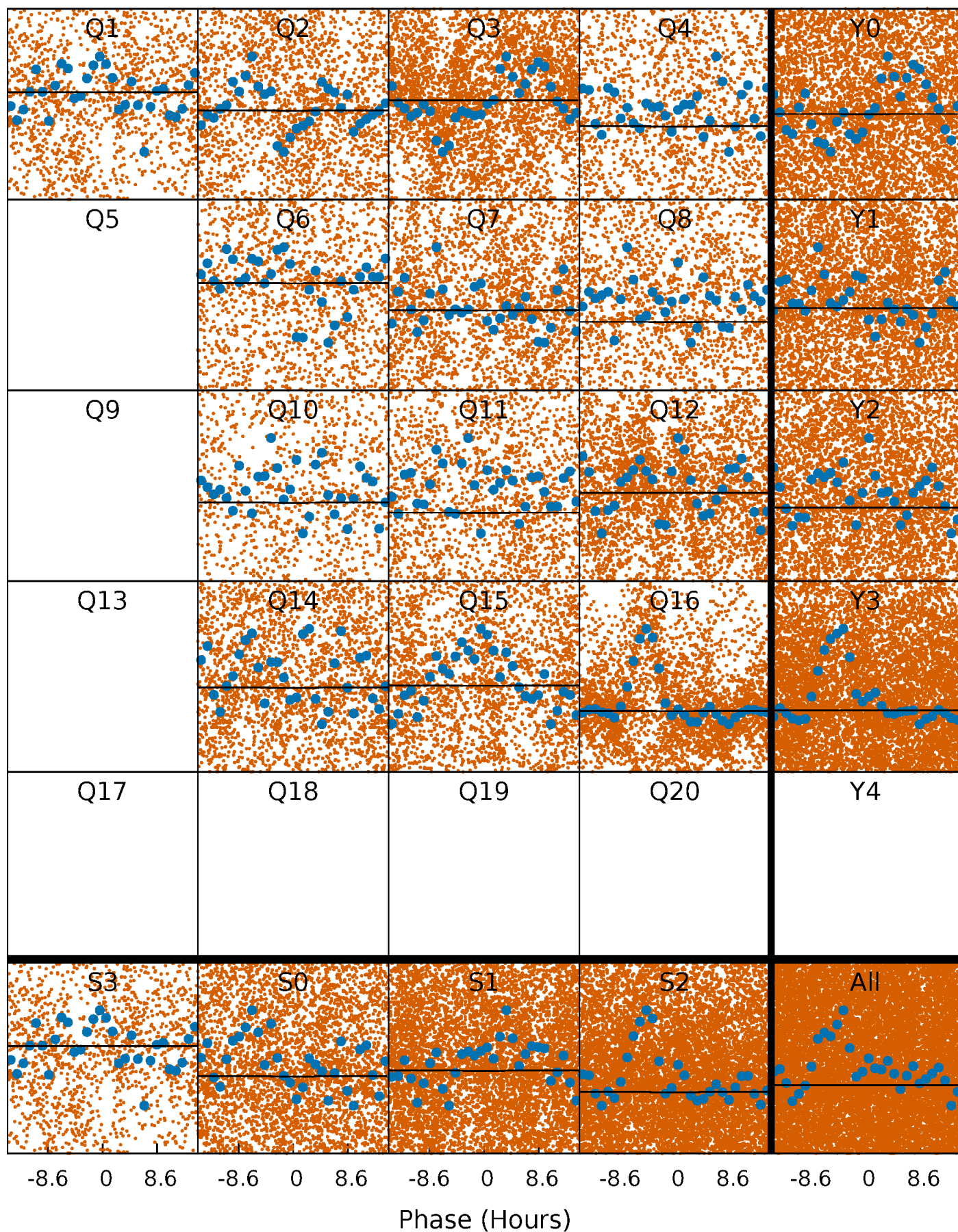
PDC Quarter-Phased Transit Curves

TCE 005510843-01 P= 1.038106 Days $T_0=132.395655$ (BKJD)



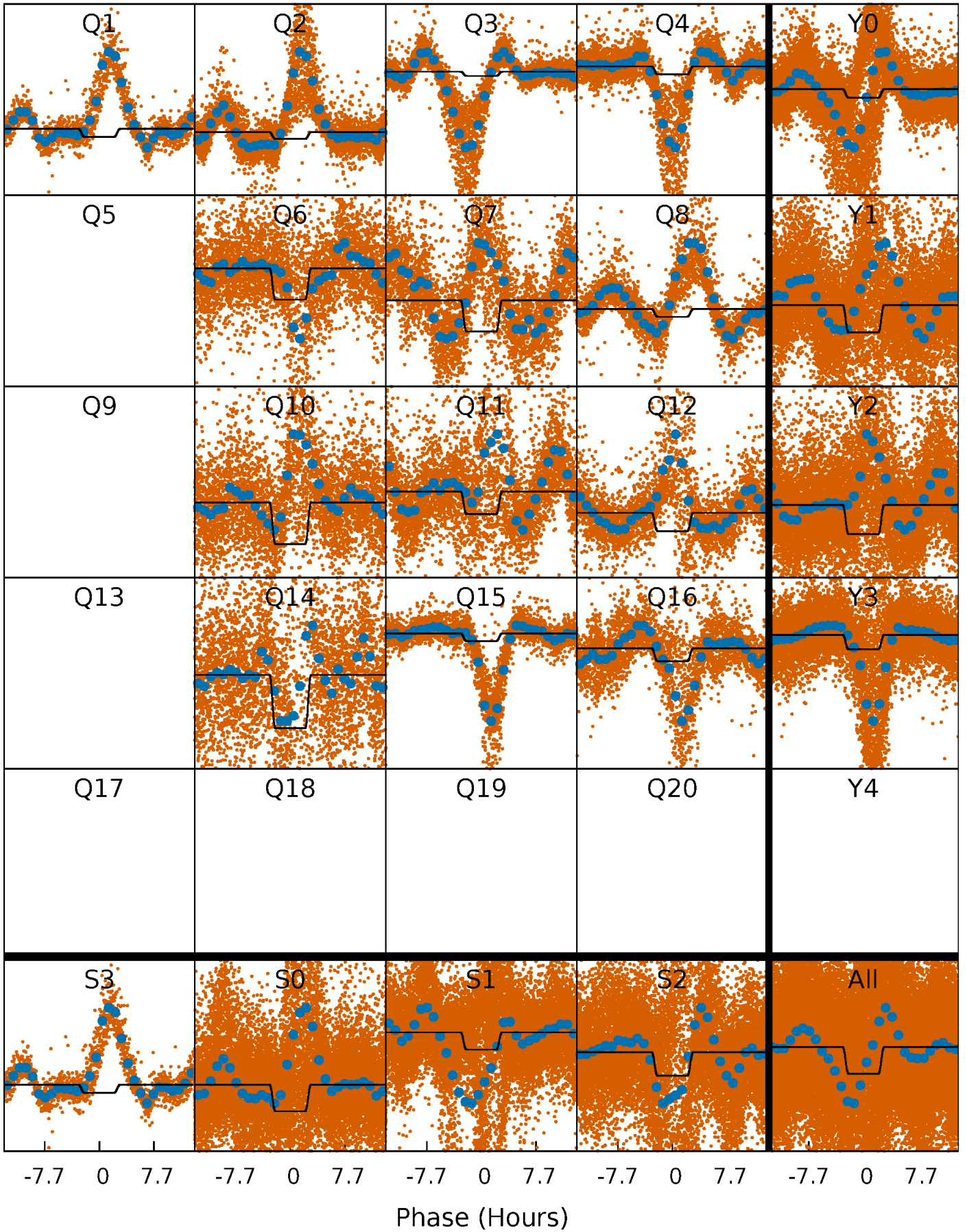
DV Quarter-Phased Transit Curves

TCE 005510843-01 P= 1.038106 Days $T_0=132.395655$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

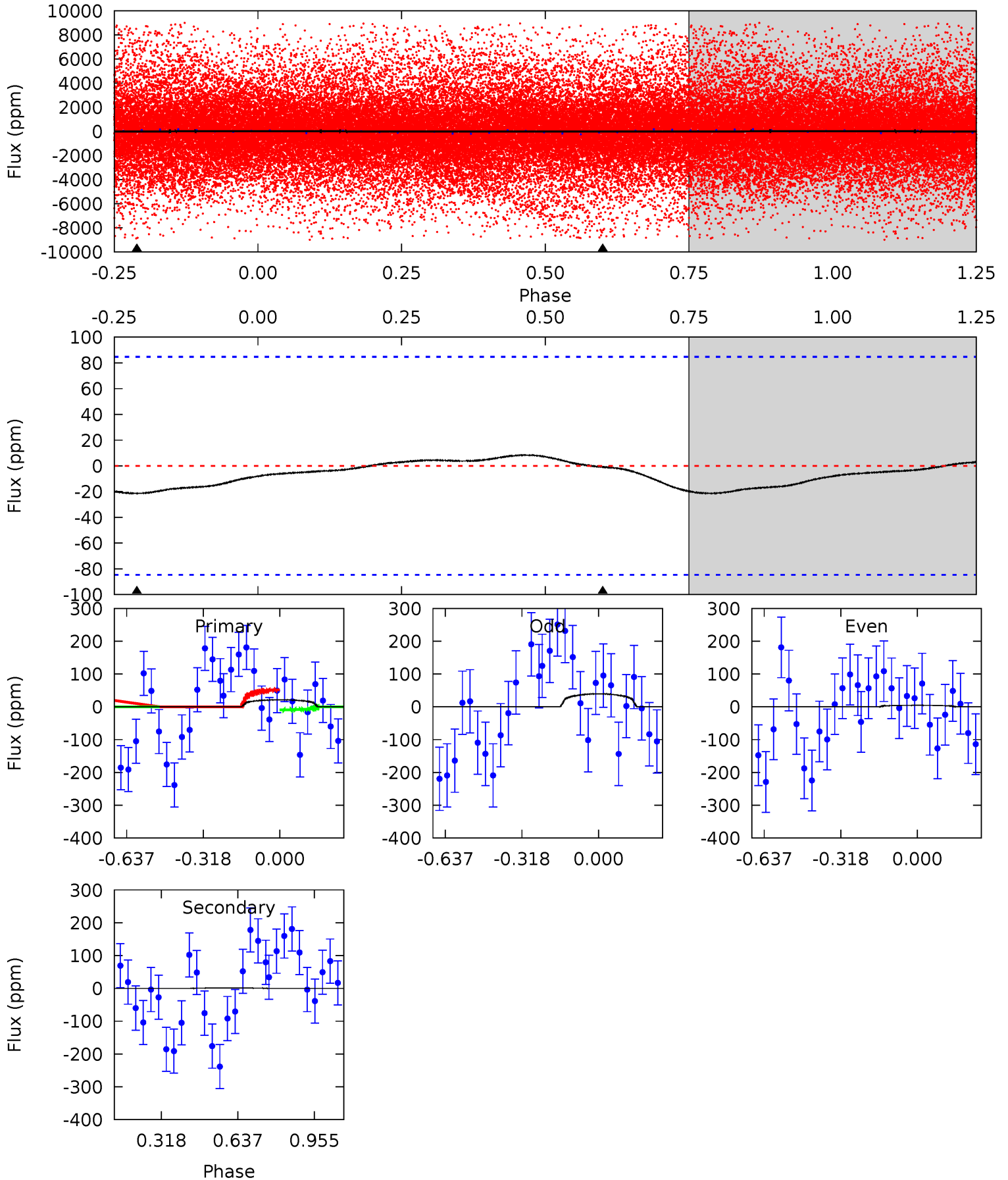
TCE 005510843-01 P= 1.038139 Days $T_0=132.383994$ (BKJD)



DV Model-Shift Uniqueness Test

005510843-01, P = 1.038106 Days, E = 131.357549 Days

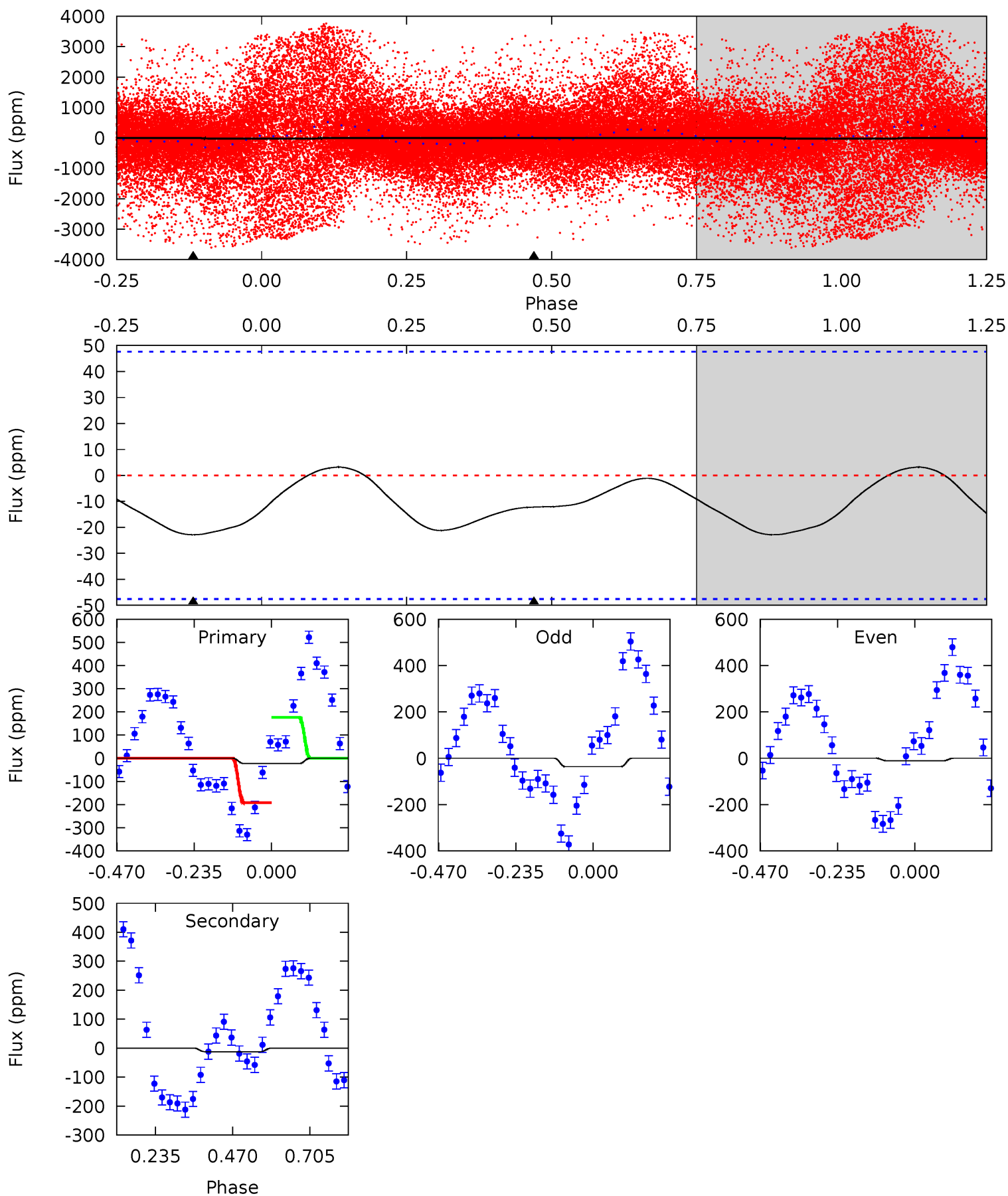
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.09	0.05	0	0	4.32	1.00	0.14	1.09	1.09	0.05	0.05	0.90	1.15	0.28	1.09



Alt Model-Shift Uniqueness Test

005510843-01, P = 1.038139 Days, E = 131.345855 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.10	1.12	0	0	4.38	1.19	0.43	2.10	2.10	1.12	1.12	1.32	25.7	0.12	0.90



Stellar Parameters For KIC 005510843

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5161^{+154}_{-154}	$4.630^{+0.066}_{-0.039}$	$-0.920^{+0.300}_{-0.300}$	$0.632^{+0.050}_{-0.050}$	$0.622^{+0.059}_{-0.023}$	$3.465^{+0.917}_{-0.559}$
	+3%/-3%	+1%/-1%	+33%/-33%	+8%/-8%	+9%/-4%	+26%/-16%
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 005510843-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 20	$0.76^{+0.77}_{-0.52}$	1927^{+68}_{-73}	-2329^{+6353}_{-1729}	$0.083^{+9.826}_{-9.501}$
Alt.	-12 ± 11	$1.62^{+1.15}_{-0.94}$	1920^{+68}_{-68}	2489^{+1028}_{-4864}	$0.670^{+4.144}_{-0.603}$

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

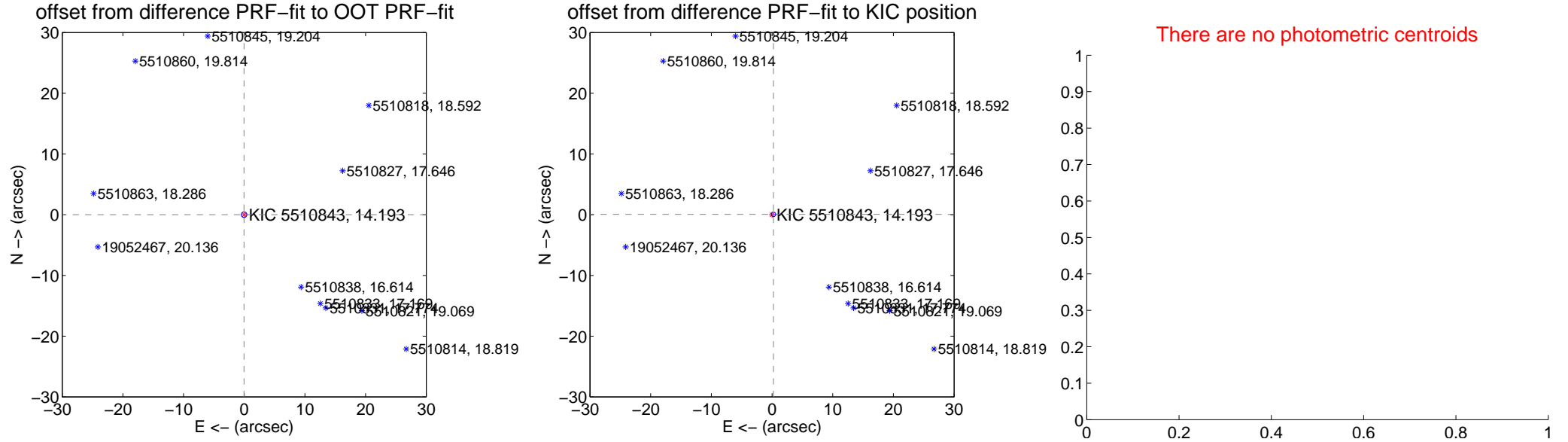
DV Centroid Data

Supplemental centroid analysis for 005510843-01. Kepler magnitude: 14.19. Transit SNR 0.06

There are 9 quarters with good PRF difference image offsets

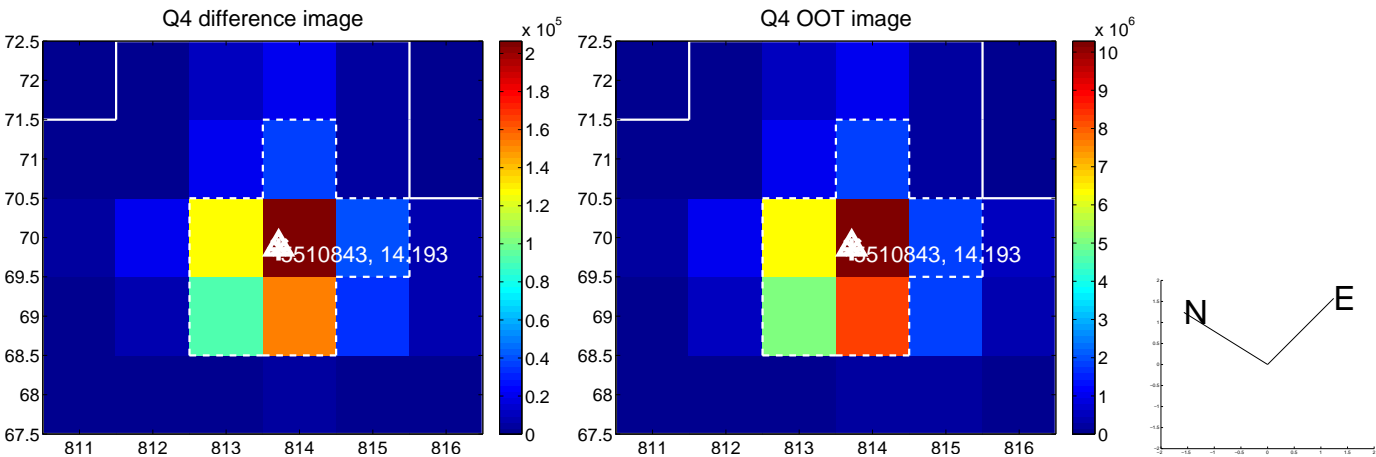
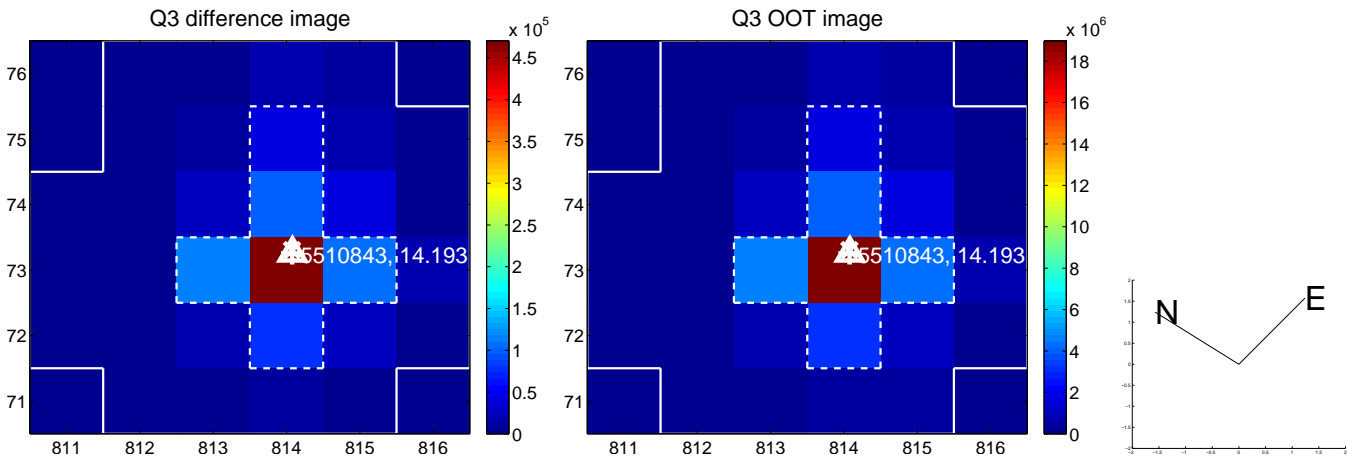
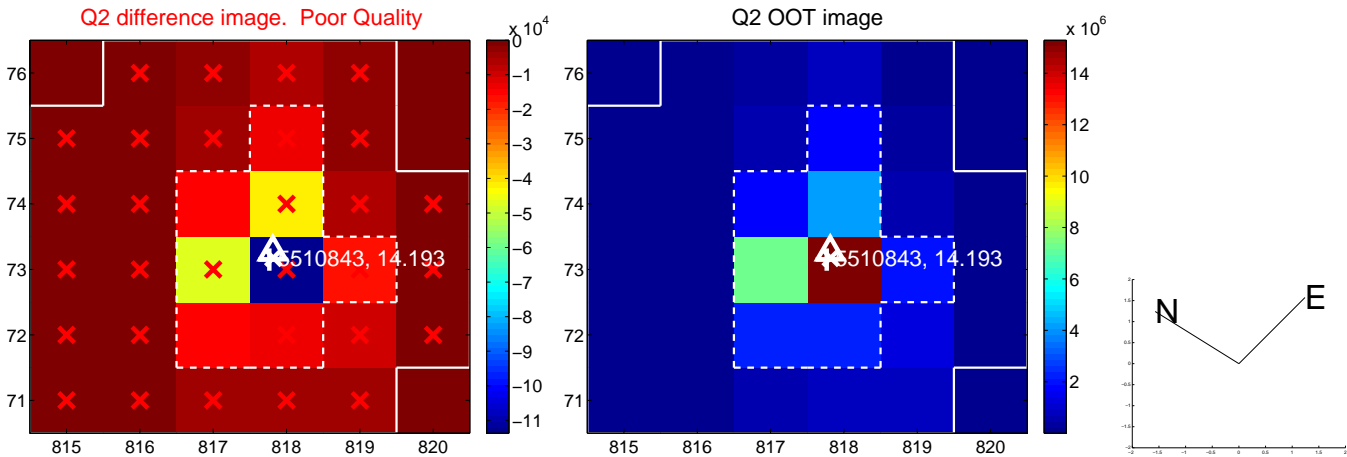
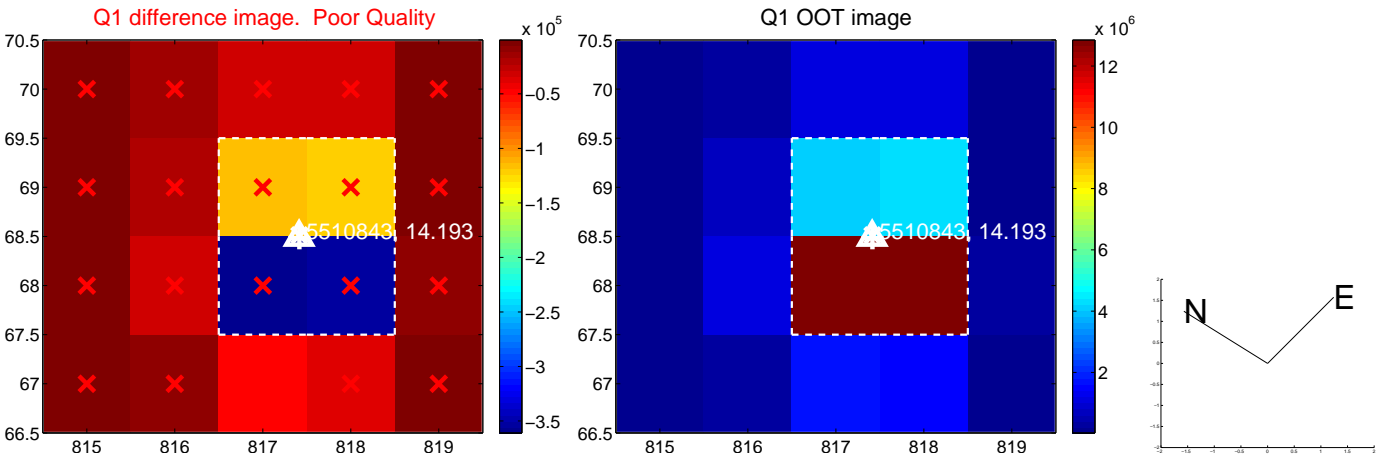
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.030 ± 0.155	0.20	0.028 ± 0.141	0.010 ± 0.094
PRF-fit source offset from KIC position	0.249 ± 0.124	2.01	-0.241 ± 0.139	0.063 ± 0.095
photometric centroid source offset	—	—	—	—

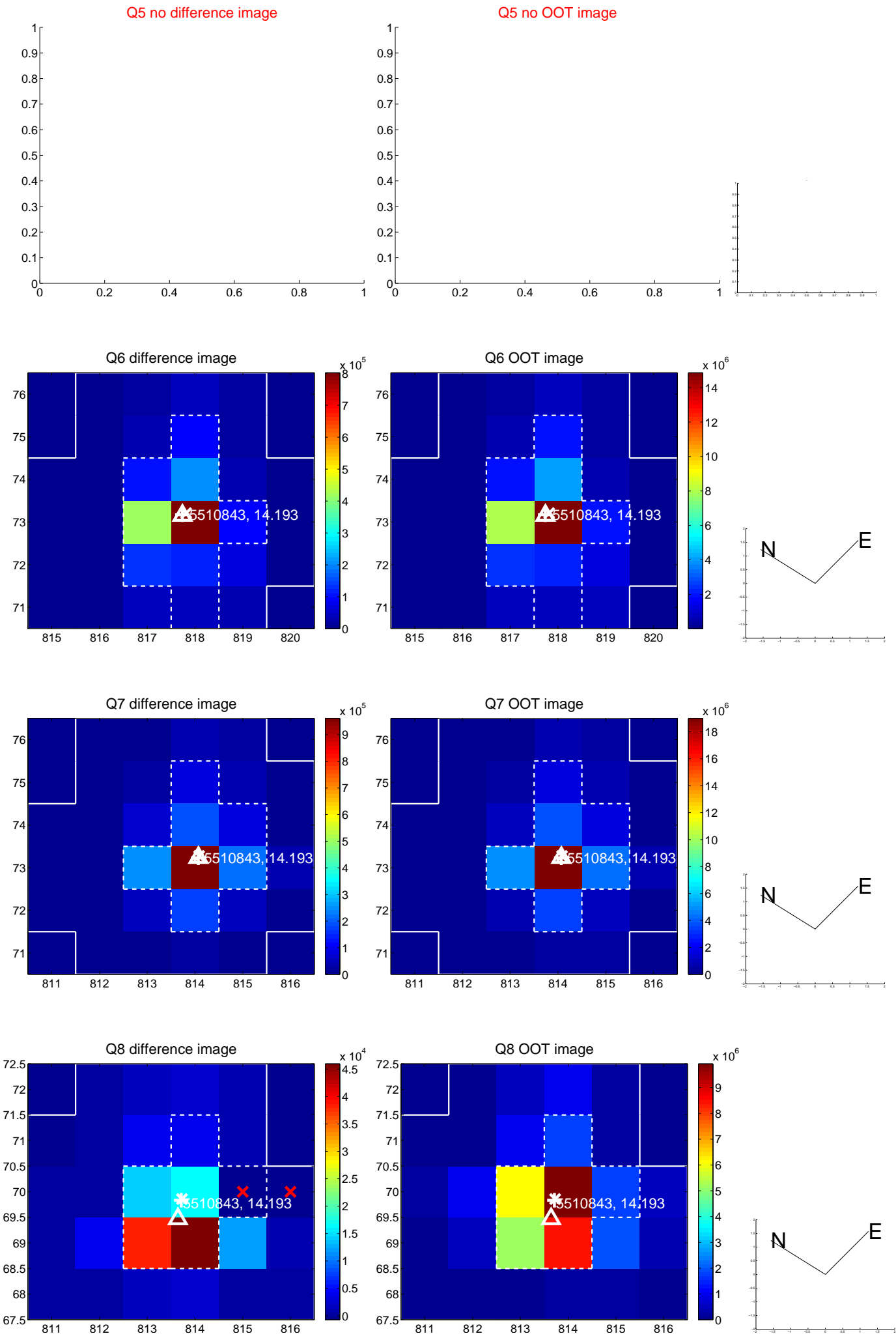


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

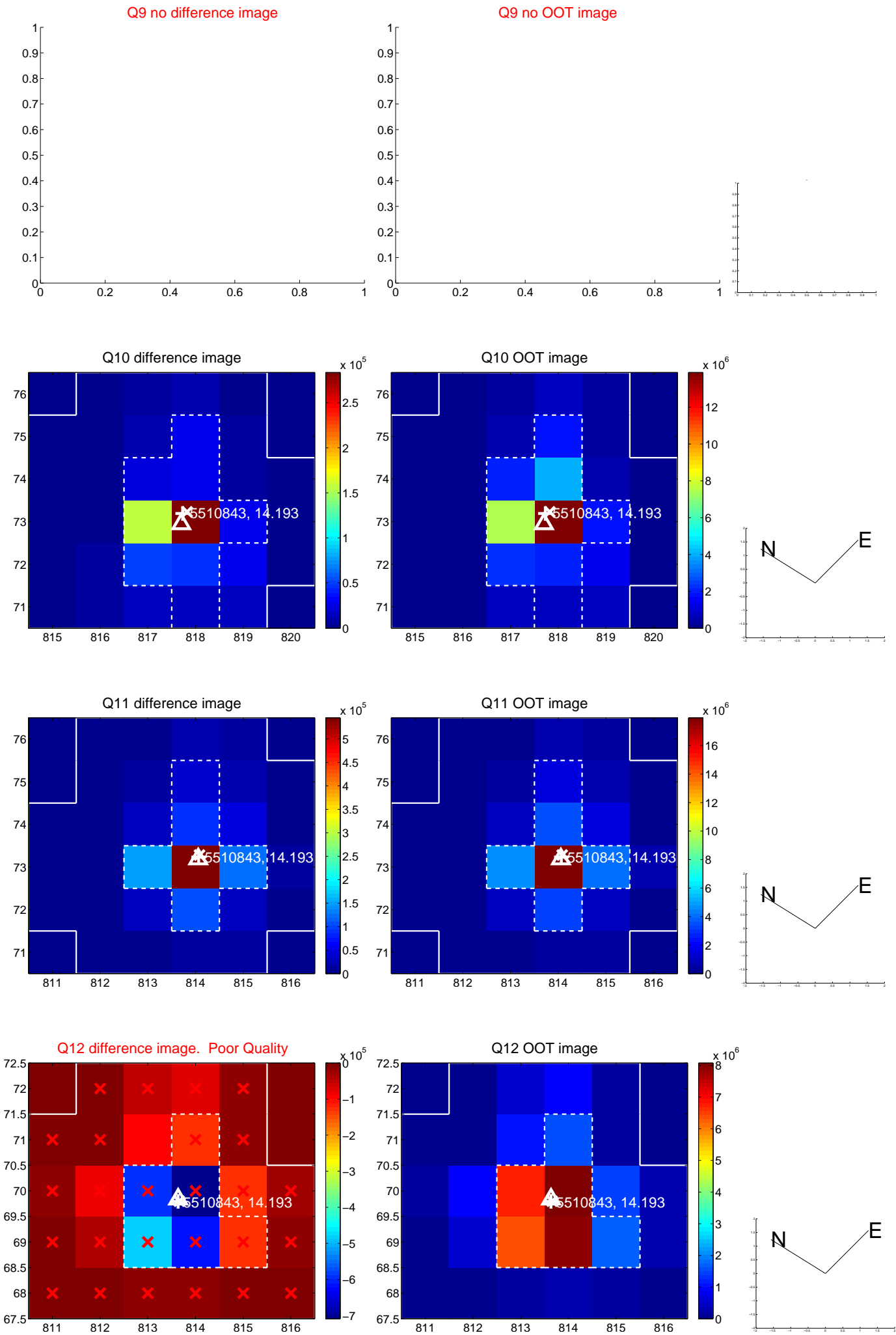
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



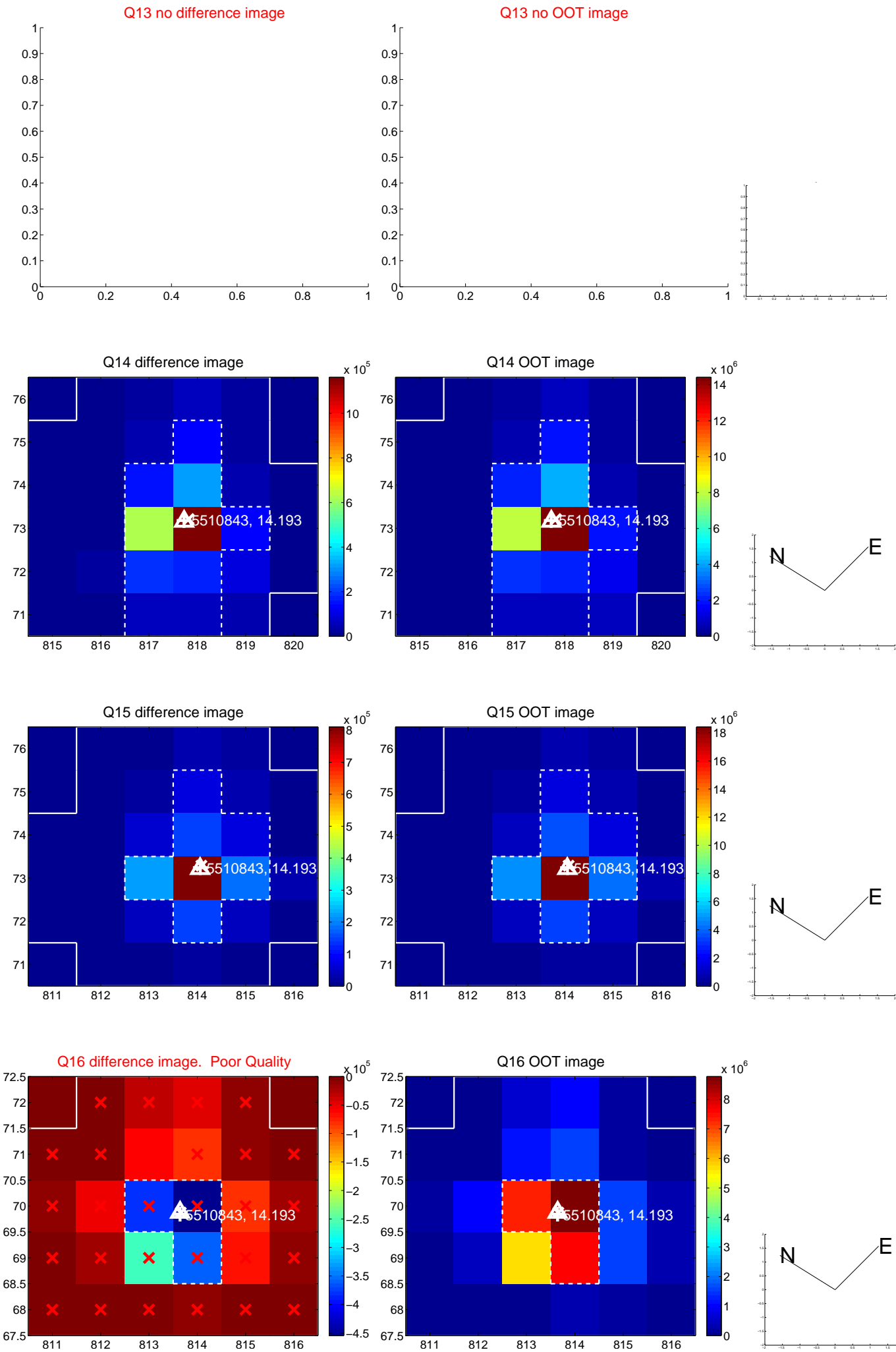
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

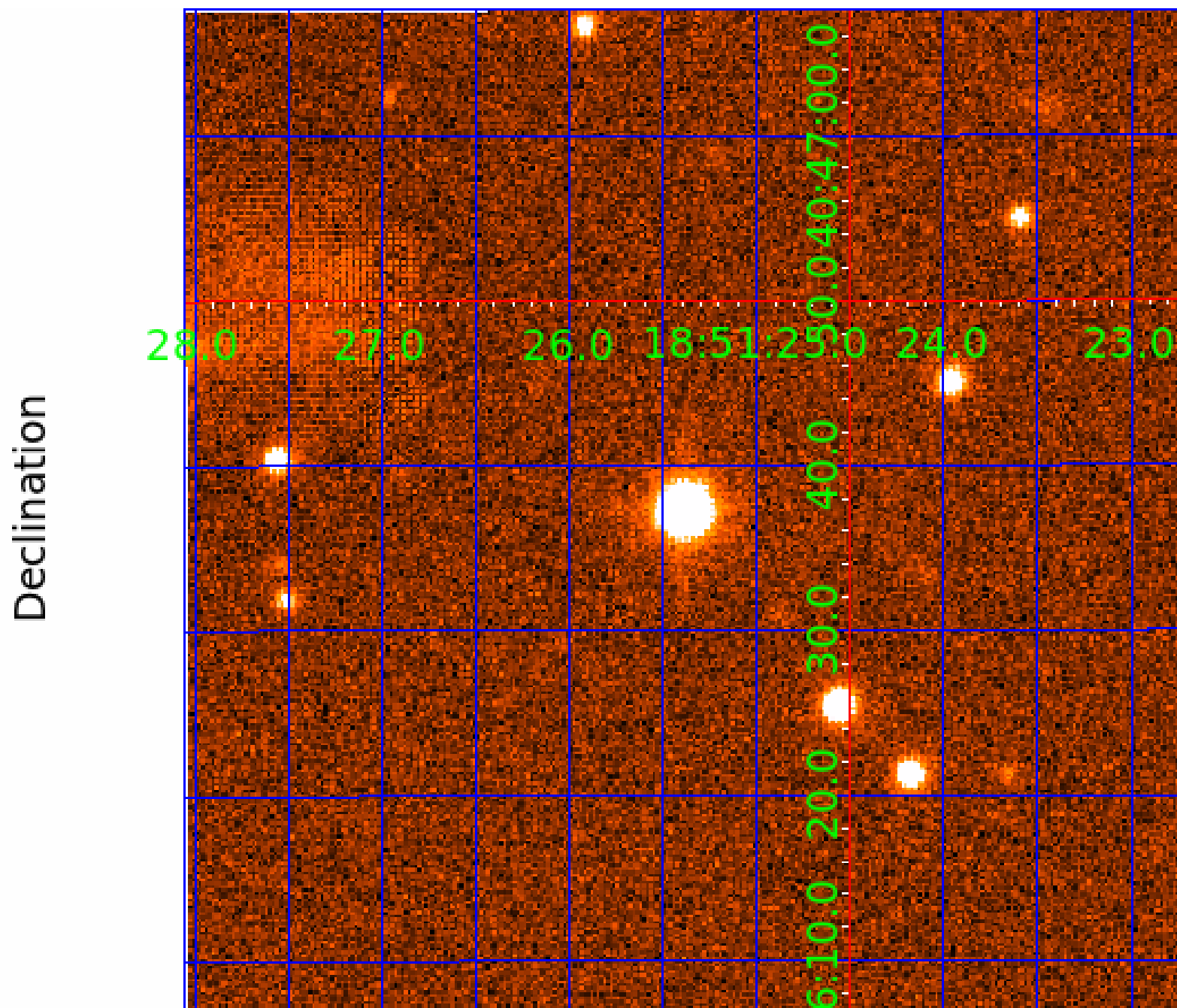


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image



KIC 005510843

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})
005510843-01	OBS	No	1.038106	132.395655	1.7	7.492	9.2	0.1	0.63	5161	0.09	865.60
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005510843-03	OBS	No	37.281320	154.704522	2347.7	1.841	8.5	9.5	0.63	5161	5.96	7.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005510843-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005510843-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
005510843-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_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.

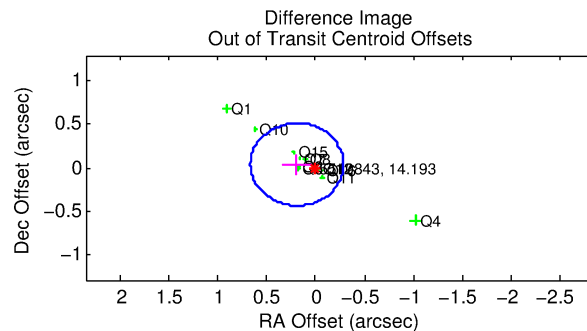
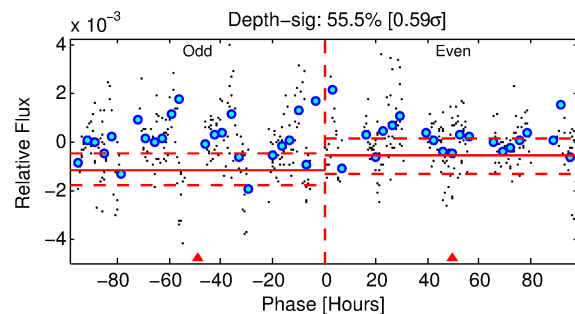
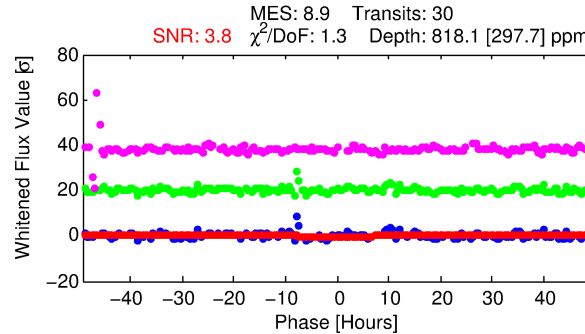
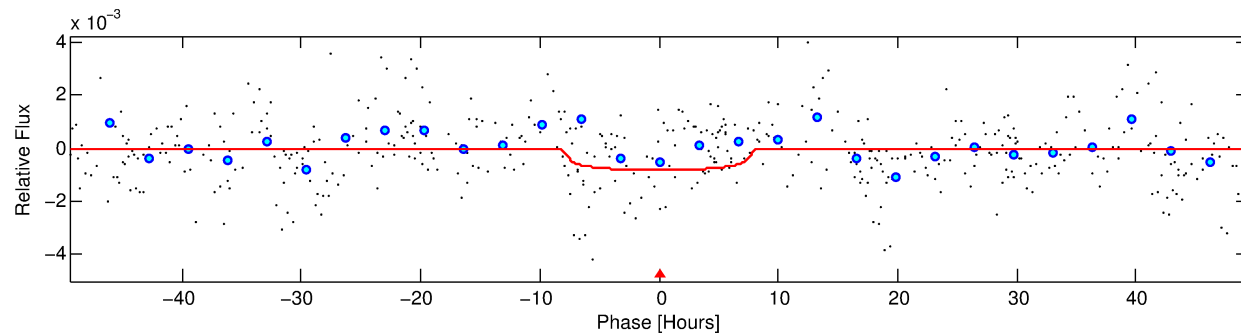
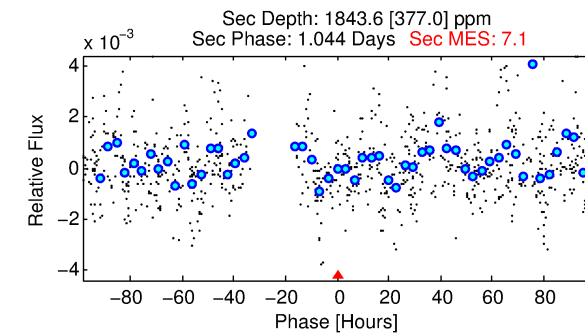
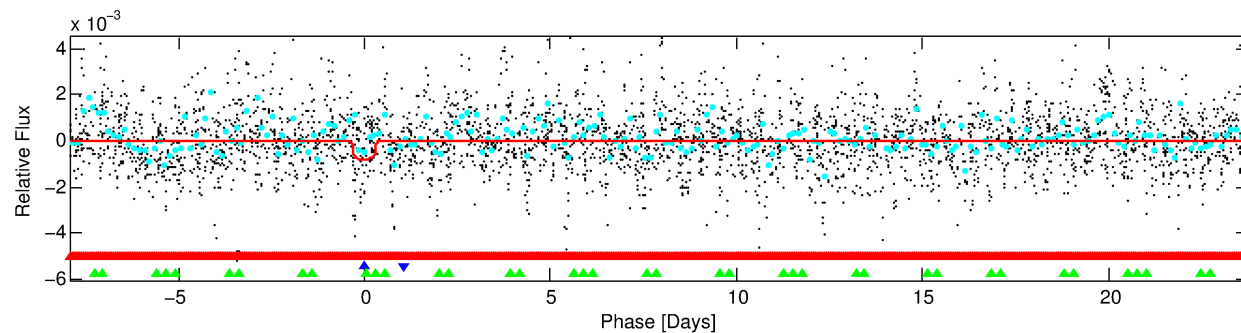
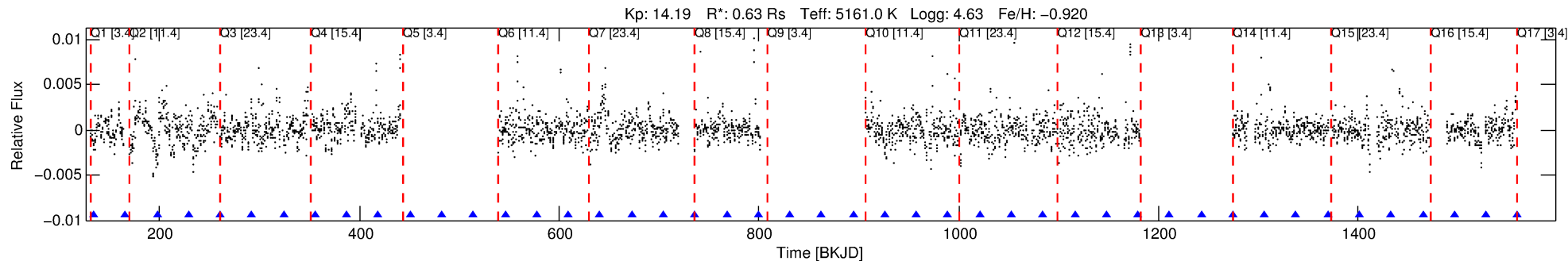
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005510843-02

No Significant Match Found

DV One-Page Summary

KIC: 5510843 Candidate: 2 of 3 Period: 31.677 d



DV Fit Results:

Period = 31.67690 [0.00138] d
Epoch = 134.1921 [0.0464] BKJD
Rp/R* = 0.0285 [0.0111]
a/R* = 10.33 [13.86]
b = 0.75 [0.79]
Seff = 9.08 [1.50]
Teq = 443 [18] K
Rp = 1.96 [0.78] Re
a = 0.1672 [0.0122] AU
Ag = 7349.75 [5963.26] [1.23σ]
Teffp = 6336 [1286] K [4.58σ]

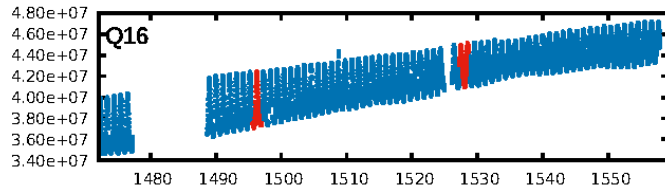
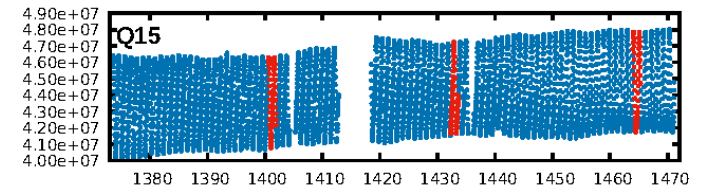
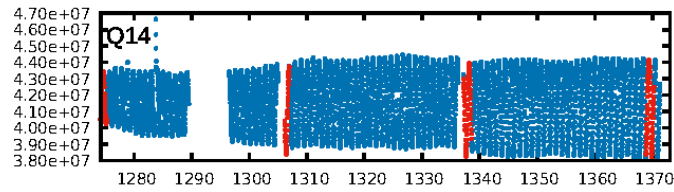
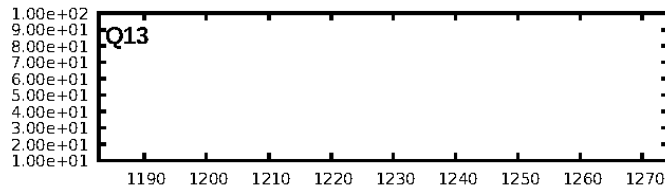
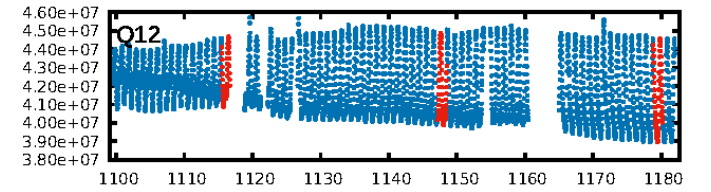
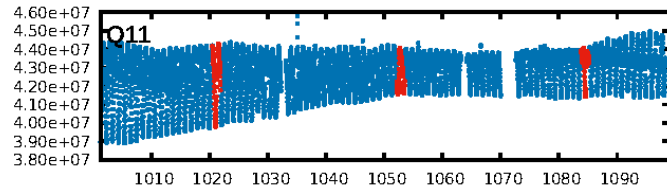
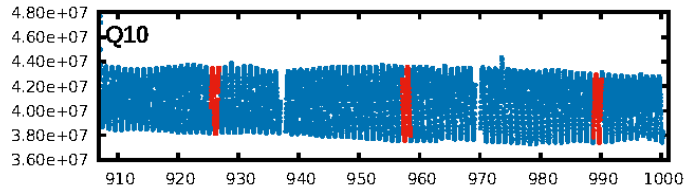
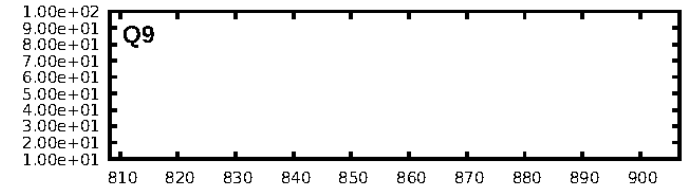
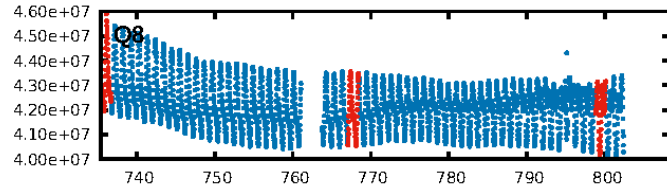
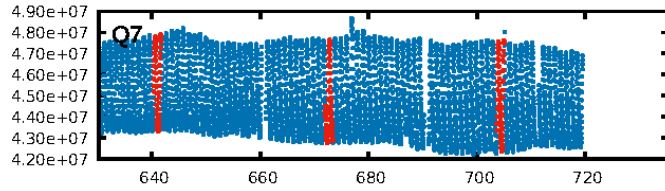
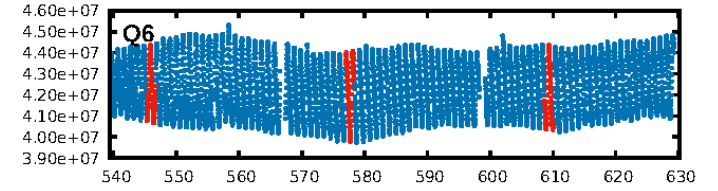
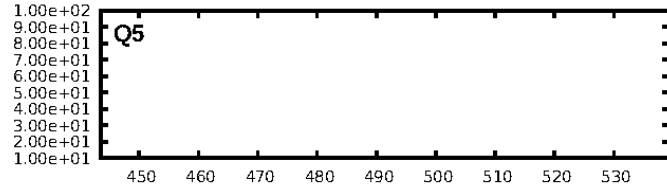
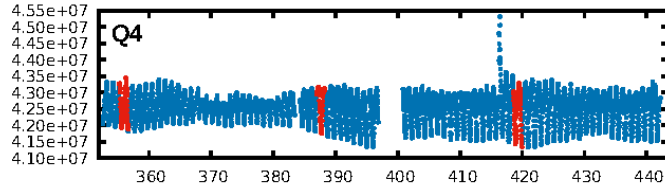
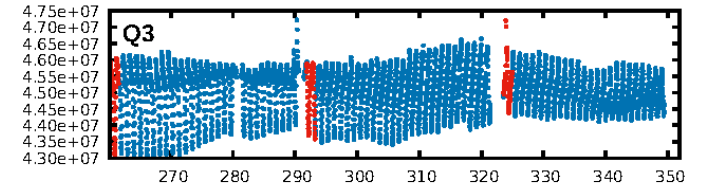
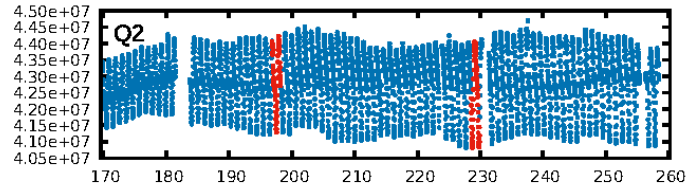
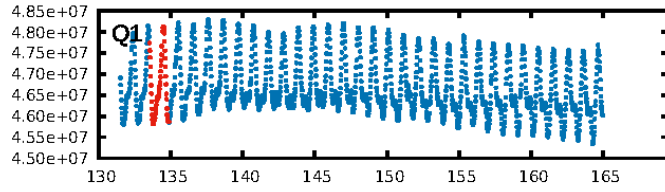
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [40.63σ]
LongPeriod-sig: 100.0% [8.11σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.61e-14
RollingBand-fgt: 1.00 [29/29]
GhostDiagnostic-chr: -0.114
Centroid-sig: 28.7%
Centroid-so: 0.444 arcsec [1.71σ]
OotOffset-rm: 0.195 arcsec [1.23σ]
OotOffset-st: 3/3/4/1 [11]
KicOffset-rm: 0.027 arcsec [0.23σ]
KicOffset-st: 3/3/4/1 [11]
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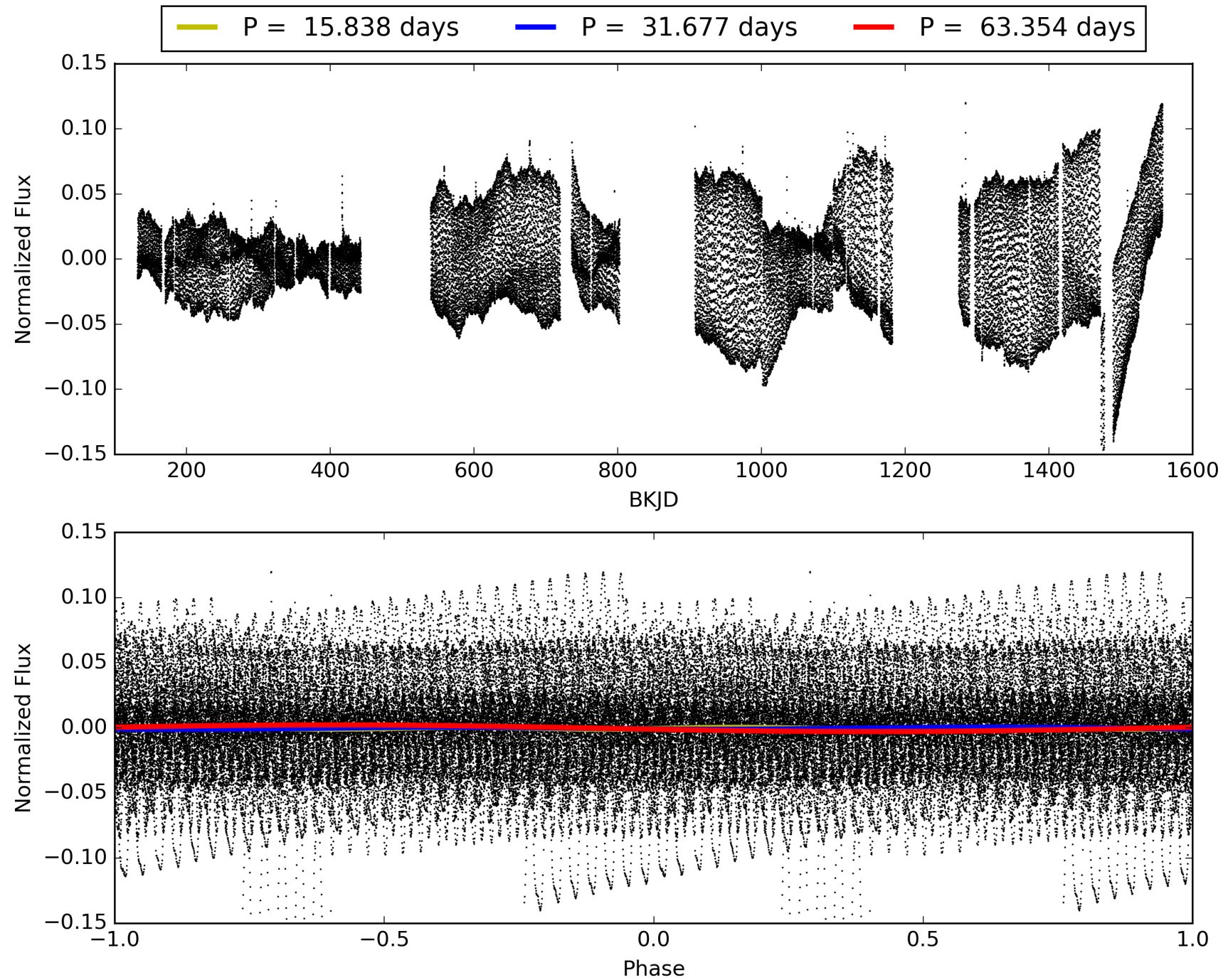
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:55:19 Z

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

TCE 005510843-02, PDC Light Curves

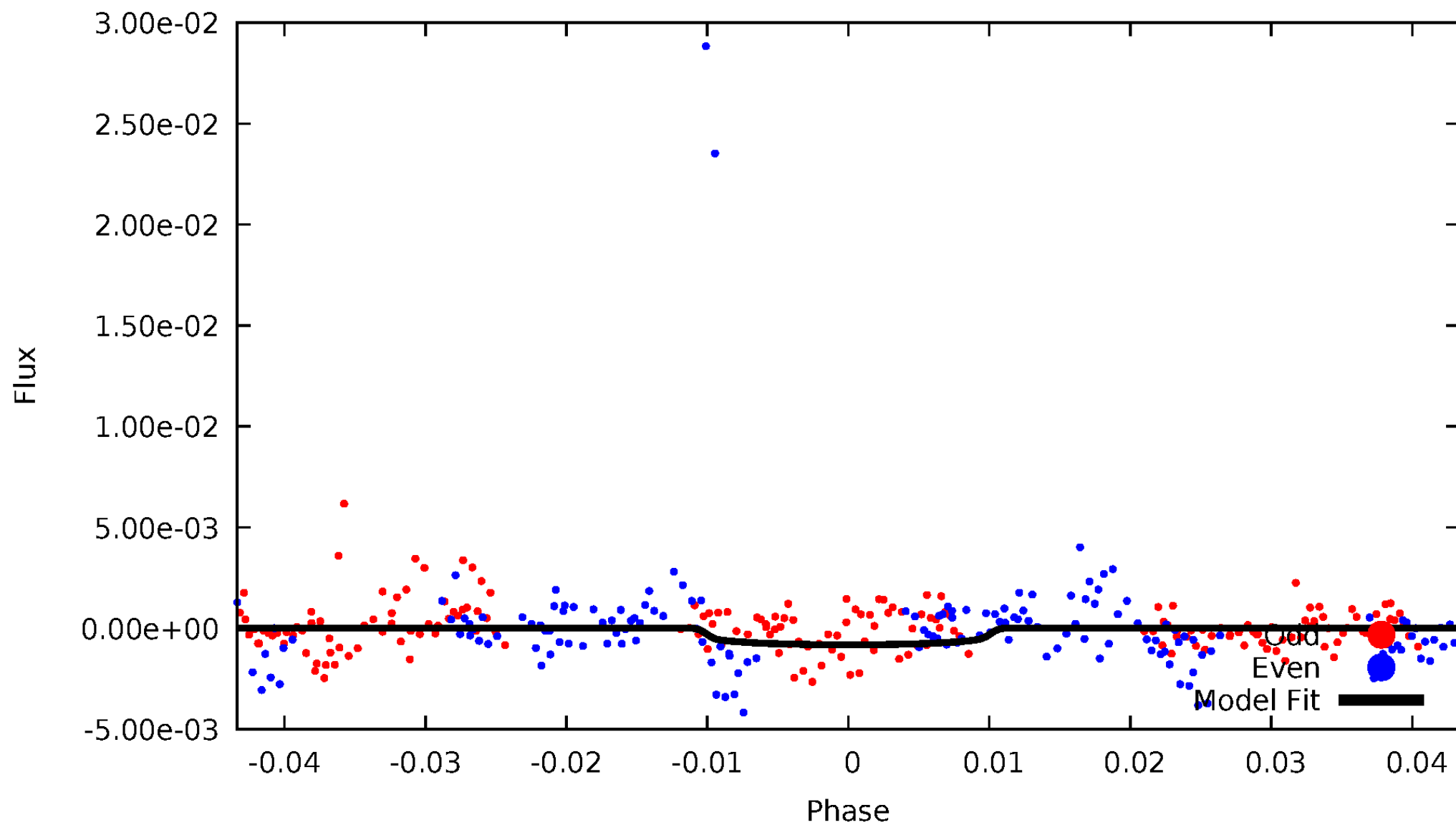


TCE 005510843-02



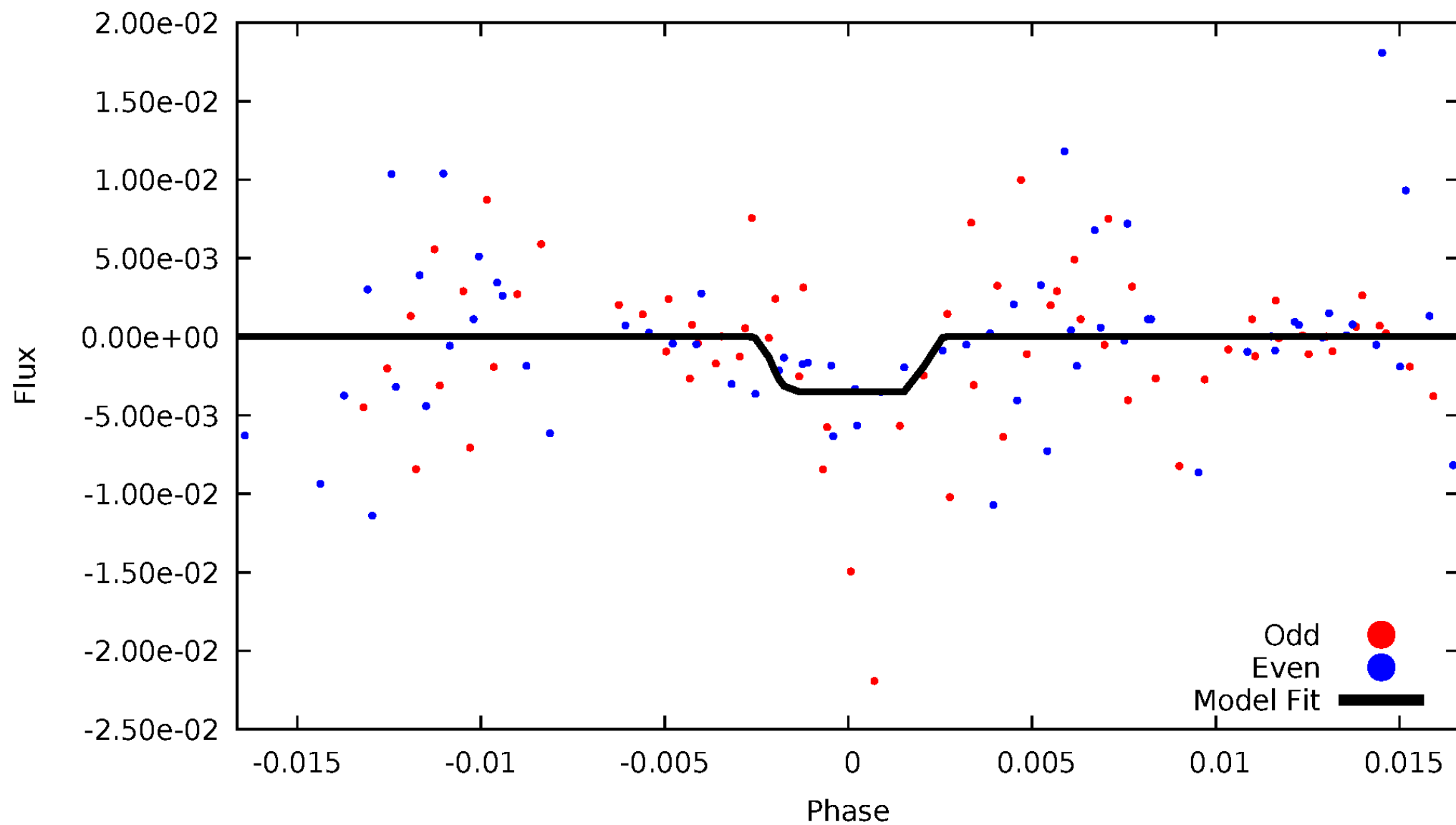
DV Odd/Even

TCE 005510843-02



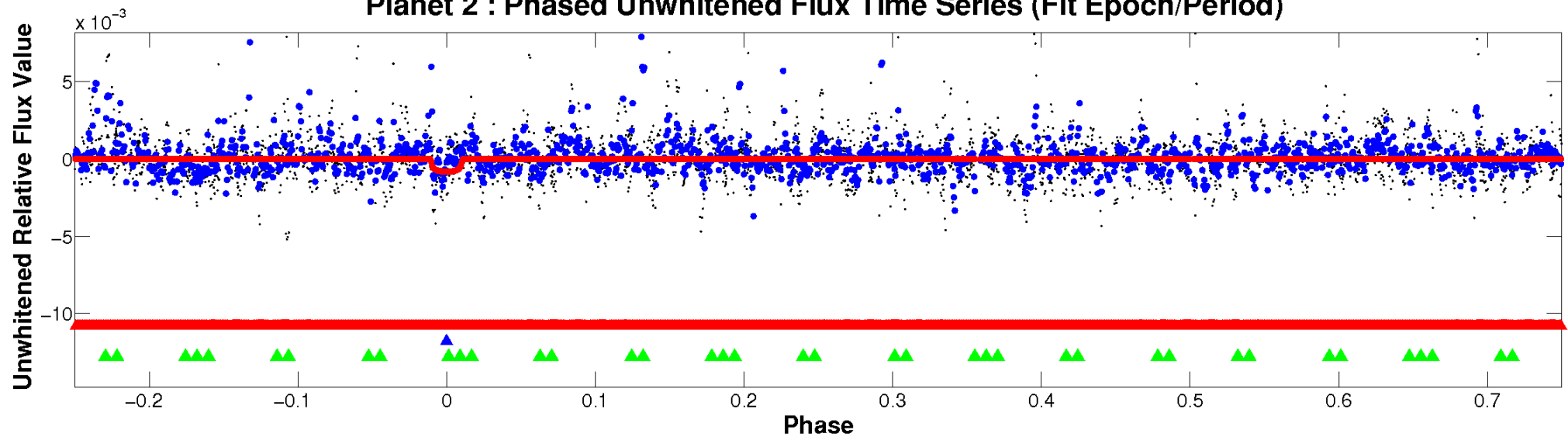
ALT Odd/Even

TCE 005510843-02

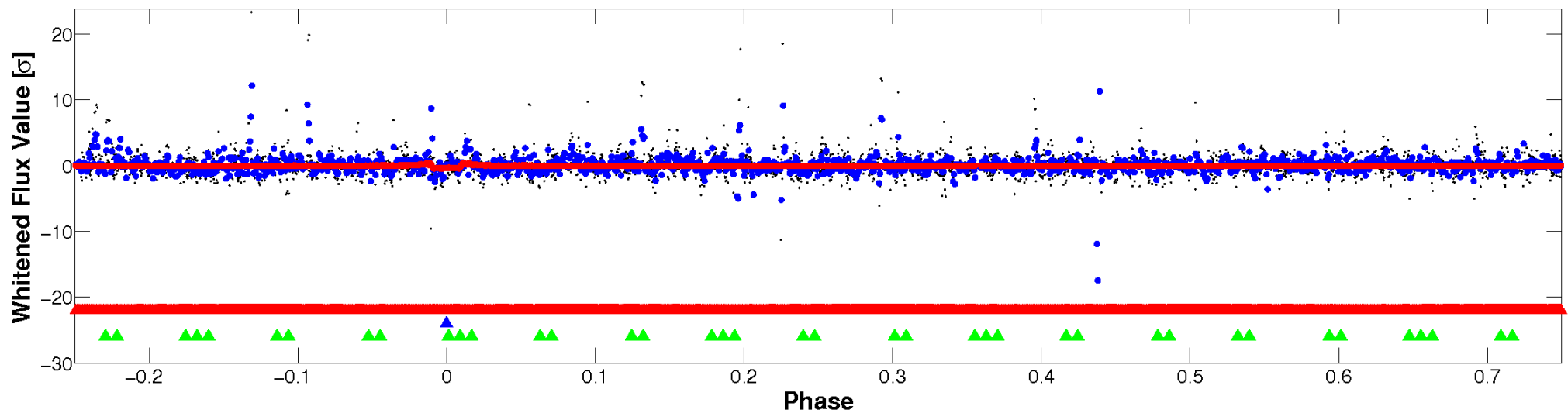


Non-Whitened Vs. Whitened Light Curve

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

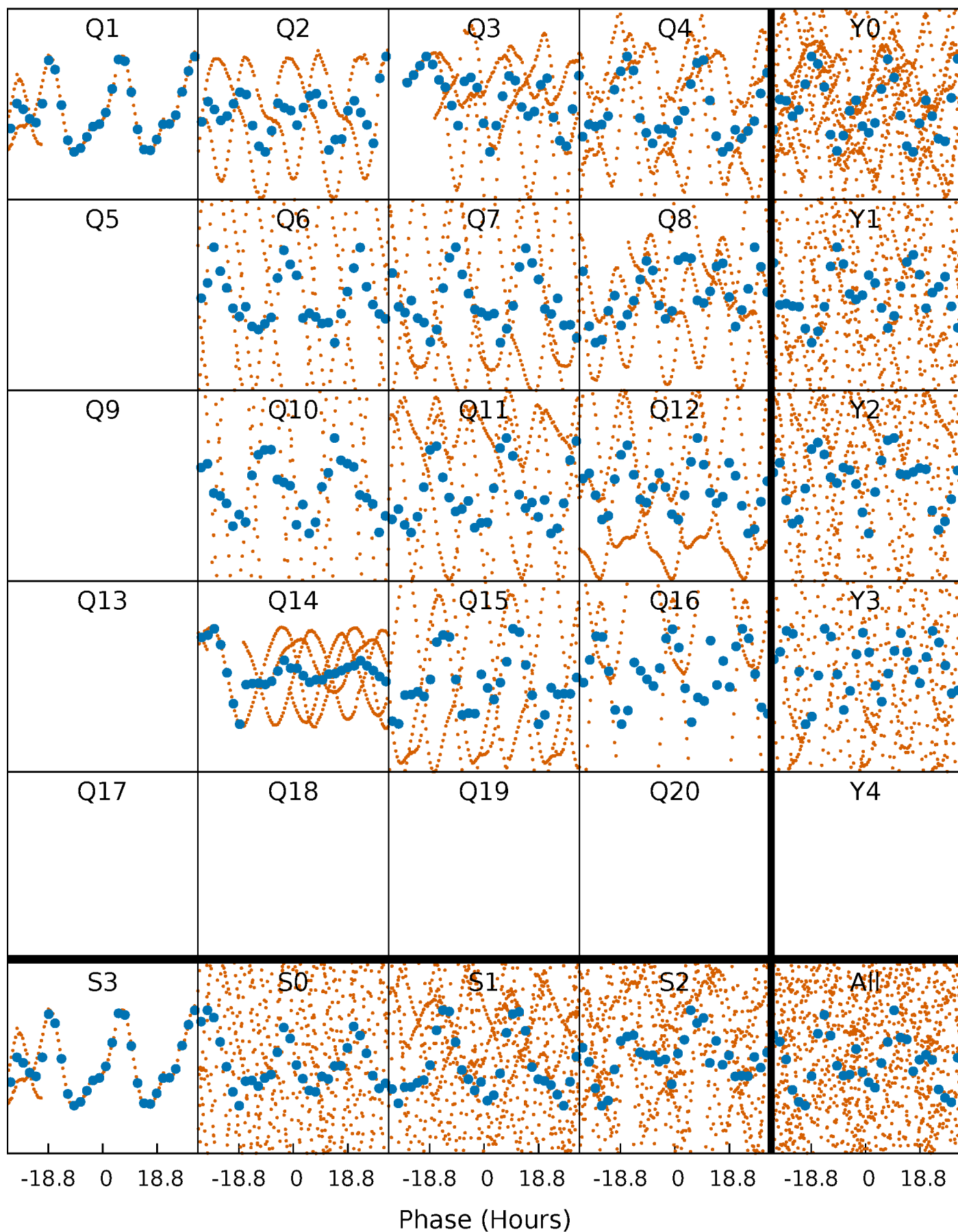


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



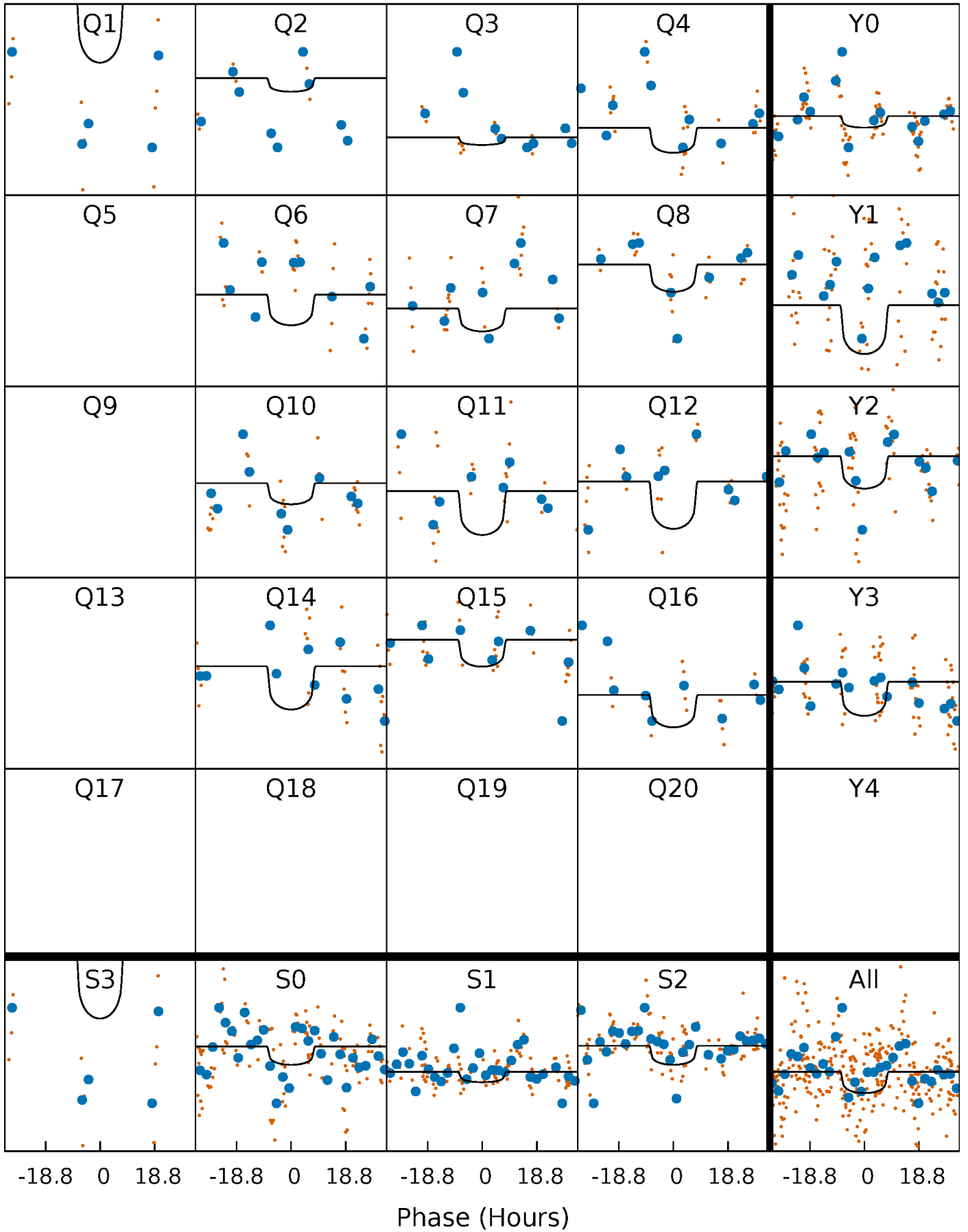
PDC Quarter-Phased Transit Curves

TCE 005510843-02 P= 31.676904 Days $T_0=134.192149$ (BKJD)



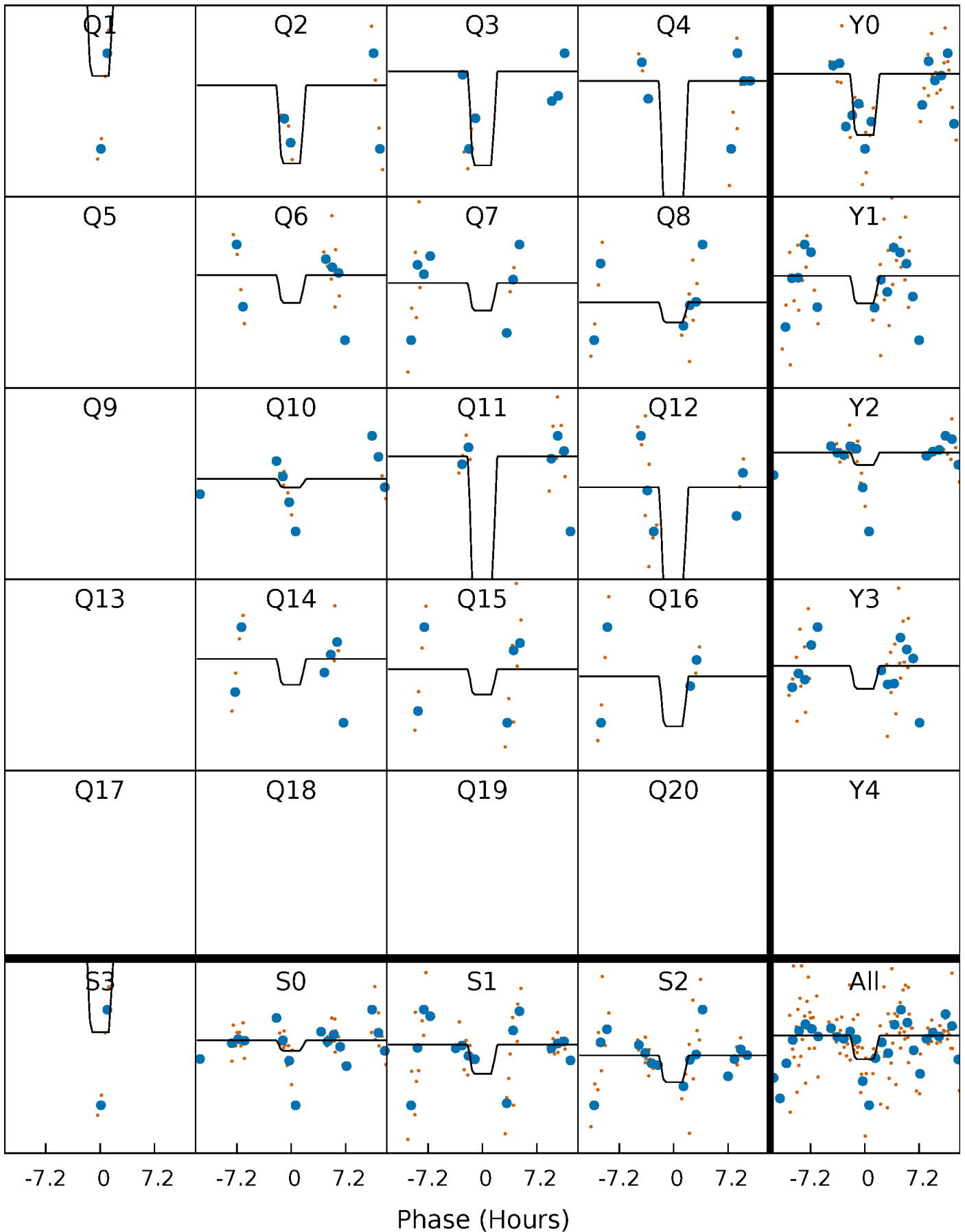
DV Quarter-Phased Transit Curves

TCE 005510843-02 P= 31.676904 Days $T_0=134.192149$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

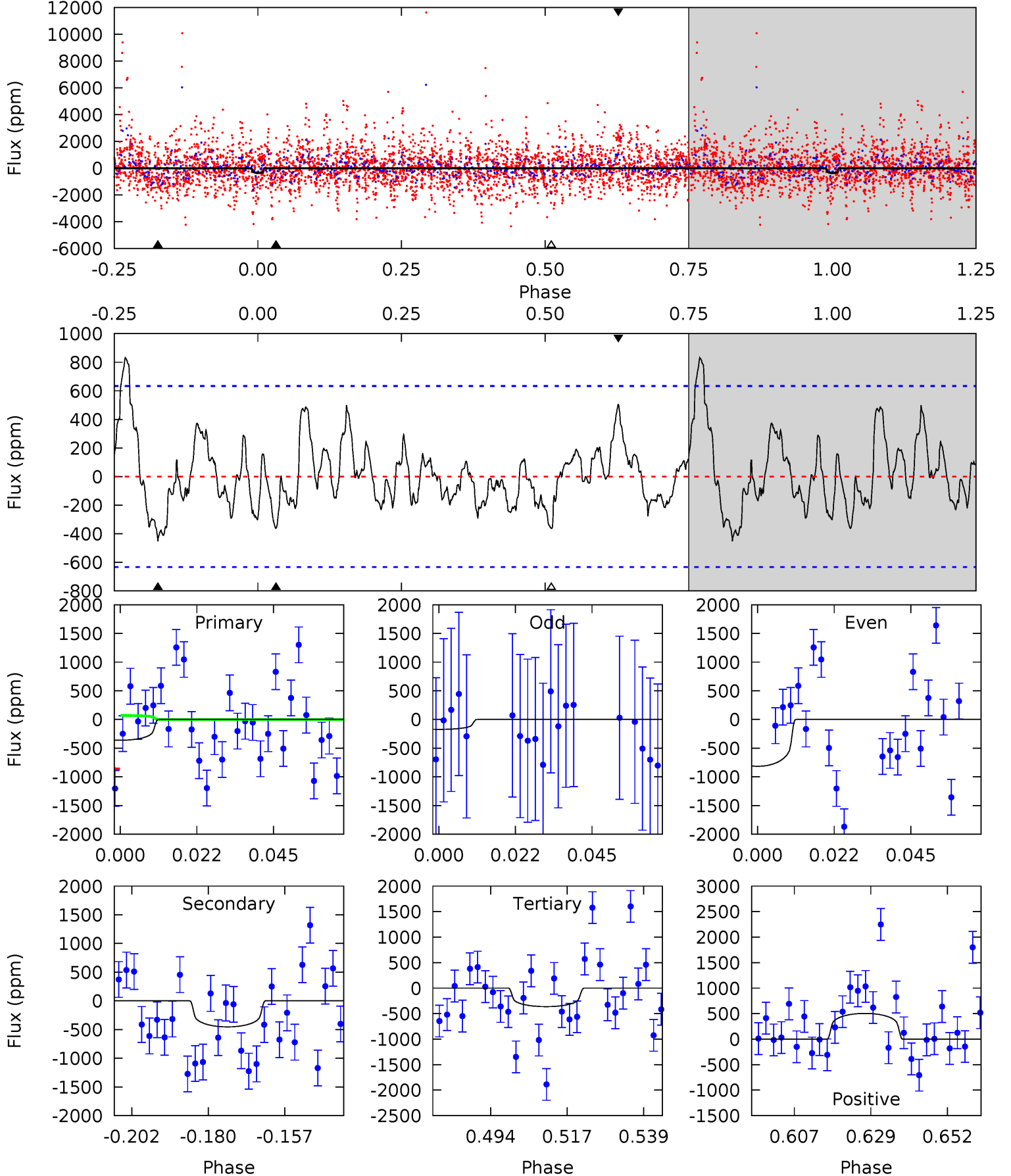
TCE 005510843-02 P= 31.683785 Days $T_0=133.937264$ (BKJD)



DV Model-Shift Uniqueness Test

005510843-02, P = 31.676904 Days, E = 102.515245 Days

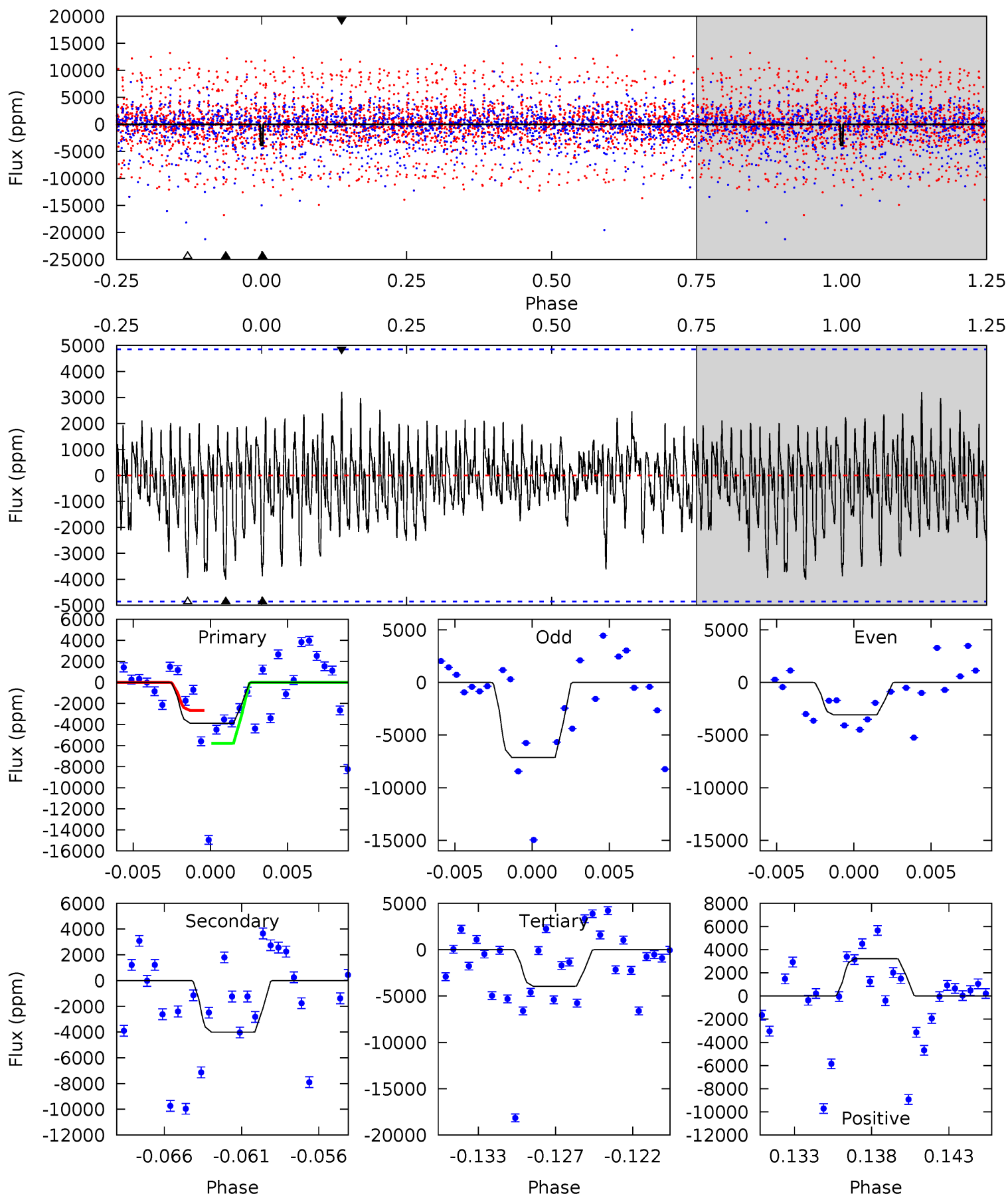
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.78	3.49	2.79	3.88	4.87	2.28	1.60	-0.01	-1.10	0.69	-0.39	2.28	9.55	0.65	3.10



Alt Model-Shift Uniqueness Test

005510843-02, P = 31.683785 Days, E = 102.253479 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.12	4.25	4.19	3.41	5.15	2.80	1.14	-0.07	0.71	0.07	0.84	2.14	1.12	0.44	1.63



Stellar Parameters For KIC 005510843

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5161^{+154}_{-154}	$4.630^{+0.066}_{-0.039}$	$-0.920^{+0.300}_{-0.300}$	$0.632^{+0.050}_{-0.050}$	$0.622^{+0.059}_{-0.023}$	$3.465^{+0.917}_{-0.559}$
	+3%/-3%	+1%/-1%	+33%/-33%	+8%/-8%	+9%/-4%	+26%/-16%
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 005510843-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-453 ± 130	$1.97^{+0.82}_{-0.79}$	615^{+23}_{-21}	4547^{+1084}_{-594}	1836^{+2942}_{-1015}
Alt.	-4005 ± 942	$4.05^{+0.80}_{-0.77}$	614^{+22}_{-22}	5317^{+664}_{-479}	3769^{+2324}_{-1303}

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

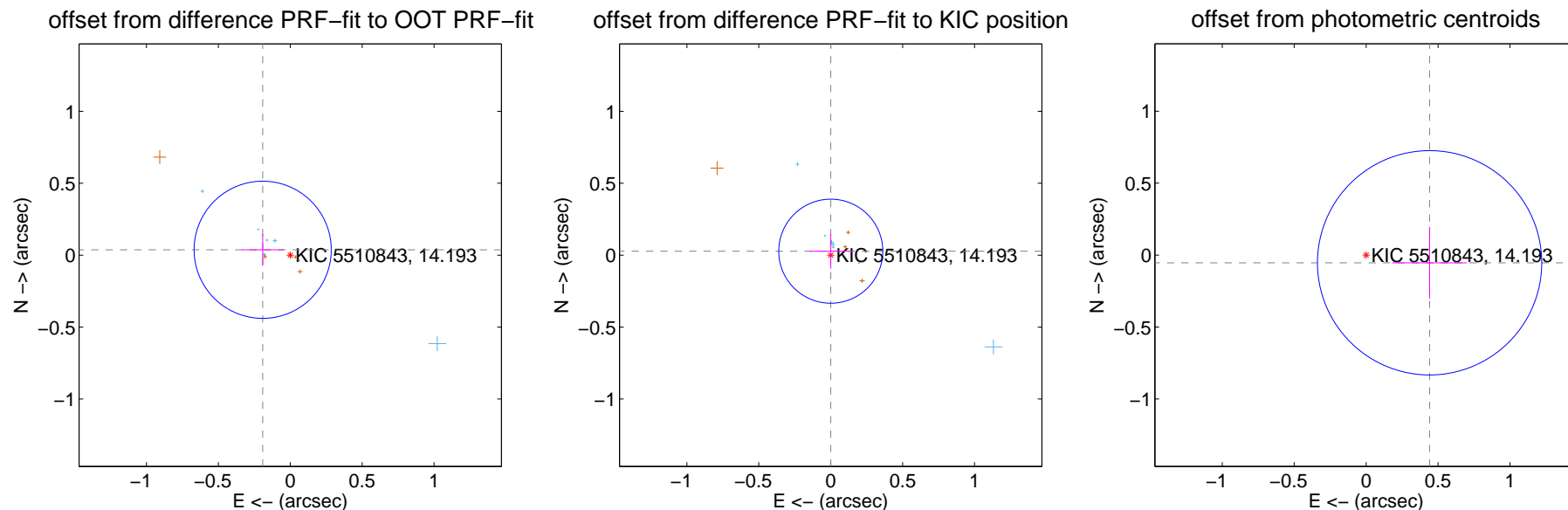
DV Centroid Data

Supplemental centroid analysis for 005510843-02. Kepler magnitude: 14.19. Transit SNR 3.85

There are 6 quarters with good PRF difference image offsets

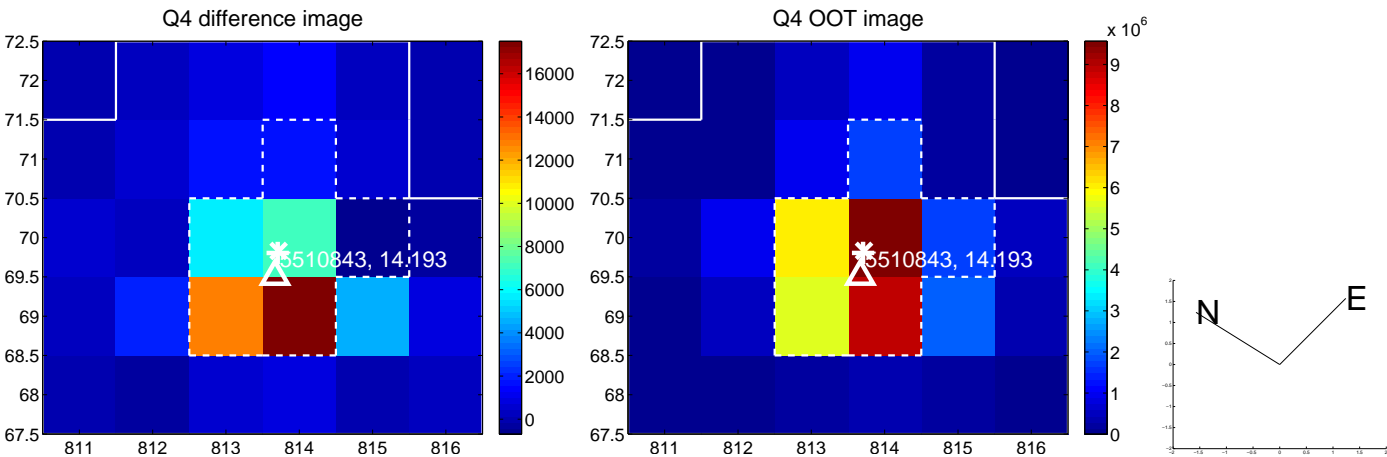
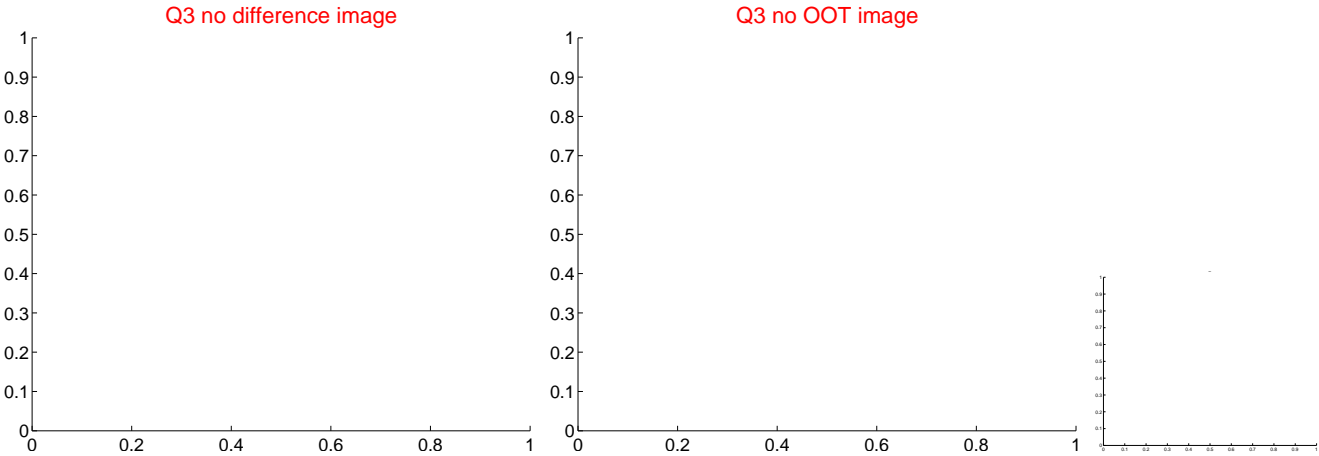
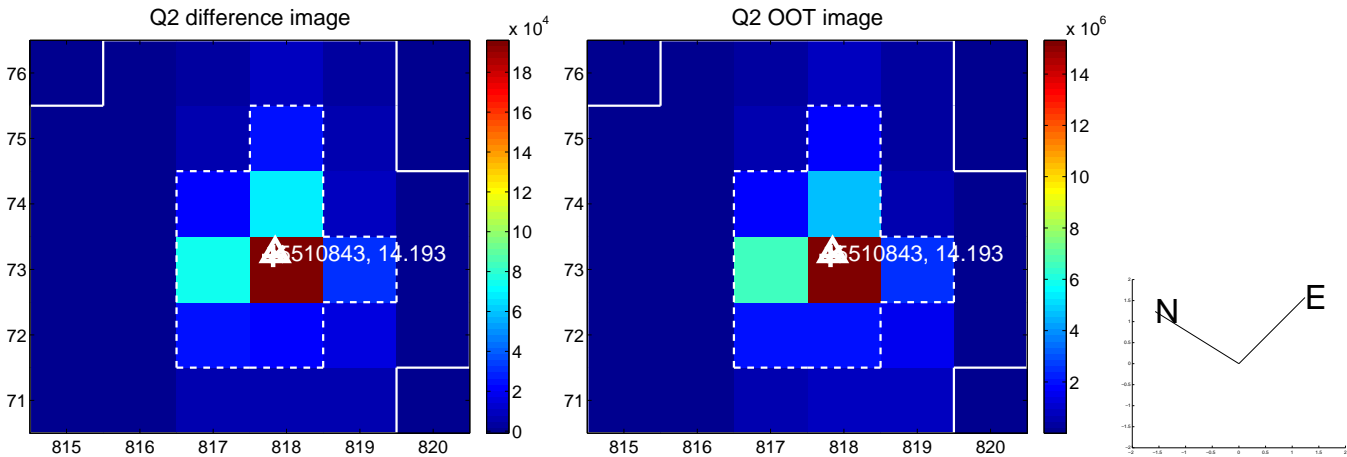
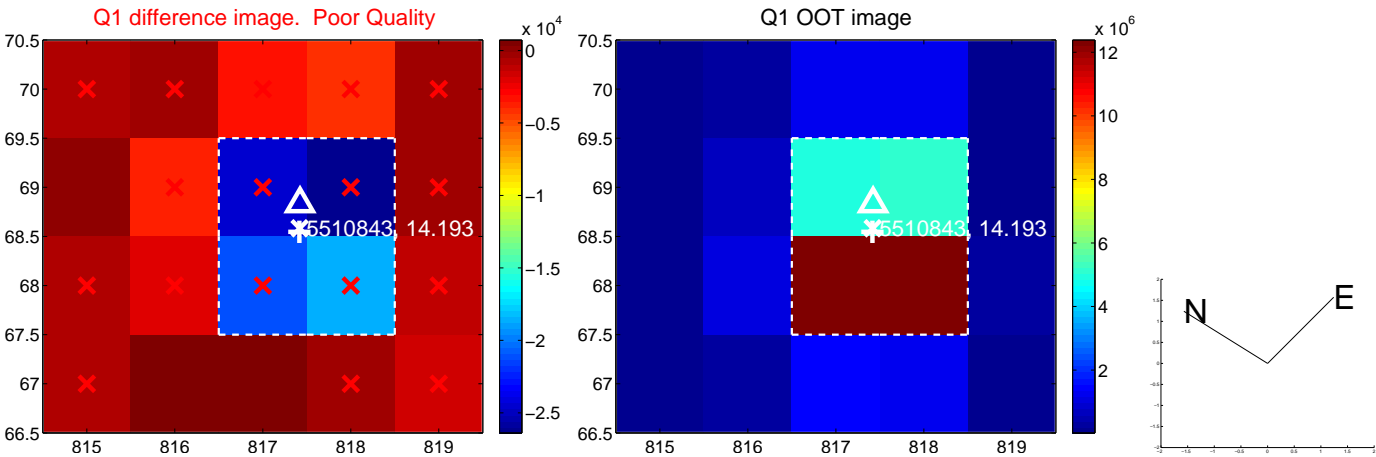
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.195 ± 0.159	1.23	0.192 ± 0.146	0.037 ± 0.110
PRF-fit source offset from KIC position	0.027 ± 0.121	0.23	-0.000 ± 0.147	0.027 ± 0.122
photometric centroid source offset	0.44 ± 0.26	1.71	-0.44 ± 0.26	-0.05 ± 0.25

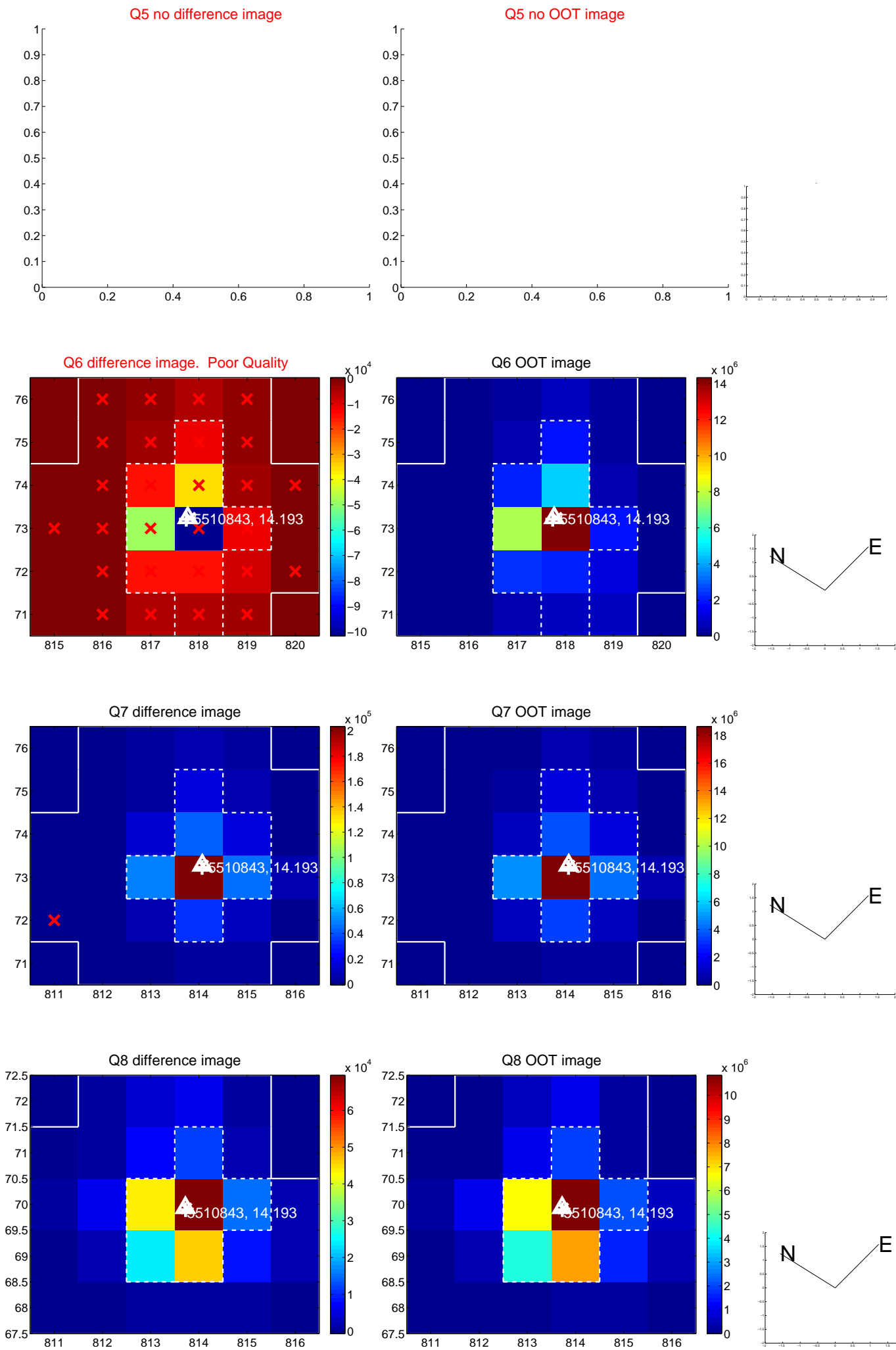


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

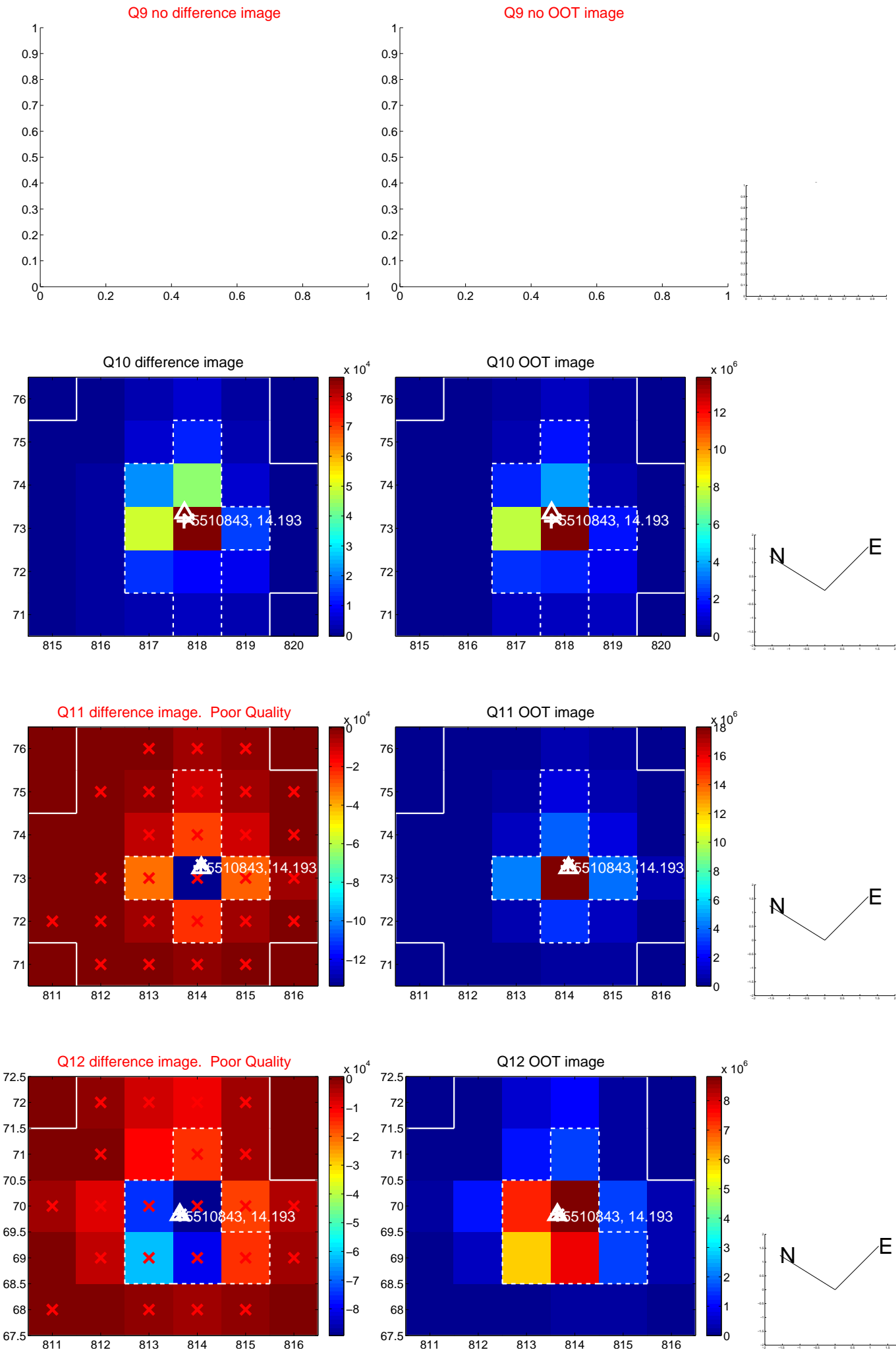
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



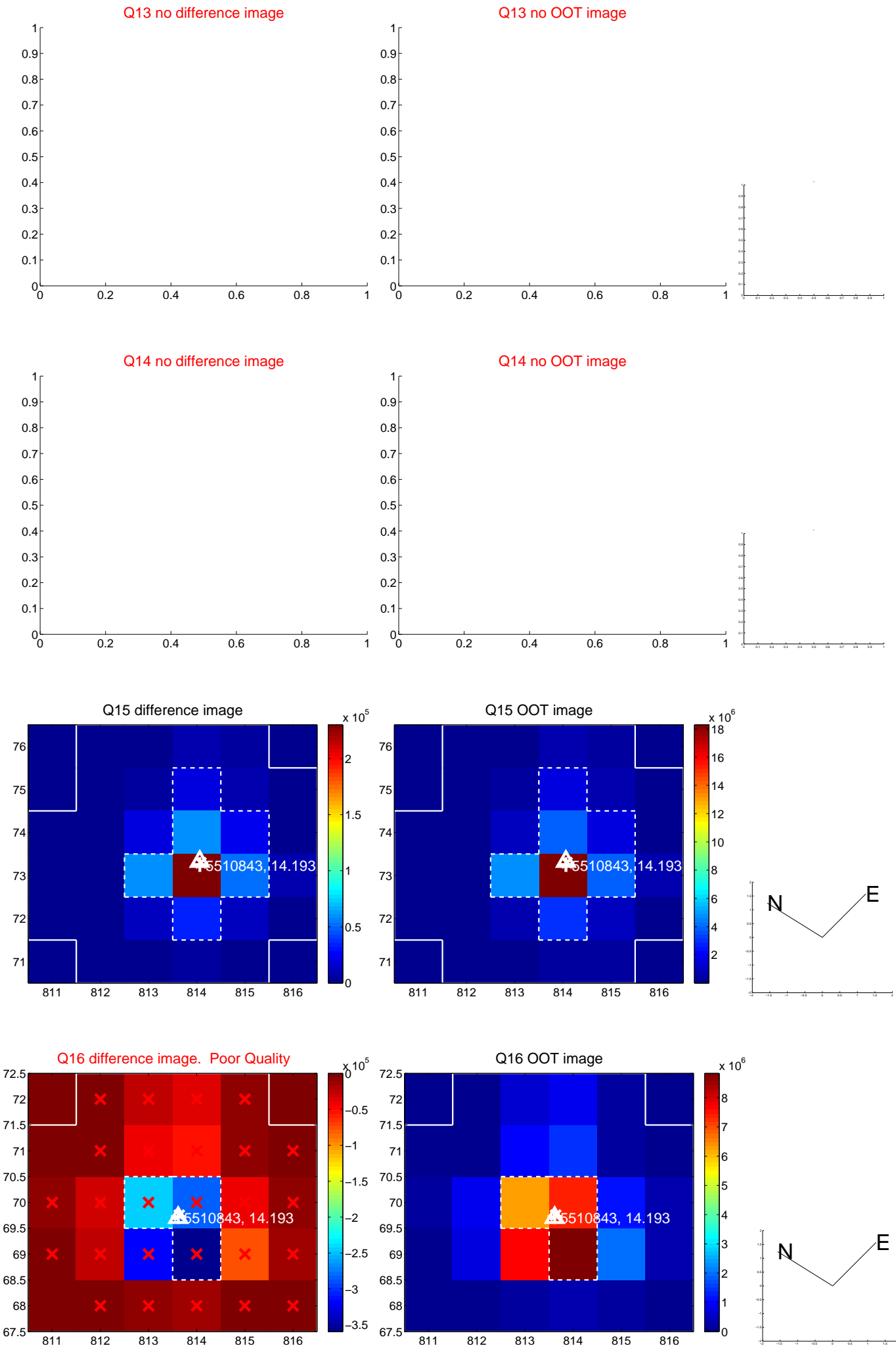
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



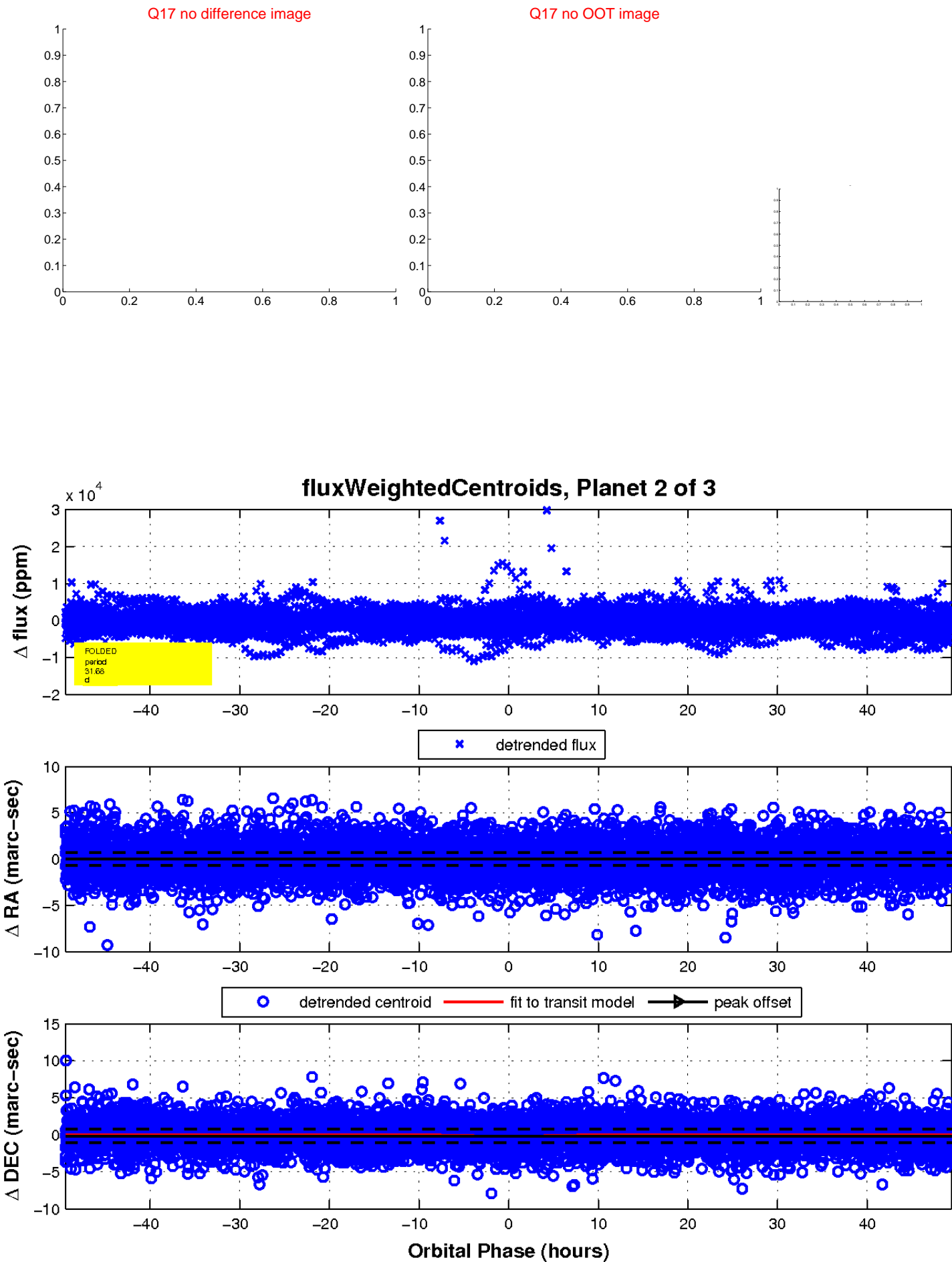
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



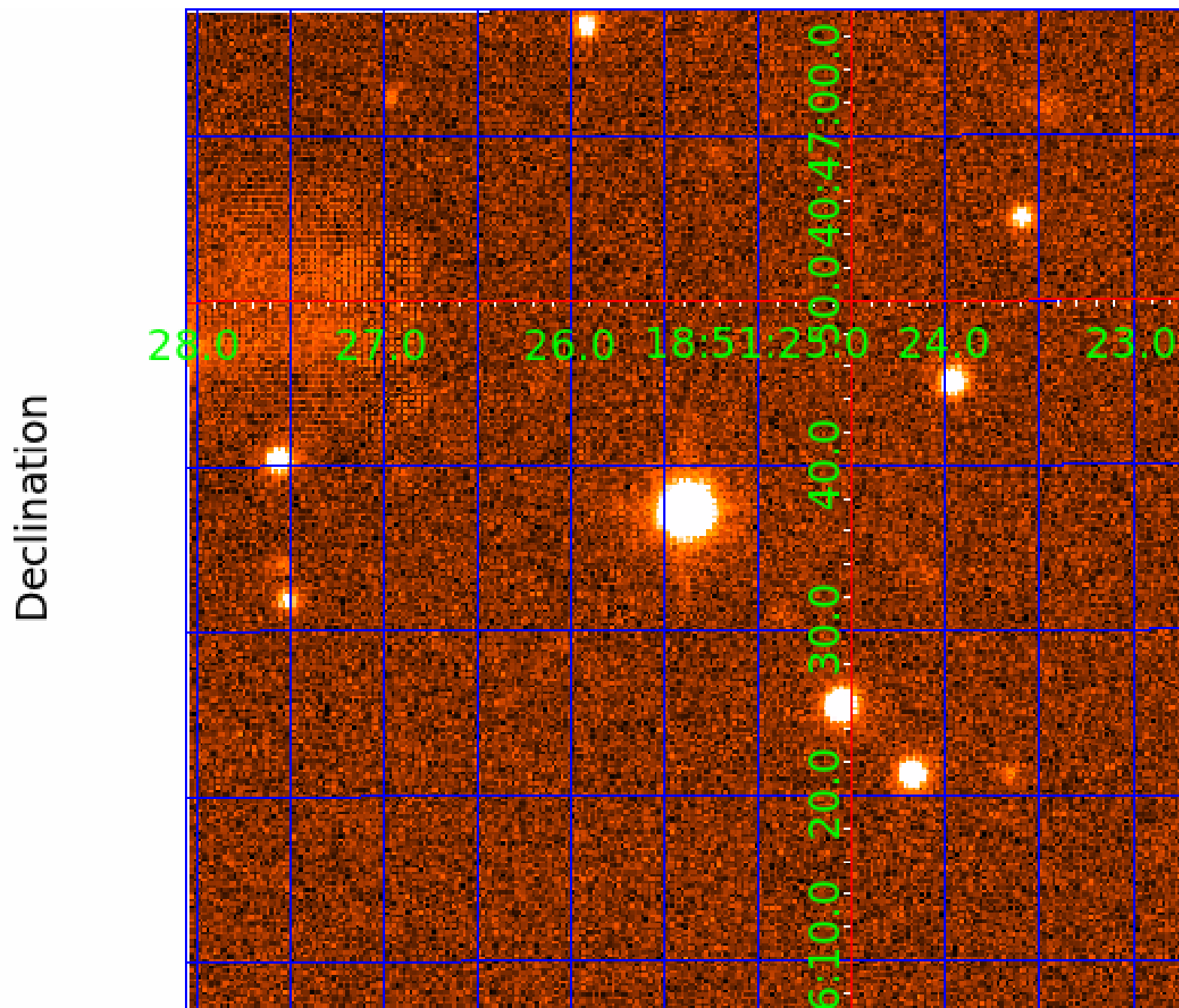
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005510843

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})
005510843-01	OBS	No	1.038106	132.395655	1.7	7.492	9.2	0.1	0.63	5161	0.09	865.60
005510843-02	OBS	No	31.676904	134.192149	818.1	16.477	8.9	3.8	0.63	5161	1.97	9.08
005510843-03	OBS	No	37.281320	154.704522	2347.7	1.841	8.5	9.5	0.63	5161	5.96	7.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005510843-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
005510843-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
005510843-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_POS_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.

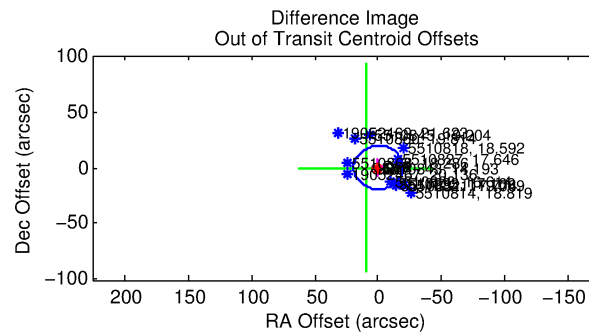
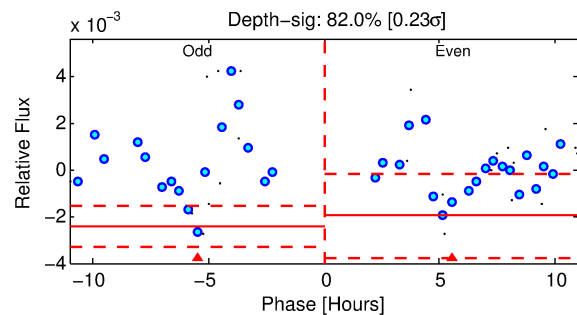
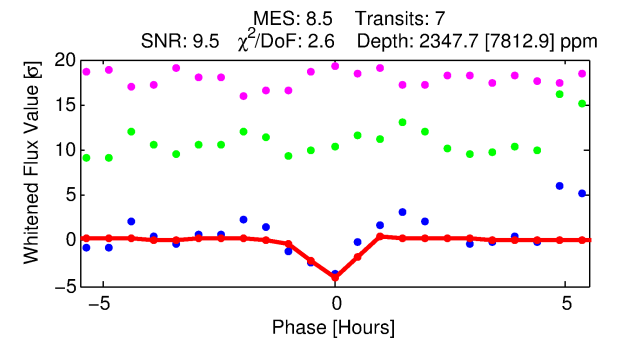
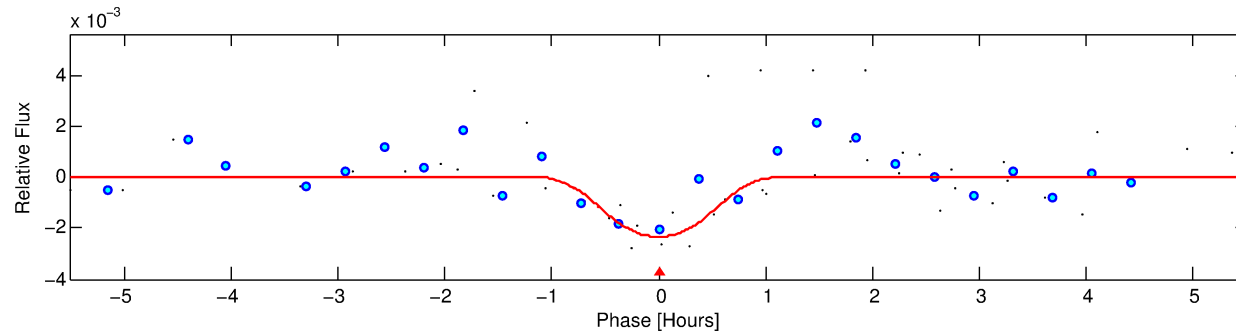
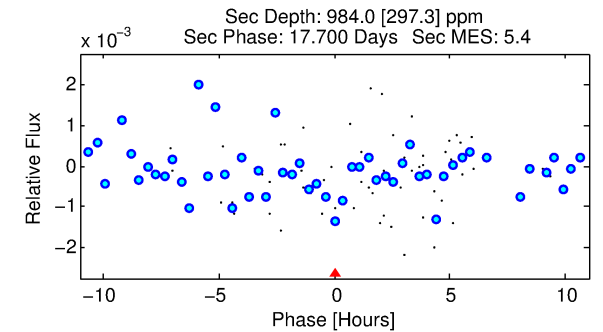
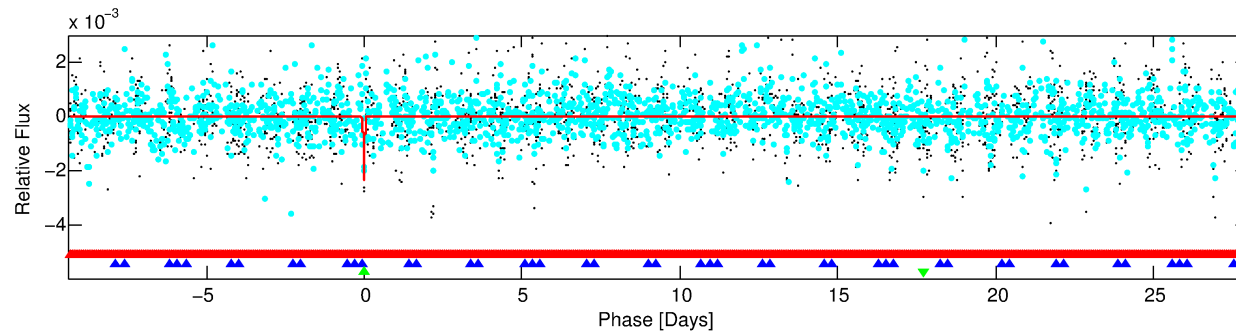
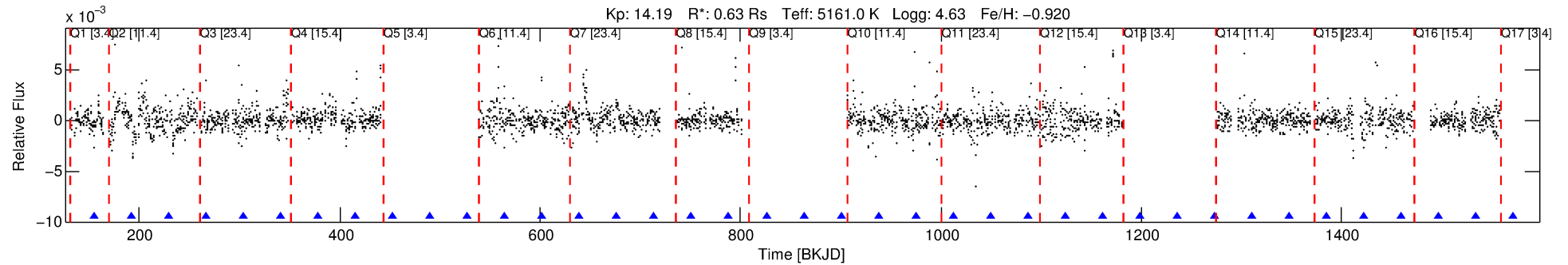
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005510843-03

No Significant Match Found

DV One-Page Summary

KIC: 5510843 Candidate: 3 of 3 Period: 37.281 d



DV Fit Results:

Period = 37.28132 [0.00034] d
Epoch = 154.7045 [0.0048] BKJD
Rp/R* = 0.0864 [1.0580]
a/R* = 65.70 [182.62]
b = 1.00 [1.68]
Seff = 7.31 [1.21]
Teq = 419 [17] K
Rp = 5.96 [72.97] Re
a = 0.1864 [0.0136] AU
Ag = 529.93 [12979.54] [0.04σ]
Teffp = 3110 [19042] K [0.14σ]

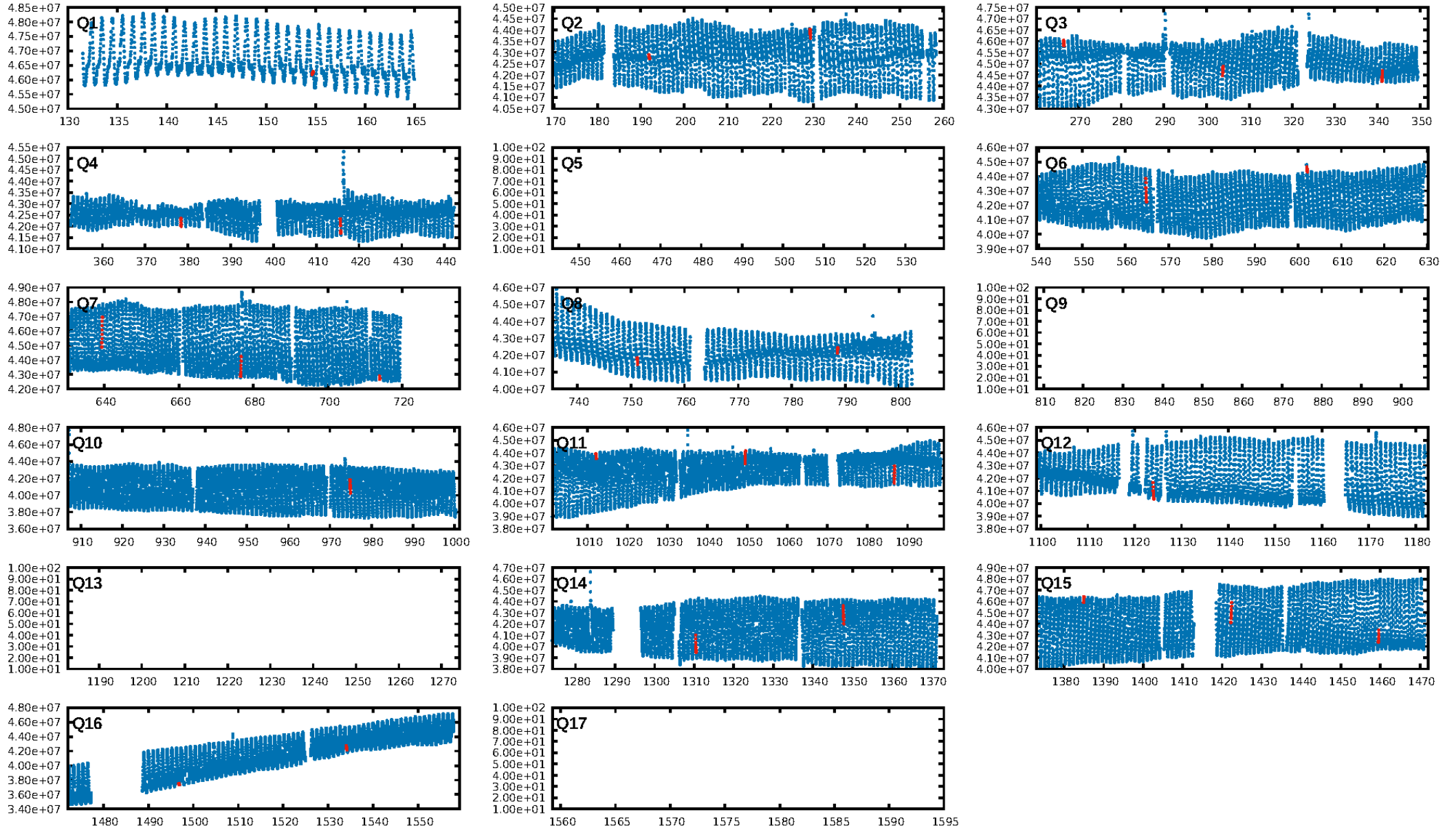
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.11σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.9%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 4.33e-10
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 12.32
Centroid-sig: 18.1%
Centroid-so: 0.819 arcsec [2.47σ]
OotOffset-rm: 0.079 arcsec [0.01σ]
KicOffset-rm: 0.115 arcsec [0.02σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 0.46 [6/13]

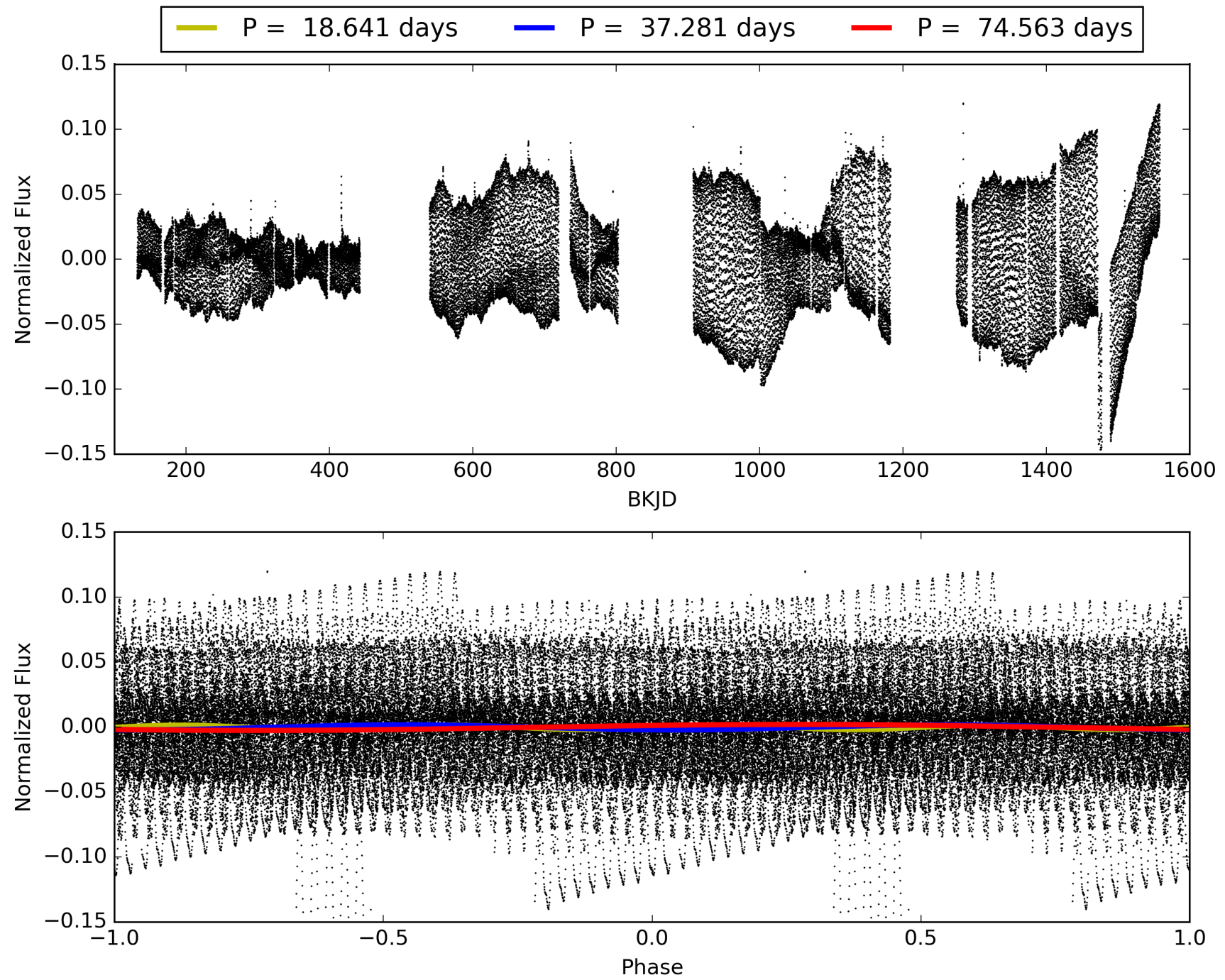
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:55:22 Z

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

TCE 005510843-03, PDC Light Curves

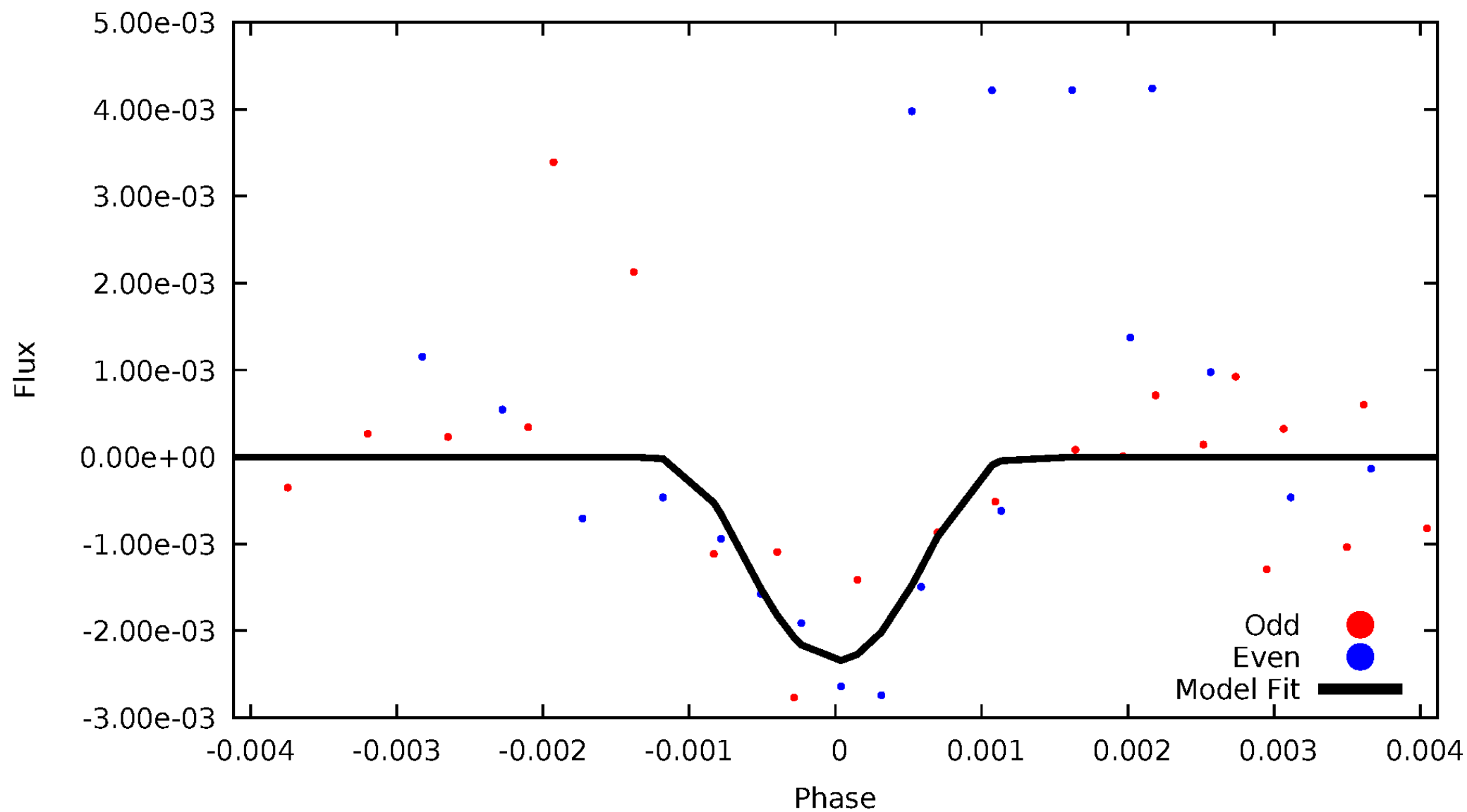


TCE 005510843-03



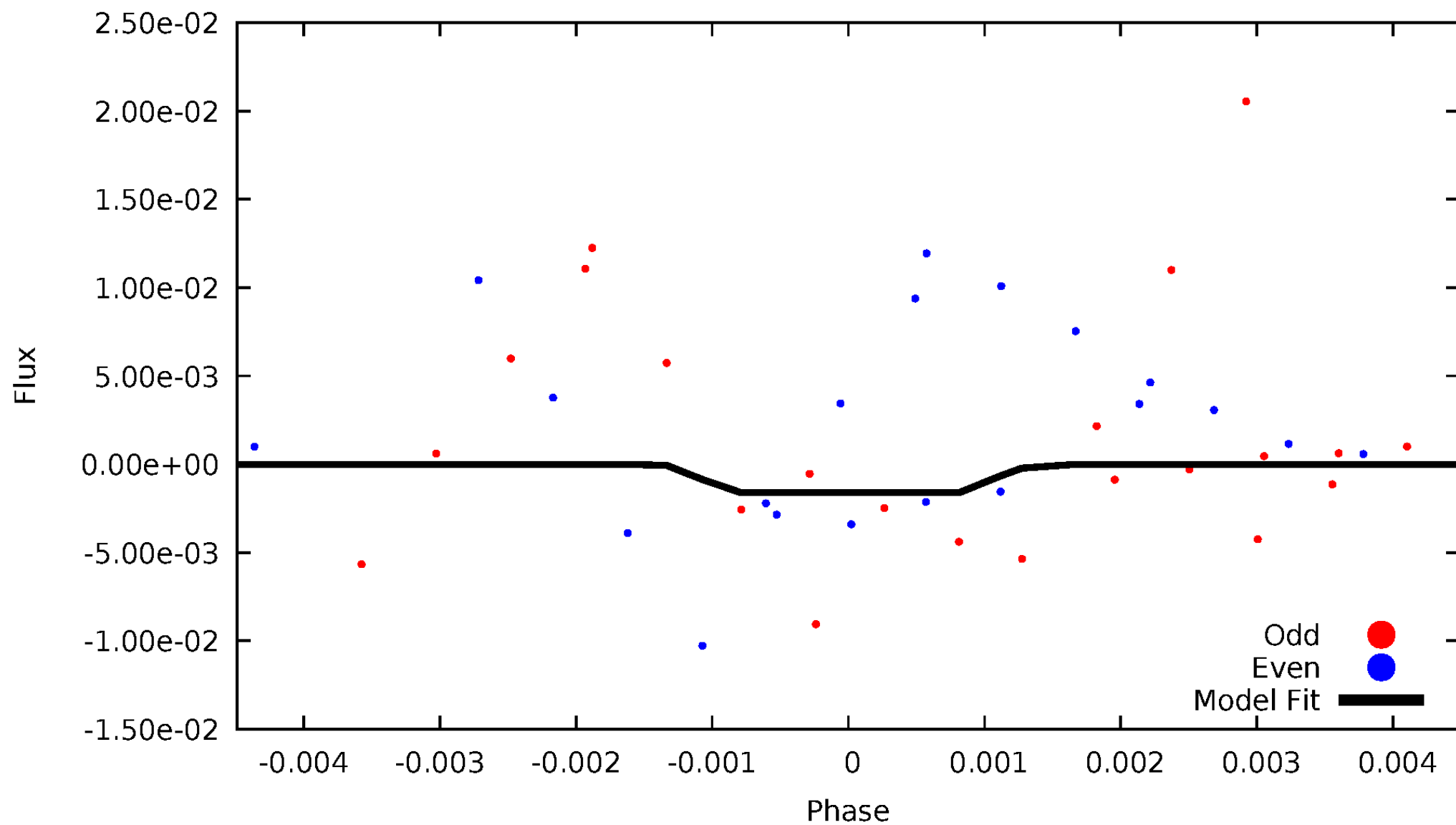
DV Odd/Even

TCE 005510843-03

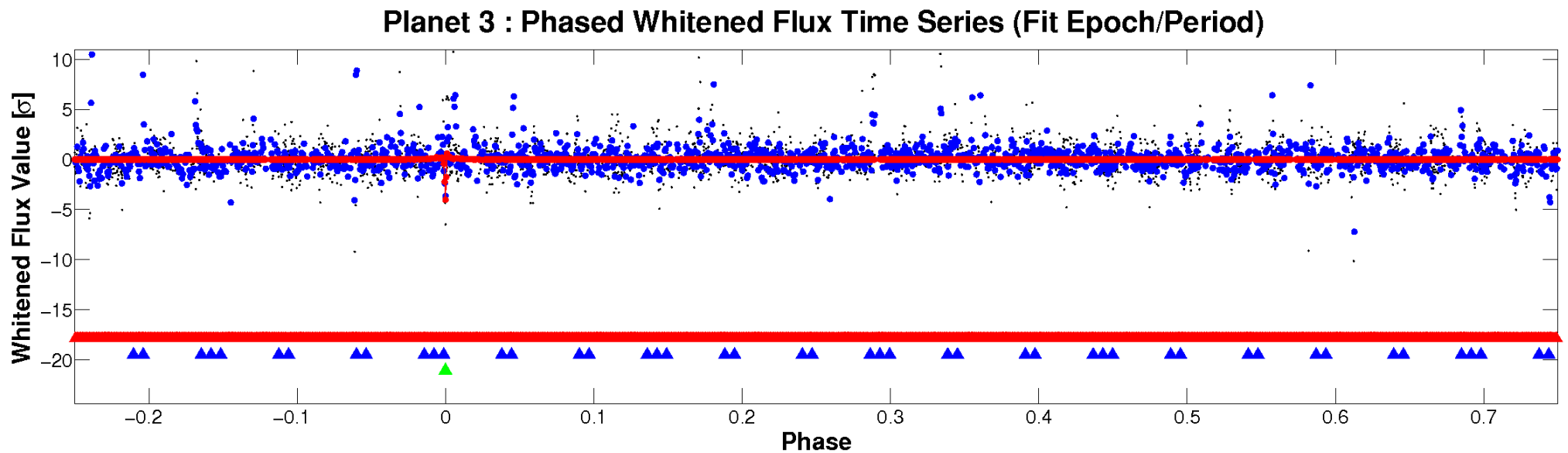
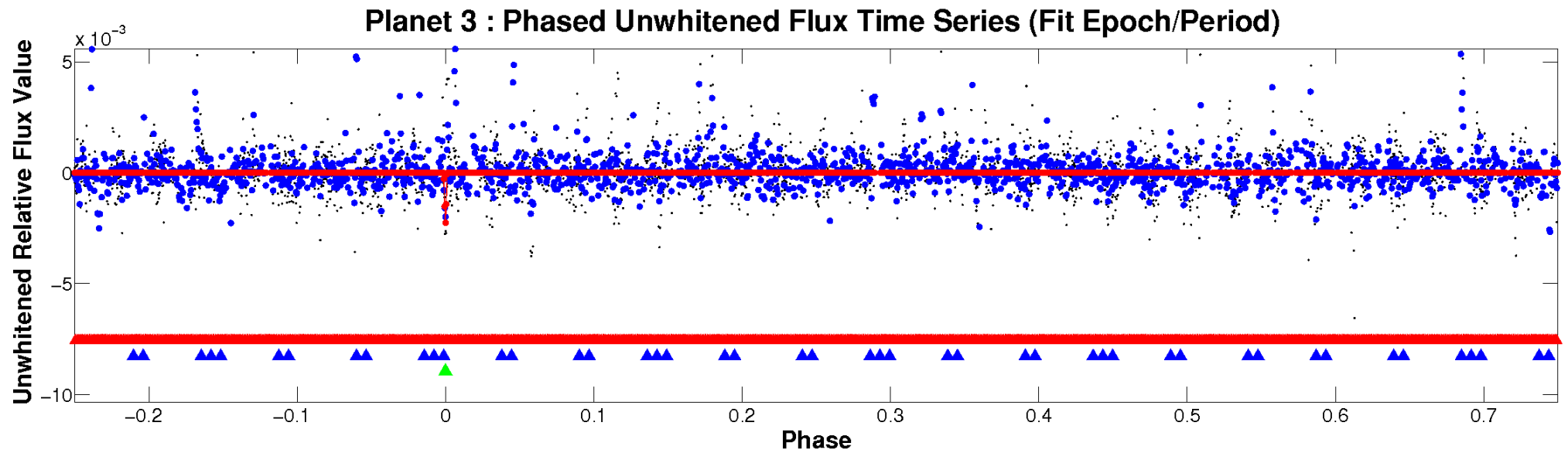


ALT Odd/Even

TCE 005510843-03

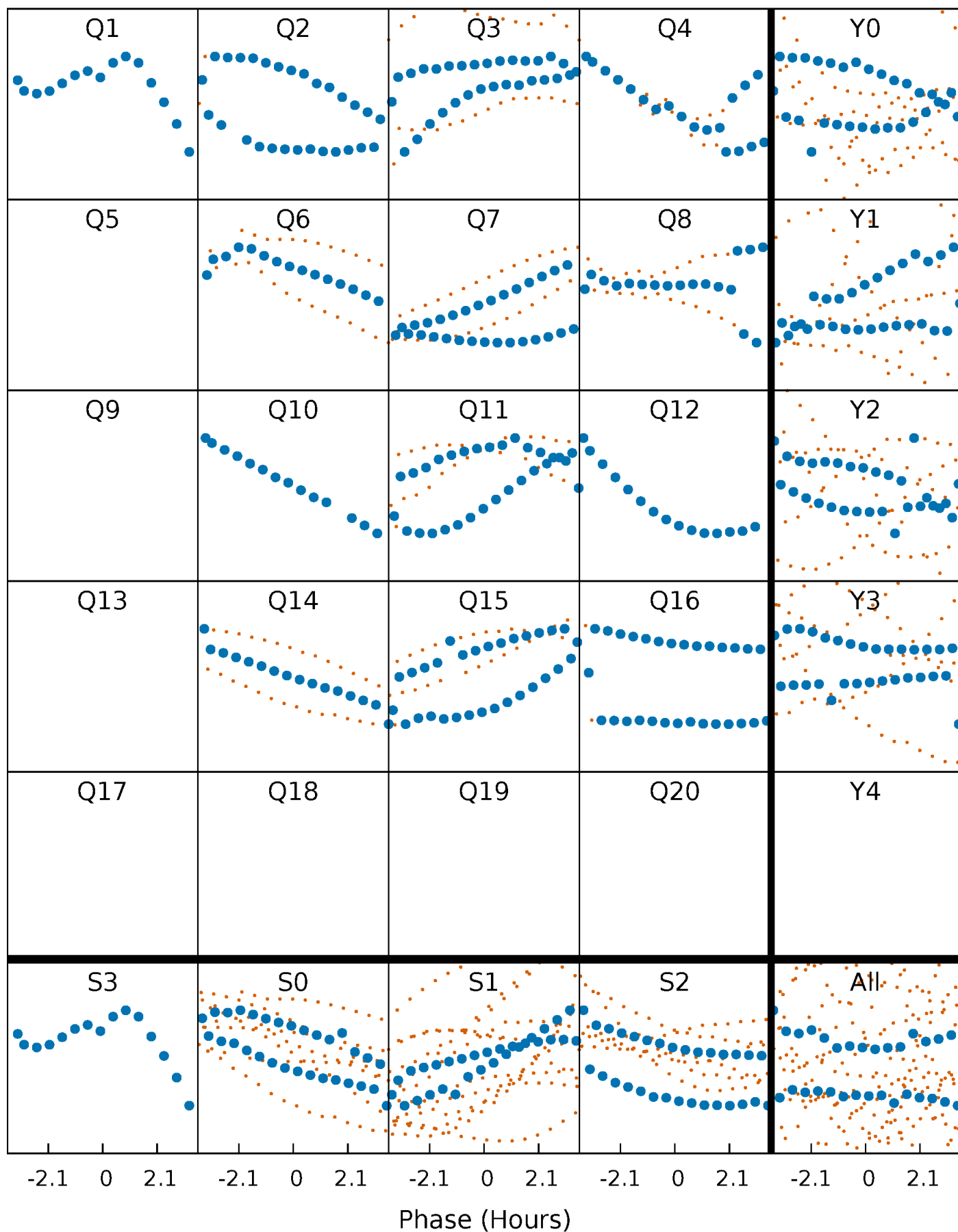


Non-Whitened Vs. Whitened Light Curve



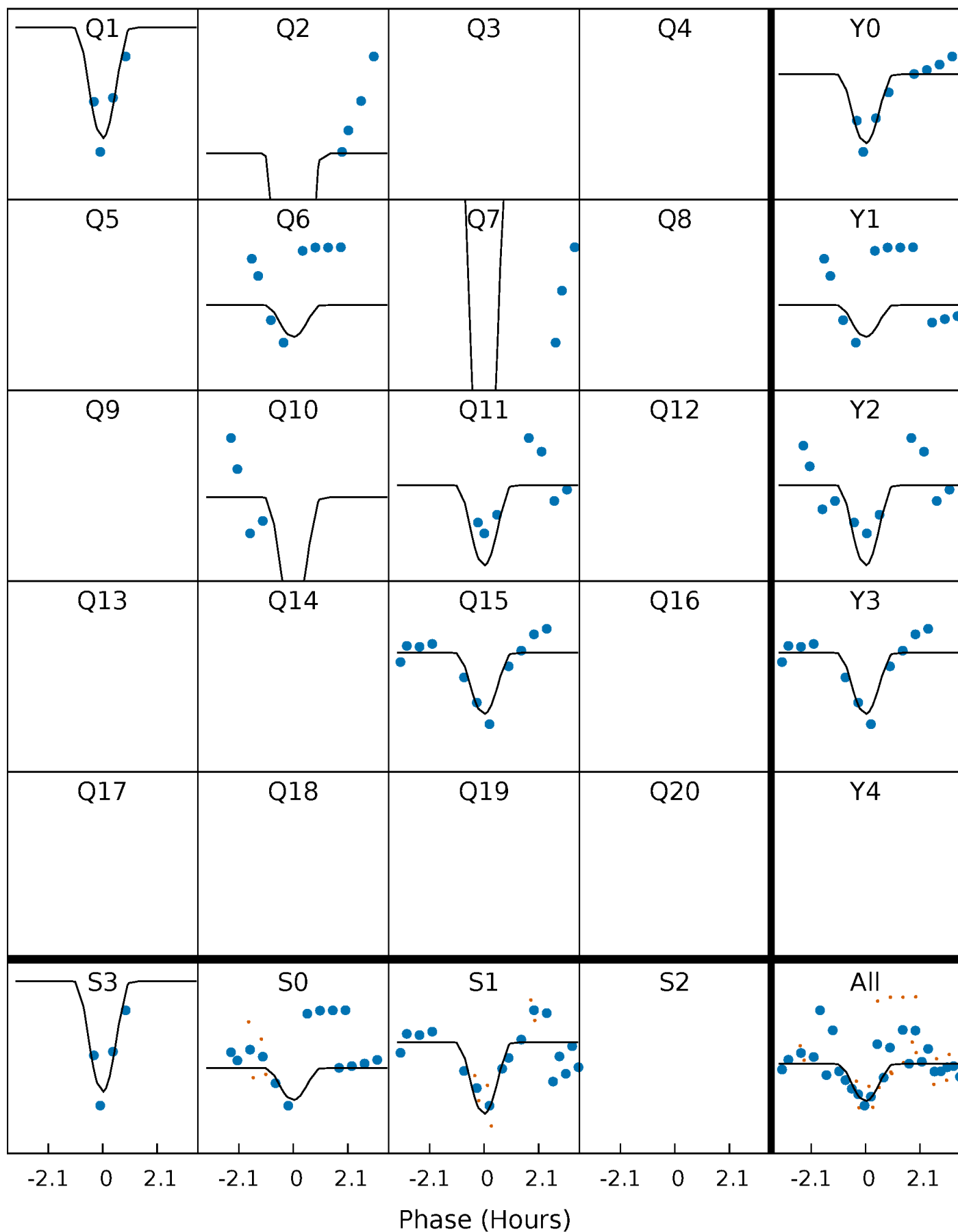
PDC Quarter-Phased Transit Curves

TCE 005510843-03 P= 37.281320 Days $T_0=154.704522$ (BKJD)



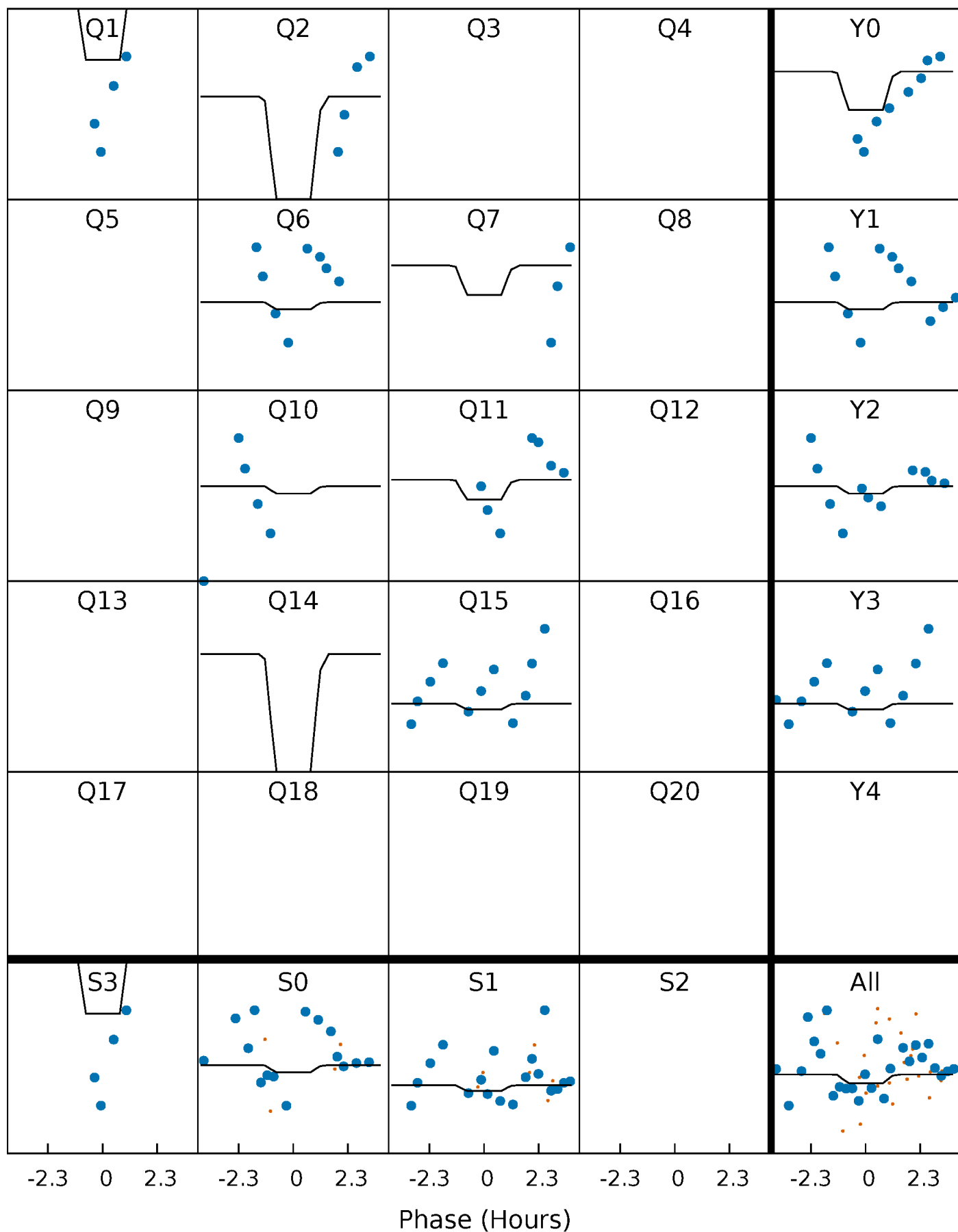
DV Quarter-Phased Transit Curves

TCE 005510843-03 P= 37.281320 Days $T_0=154.704522$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

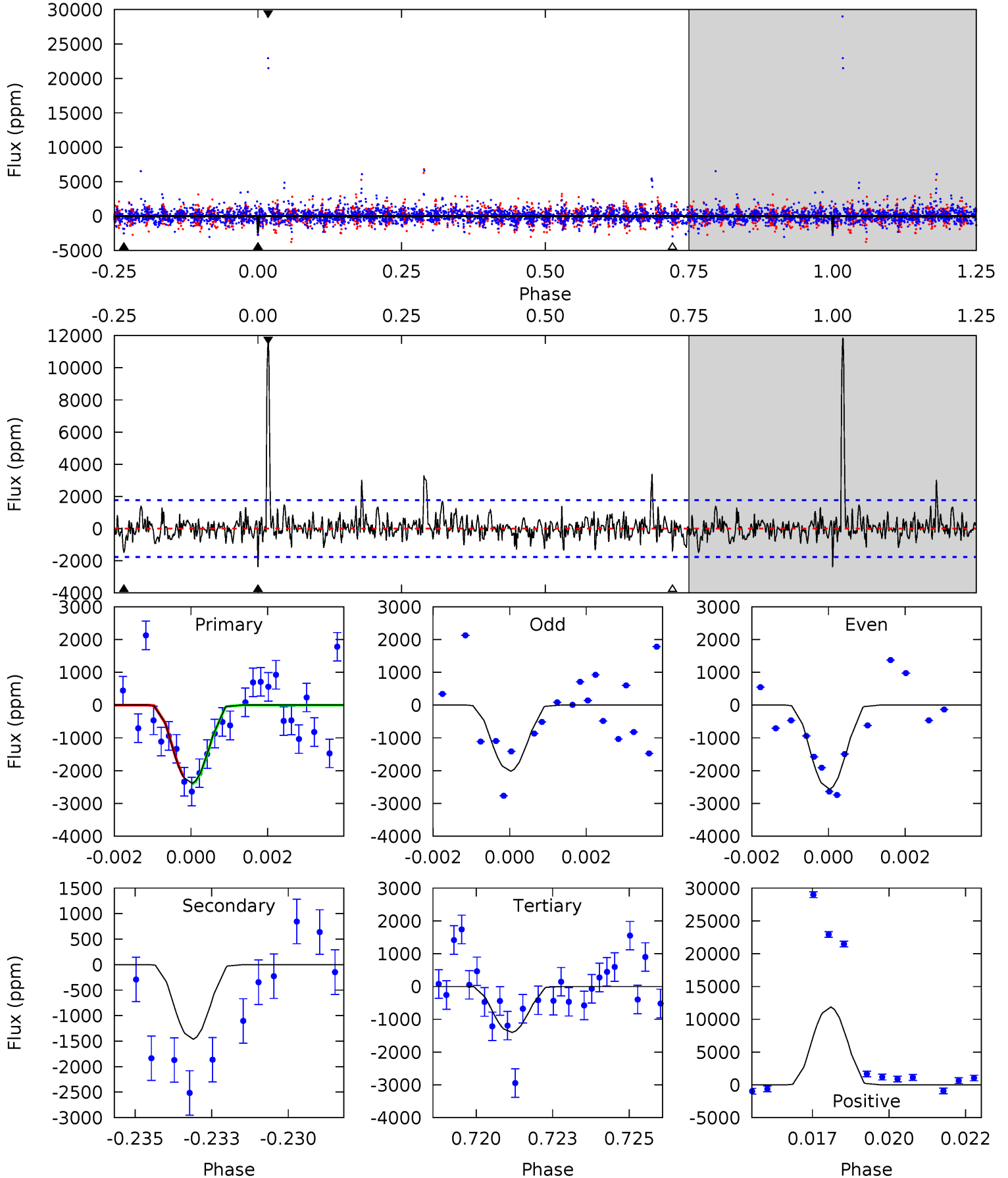
TCE 005510843-03 P= 37.281107 Days $T_0=154.705150$ (BKJD)



DV Model-Shift Uniqueness Test

005510843-03, P = 37.281320 Days, E = 117.423202 Days

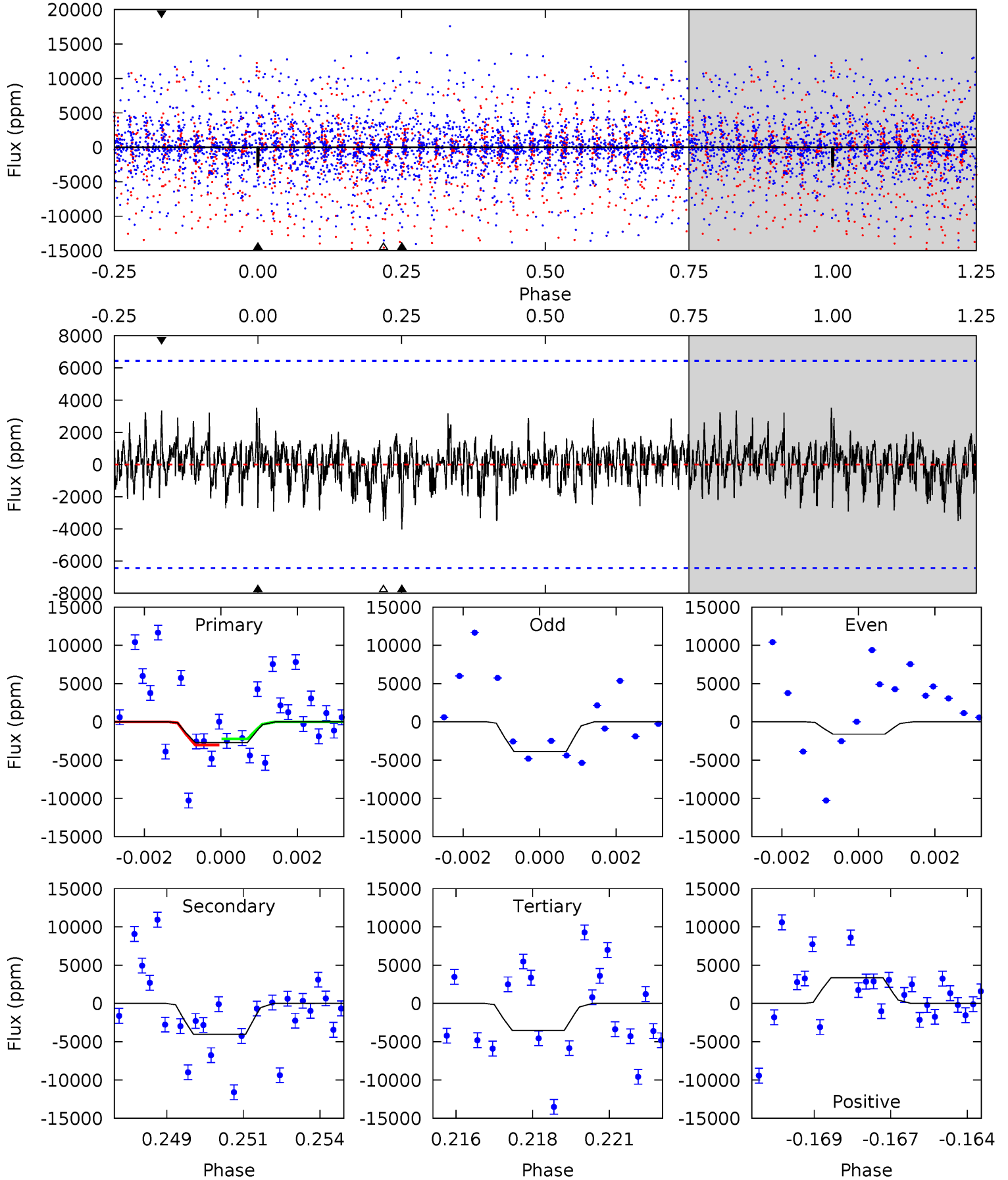
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.14	4.38	4.19	35.5	5.29	3.03	2.13	2.95	-28.3	0.18	-31.1	0.74	0.25	0.83	0.35



Alt Model-Shift Uniqueness Test

005510843-03, P = 37.281107 Days, E = 117.424043 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.22	3.32	2.89	2.75	5.30	3.04	0.80	-0.67	-0.53	0.43	0.57	0.90	-0.51	0.47	0.33



Stellar Parameters For KIC 005510843

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5161^{+154}_{-154}	$4.630^{+0.066}_{-0.039}$	$-0.920^{+0.300}_{-0.300}$	$0.632^{+0.050}_{-0.050}$	$0.622^{+0.059}_{-0.023}$	$3.465^{+0.917}_{-0.559}$
	+3%/-3%	+1%/-1%	+33%/-33%	+8%/-8%	+9%/-4%	+26%/-16%
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 005510843-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1464 ± 335	$52.97^{+55.57}_{-36.47}$	581^{+22}_{-20}	2108^{+676}_{-308}	10^{+92}_{-8}
Alt.	-4034 ± 1215	$49.48^{+55.31}_{-34.72}$	583^{+19}_{-21}	2380^{+906}_{-369}	30^{+287}_{-23}

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

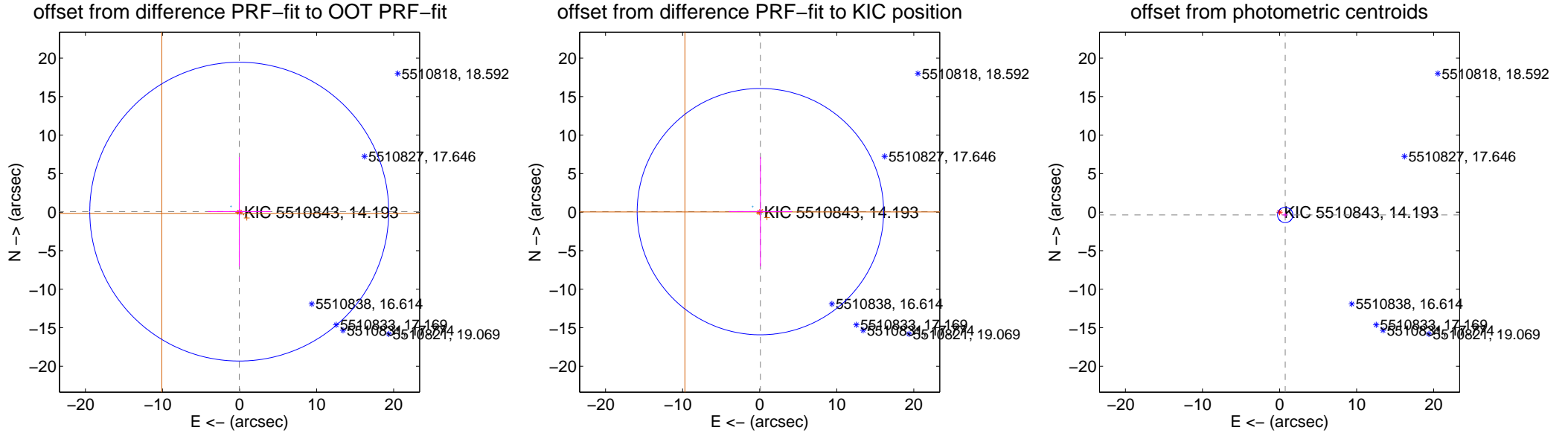
DV Centroid Data

Supplemental centroid analysis for 005510843-03. Kepler magnitude: 14.19. Transit SNR 9.46

There are 6 quarters with good PRF difference image offsets

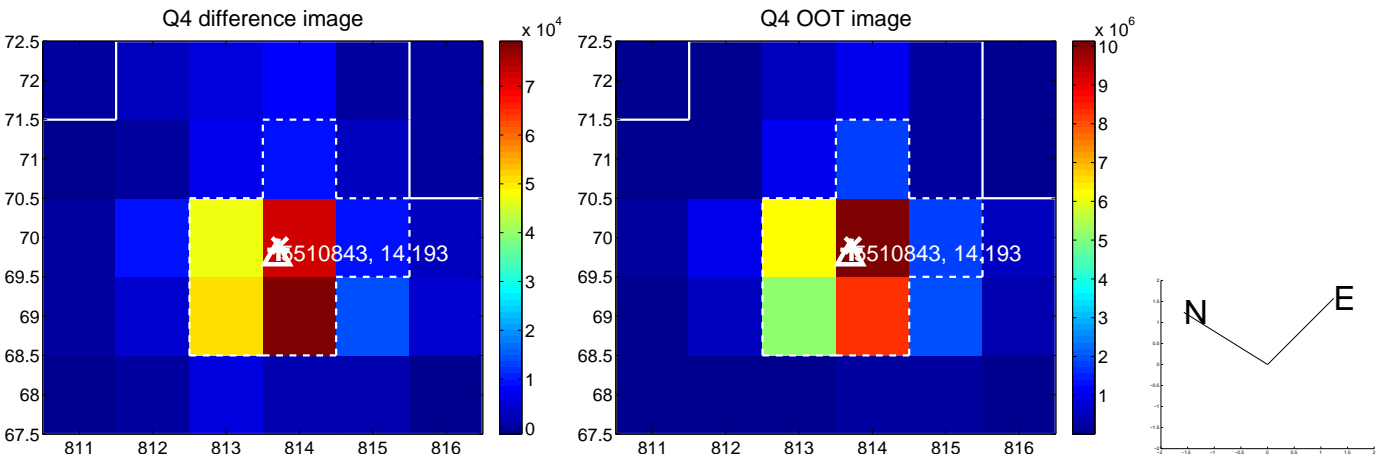
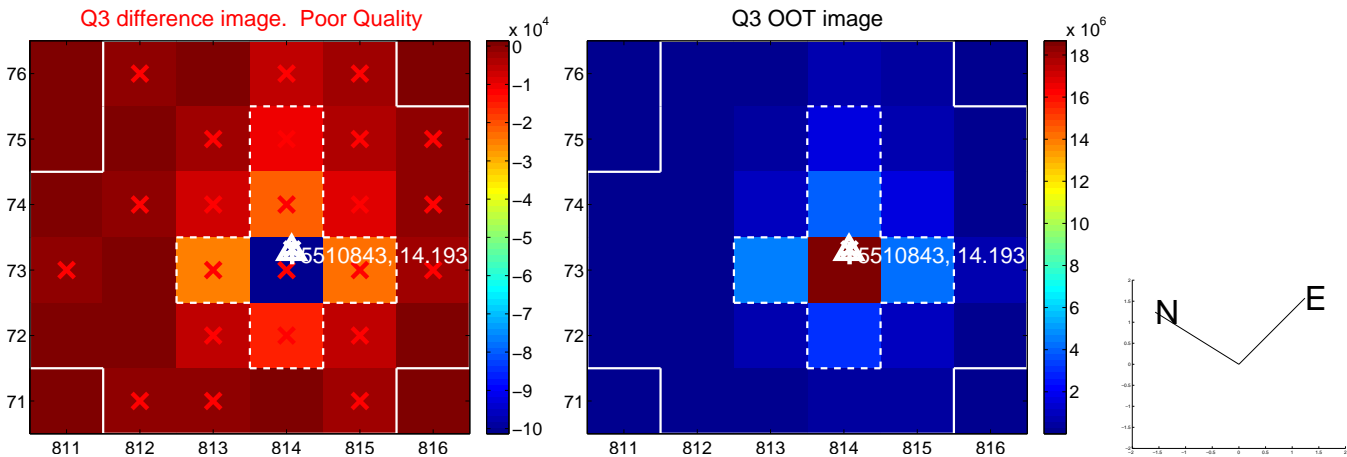
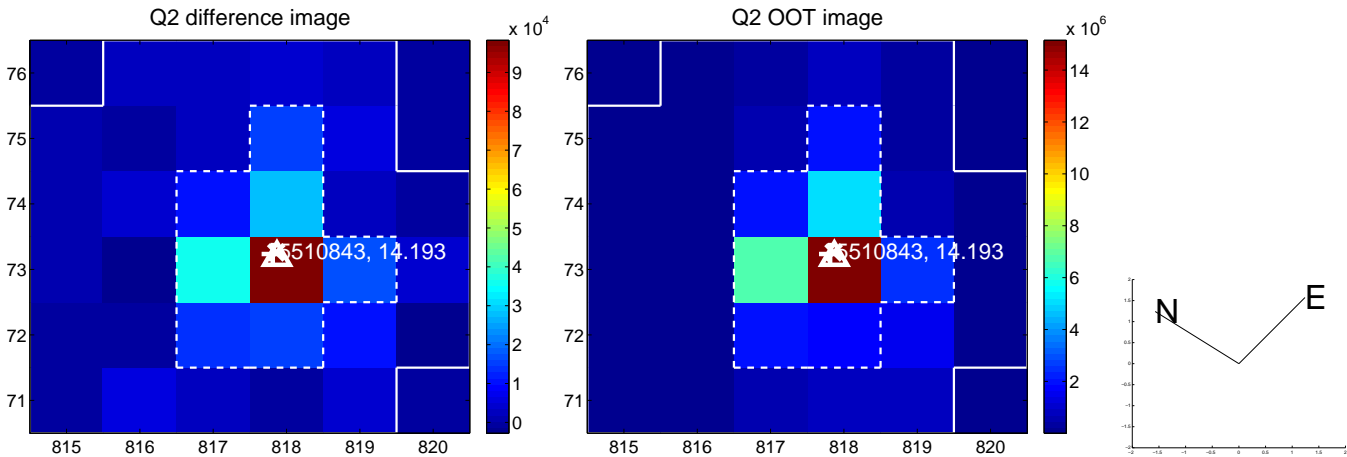
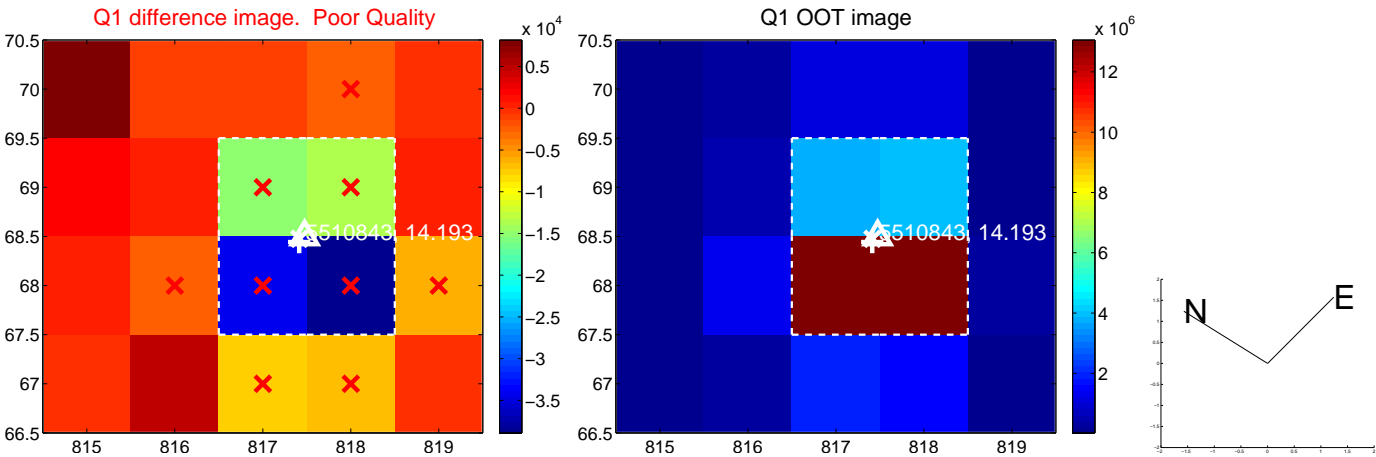
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.079 ± 6.464	0.01	0.040 ± 4.079	0.068 ± 7.106
PRF-fit source offset from KIC position	0.115 ± 5.329	0.02	-0.093 ± 4.079	0.068 ± 7.106
photometric centroid source offset	0.82 ± 0.33	2.47	-0.73 ± 0.34	-0.36 ± 0.31

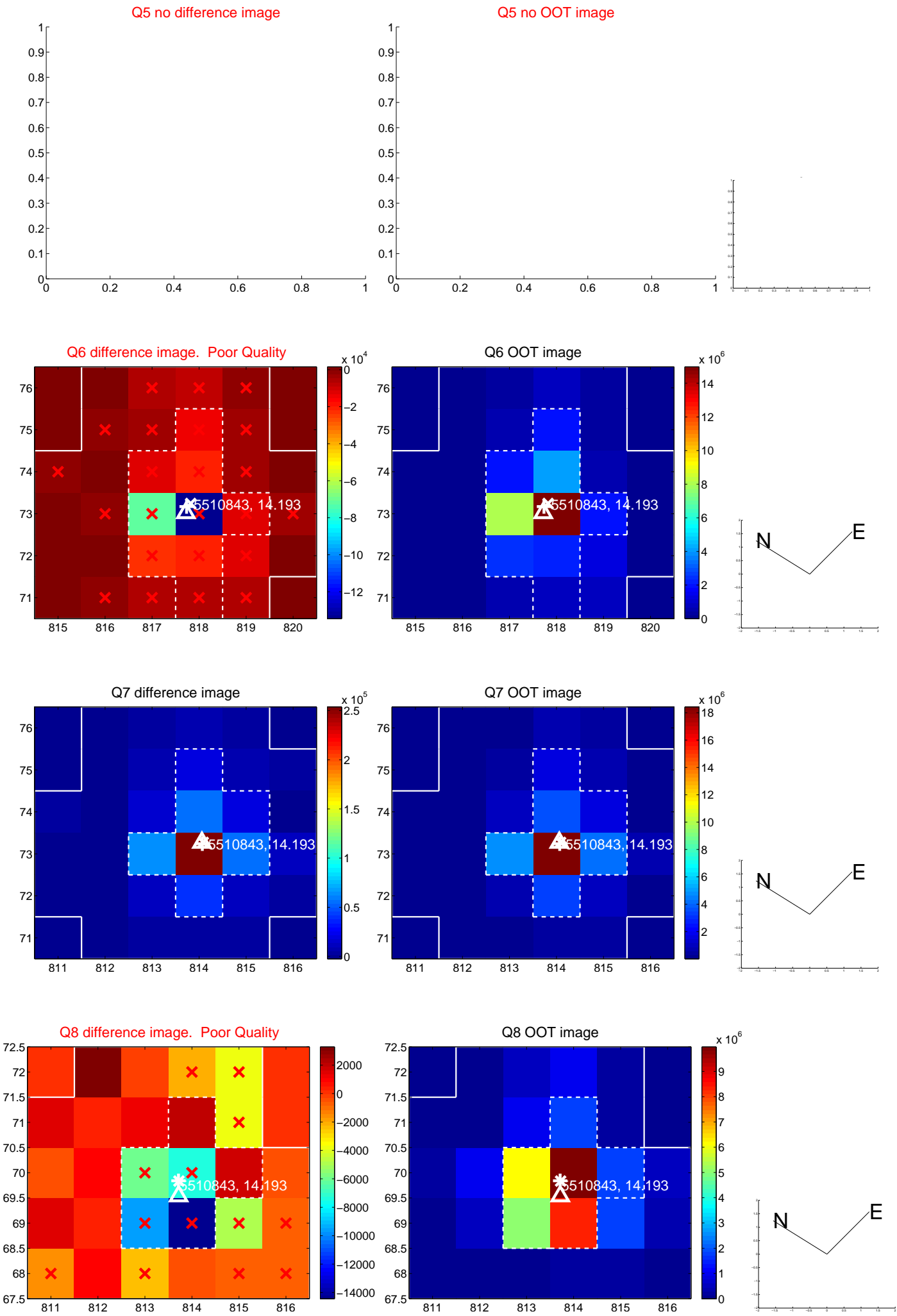


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

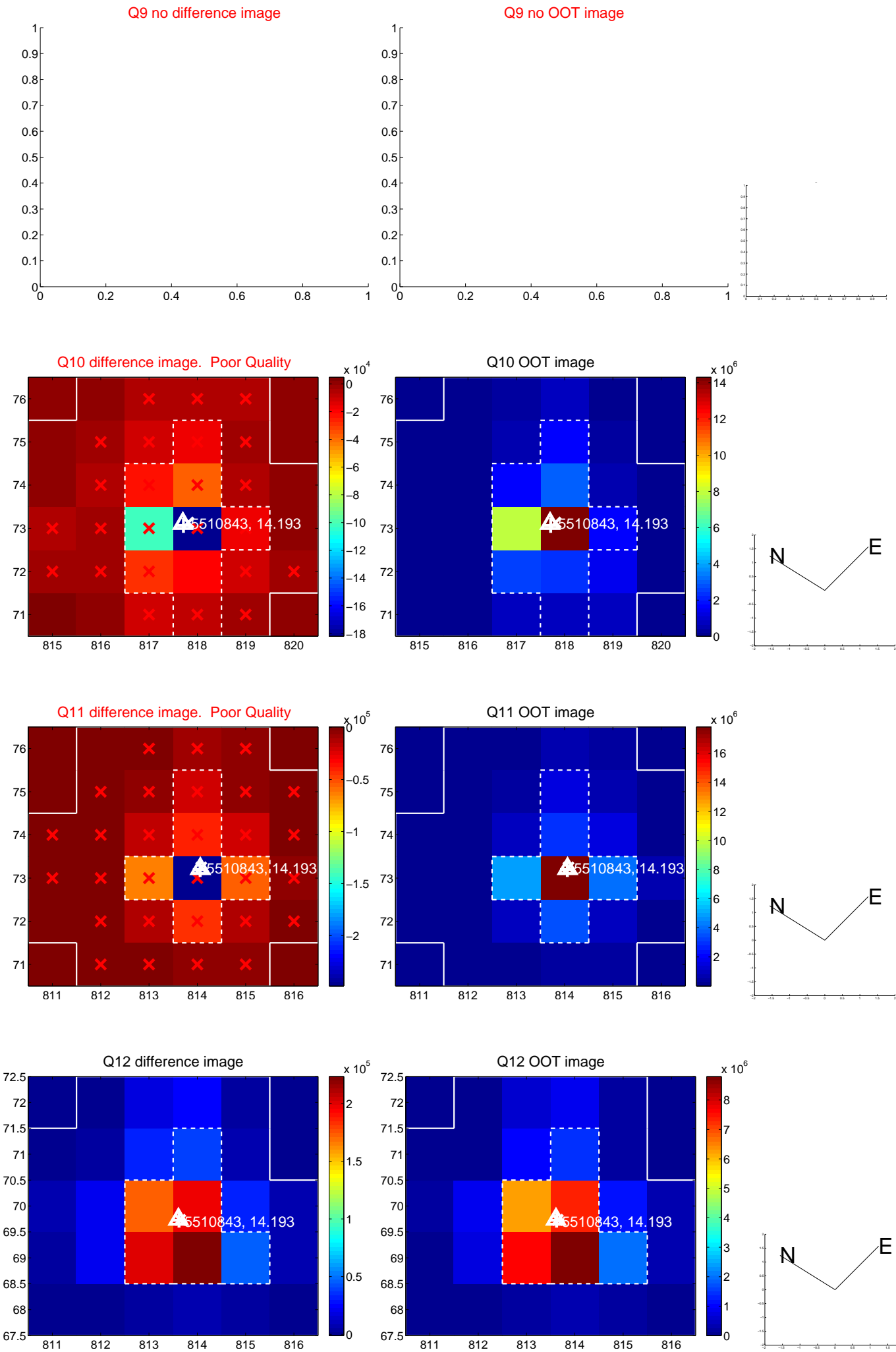
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



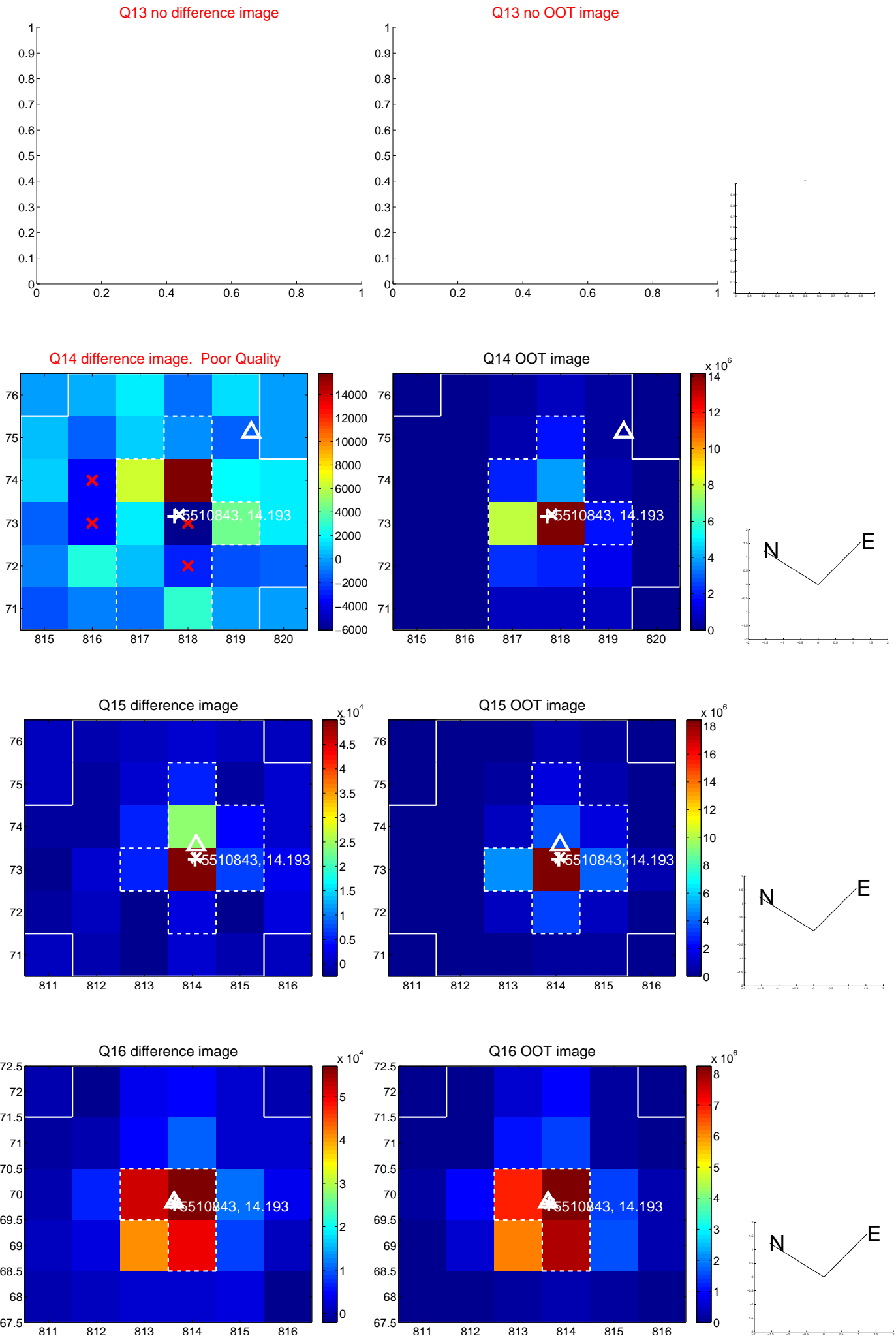
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



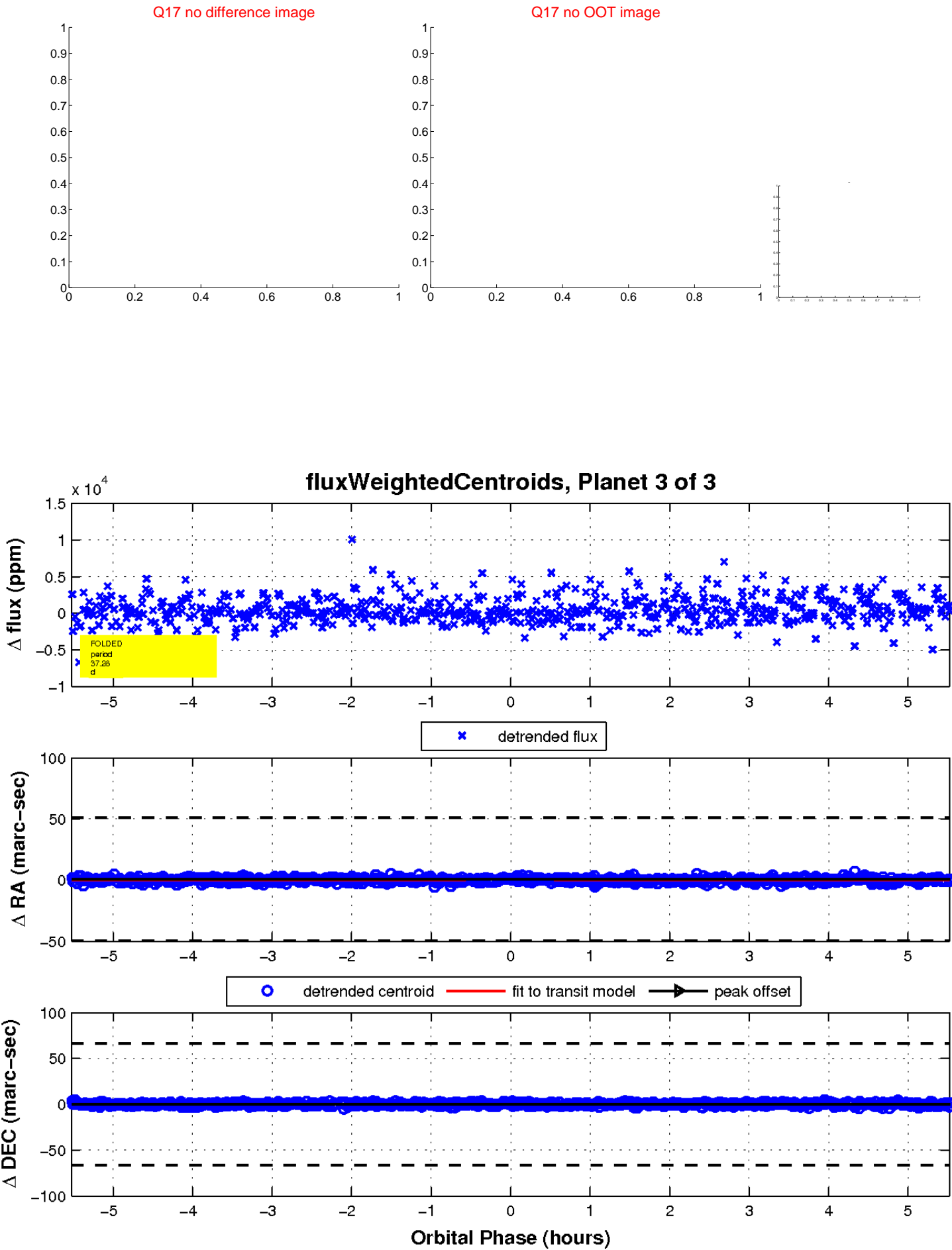
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

