

KIC 011820830

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})
011820830-01	OBS	1728.01	12.731942	138.732216	8810.1	3.294	592.4	536.0	1.57	7238	16.58	406.51
011820830-02	OBS	No	12.731924	138.504745	196.9	1.500	11.0	-1.0	1.57	7238	2.24	406.51
011820830-03	OBS	No	1.820244	132.394622	42.2	6.308	10.7	6.8	1.57	7238	1.18	5437.84
011820830-04	OBS	No	1.820549	131.787509	38.9	11.828	10.0	4.1	1.57	7238	1.05	5436.63
011820830-06	OBS	No	54.581769	142.347683	194.1	7.218	17.4	3.3	1.57	7238	2.37	58.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011820830-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011820830-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
011820830-03	OBS	FP	0.00	1	0	0	0	LPP_DV
011820830-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—SAME_NTL_PERIOD
011820830-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_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.

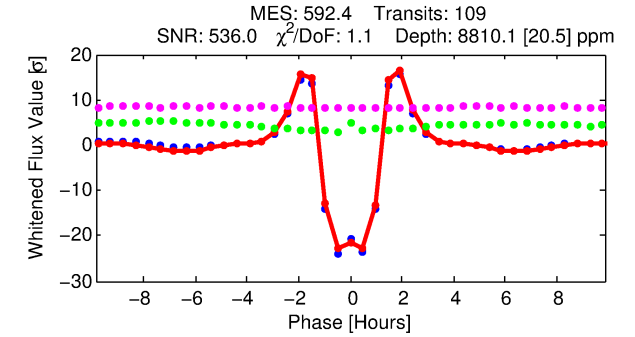
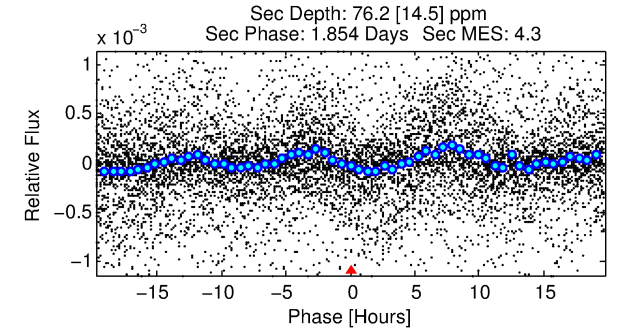
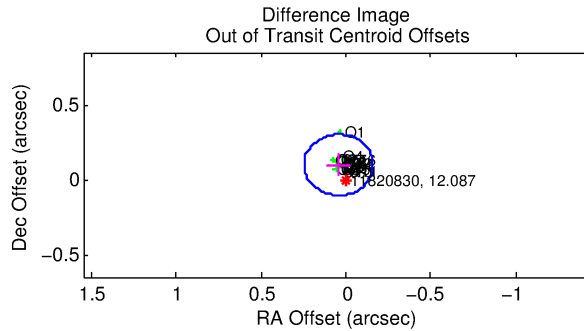
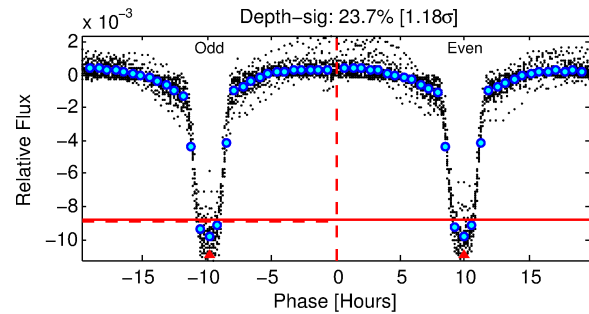
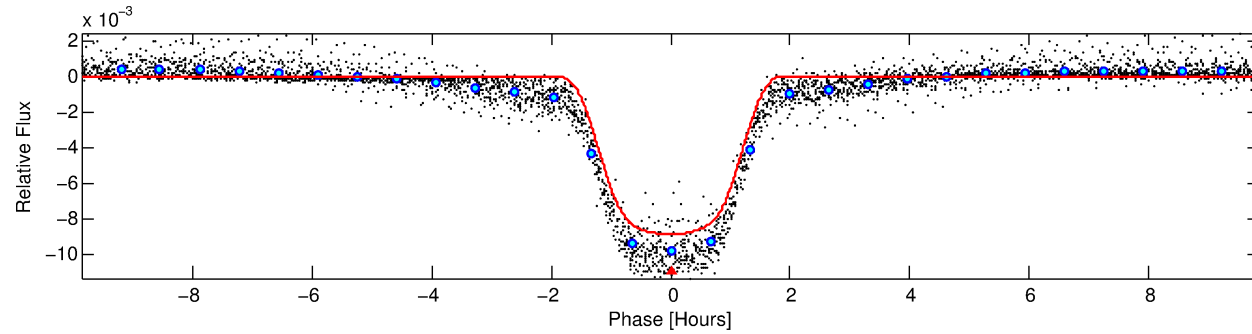
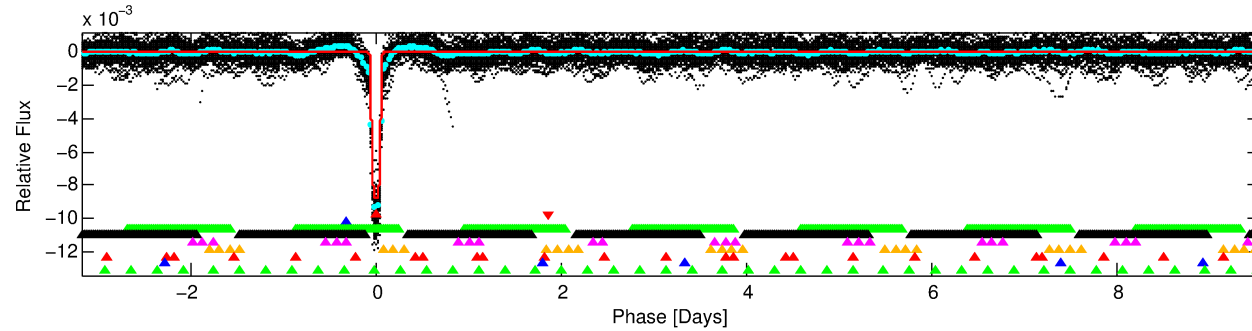
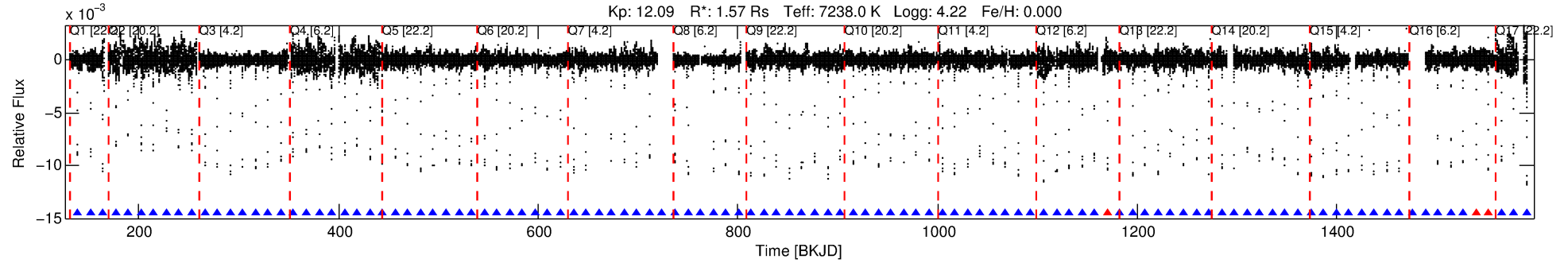
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011820830-01

No Significant Match Found

DV One-Page Summary

KIC: 11820830 Candidate: 1 of 9 Period: 12.732 d
KOI: K01728.01 Corr: 0.872



DV Fit Results:

Period = 12.73194 [0.00000] d
Epoch = 138.7322 [0.0001] BKJD
Rp/R* = 0.0969 [0.0001]
a/R* = 20.75 [0.06]
b = 0.84 [0.00]
Seff = 406.51 [174.01]
Teff = 1145 [123] K
Rp = 16.58 [5.88] Re
a = 0.1220 [0.0349] AU
Ag = 2.27 [1.00] [1.26 σ]
Teffp = 2172 [133] K [5.68 σ]

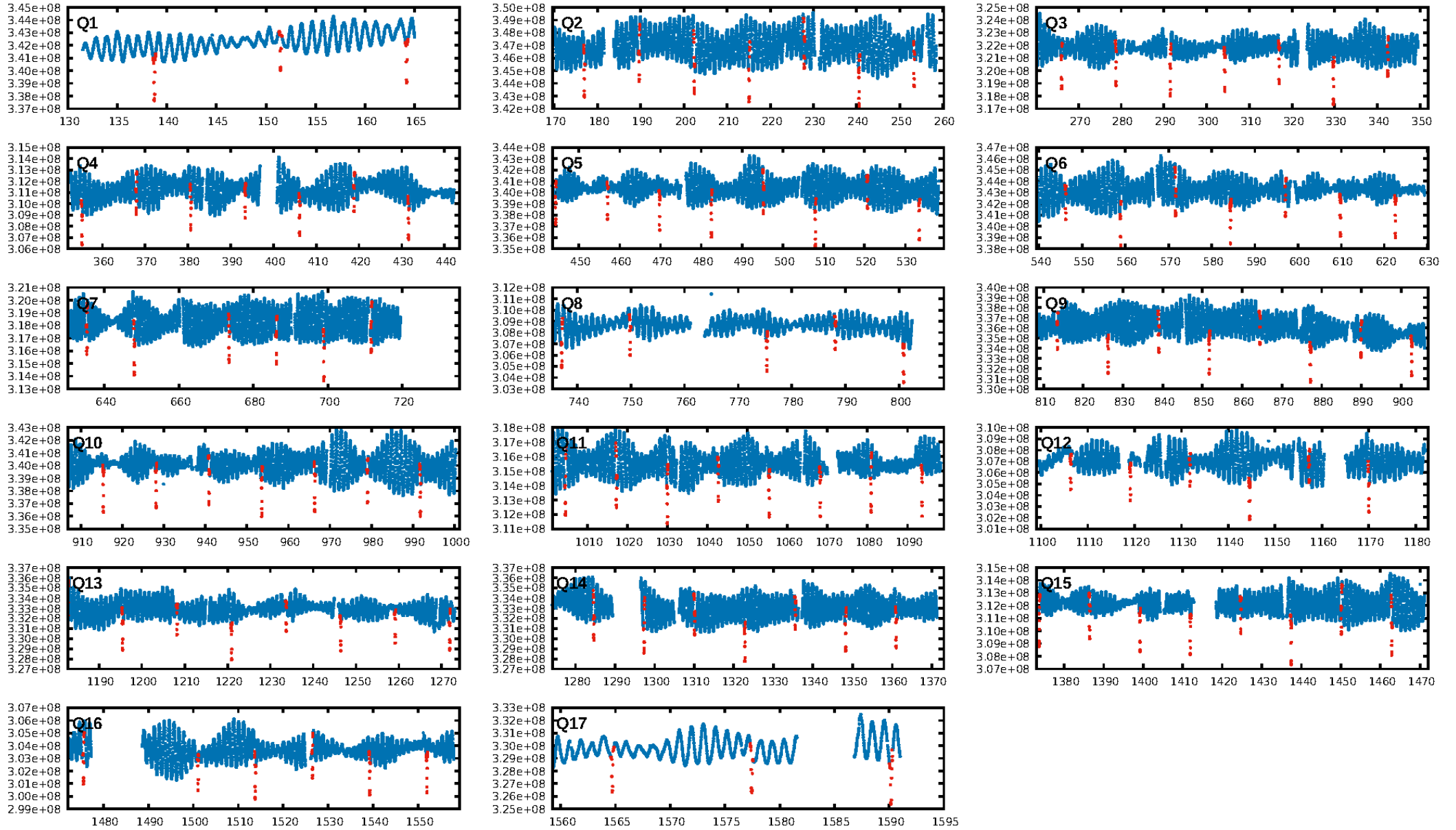
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [58.50 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [100/103]
GhostDiagnostic-chr: 2.84
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.108 arcsec [1.59 σ]
KicOffset-rm: 0.089 arcsec [1.31 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

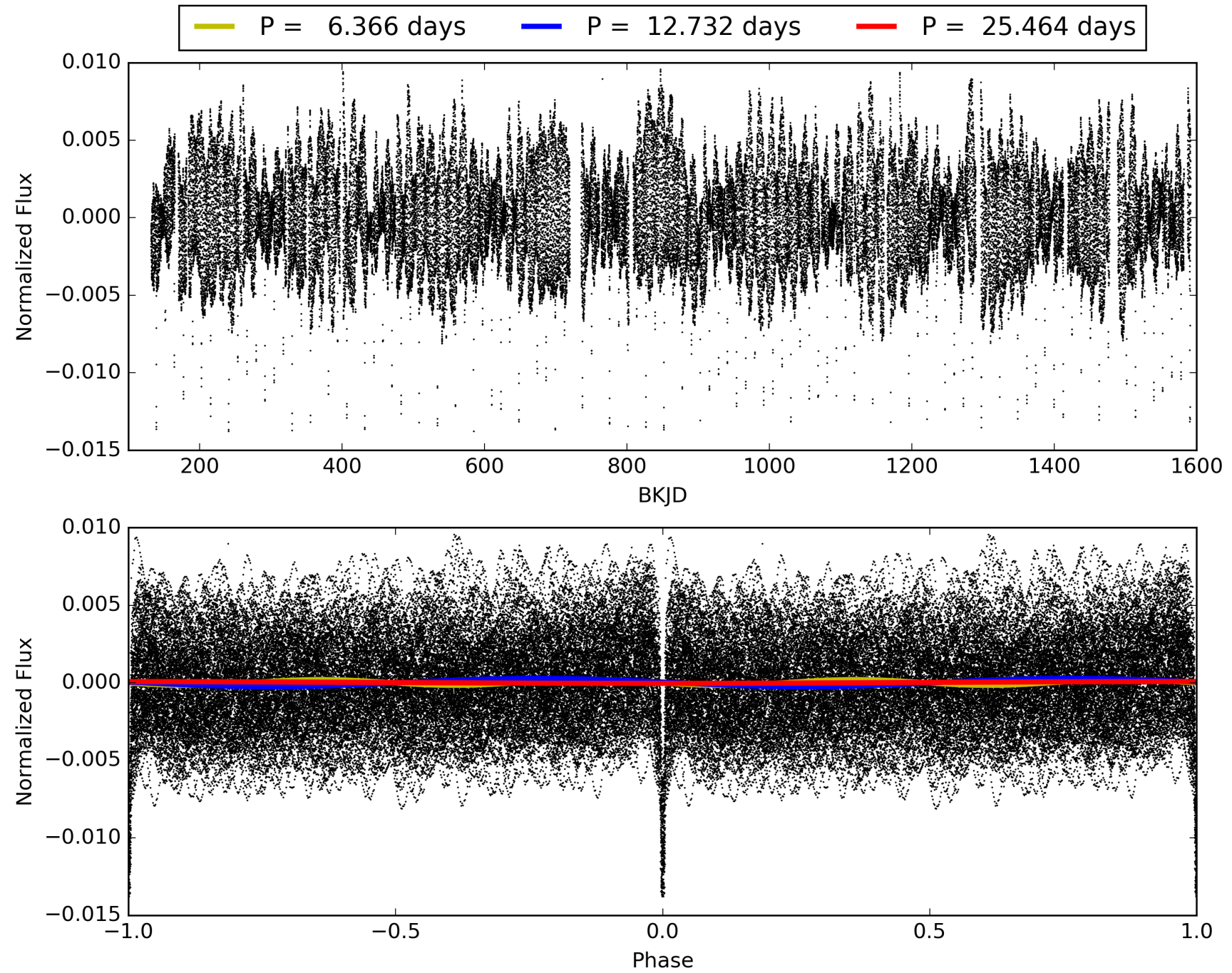
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:29:20 Z

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

TCE 011820830-01, PDC Light Curves

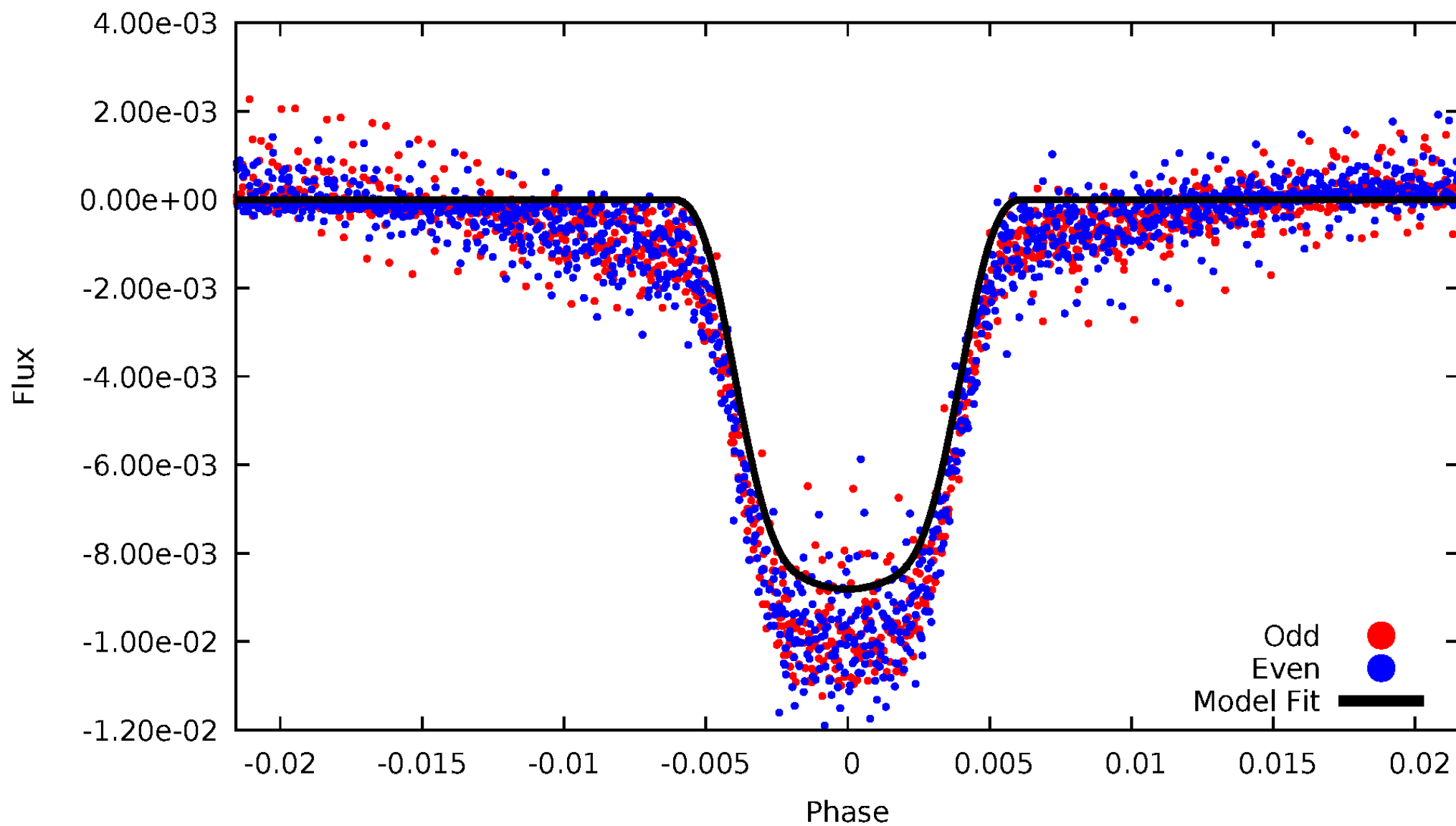


TCE 011820830-01



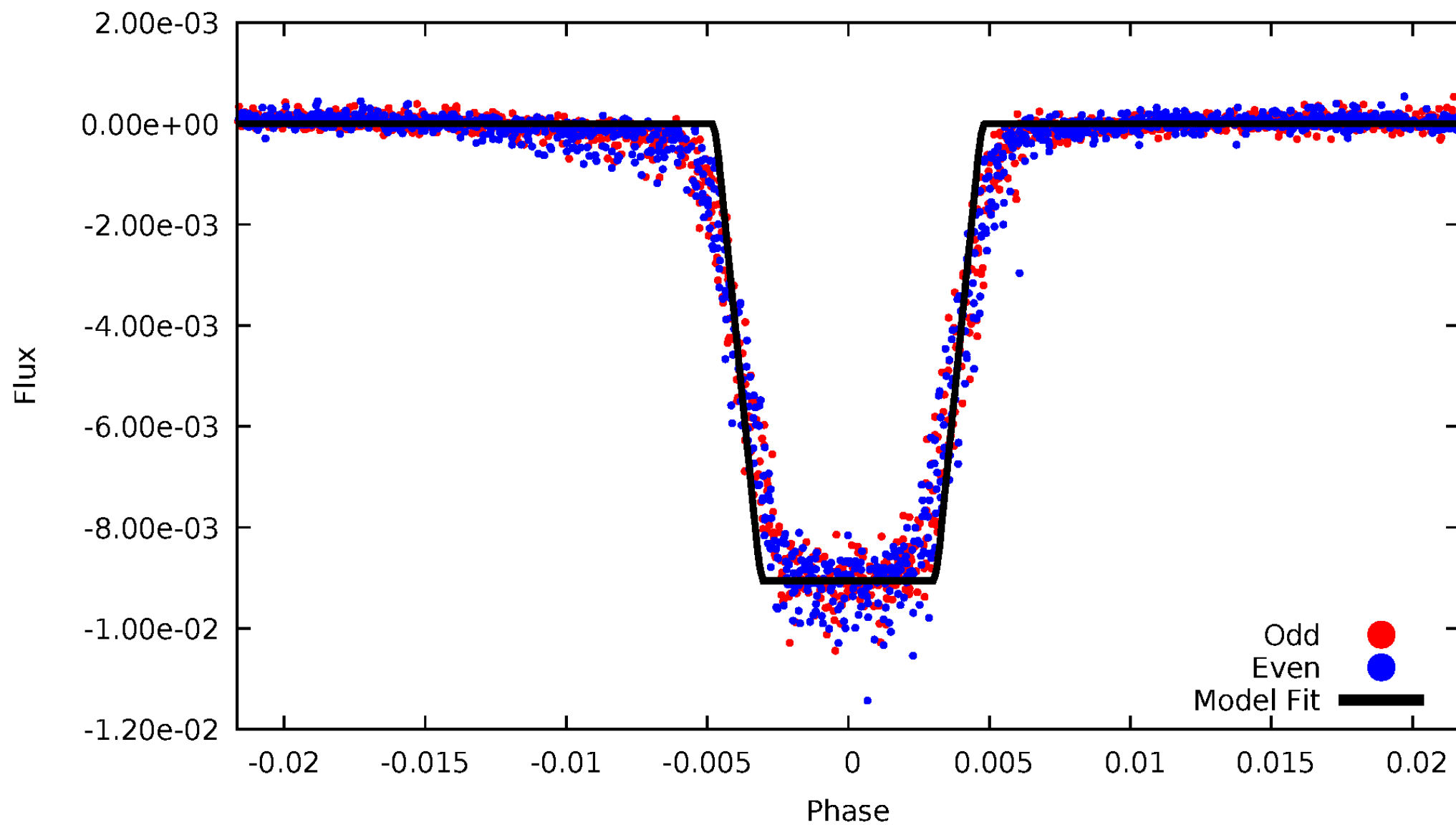
DV Odd/Even

TCE 011820830-01



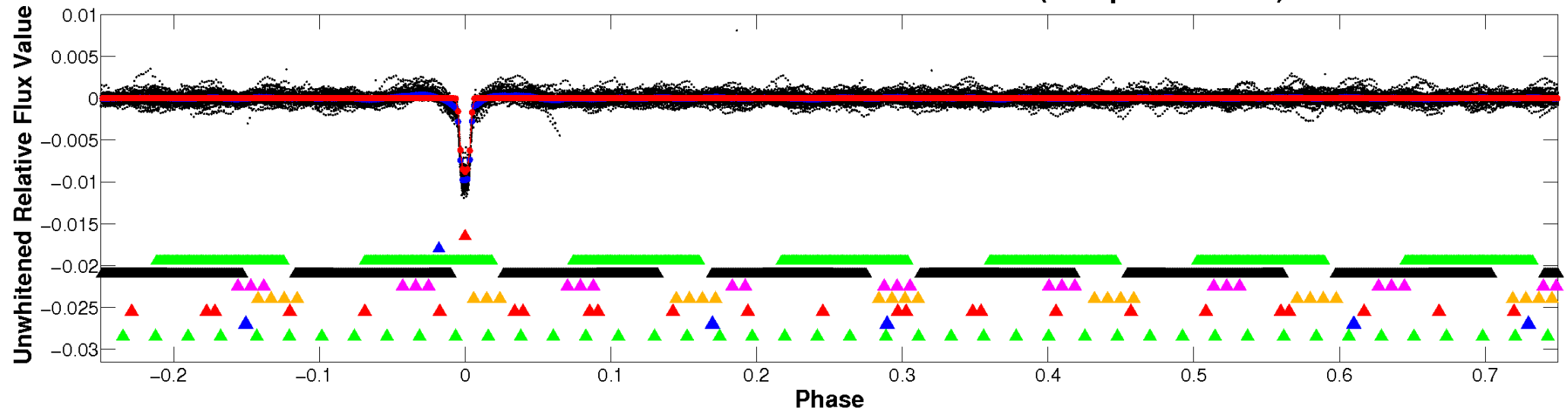
ALT Odd/Even

TCE 011820830-01

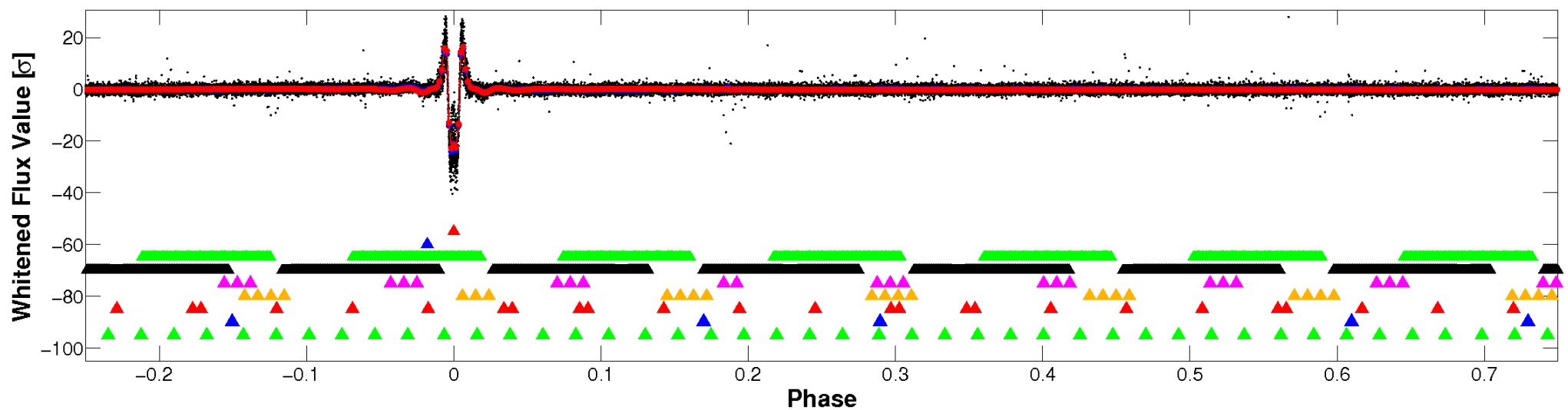


Non-Whitened Vs. Whitened Light Curve

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

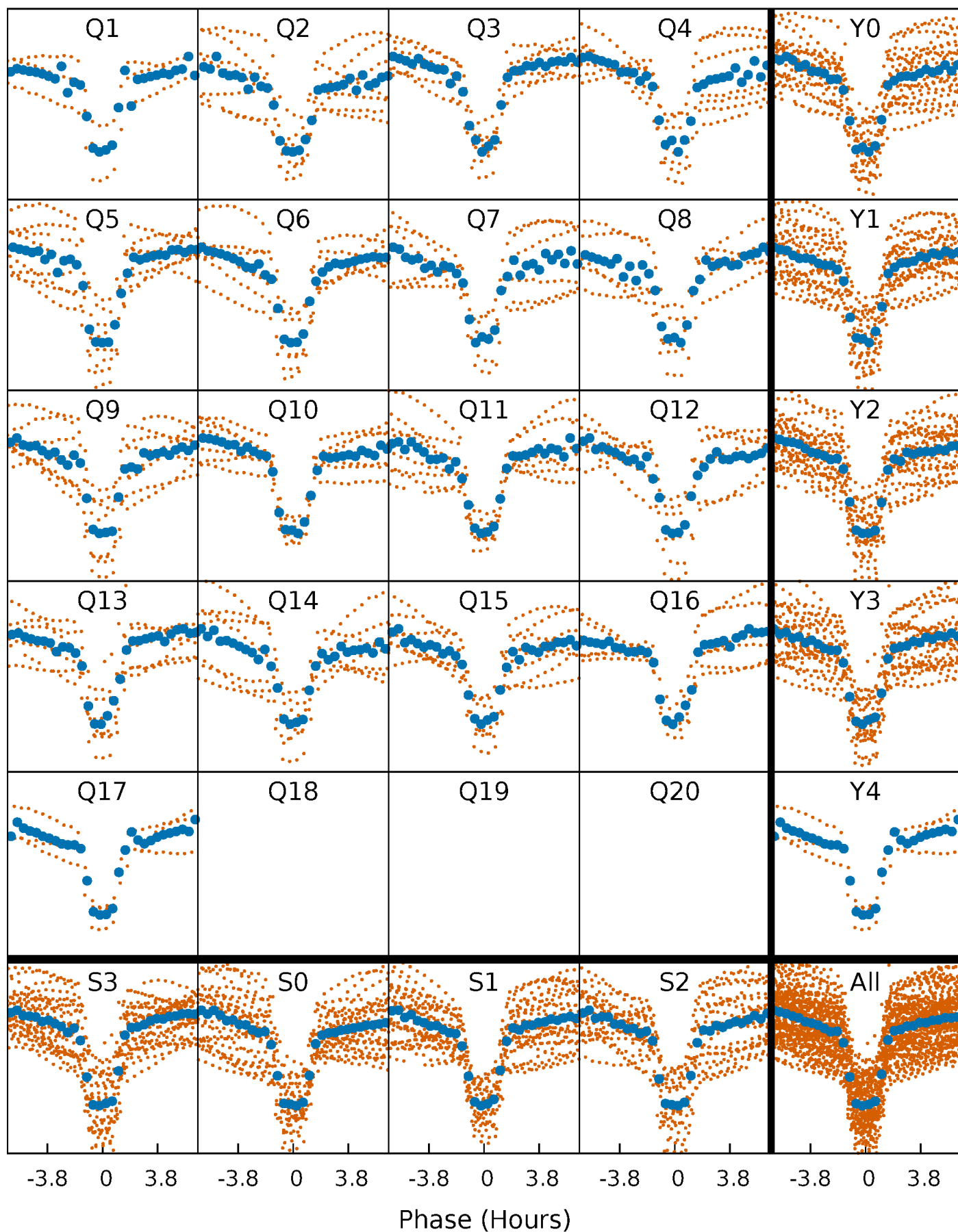


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



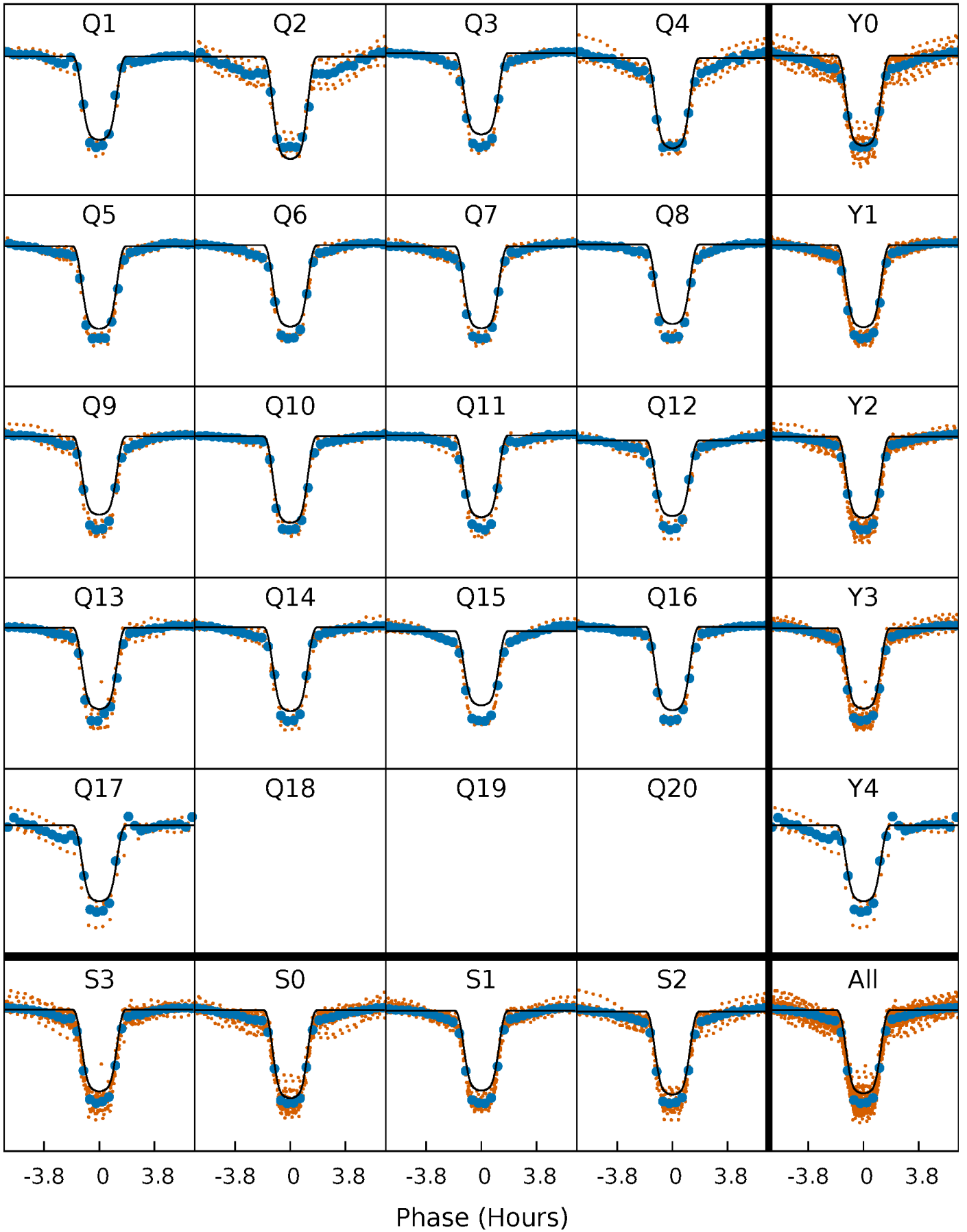
PDC Quarter-Phased Transit Curves

TCE 011820830-01 P= 12.731942 Days $T_0=138.732216$ (BKJD)



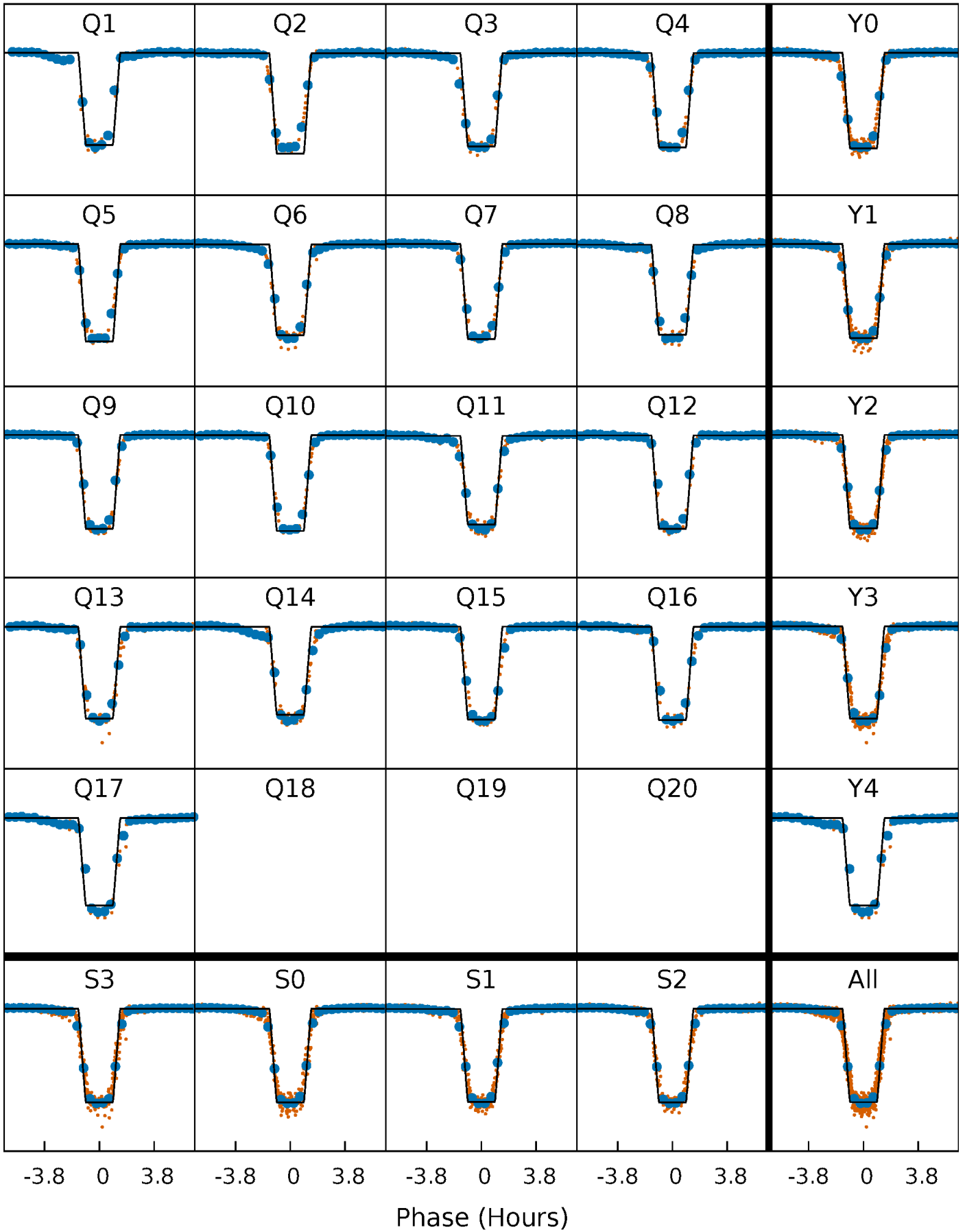
DV Quarter-Phased Transit Curves

TCE 011820830-01 P= 12.731942 Days $T_0=138.732216$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

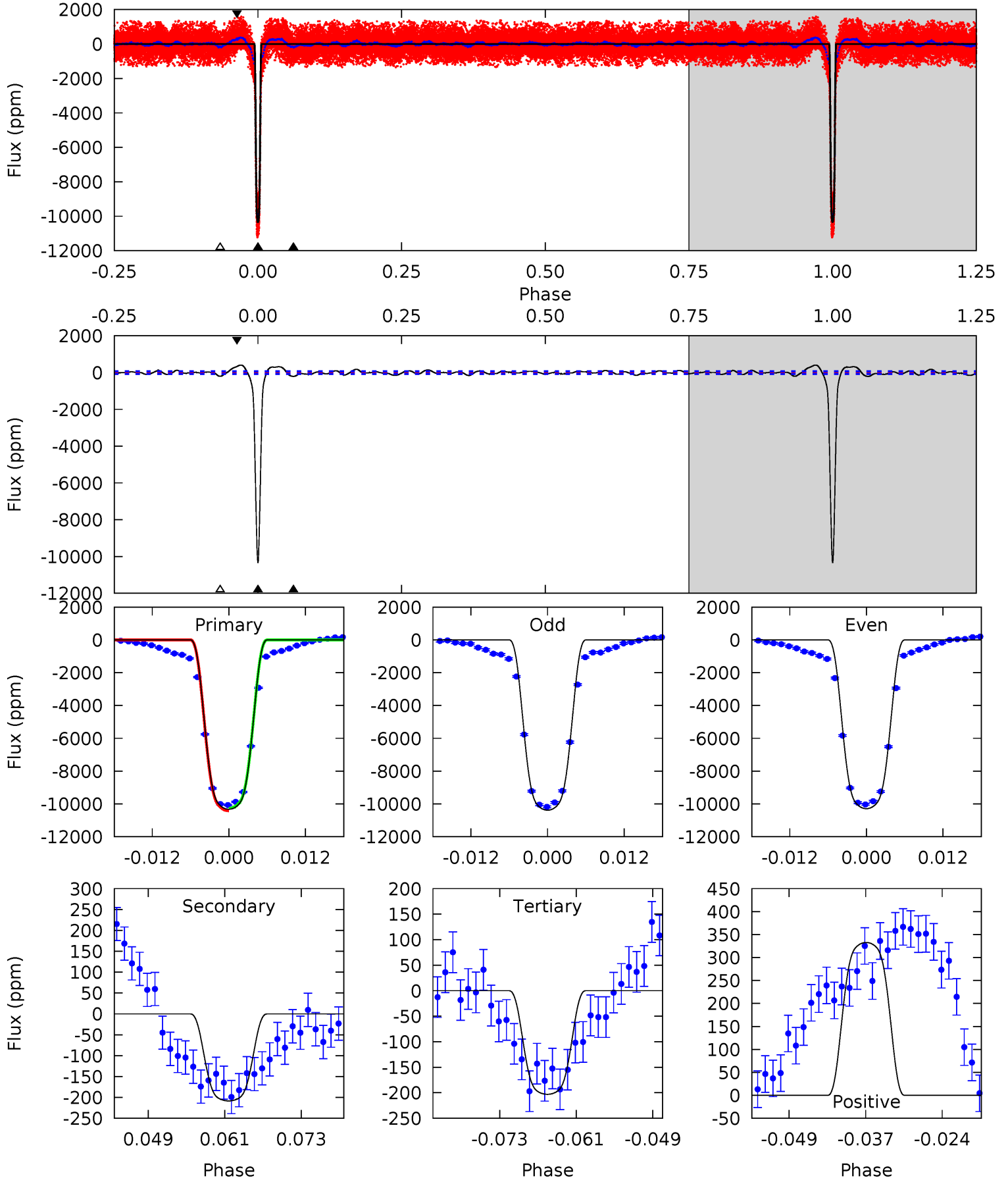
TCE 011820830-01 P= 12.731848 Days $T_0=138.737086$ (BKJD)



DV Model-Shift Uniqueness Test

011820830-01, $P = 12.731942$ Days, $E = 126.000274$ Days

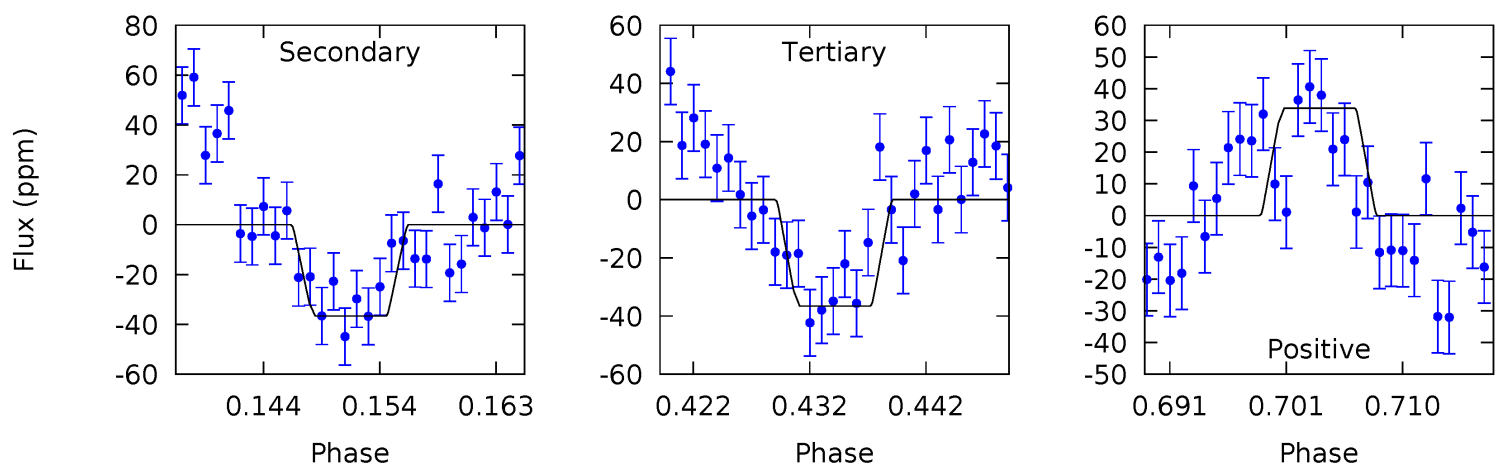
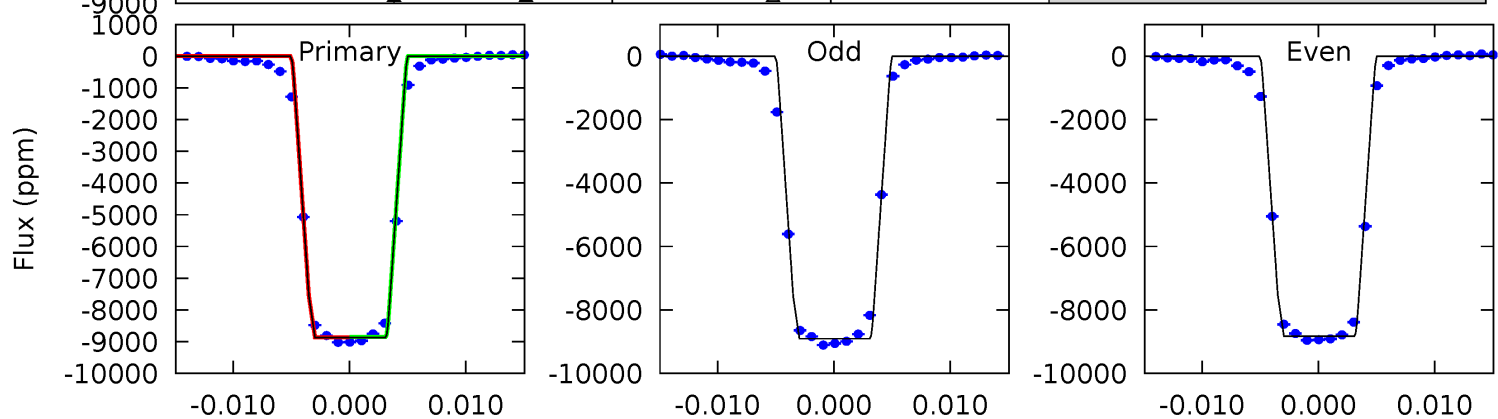
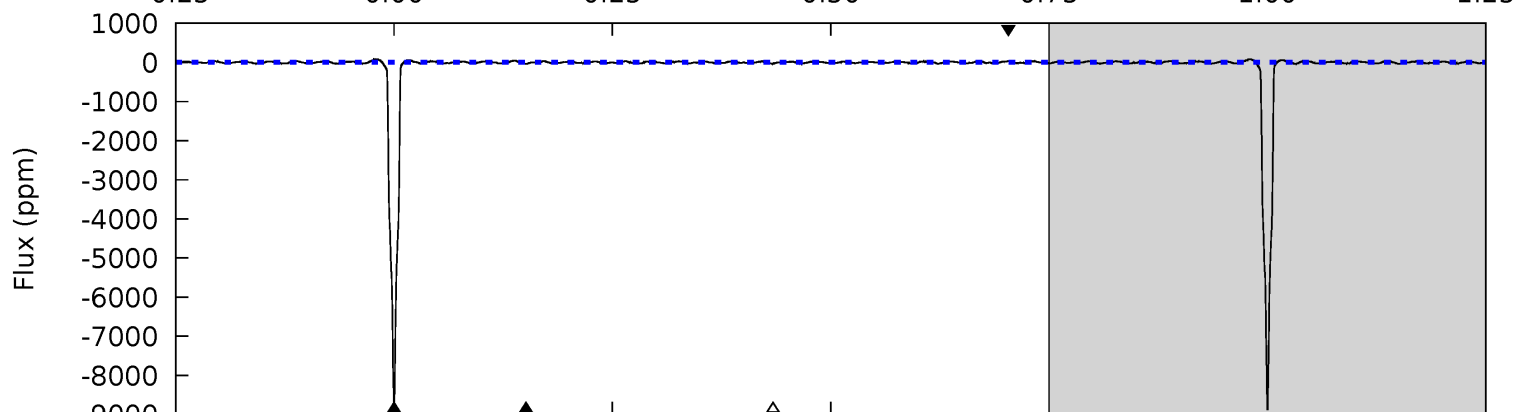
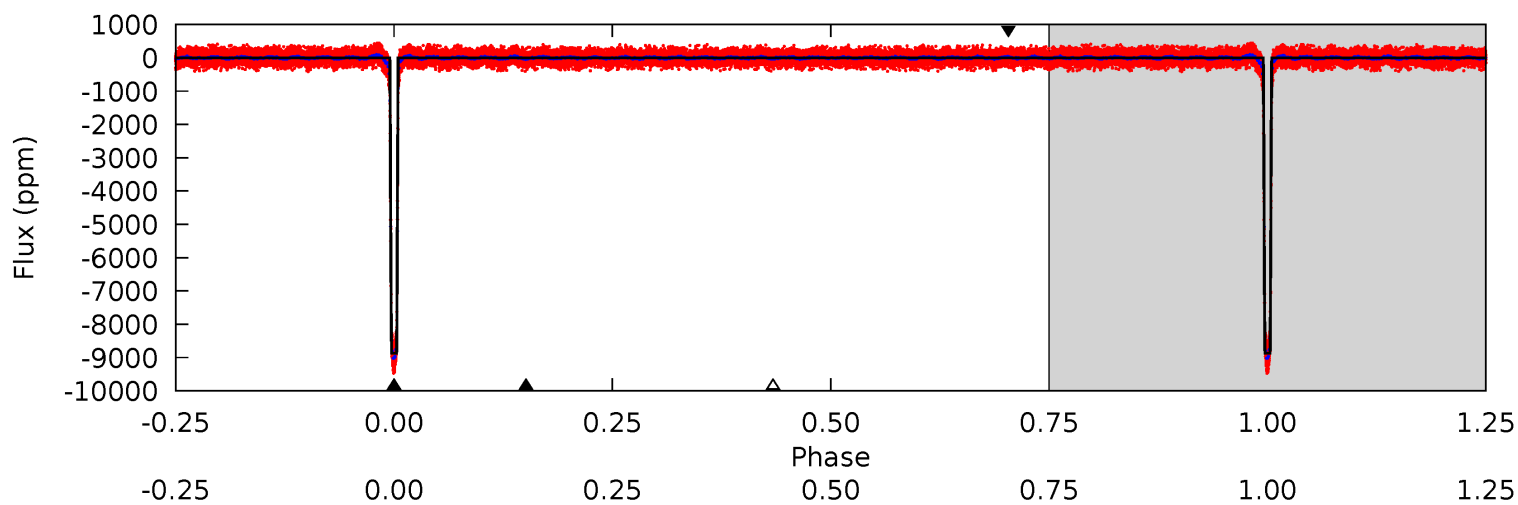
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
723.0	14.6	14.2	23.3	4.99	2.51	6.91	708.7	699.7	0.37	-8.71	3.33	0.99	0.04	5.10



Alt Model-Shift Uniqueness Test

011820830-01, P = 12.731848 Days, E = 126.005238 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1567	6.48	6.46	5.98	5.03	2.59	3.44	1560	1561	0.02	0.50	6.82	1.01	0.01	0



Stellar Parameters For KIC 011820830

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7238^{+201}_{-277}	$4.221^{+0.090}_{-0.210}$	$0.000^{+0.200}_{-0.350}$	$1.568^{+0.556}_{-0.238}$	$1.491^{+0.221}_{-0.199}$	$0.545^{+0.221}_{-0.282}$
	+3%/-4%	+2%/-5%	+inf%/-inf%	+35%/-15%	+15%/-13%	+41%/-52%
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 011820830-01 / KOI 1728.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-208 ± 14	$16.83^{+2.87}_{-1.50}$	1623^{+119}_{-92}	3287^{+68}_{-75}	$5.875^{+1.320}_{-1.456}$
Alt.	-37 ± 6	$16.52^{+3.18}_{-1.41}$	1624^{+124}_{-93}	2497^{+80}_{-94}	$1.044^{+0.260}_{-0.296}$

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 $A_{obs} \gg 1.0$

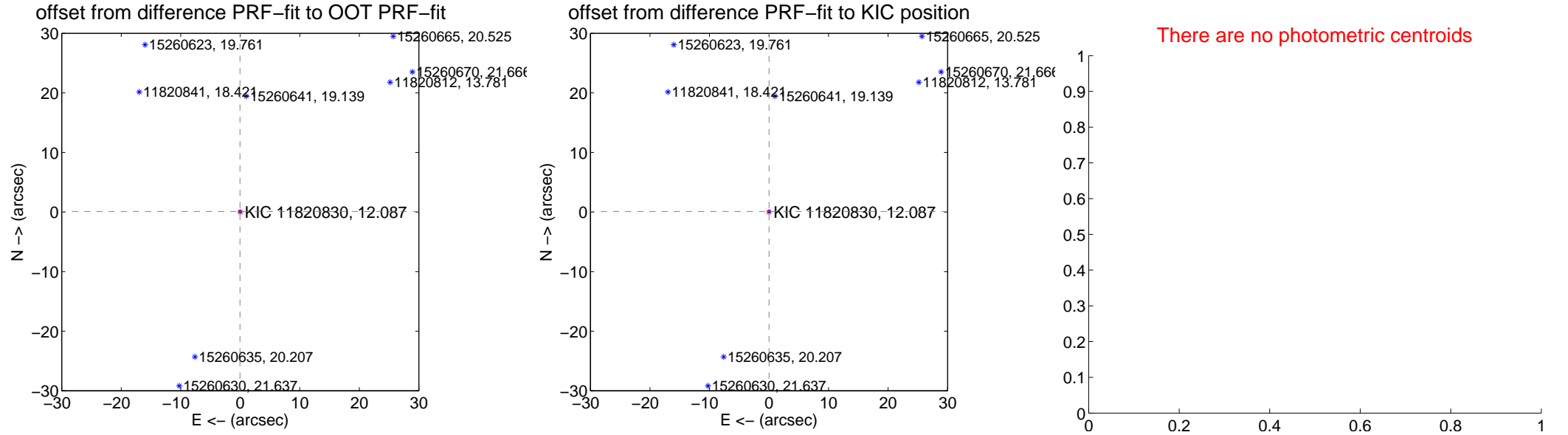
DV Centroid Data

Supplemental centroid analysis for 011820830-01. Kepler magnitude: 12.09. Transit SNR 536.00

There are 17 quarters with good PRF difference image offsets

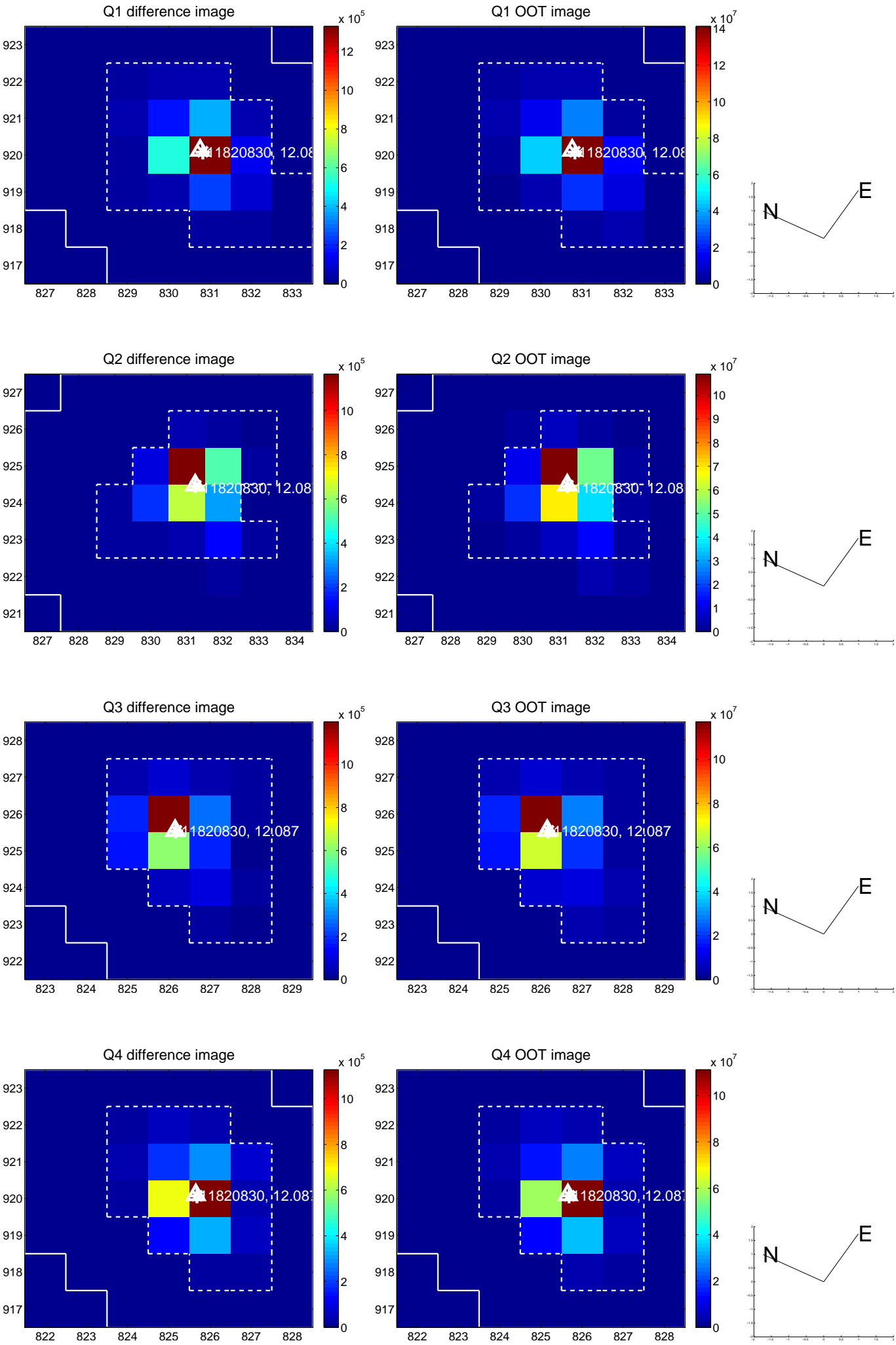
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.108 ± 0.068	1.59	0.045 ± 0.067	0.098 ± 0.068
PRF-fit source offset from KIC position	0.089 ± 0.068	1.31	-0.010 ± 0.067	0.089 ± 0.068
photometric centroid source offset	—	—	—	—

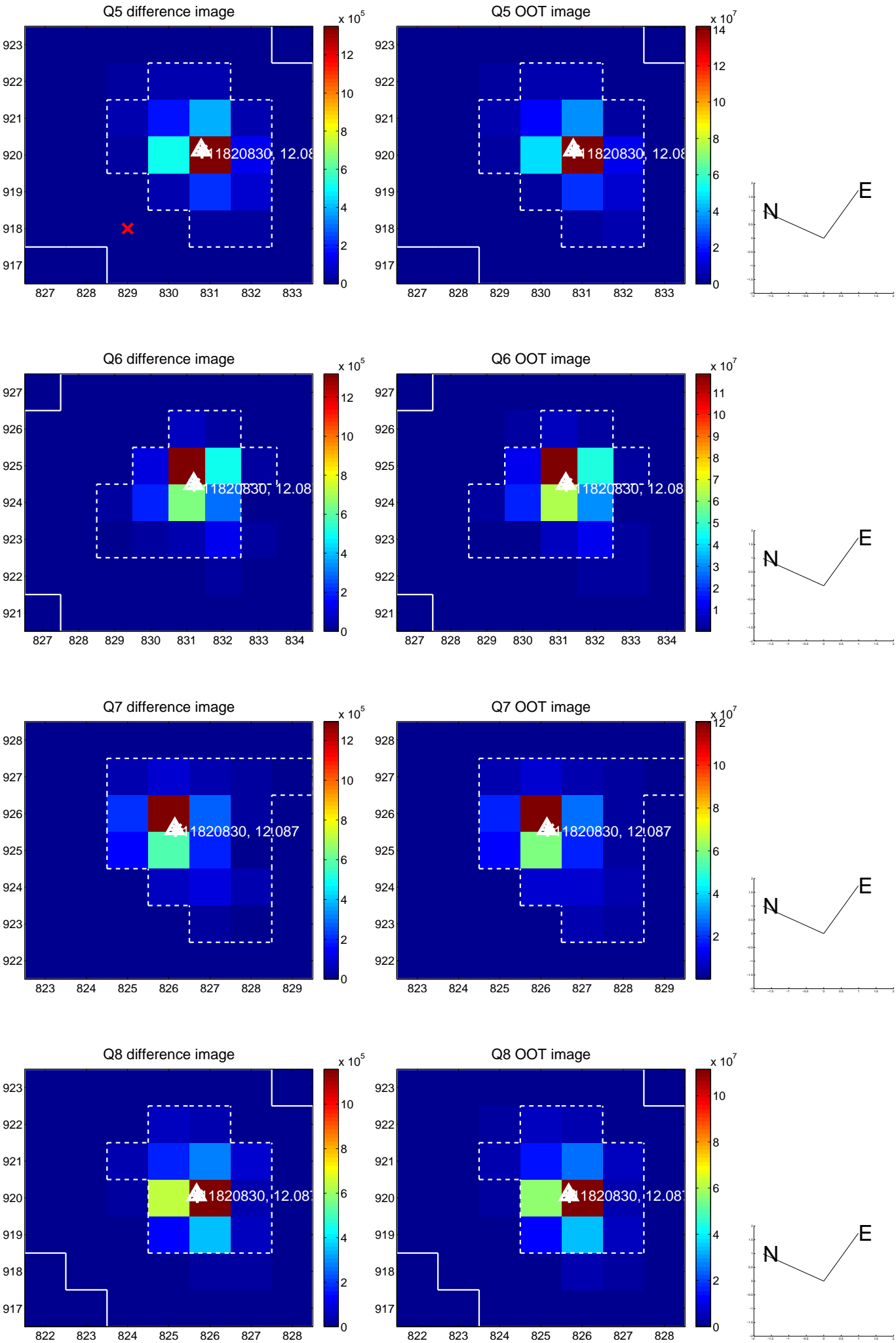


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

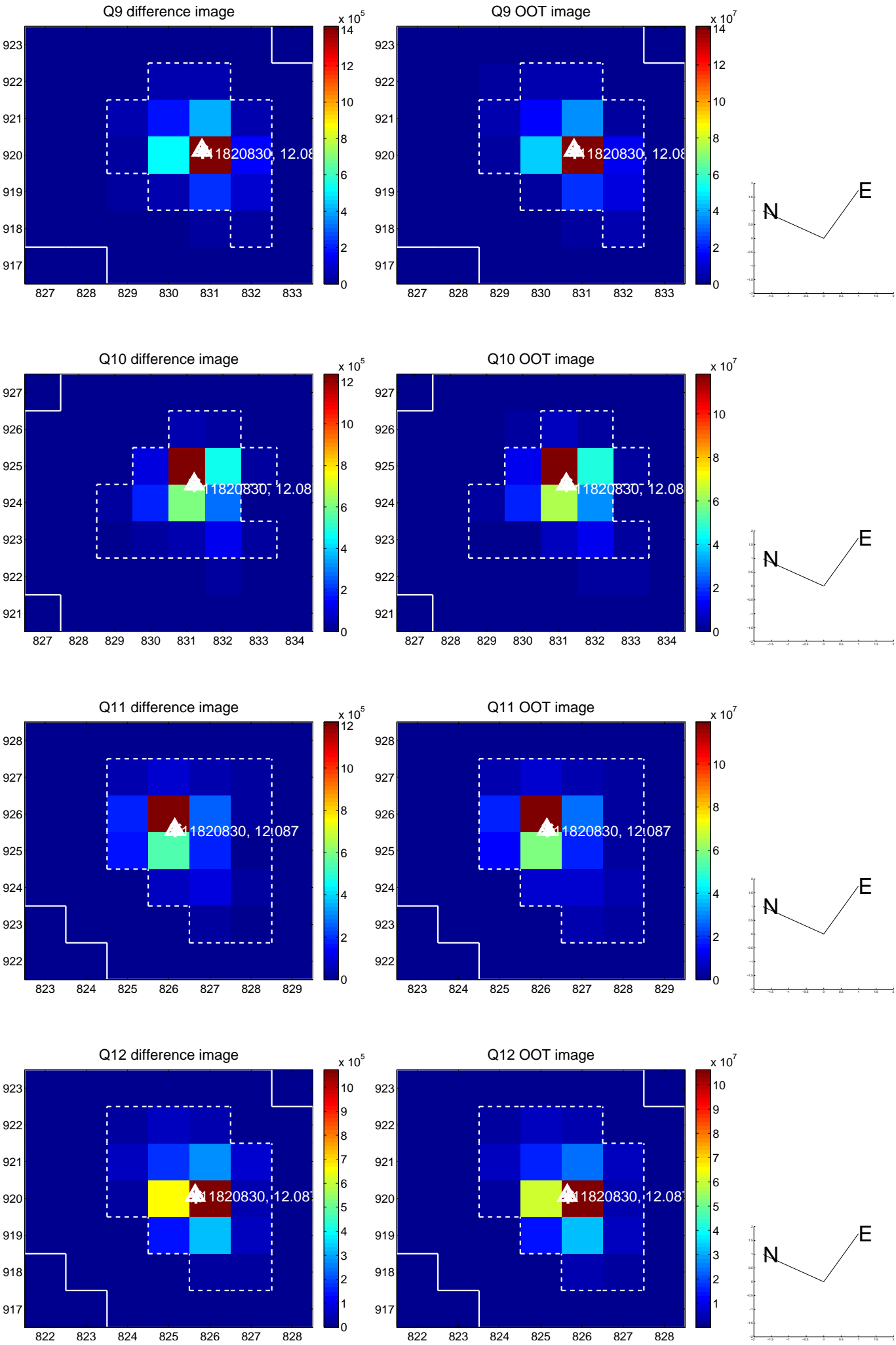
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



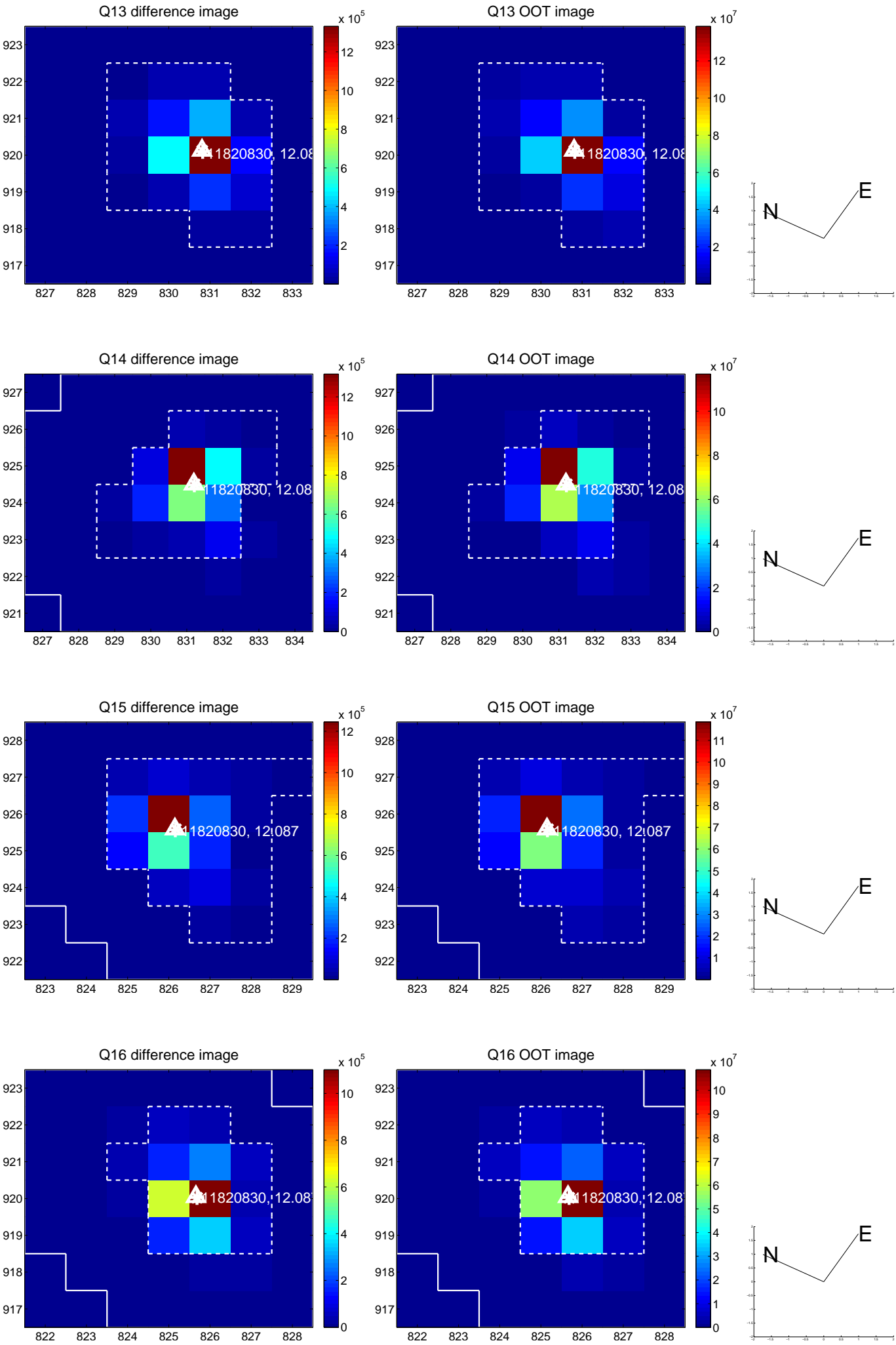
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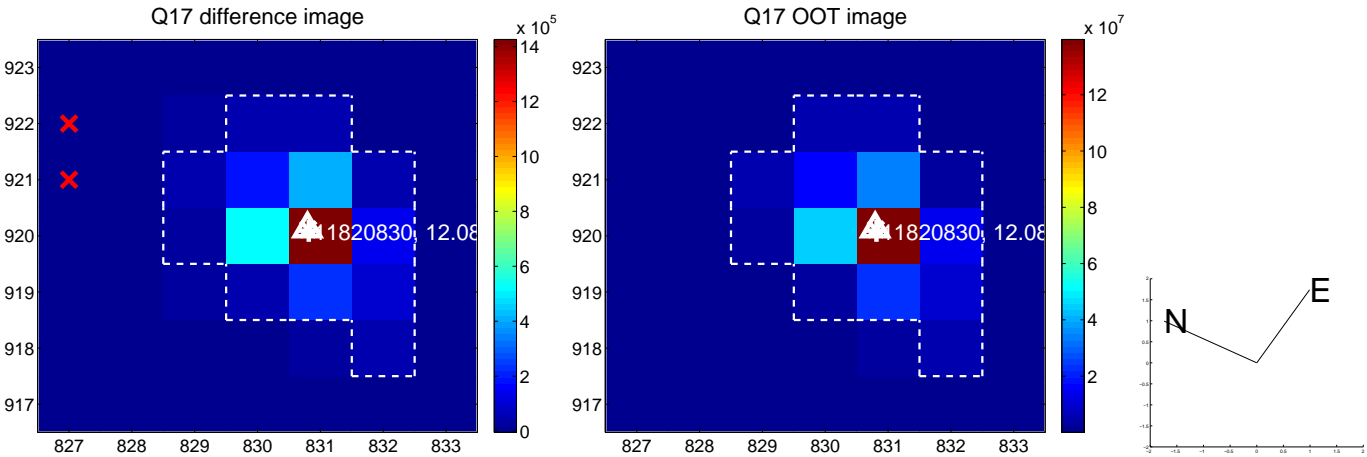
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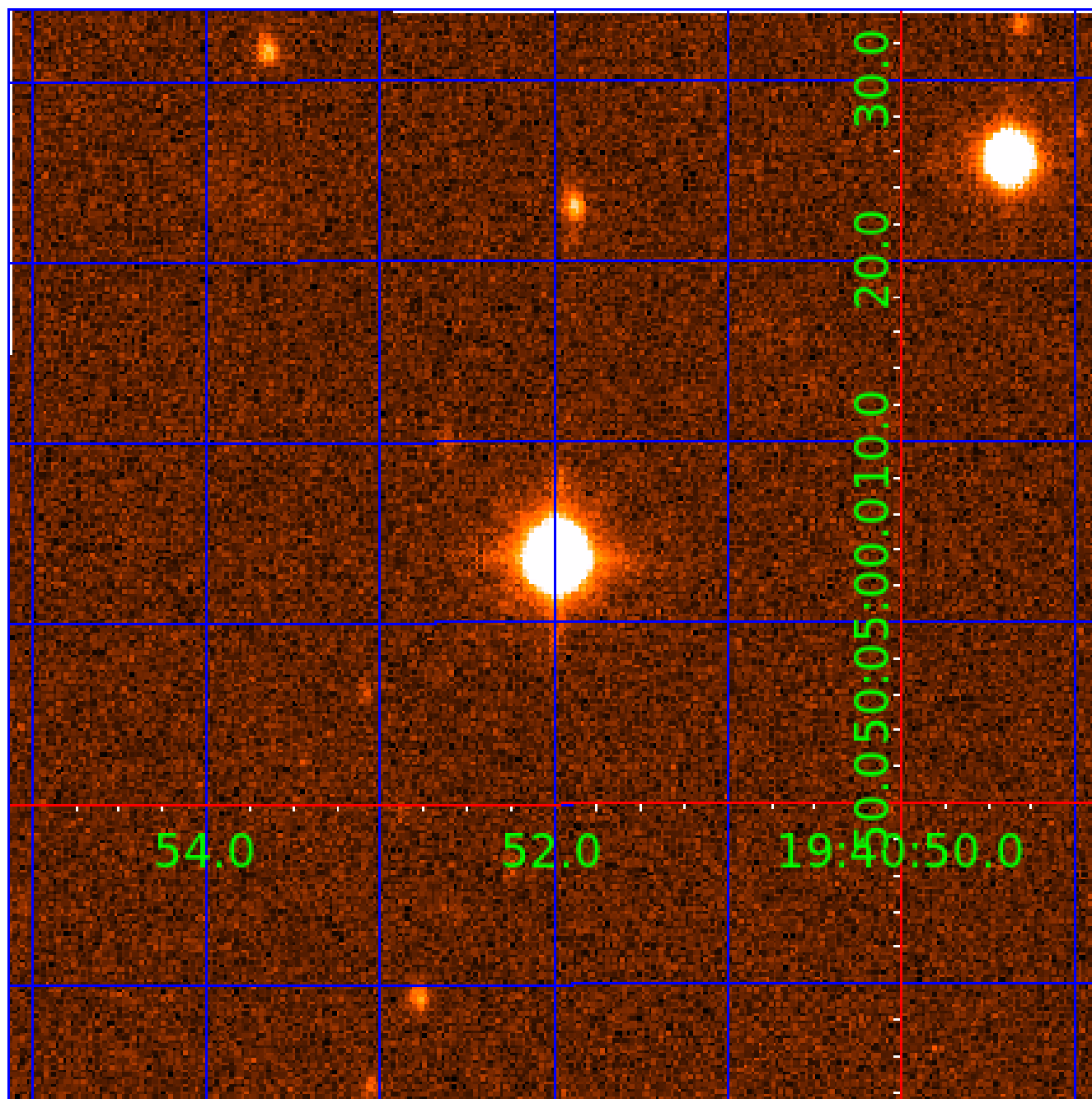
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 011820830

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})
011820830-01	OBS	1728.01	12.731942	138.732216	8810.1	3.294	592.4	536.0	1.57	7238	16.58	406.51
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011820830-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011820830-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
011820830-03	OBS	FP	0.00	1	0	0	0	LPP_DV
011820830-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—SAME_NTL_PERIOD
011820830-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_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 011820830-02

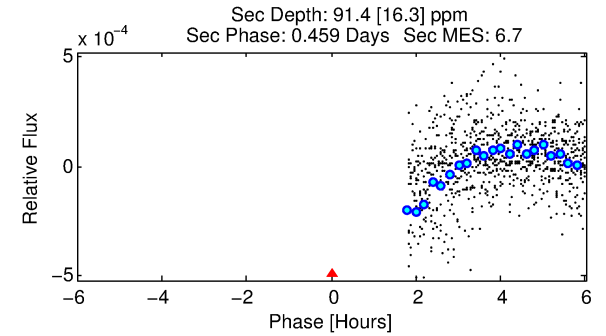
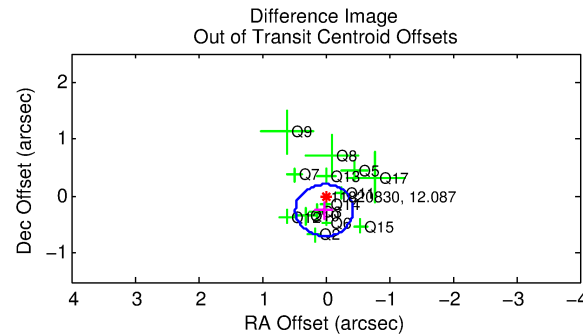
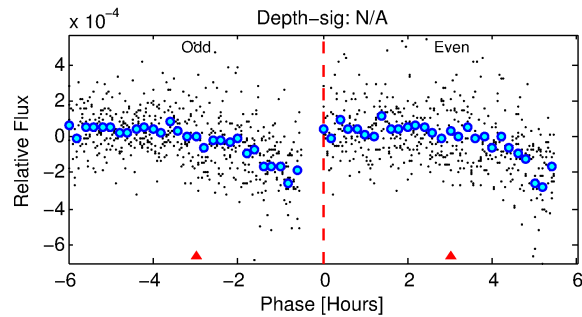
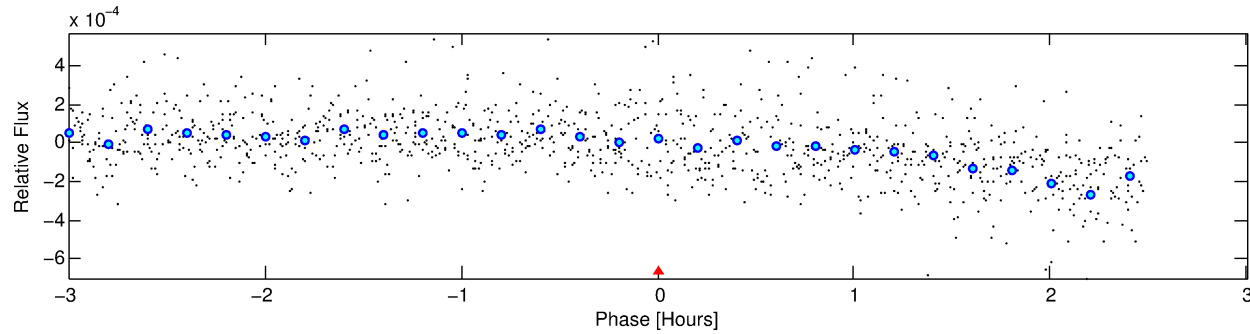
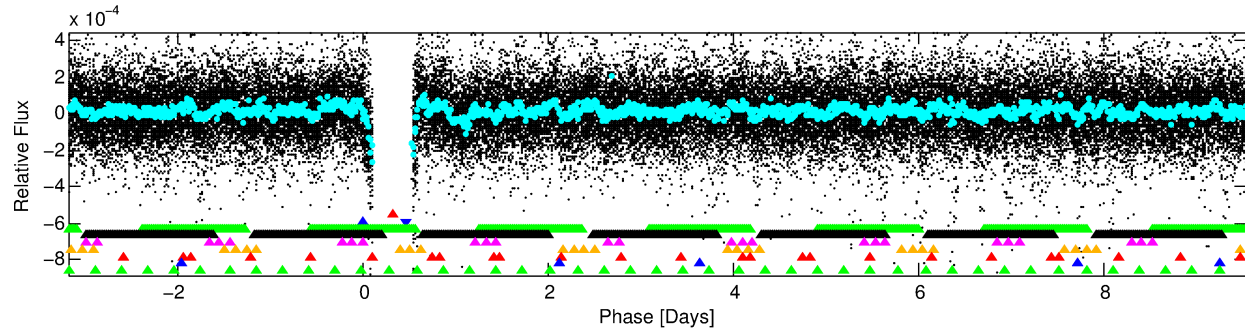
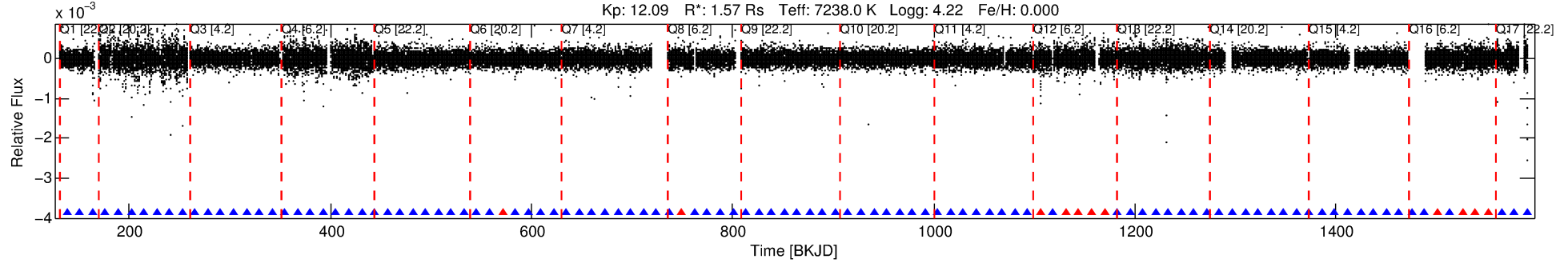
No Significant Match Found

DV One-Page Summary

KIC: 11820830 Candidate: 2 of 9 Period: 12.732 d

KOI: K01728 Corr: No Ephemeris Match

Kp: 12.09 R*: 1.57 Rs Teff: 7238.0 K Logg: 4.22 Fe/H: 0.000



TPS TCE Results:

Period = 12.73192 d
Epoch = 138.5047 BKJD

DV fit results are unavailable

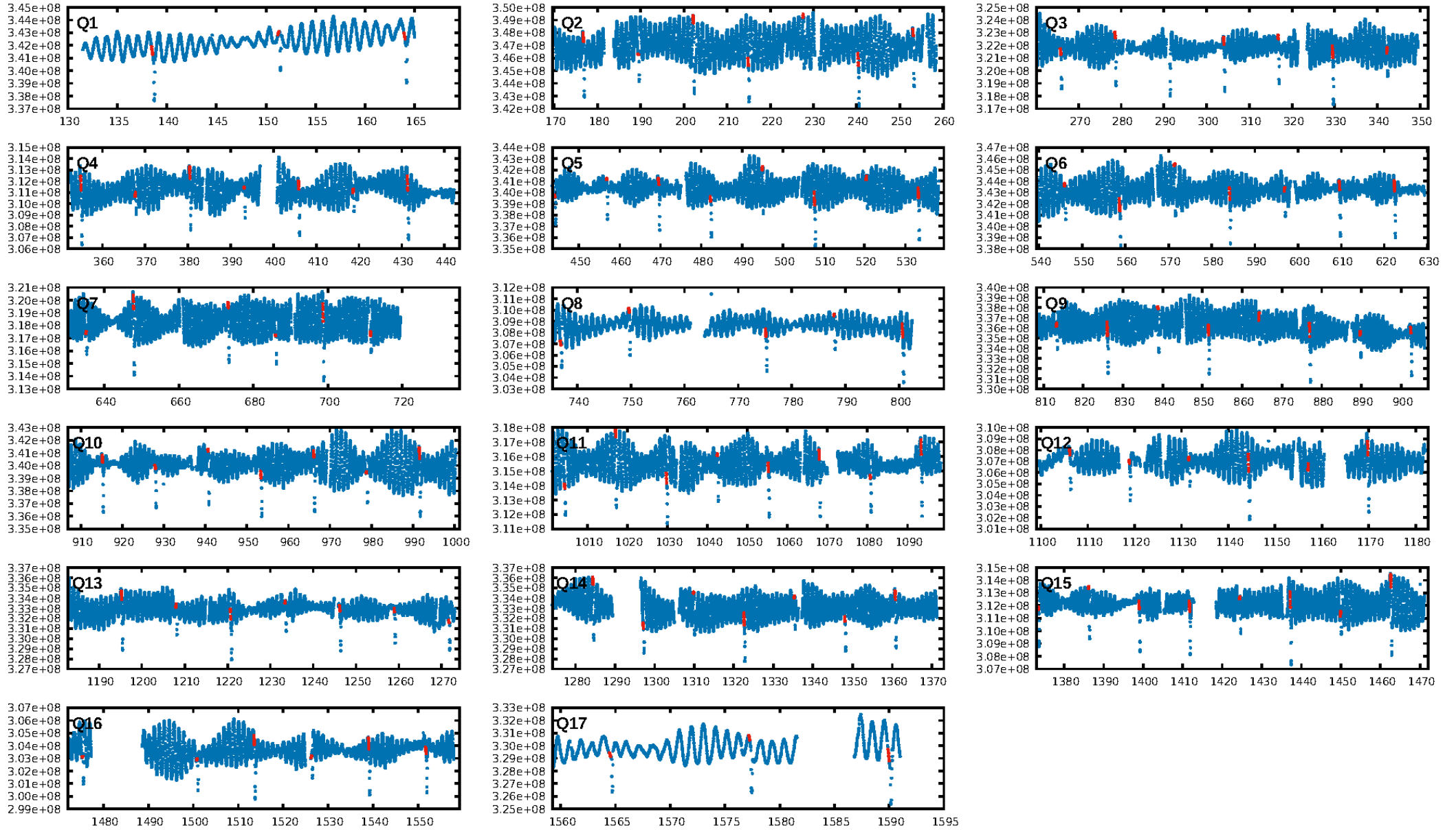
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [21.96σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [88/99]
GhostDiagnostic-chr: 1.713
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.245 arcsec [1.62σ]
KicOffset-rm: 0.241 arcsec [1.63σ]
OotOffset-st: 4/4/2/4 [14]
KicOffset-st: 4/4/2/4 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 0.20 [3/15]

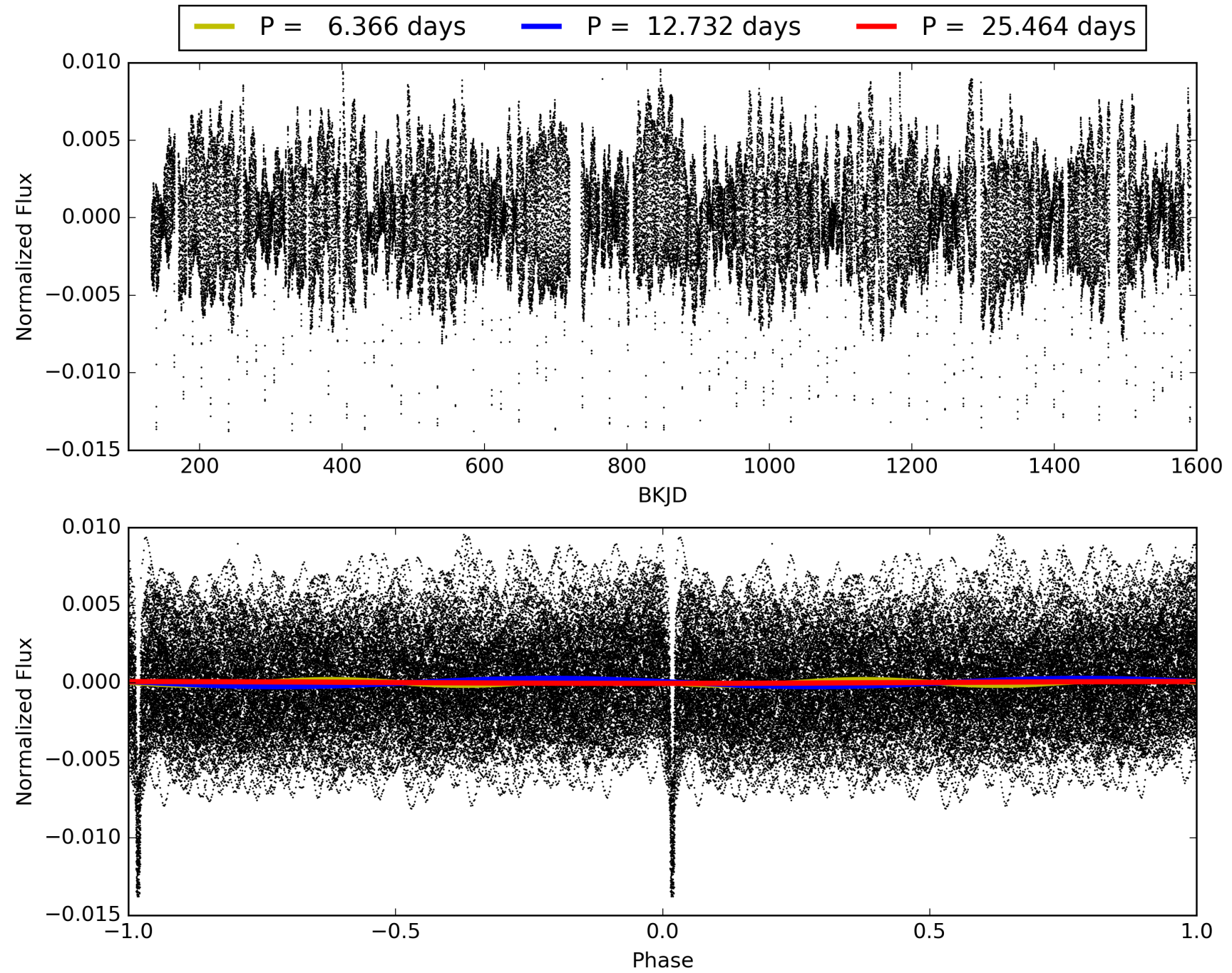
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:29:26 Z

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

TCE 011820830-02, PDC Light Curves

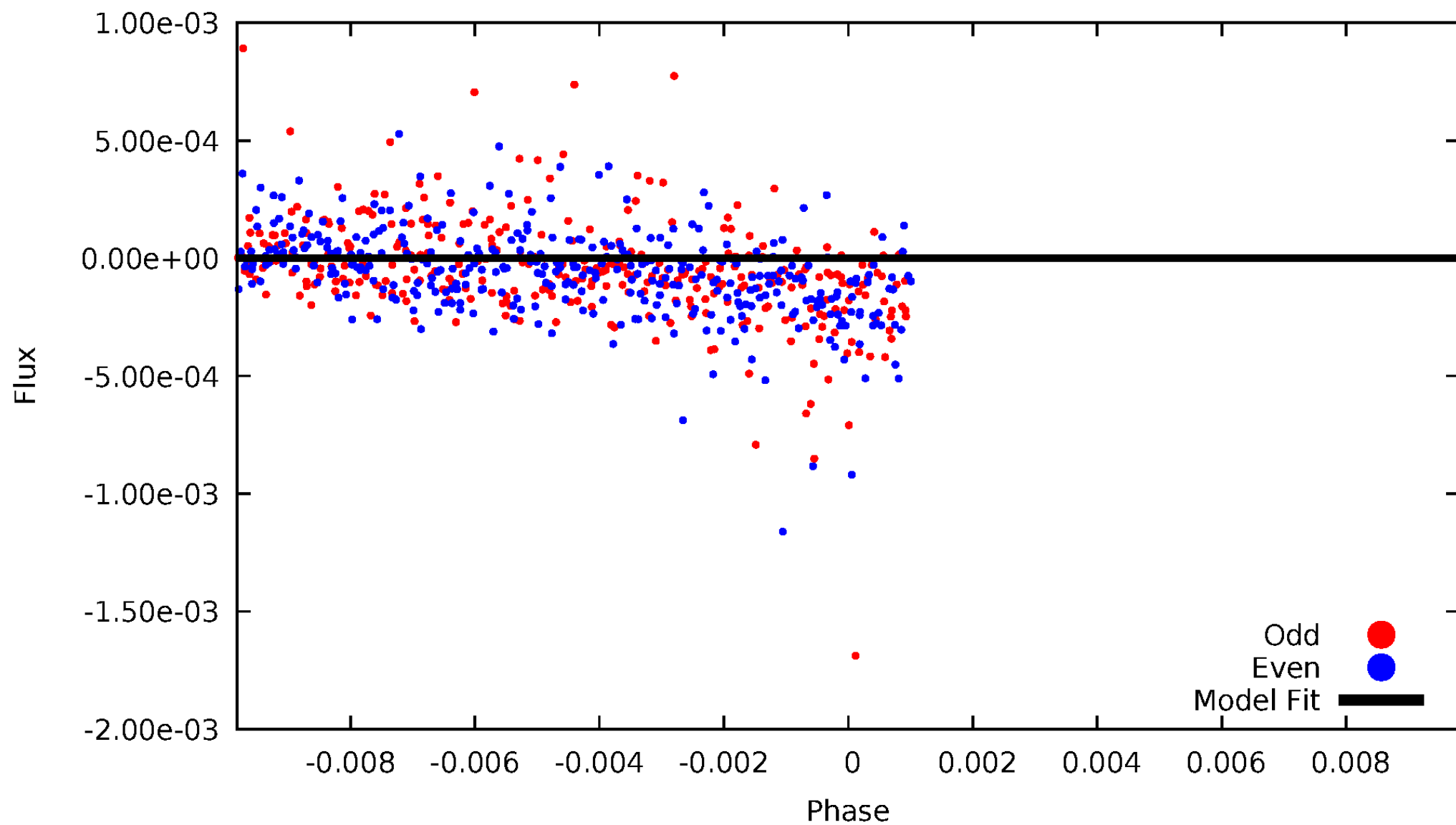


TCE 011820830-02



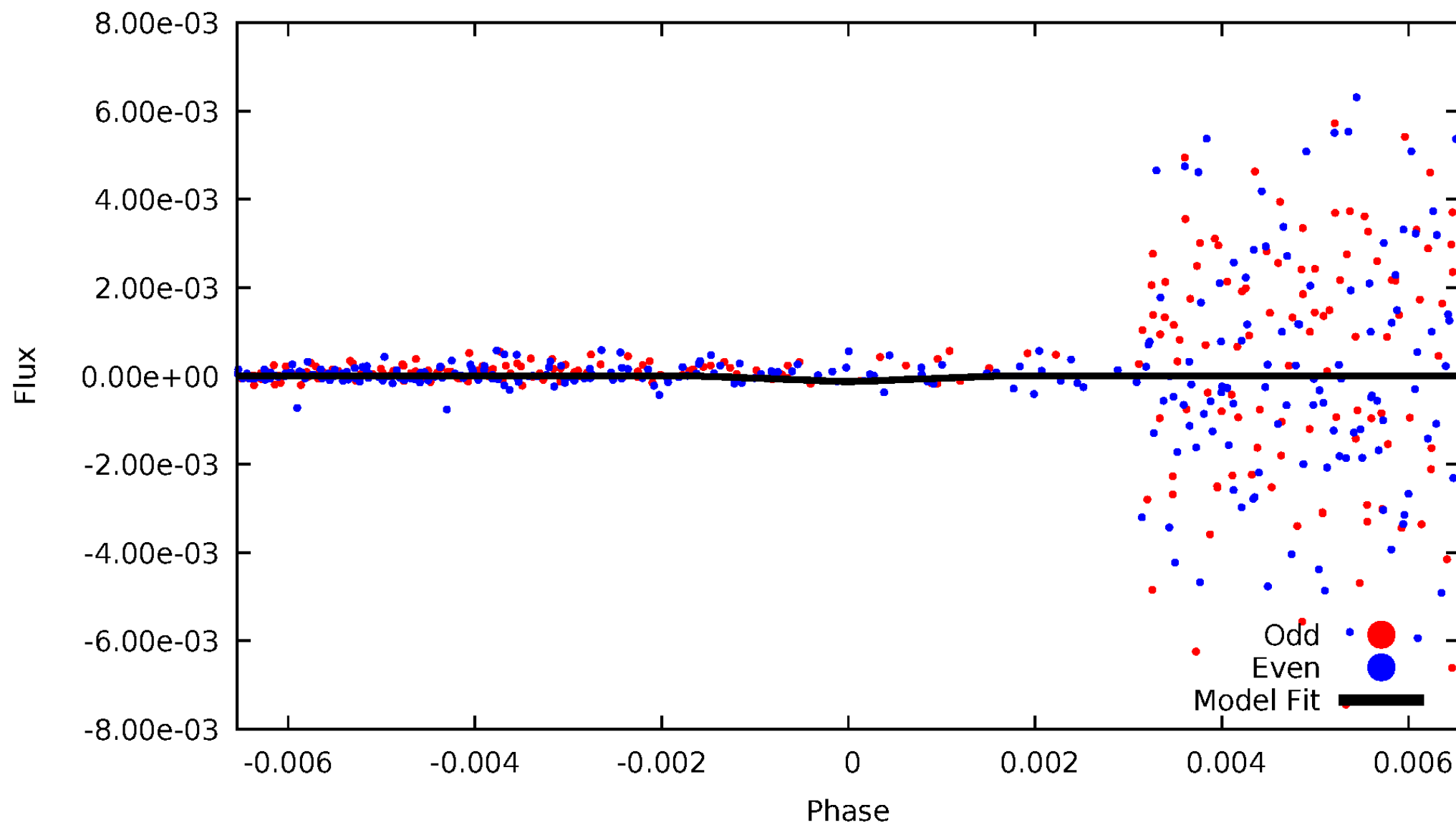
DV Odd/Even

TCE 011820830-02



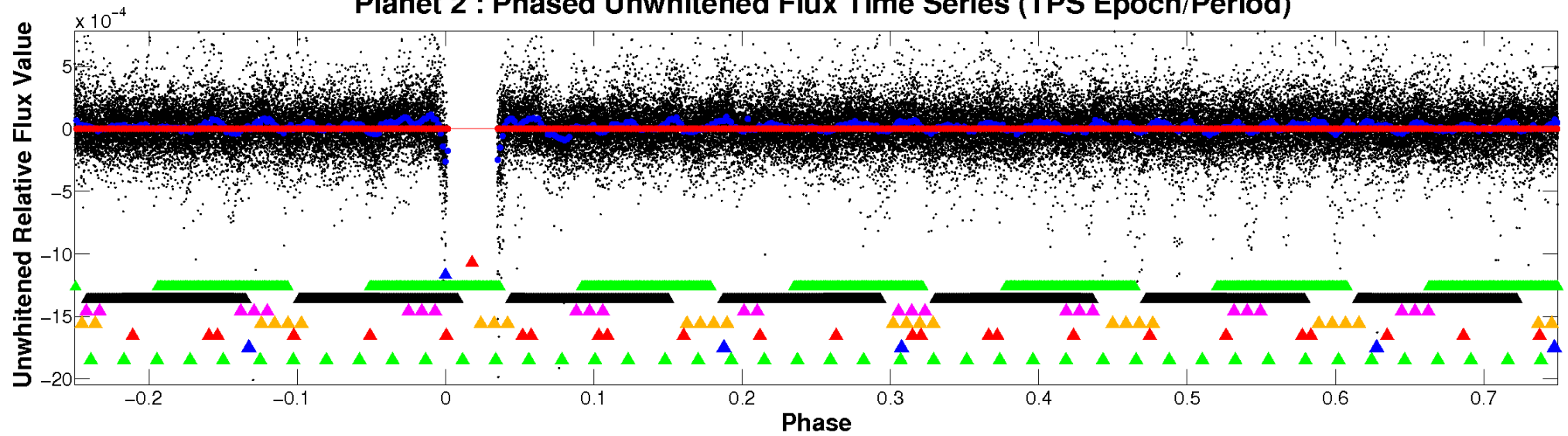
ALT Odd/Even

TCE 011820830-02

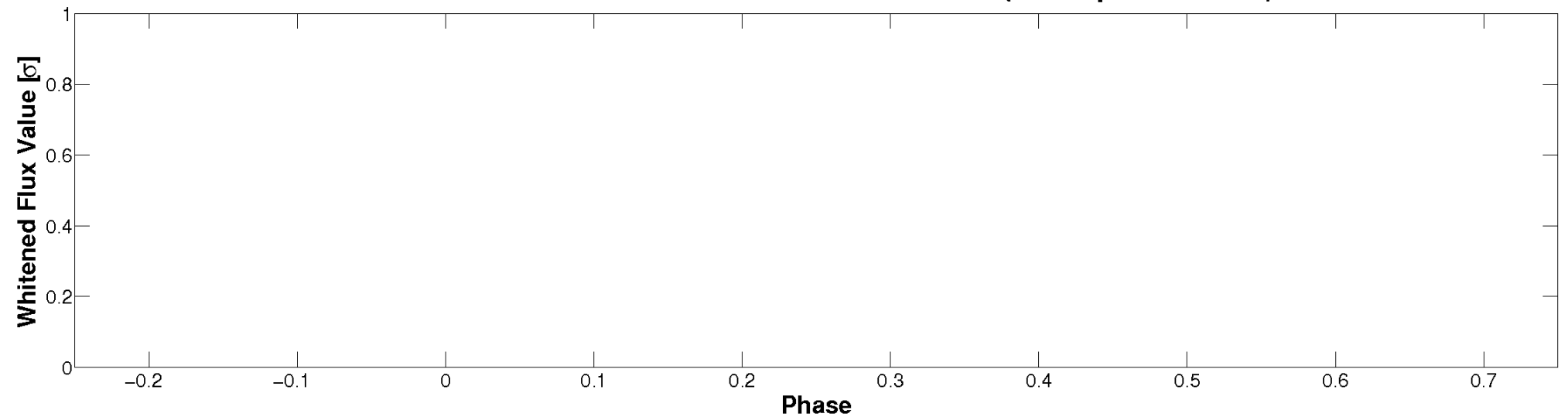


Non-Whitened Vs. Whitened Light Curve

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

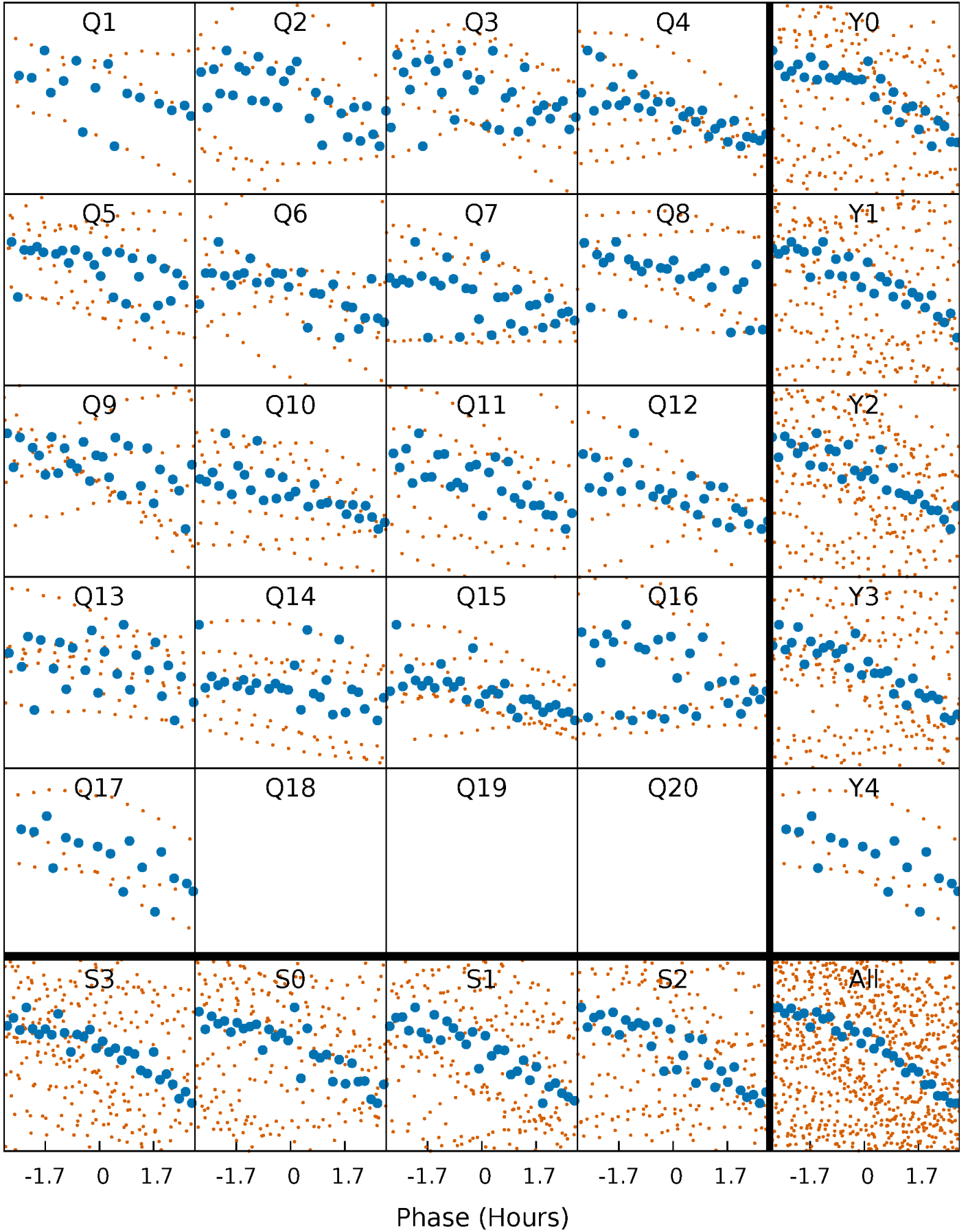


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



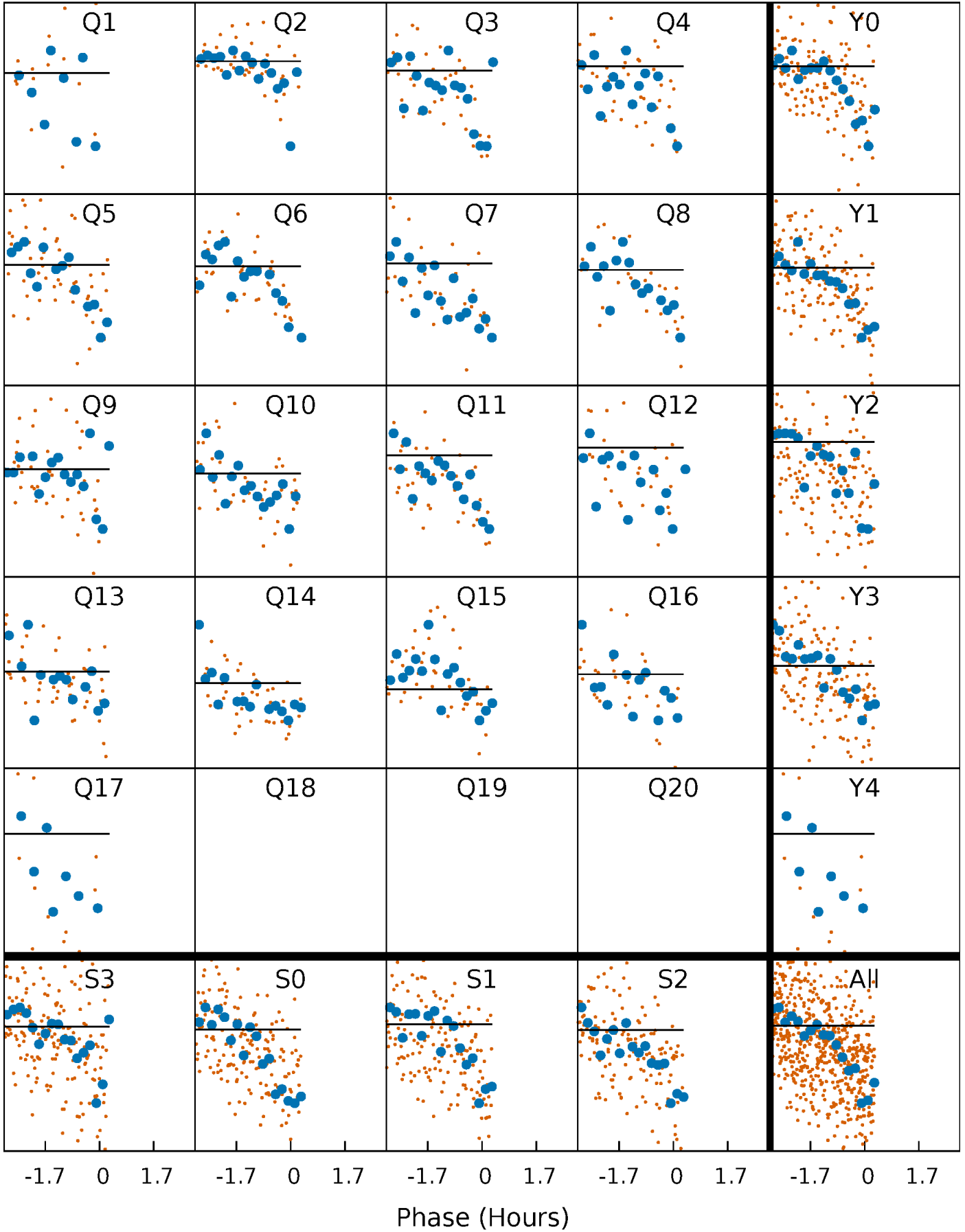
PDC Quarter-Phased Transit Curves

TCE 011820830-02 P= 12.731924 Days $T_0=138.504746$ (BKJD)



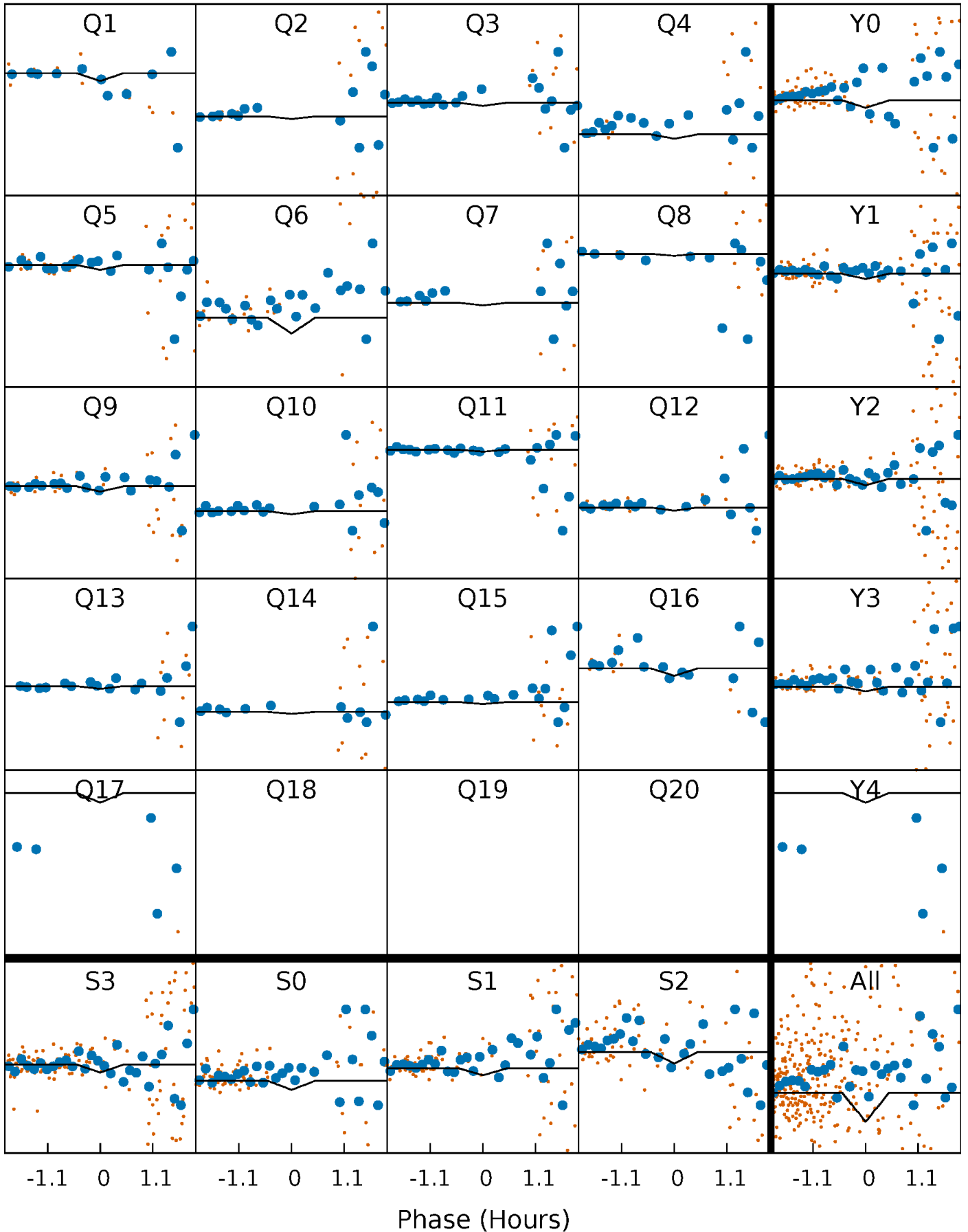
DV Quarter-Phased Transit Curves

TCE 011820830-02 P= 12.731924 Days $T_0=138.504746$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

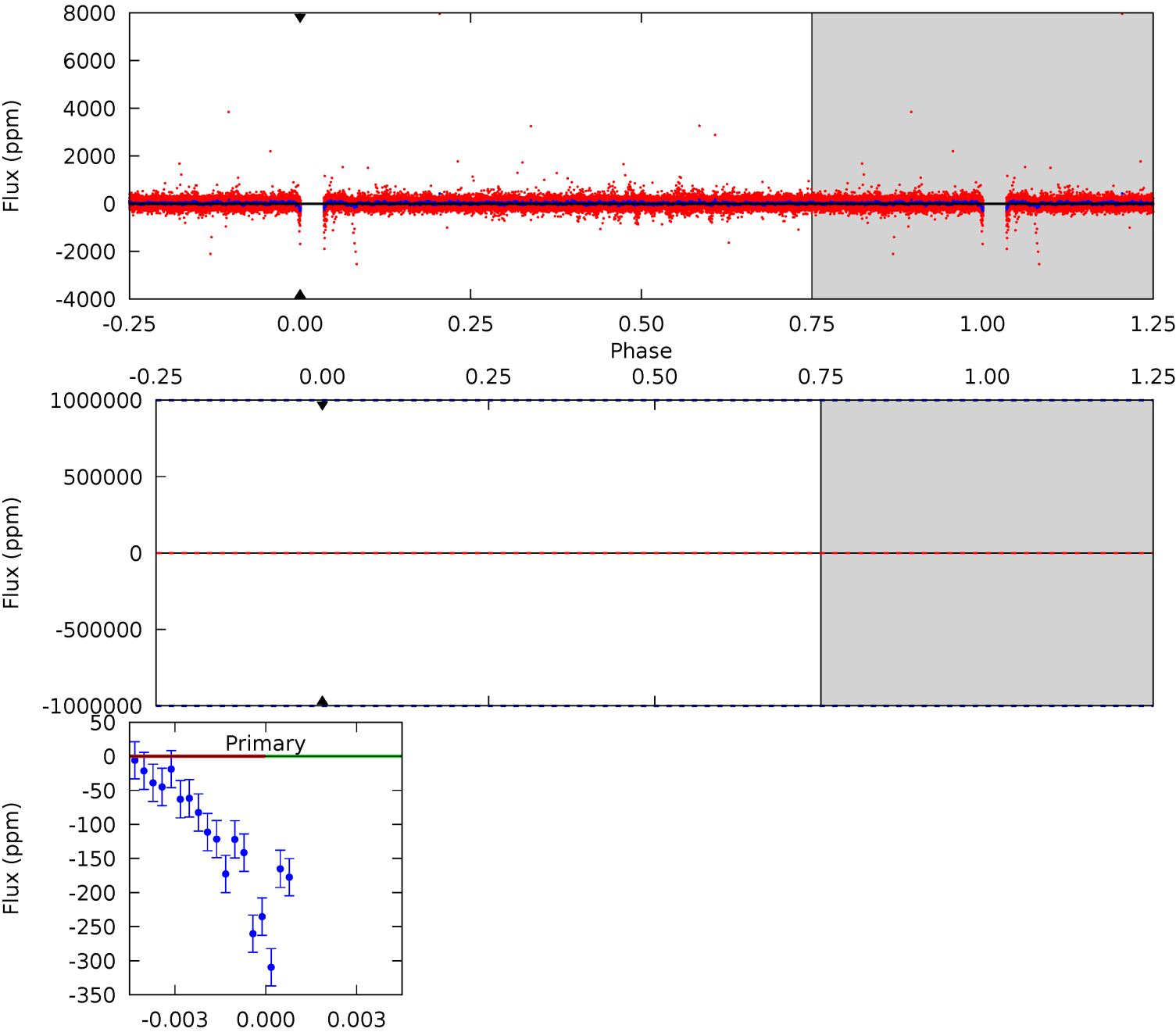
TCE 011820830-02 $P = 12.731924$ Days $T_0 = 138.413686$ (BKJD)



DV Model-Shift Uniqueness Test

011820830-02, P = 12.731924 Days, E = 125.772822 Days

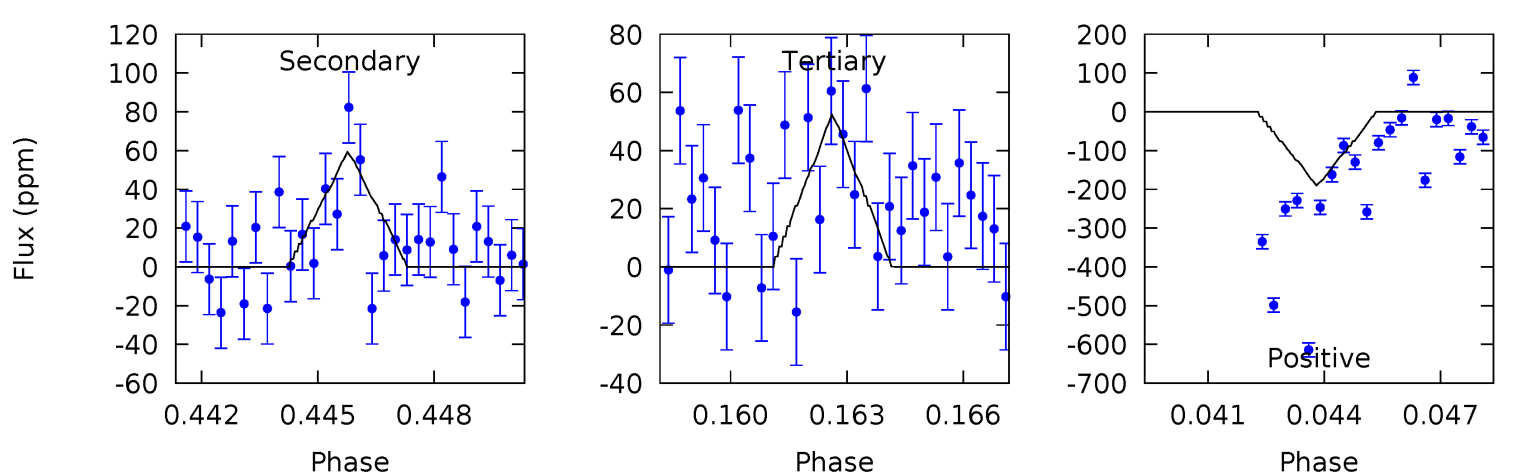
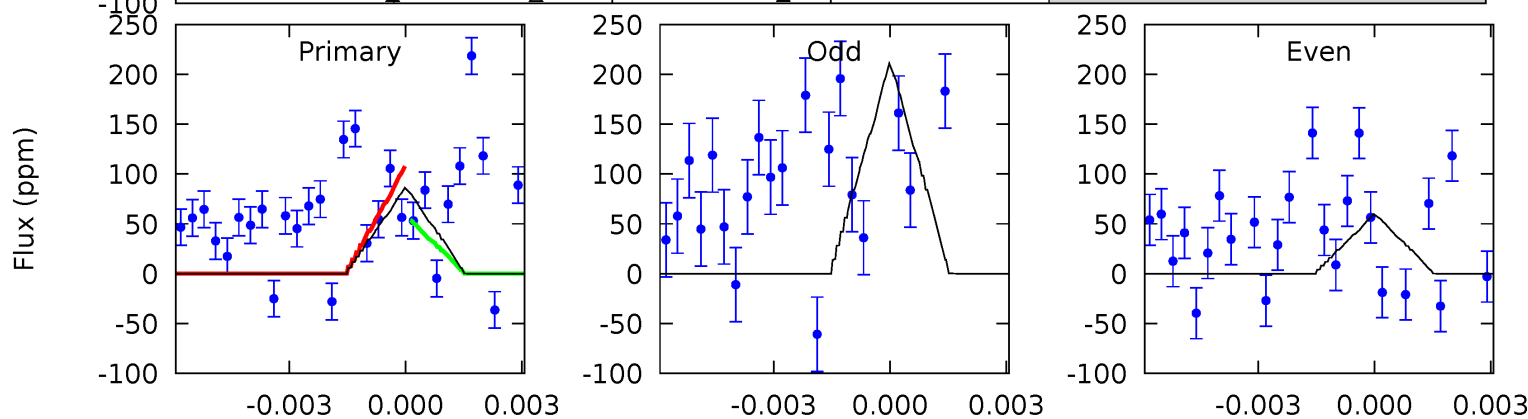
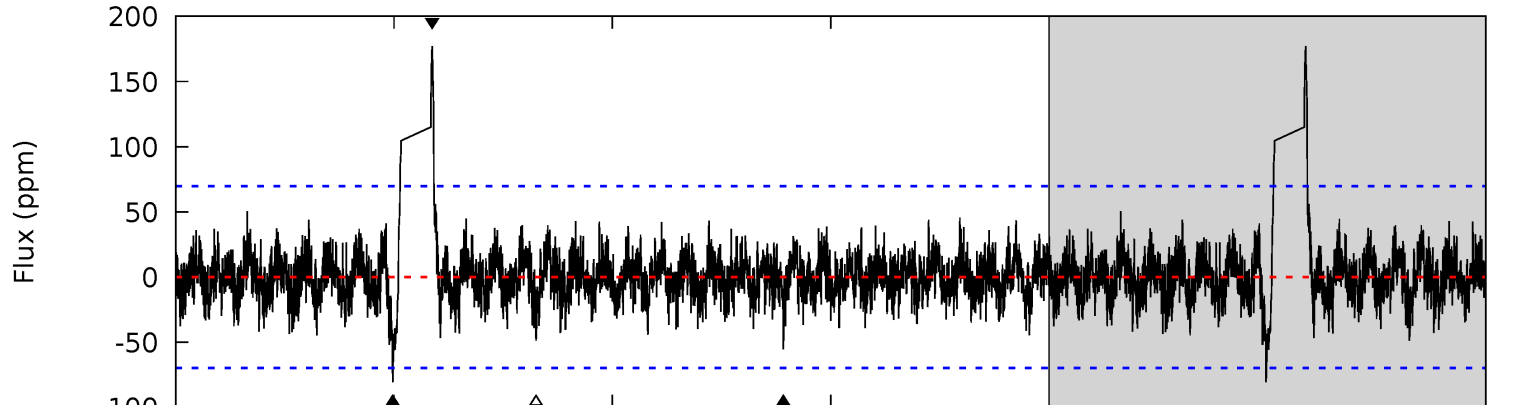
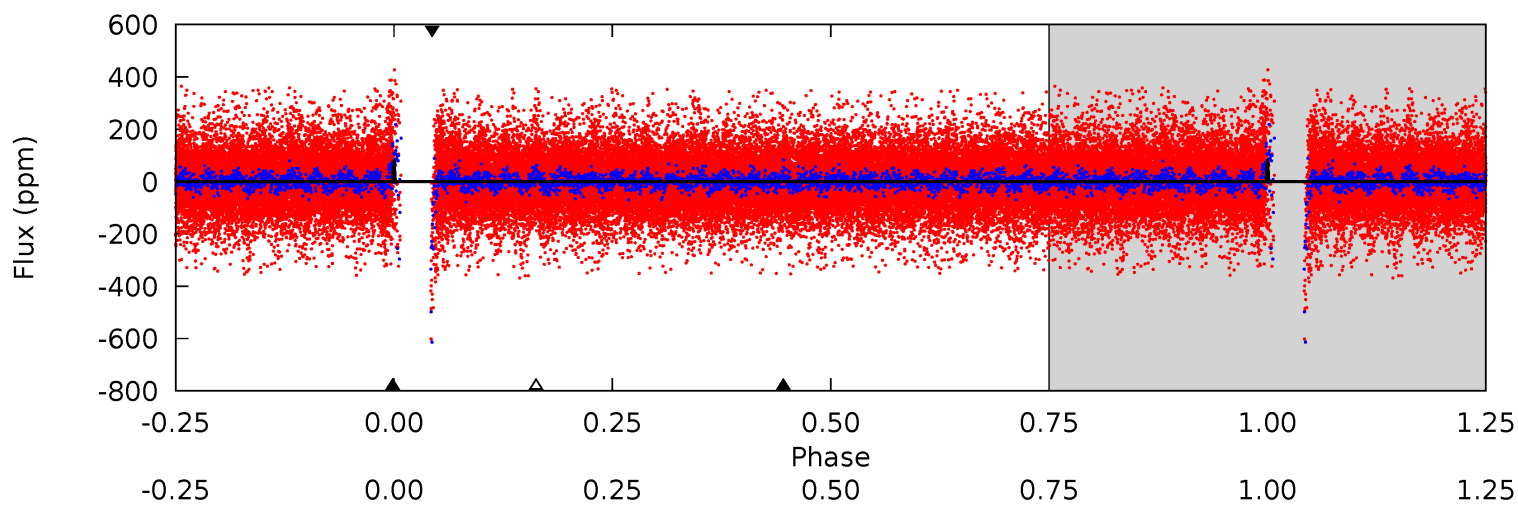
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011820830-02, $P = 12.731924$ Days, $E = 125.681762$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.05	4.17	3.68	13.3	5.24	2.95	1.14	2.37	-7.28	0.49	-9.16	5.06	2.74	0.69	1.97



Stellar Parameters For KIC 011820830

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7238^{+201}_{-277}	$4.221^{+0.090}_{-0.210}$	$0.000^{+0.200}_{-0.350}$	$1.568^{+0.556}_{-0.238}$	$1.491^{+0.221}_{-0.199}$	$0.545^{+0.221}_{-0.282}$
	+3%/-4%	+2%/-5%	+inf%/-inf%	+35%/-15%	+15%/-13%	+41%/-52%
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 011820830-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$12.60^{+13.99}_{-8.52}$	1625^{+118}_{-90}	4270^{+37968}_{-39885}	19^{+11122}_{-8163}
Alt.	-55 ± 13	$12.10^{+13.19}_{-8.10}$	1619^{+128}_{-91}	2949^{+1313}_{-652}	$2.846^{+22.125}_{-2.173}$

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 $A_{obs} \gg 1.0$

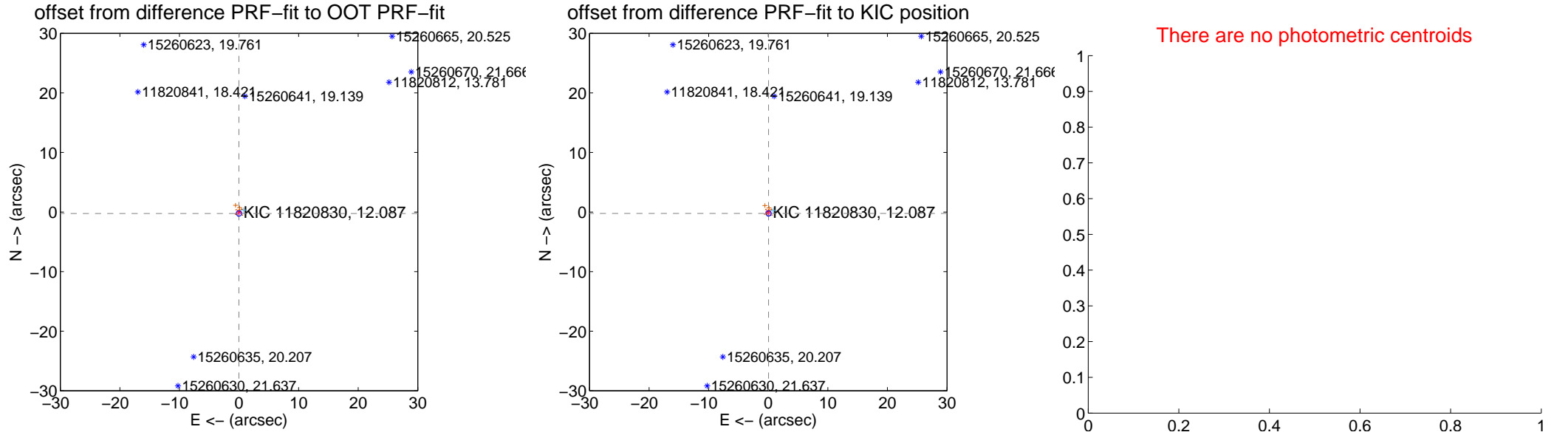
DV Centroid Data

Supplemental centroid analysis for 011820830-02. Kepler magnitude: 12.09. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

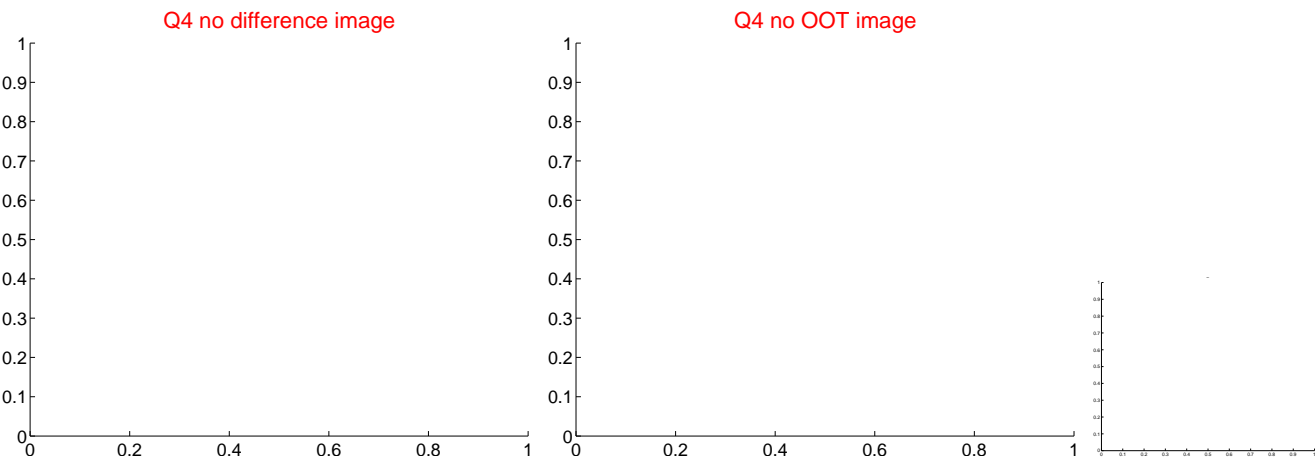
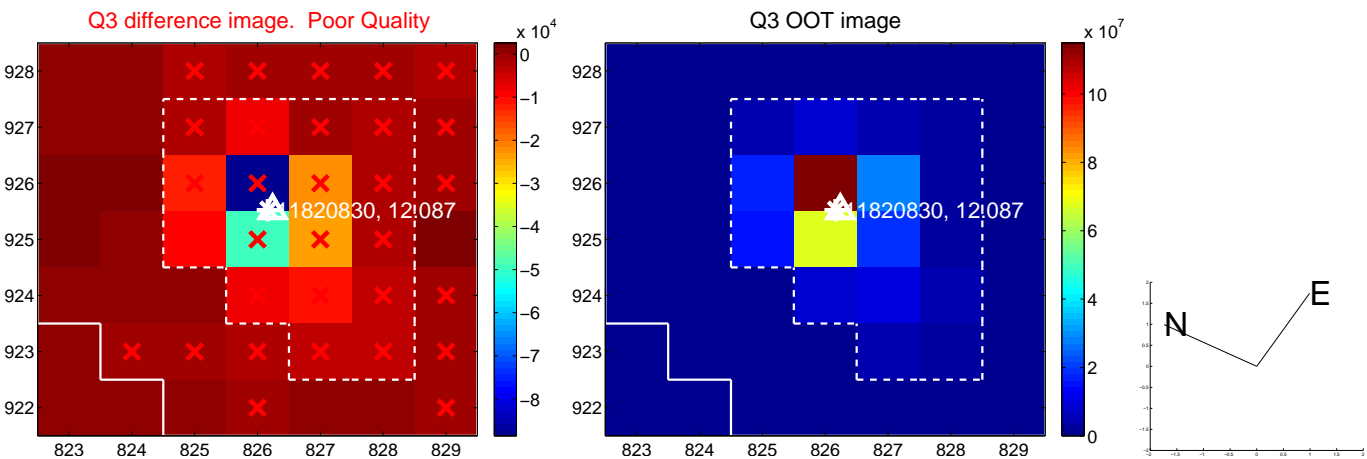
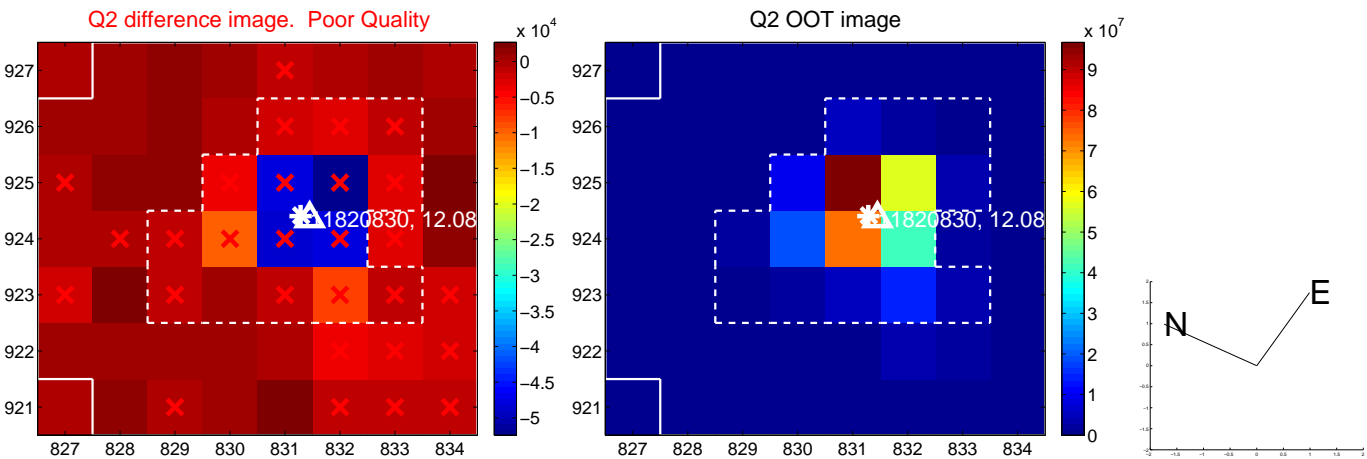
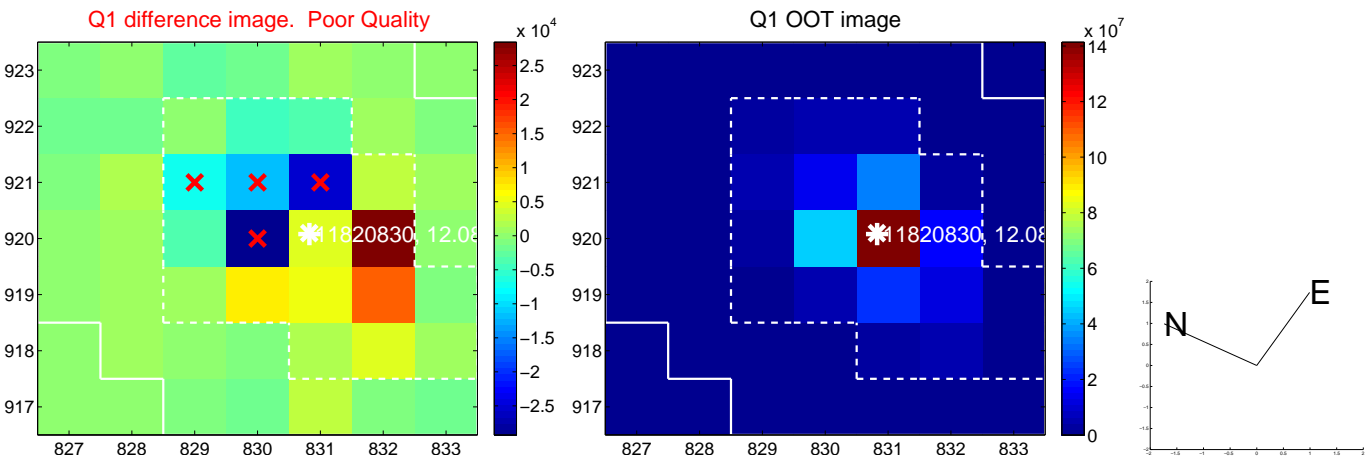
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.245 ± 0.151	1.62	0.020 ± 0.128	-0.244 ± 0.152
PRF-fit source offset from KIC position	0.241 ± 0.148	1.63	-0.049 ± 0.129	-0.236 ± 0.148
photometric centroid source offset	—	—	—	—

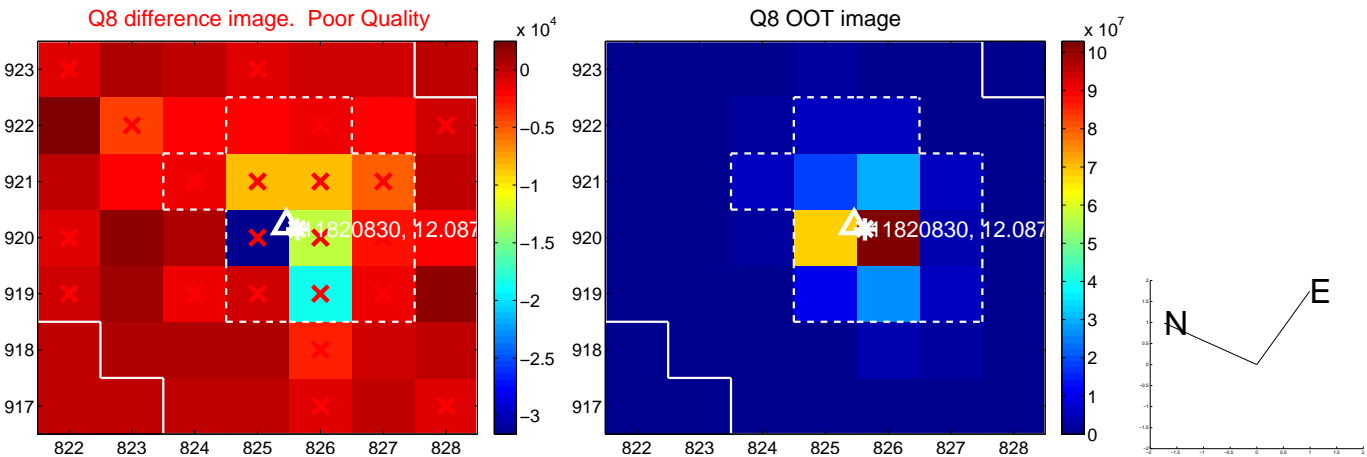
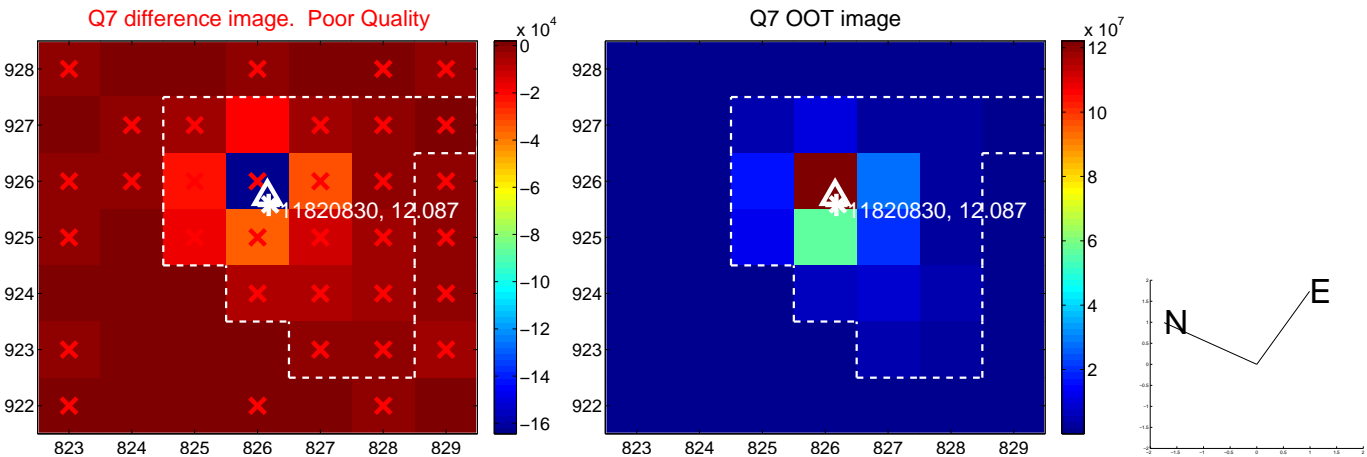
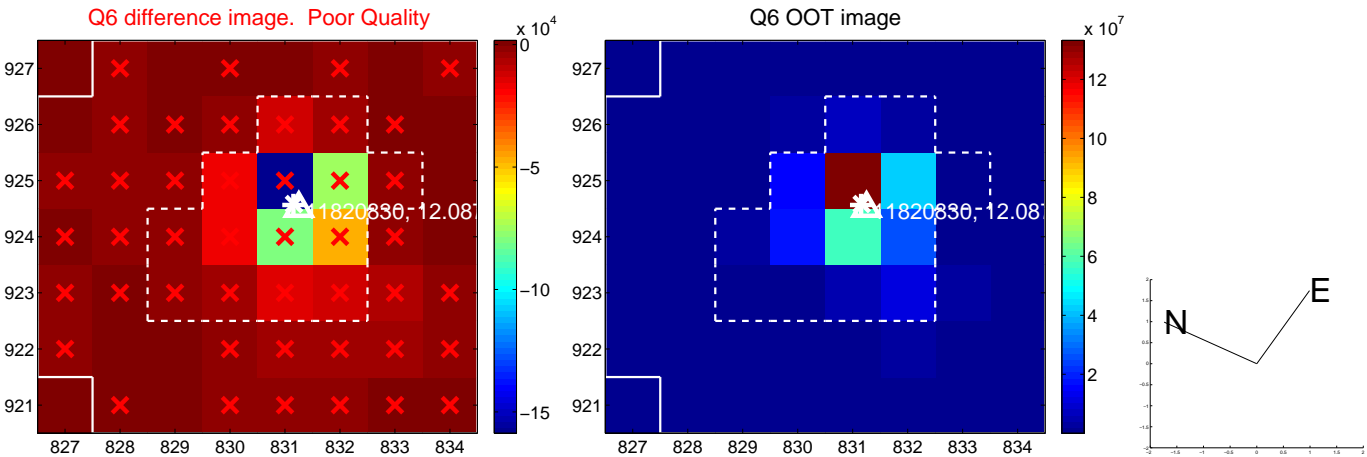
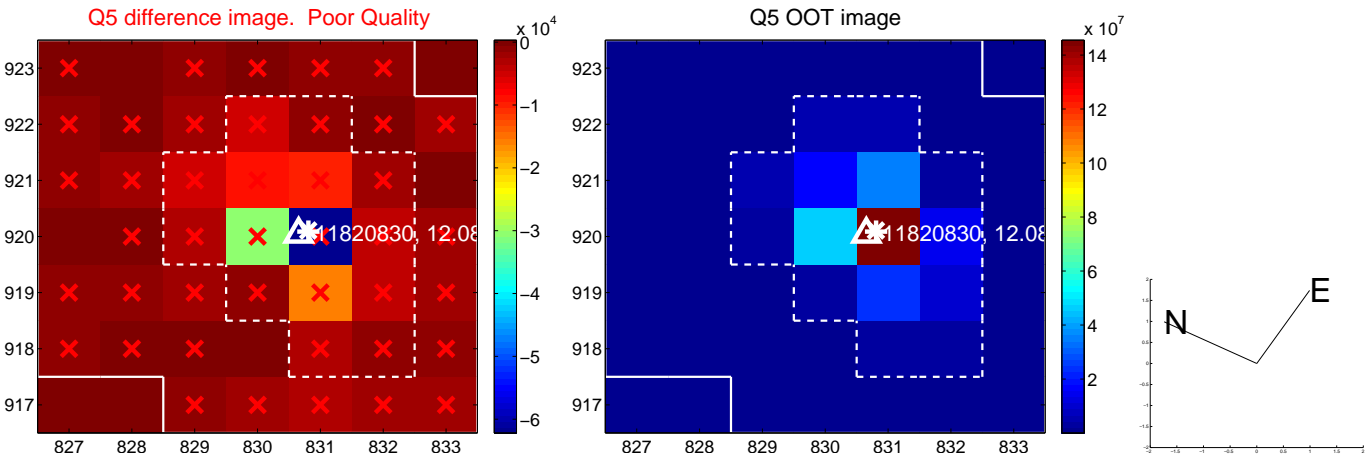


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

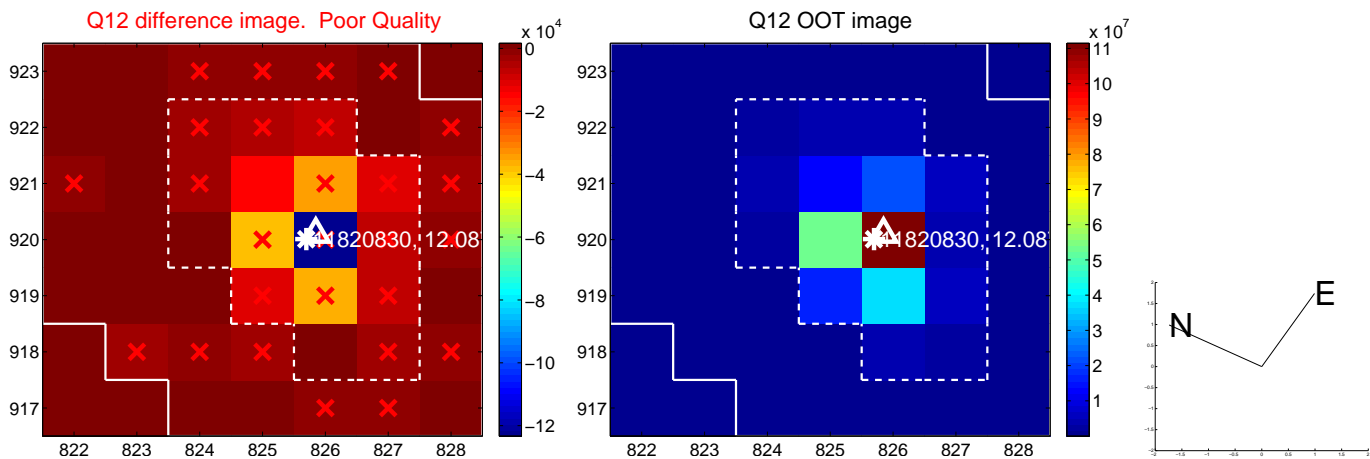
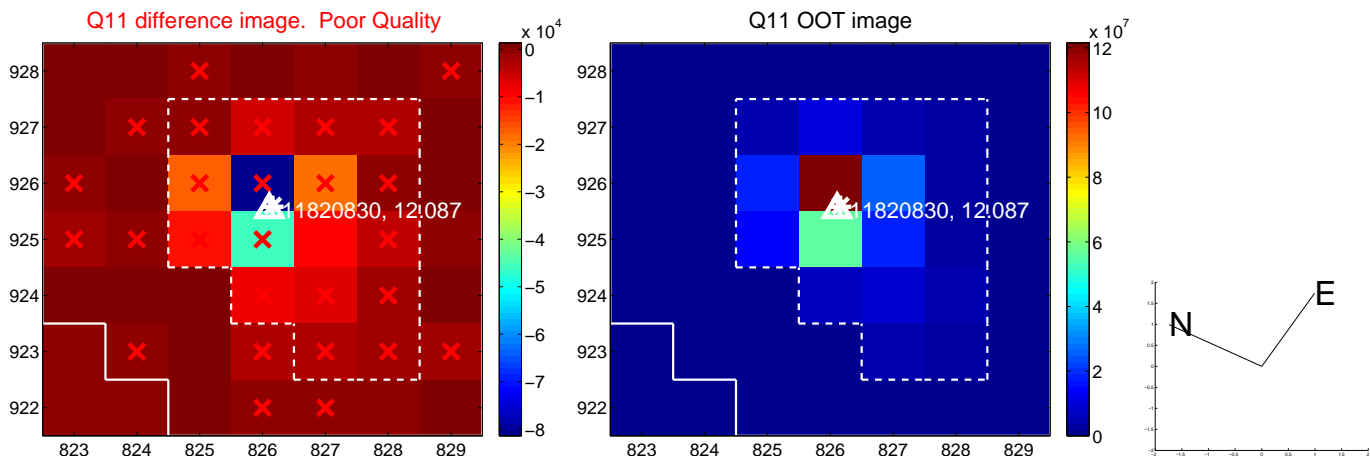
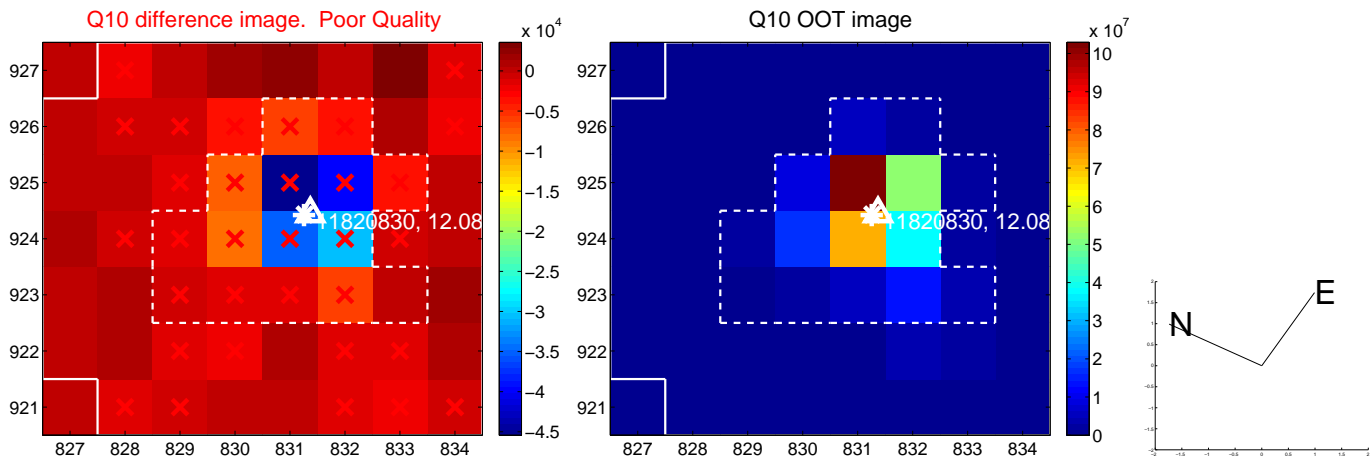
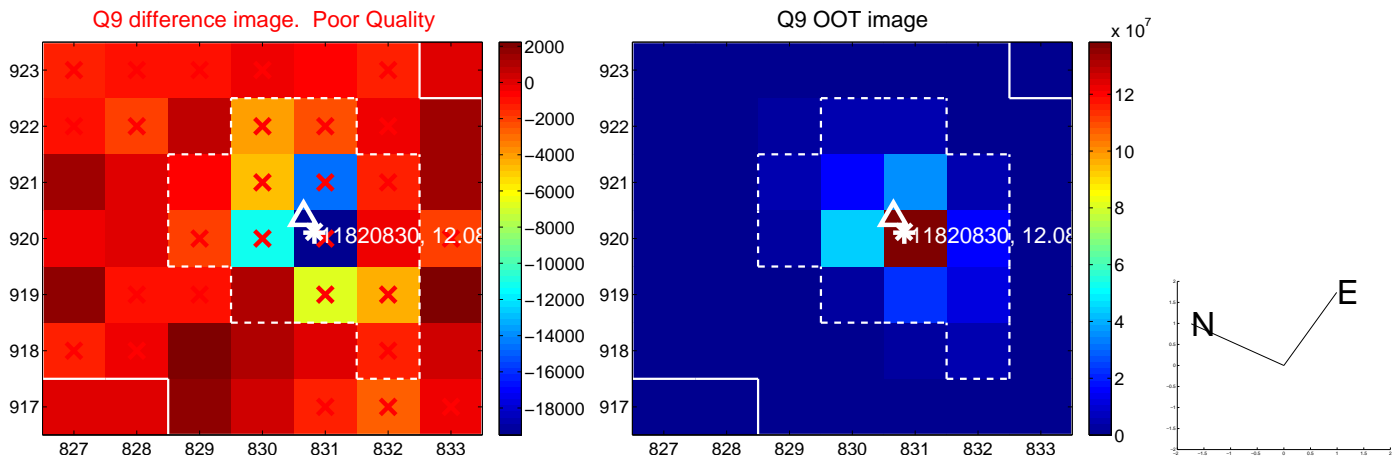
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



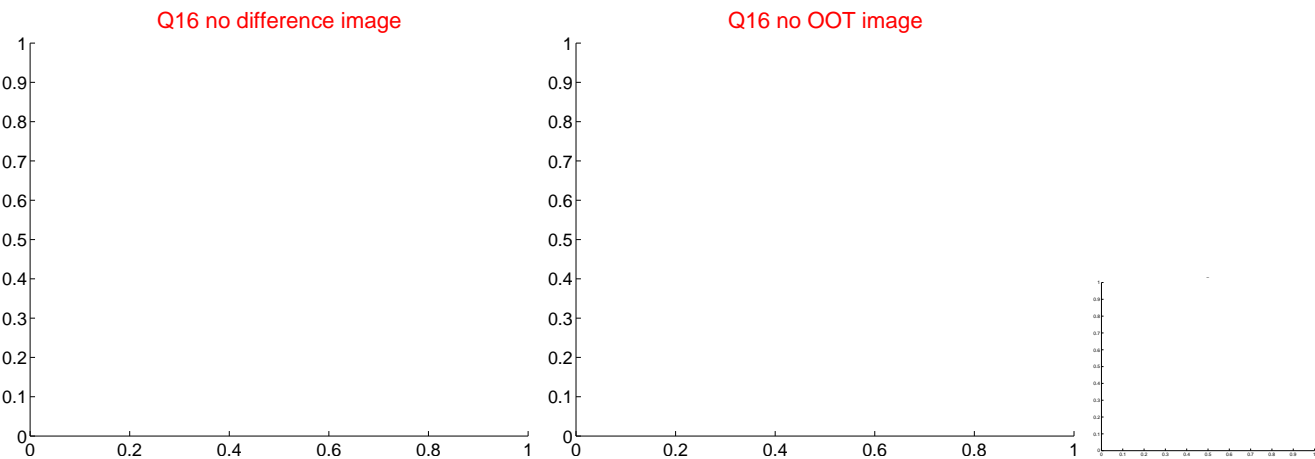
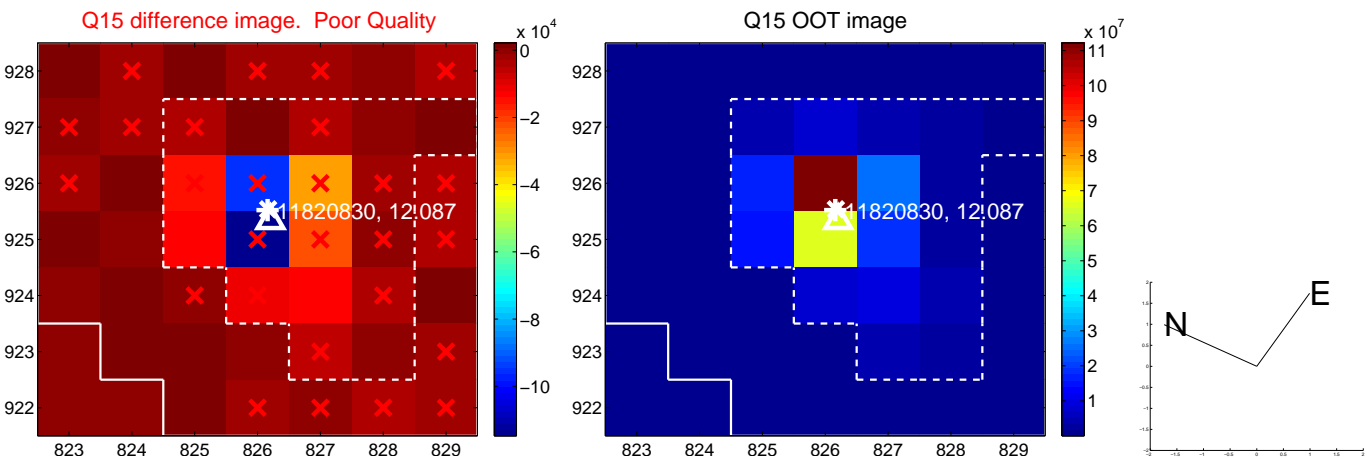
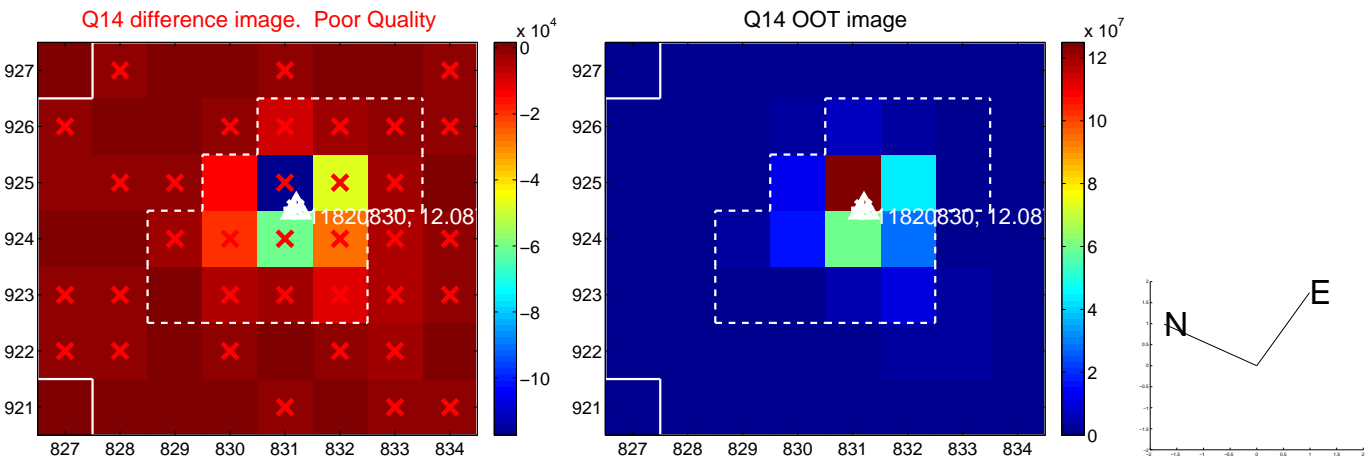
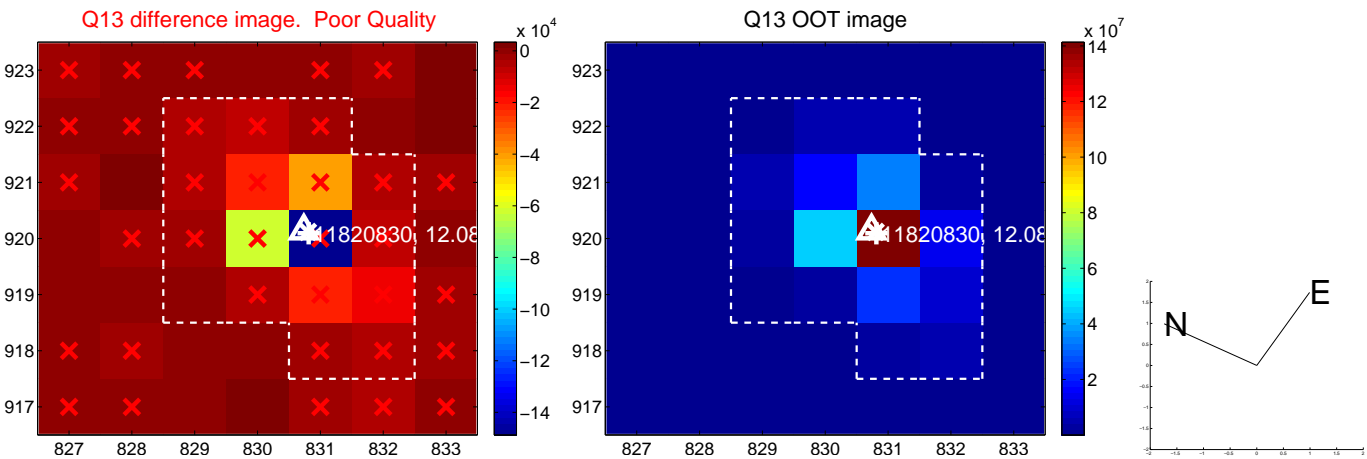
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



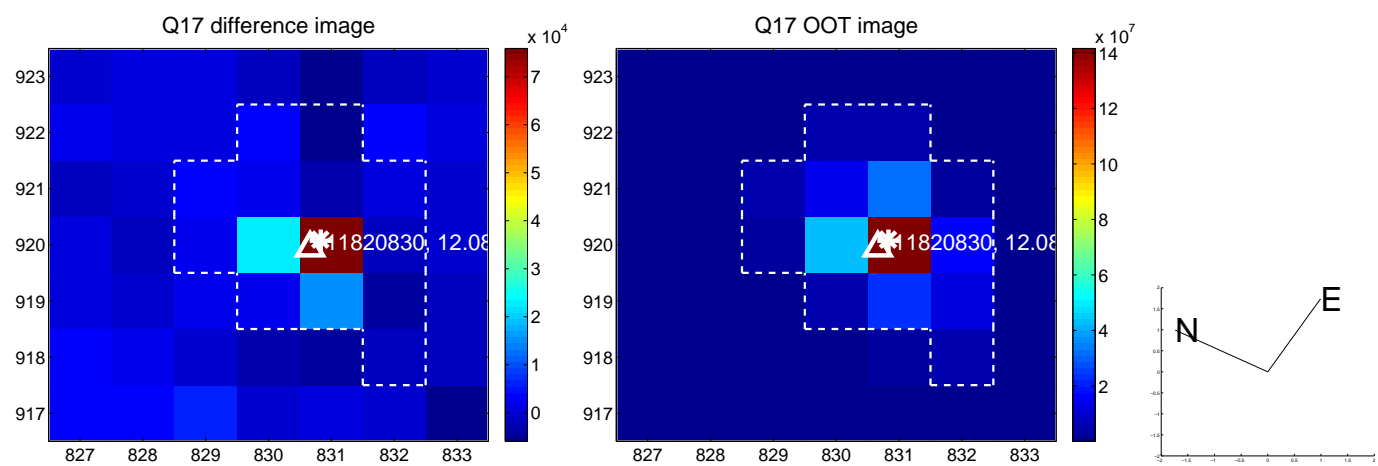
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



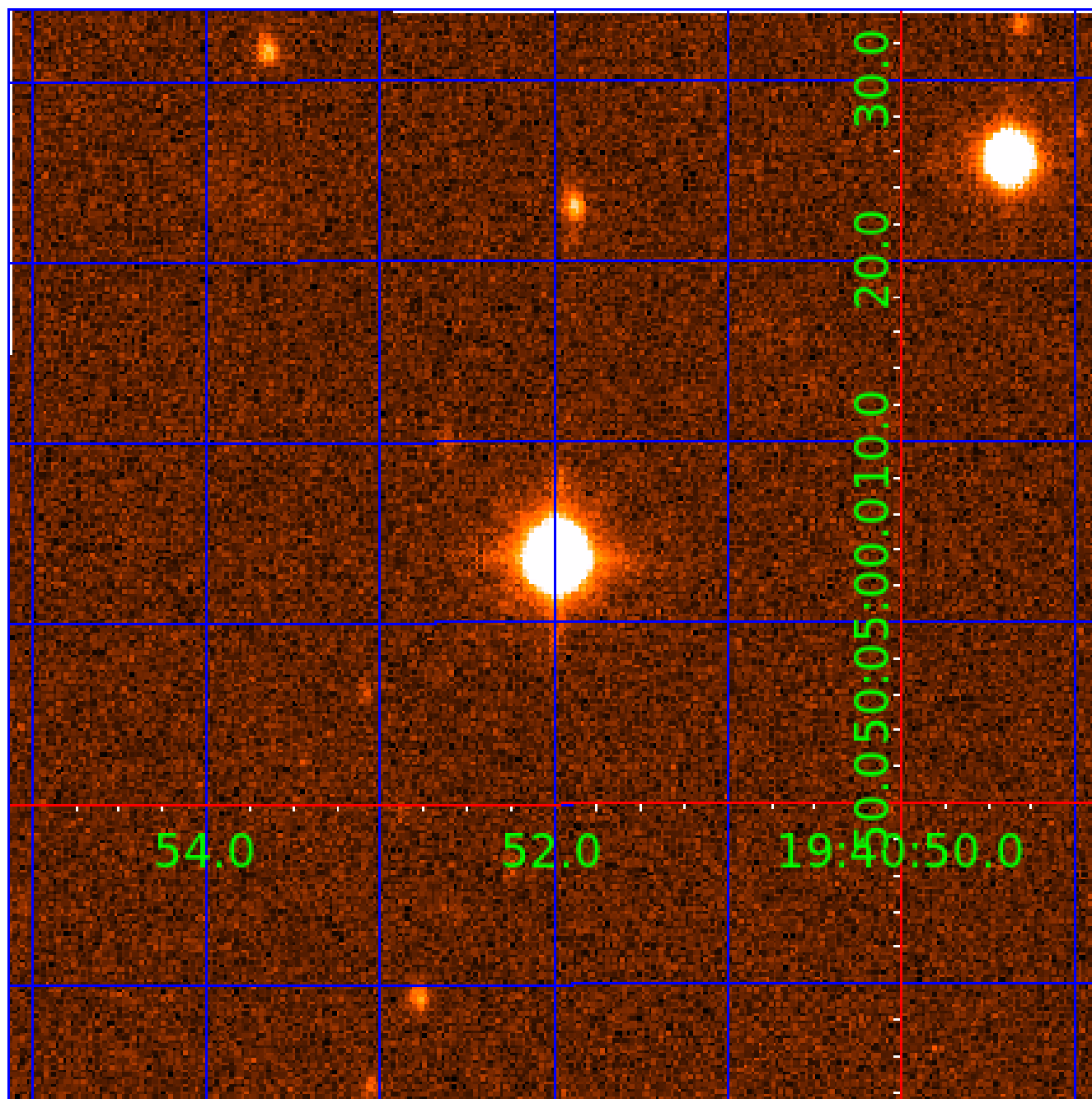
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 011820830

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})
011820830-01	OBS	1728.01	12.731942	138.732216	8810.1	3.294	592.4	536.0	1.57	7238	16.58	406.51
011820830-02	OBS	No	12.731924	138.504745	196.9	1.500	11.0	-1.0	1.57	7238	2.24	406.51
011820830-03	OBS	No	1.820244	132.394622	42.2	6.308	10.7	6.8	1.57	7238	1.18	5437.84
011820830-04	OBS	No	1.820549	131.787509	38.9	11.828	10.0	4.1	1.57	7238	1.05	5436.63
011820830-06	OBS	No	54.581769	142.347683	194.1	7.218	17.4	3.3	1.57	7238	2.37	58.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011820830-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011820830-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
011820830-03	OBS	FP	0.00	1	0	0	0	LPP_DV
011820830-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—SAME_NTL_PERIOD
011820830-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_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.

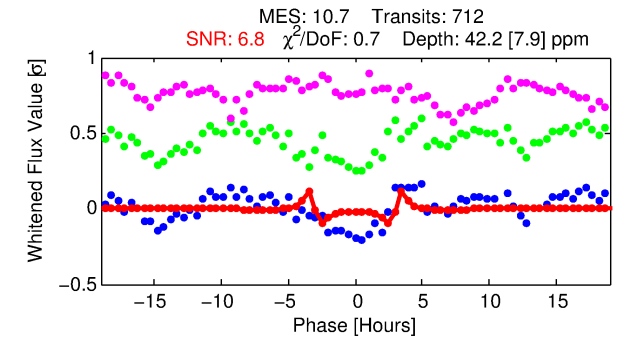
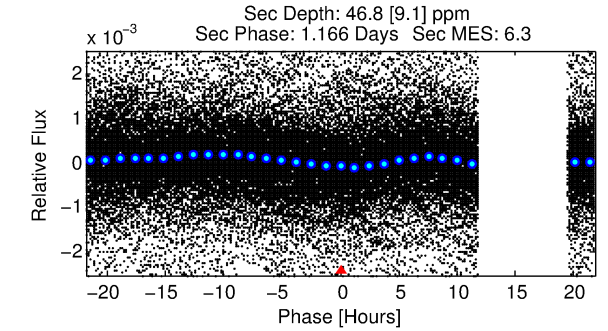
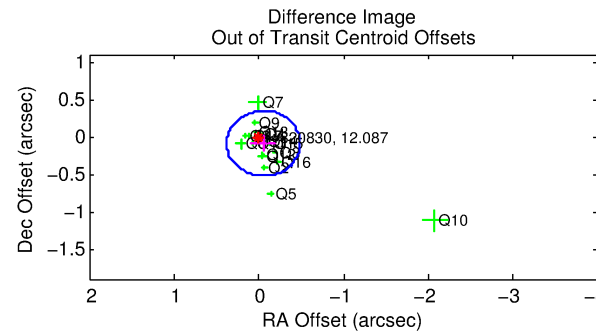
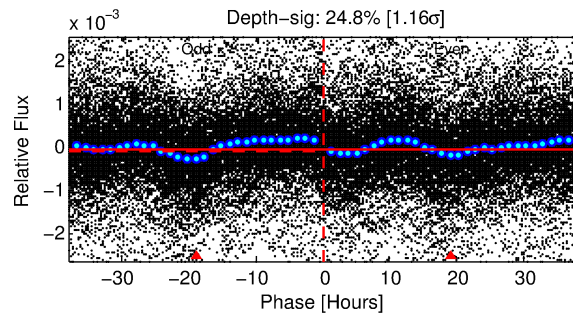
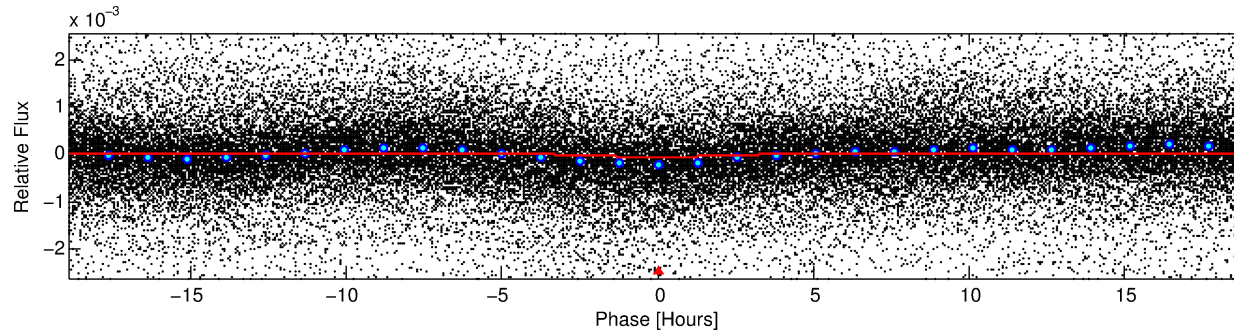
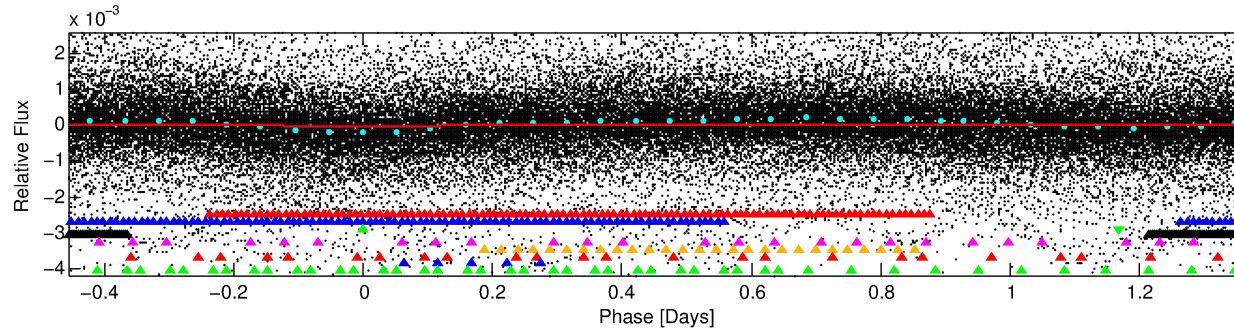
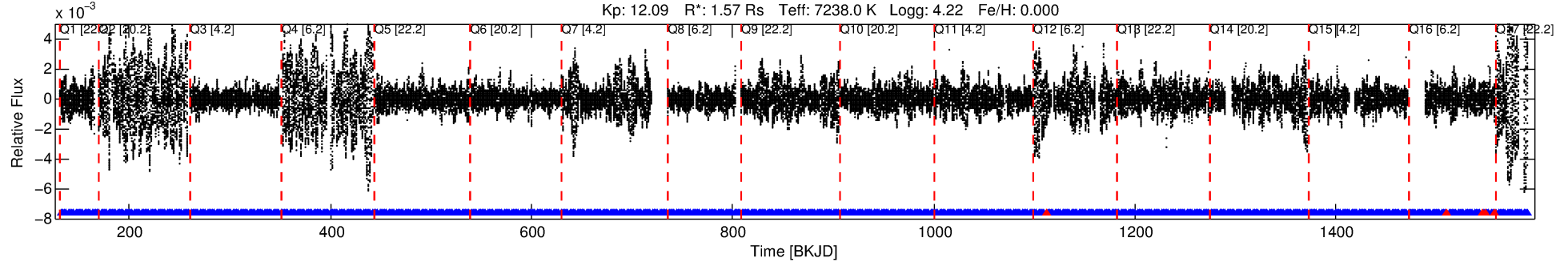
Ephemeris Match Information For 011820830-03

No Significant Match Found

DV One-Page Summary

KIC: 11820830 Candidate: 3 of 9 Period: 1.820 d
KOI: K01728 Corr: No Ephemeris Match

Kp: 12.09 R*: 1.57 Rs Teff: 7238.0 K Logg: 4.22 Fe/H: 0.000



DV Fit Results:

Period = 1.82024 [0.00001] d
Epoch = 132.3946 [0.0023] BKJD
Rp/R* = 0.0069 [0.0011]
a/R* = 1.36 [0.43]
b = 0.90 [0.14]
Seff = 5437.84 [2327.71]
Teq = 2190 [234] K
Rp = 1.18 [0.46] Re
a = 0.0333 [0.0095] AU
Ag = 20.45 [11.13] [1.75σ]
Teffp = 7200 [719] K [6.62σ]

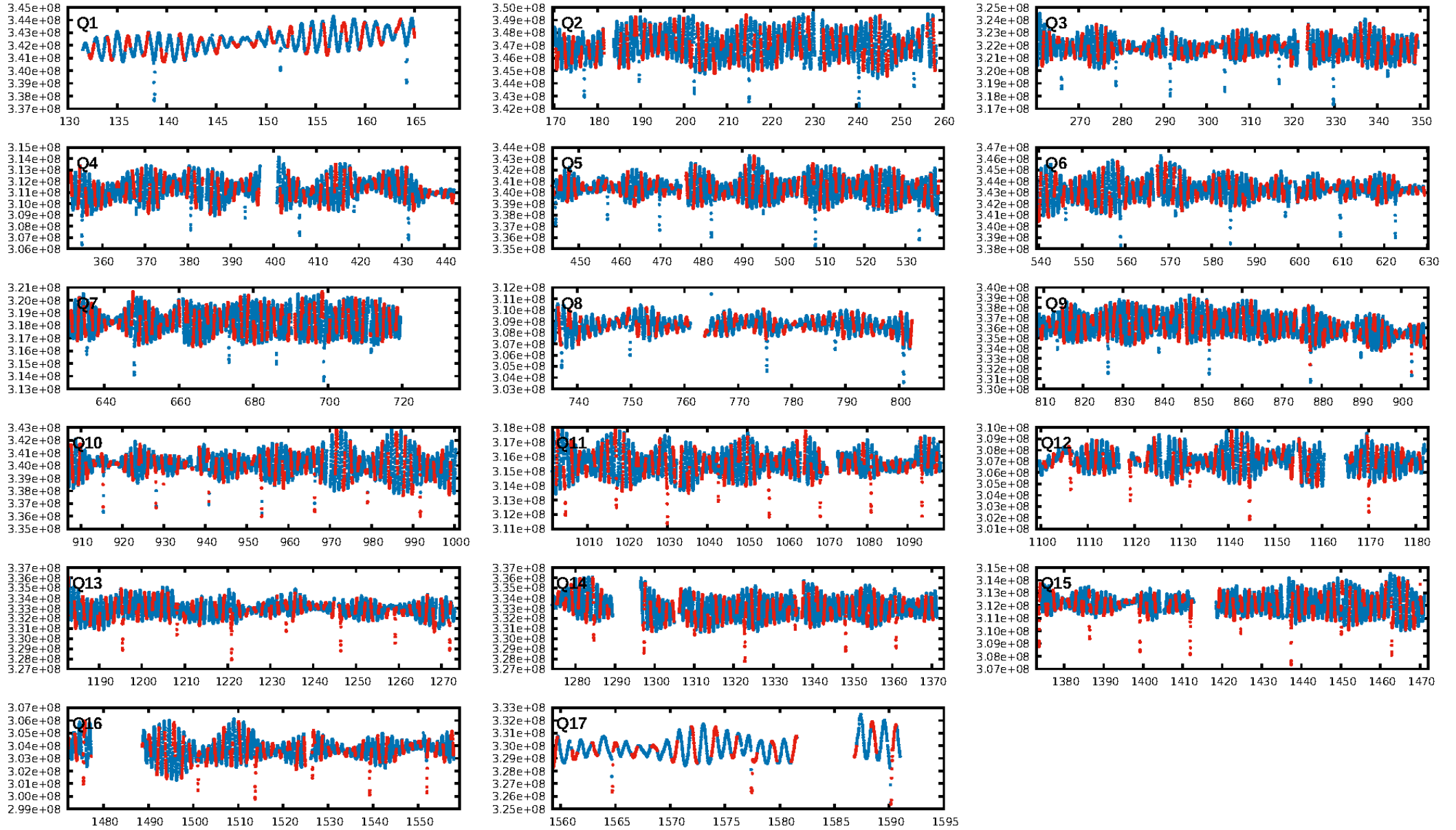
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [673/678]
GhostDiagnostic-chr: 2.549
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.106 arcsec [0.73σ]
KicOffset-rm: 0.111 arcsec [0.79σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.76 [13/17]
DiffImageOverlap-fno: 0.00 [0/17]

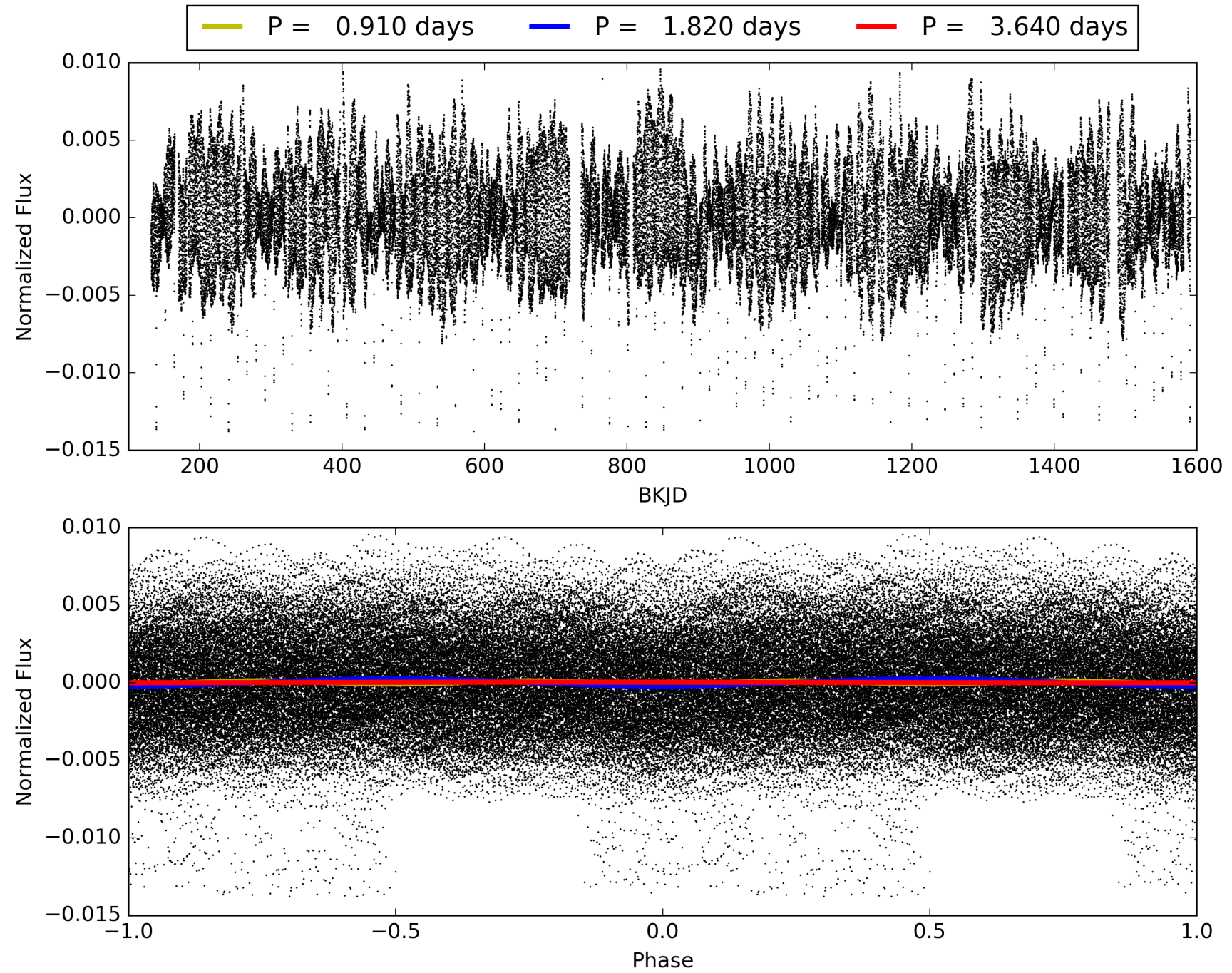
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:29:34 Z

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

TCE 011820830-03, PDC Light Curves

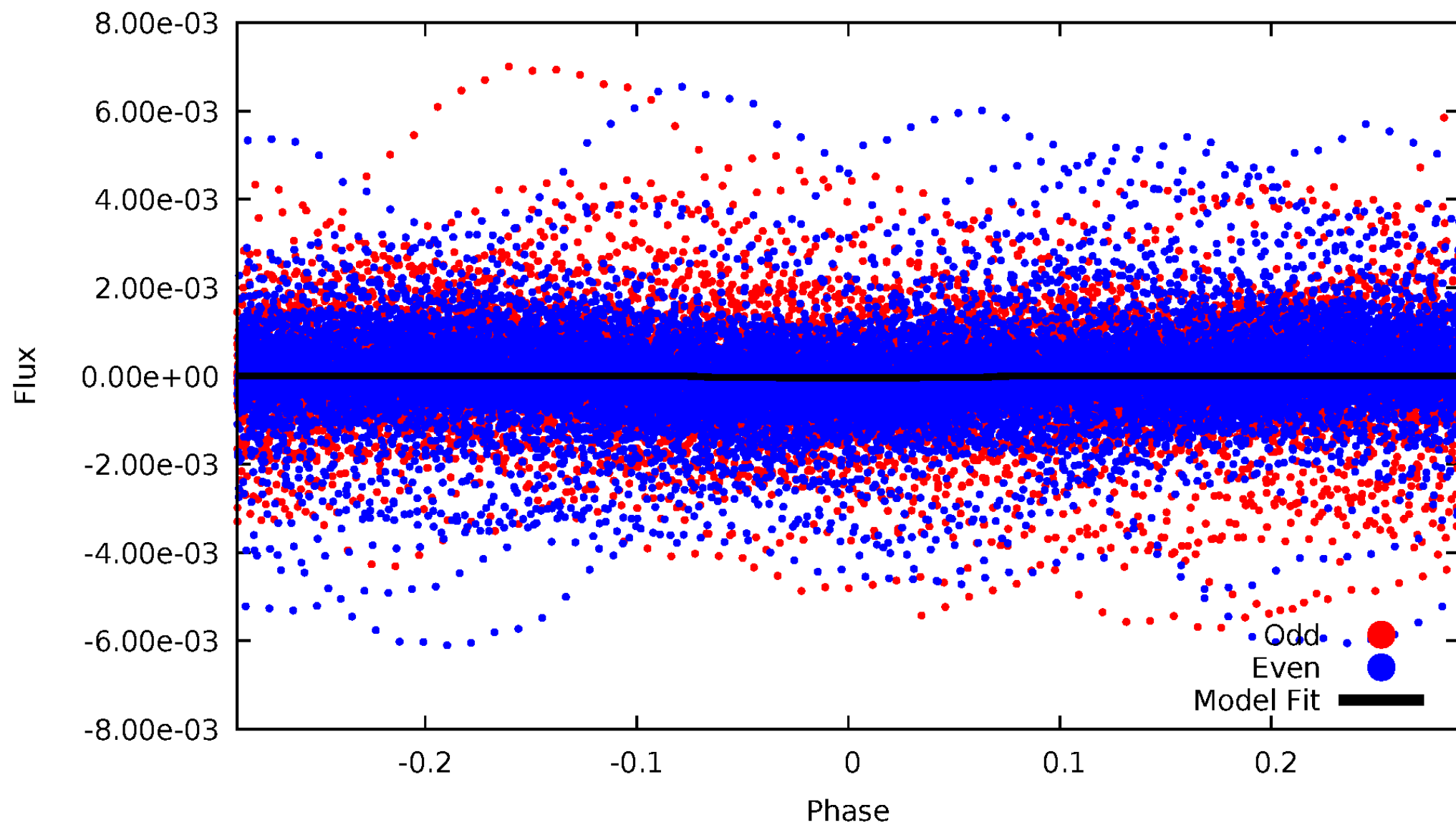


TCE 011820830-03



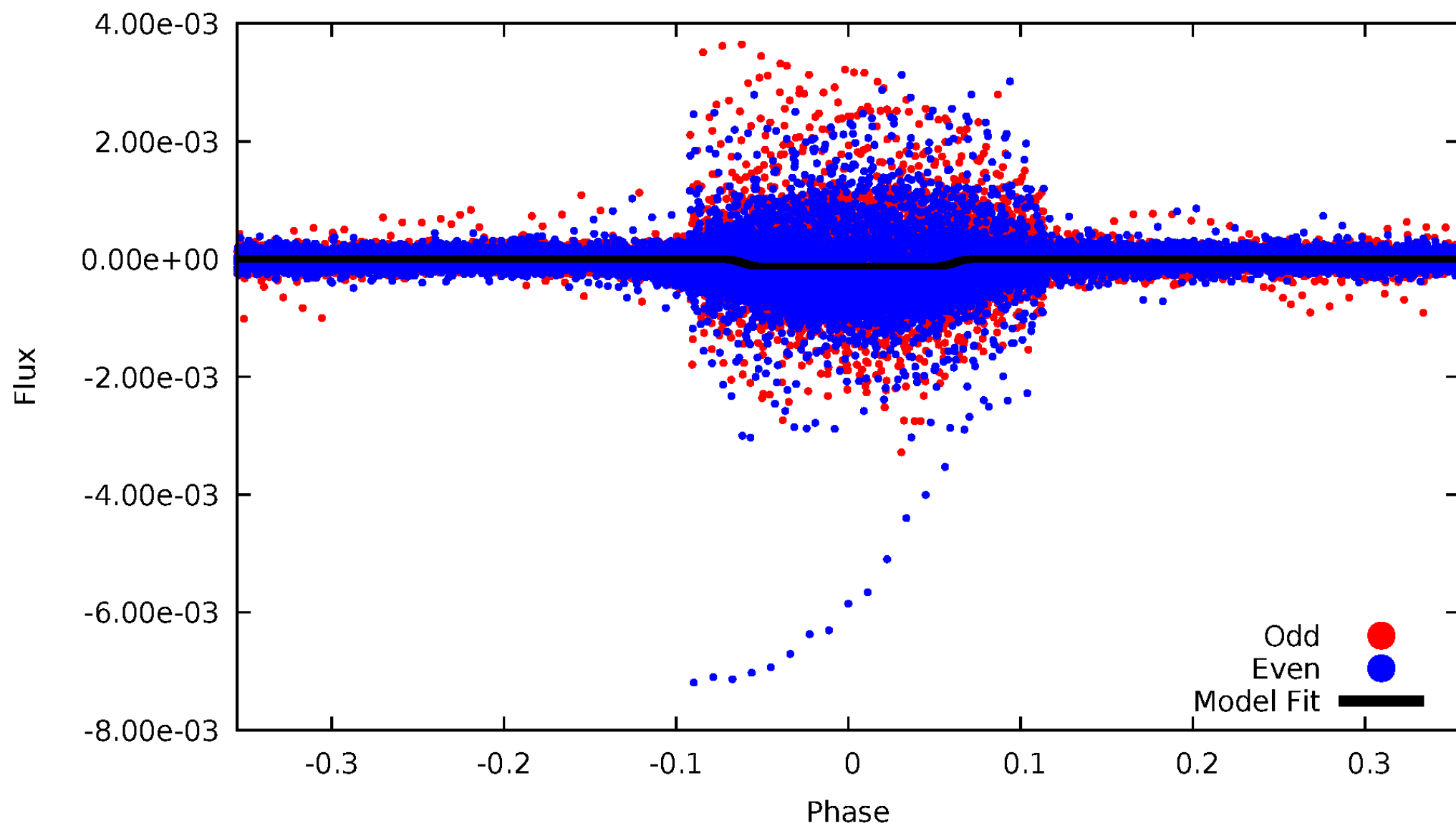
DV Odd/Even

TCE 011820830-03



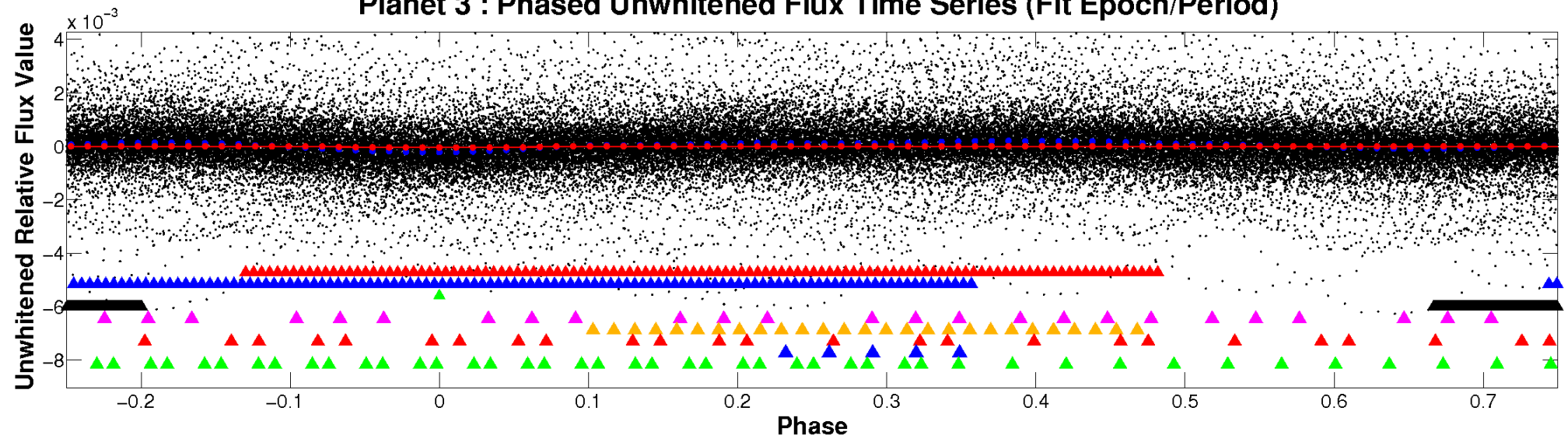
ALT Odd/Even

TCE 011820830-03

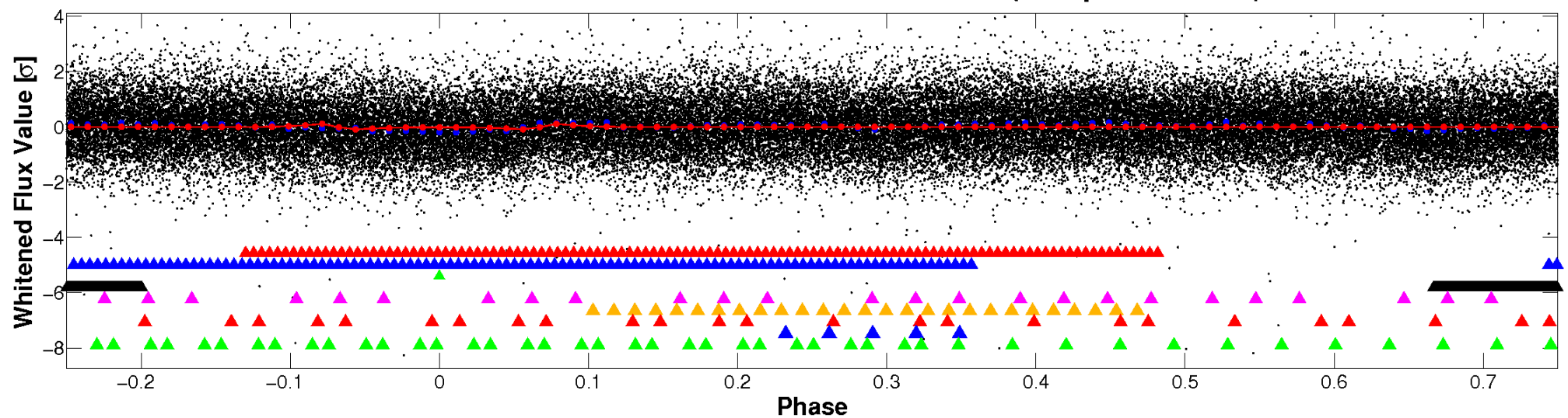


Non-Whitened Vs. Whitened Light Curve

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

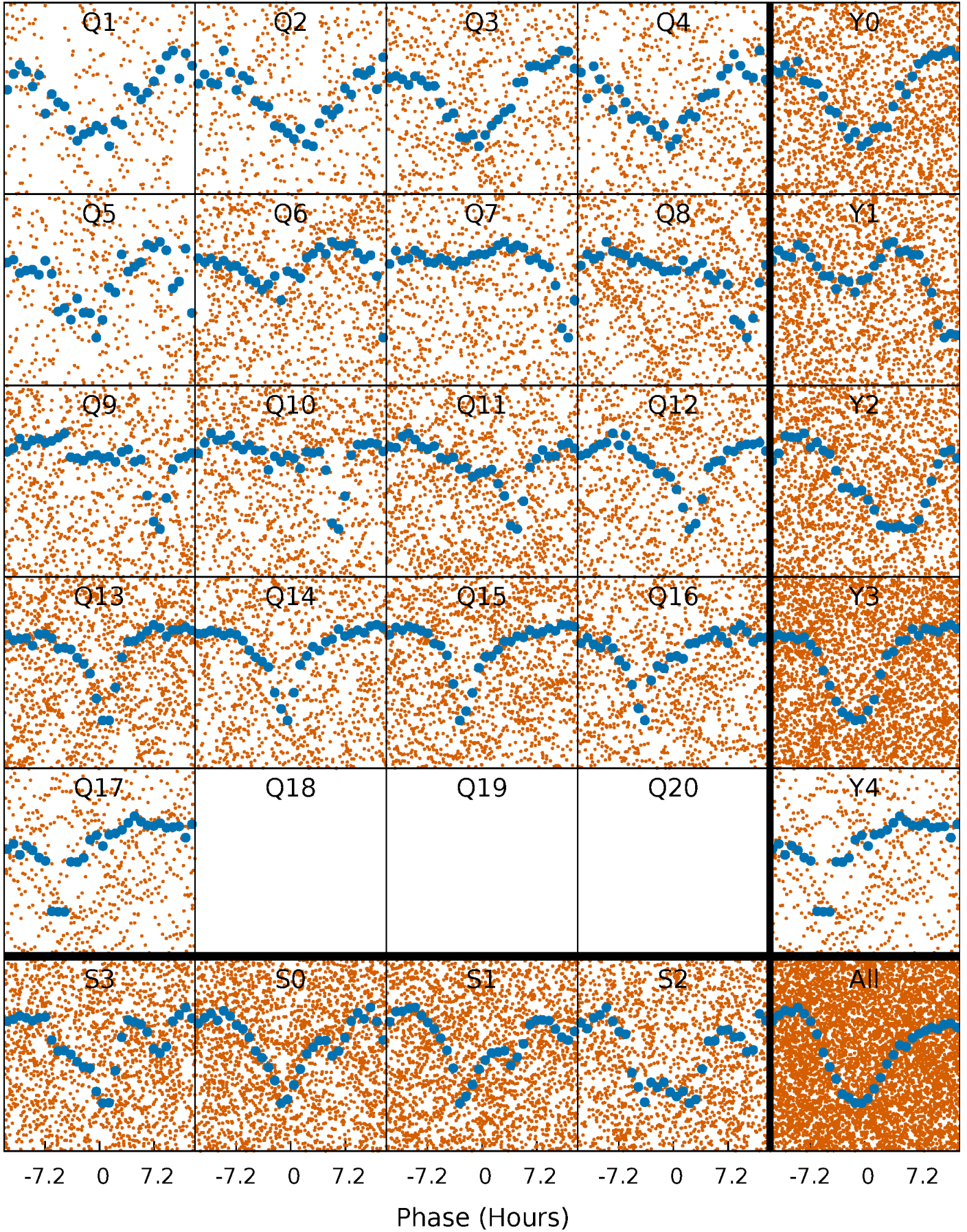


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



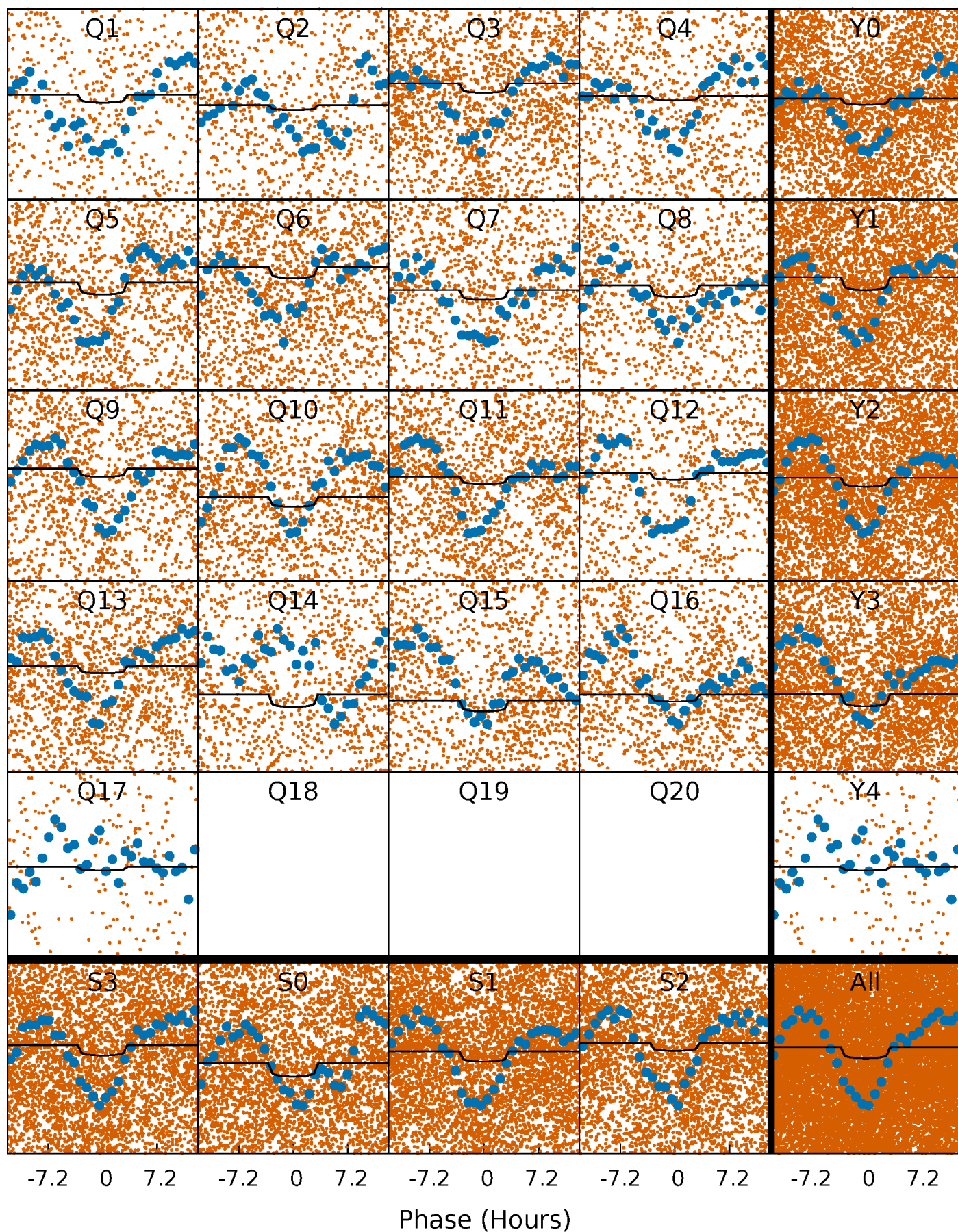
PDC Quarter-Phased Transit Curves

TCE 011820830-03 P= 1.820244 Days $T_0=132.394622$ (BKJD)



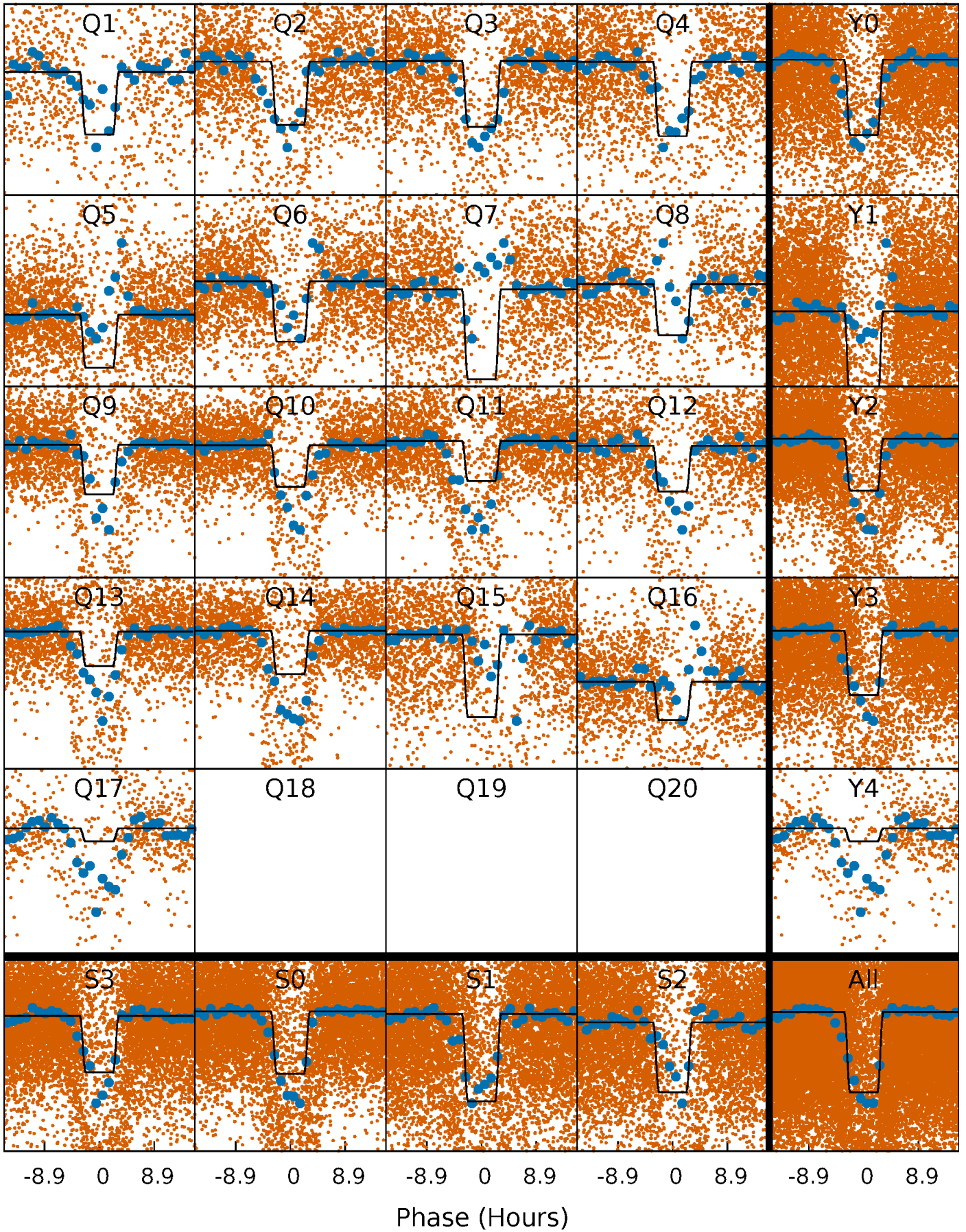
DV Quarter-Phased Transit Curves

TCE 011820830-03 P= 1.820244 Days $T_0=132.394622$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

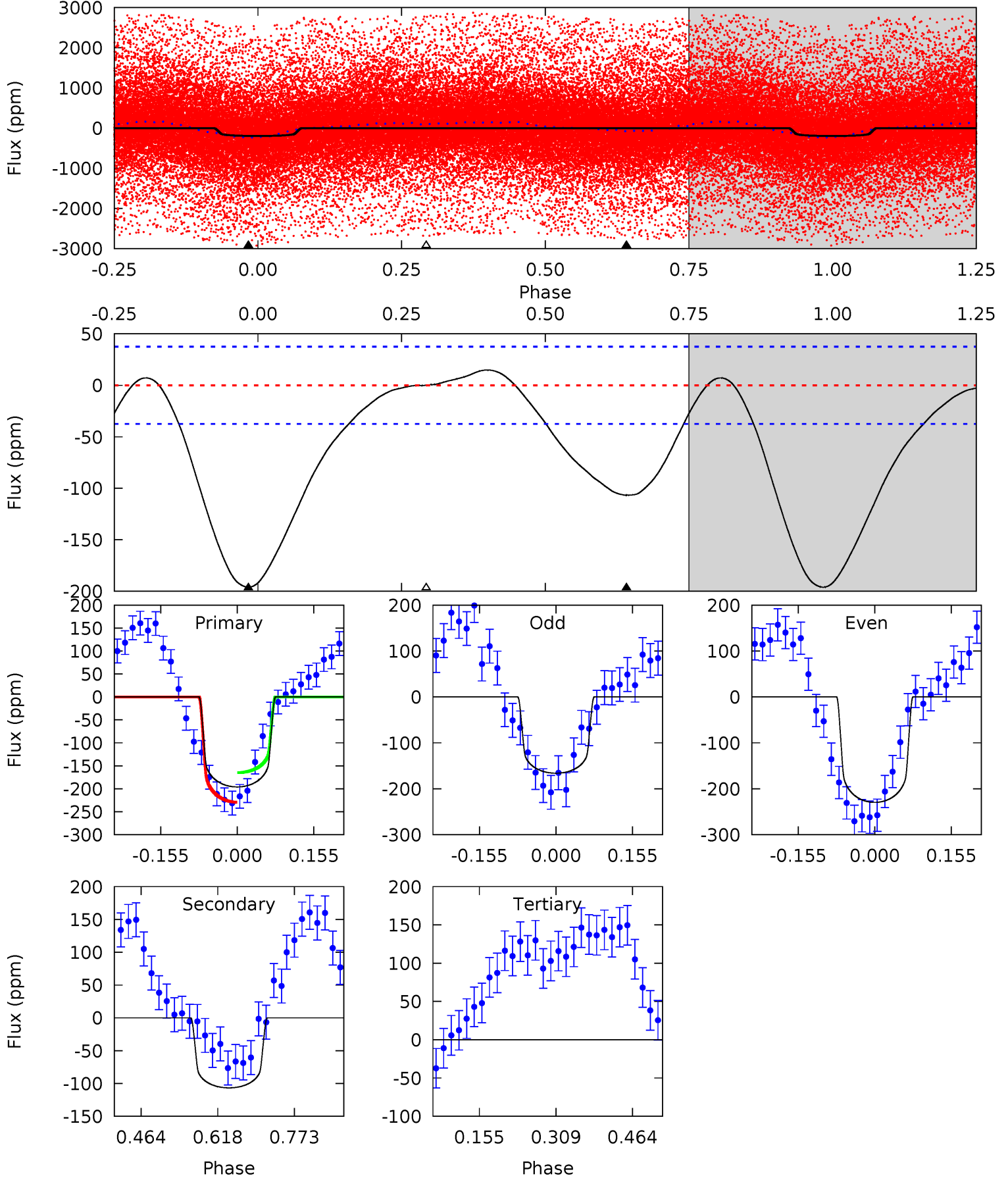
TCE 011820830-03 P= 1.820150 Days $T_0=132.412219$ (BKJD)



DV Model-Shift Uniqueness Test

011820830-03, P = 1.820244 Days, E = 130.574378 Days

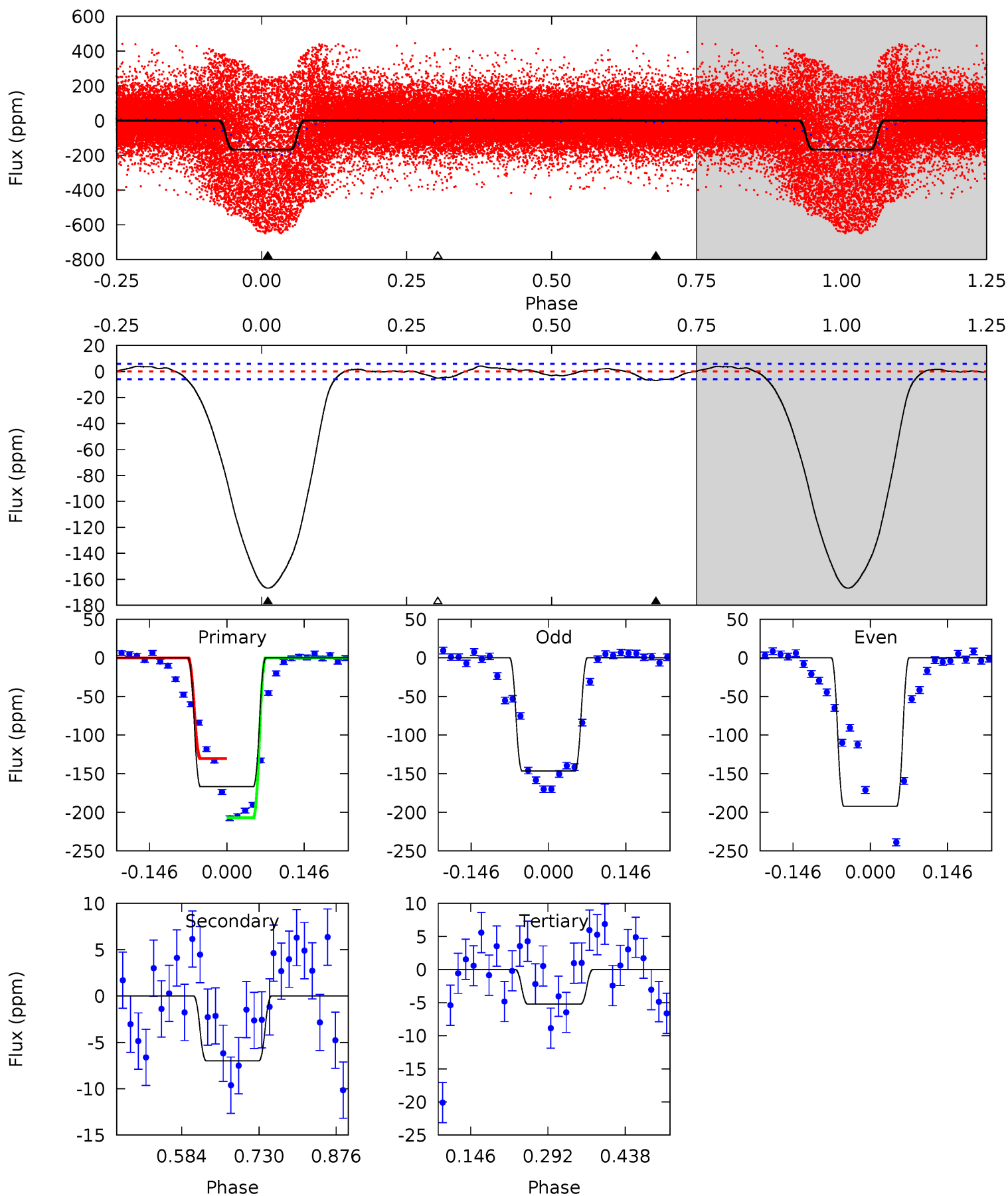
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	12.7	-0.02	0	4.47	1.42	1.82	23.4	23.4	12.7	12.7	3.83	1.10	0.07	0



Alt Model-Shift Uniqueness Test

011820830-03, P = 1.820150 Days, E = 130.592069 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
127.6	5.34	4.00	0	4.48	1.45	1.78	123.6	127.6	1.34	5.34	17.3	0.75	0.02	0



Stellar Parameters For KIC 011820830

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7238^{+201}_{-277}	$4.221^{+0.090}_{-0.210}$	$0.000^{+0.200}_{-0.350}$	$1.568^{+0.556}_{-0.238}$	$1.491^{+0.221}_{-0.199}$	$0.545^{+0.221}_{-0.282}$
	+3%/-4%	+2%/-5%	+inf%/-inf%	+35%/-15%	+15%/-13%	+41%/-52%
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 011820830-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-107 ± 8	$1.22^{+0.28}_{-0.24}$	3084^{+268}_{-169}	9256^{+1282}_{-1052}	44^{+24}_{-15}
Alt.	-7 ± 1	$1.96^{+0.39}_{-0.26}$	3095^{+255}_{-168}	3626^{+240}_{-269}	$1.090^{+0.404}_{-0.370}$

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 $A_{obs} \gg 1.0$

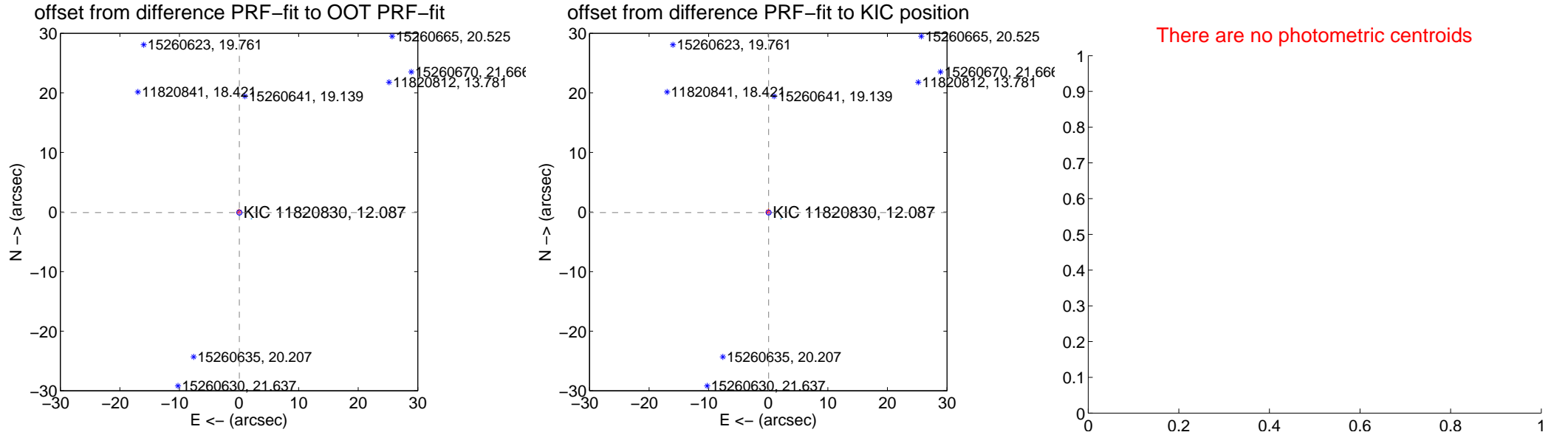
DV Centroid Data

Supplemental centroid analysis for 011820830-03. Kepler magnitude: 12.09. Transit SNR 6.78

There are 13 quarters with good PRF difference image offsets

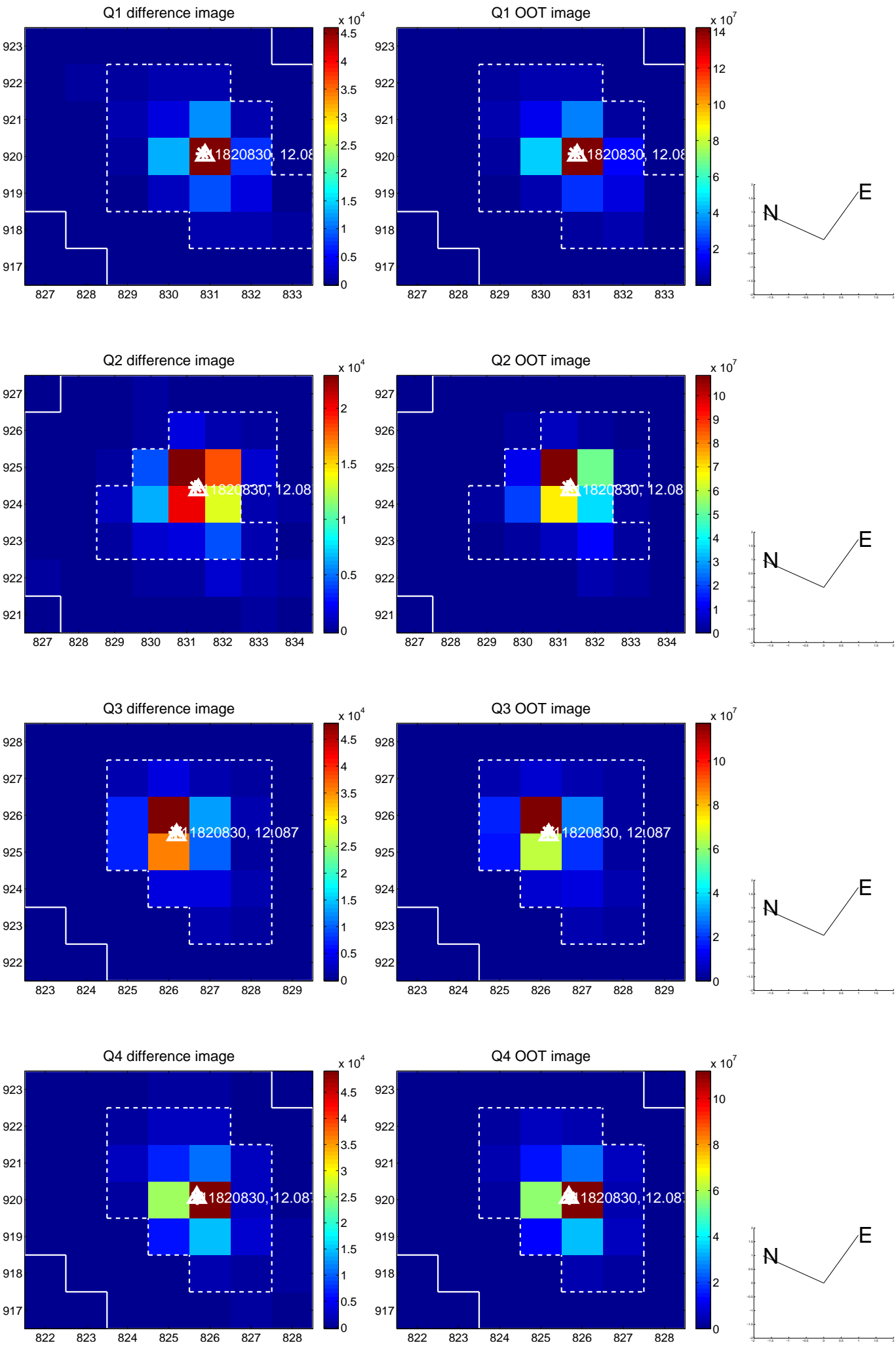
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.106 ± 0.145	0.73	-0.056 ± 0.139	-0.090 ± 0.109
PRF-fit source offset from KIC position	0.111 ± 0.140	0.79	-0.064 ± 0.134	-0.091 ± 0.104
photometric centroid source offset	—	—	—	—

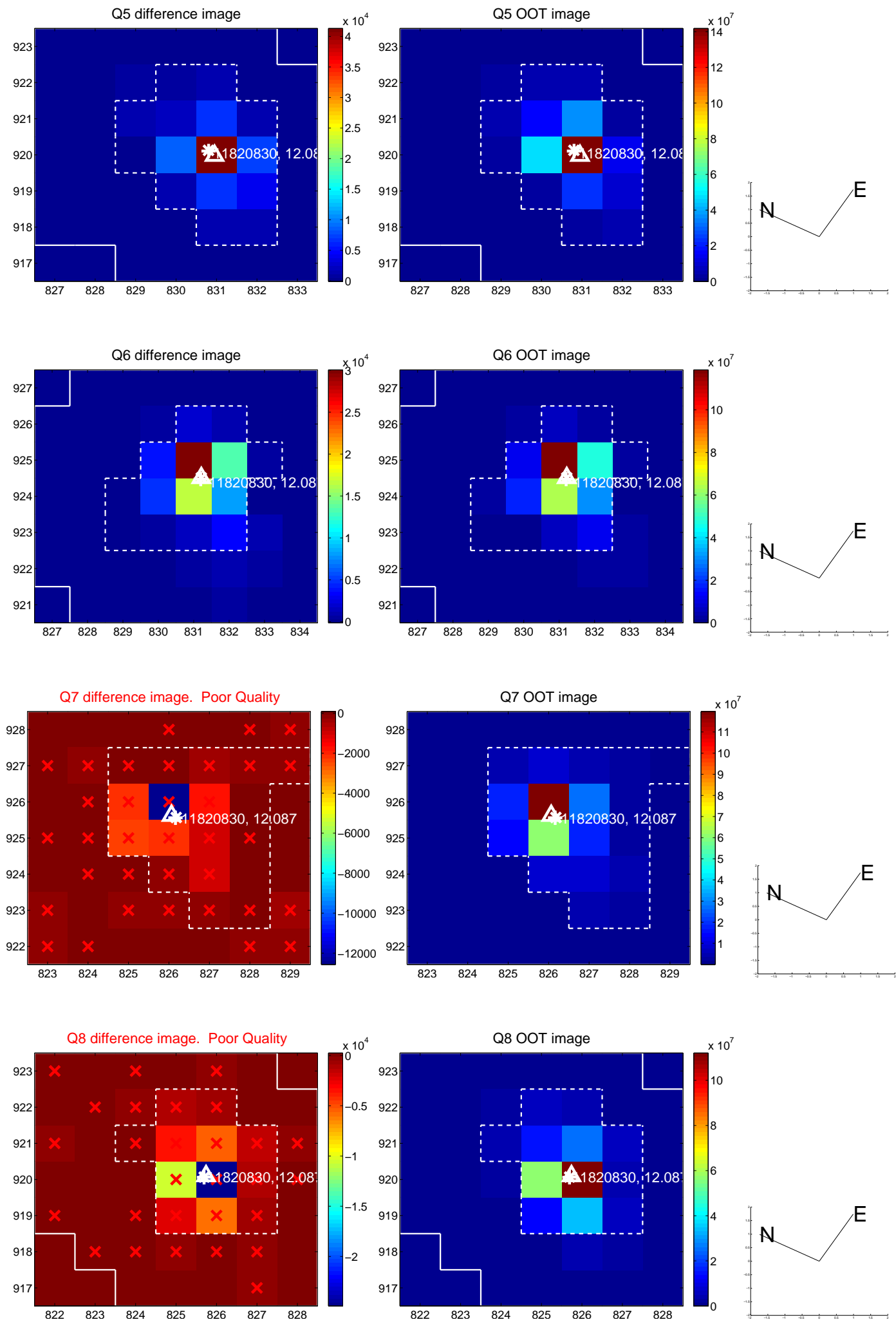


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

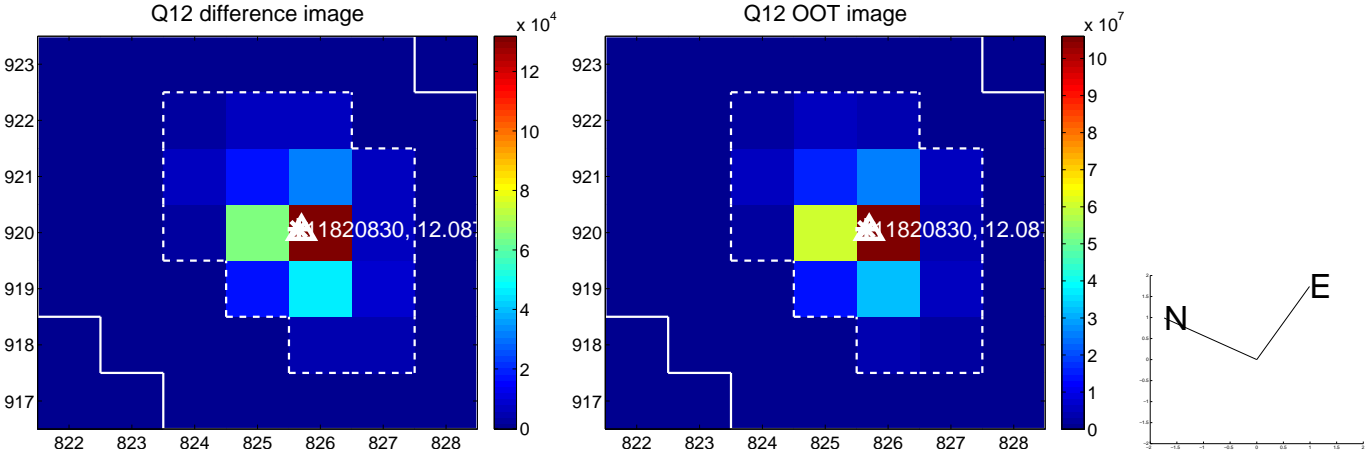
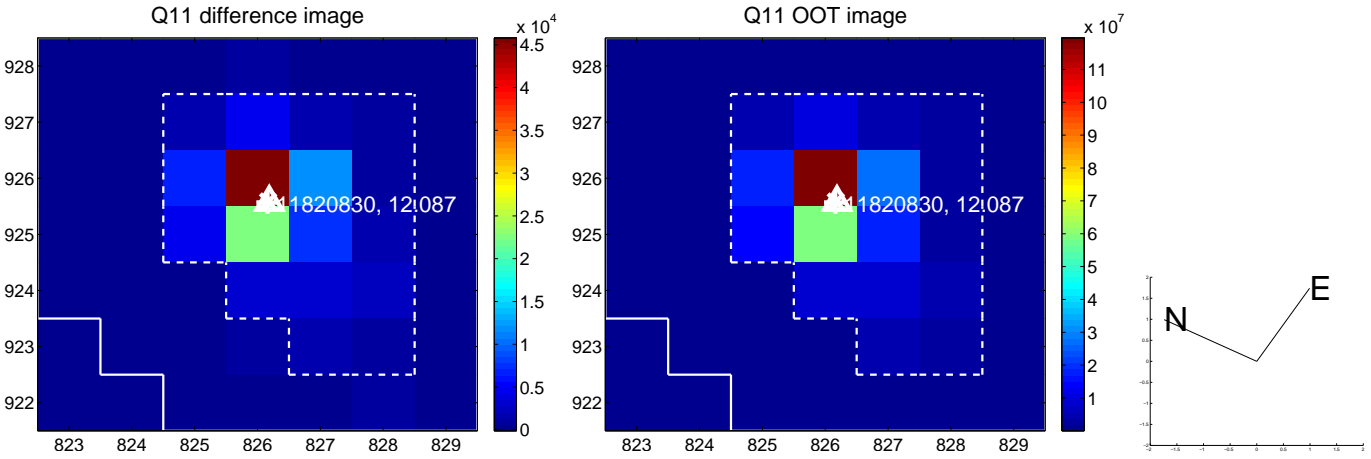
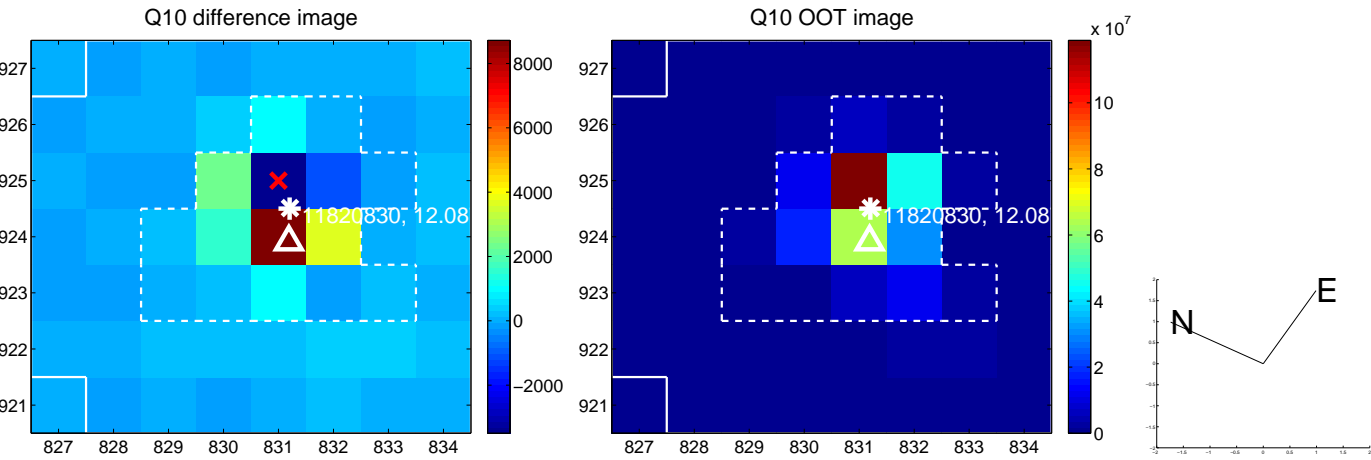
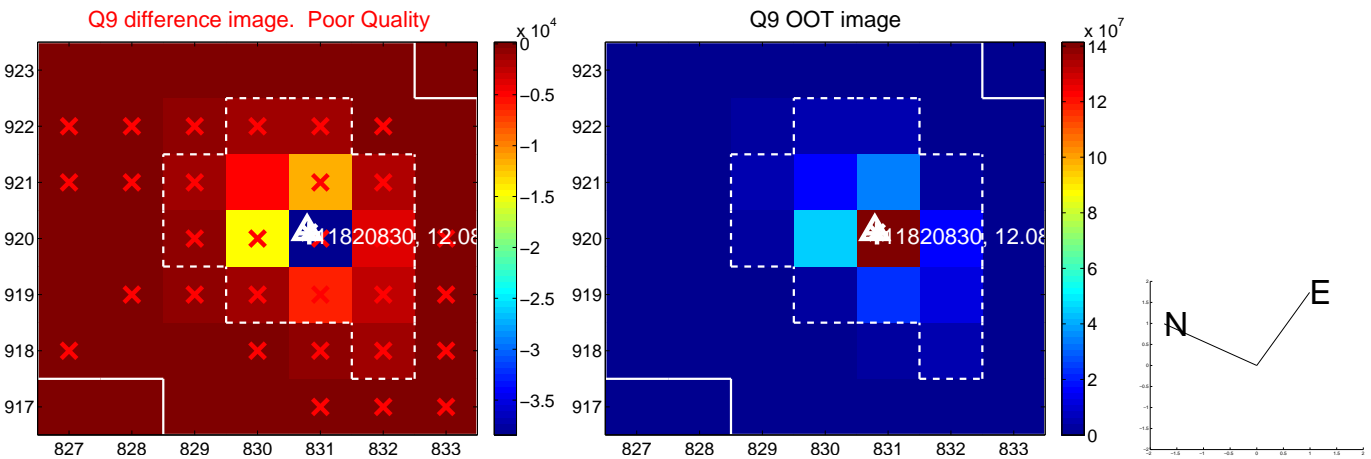
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



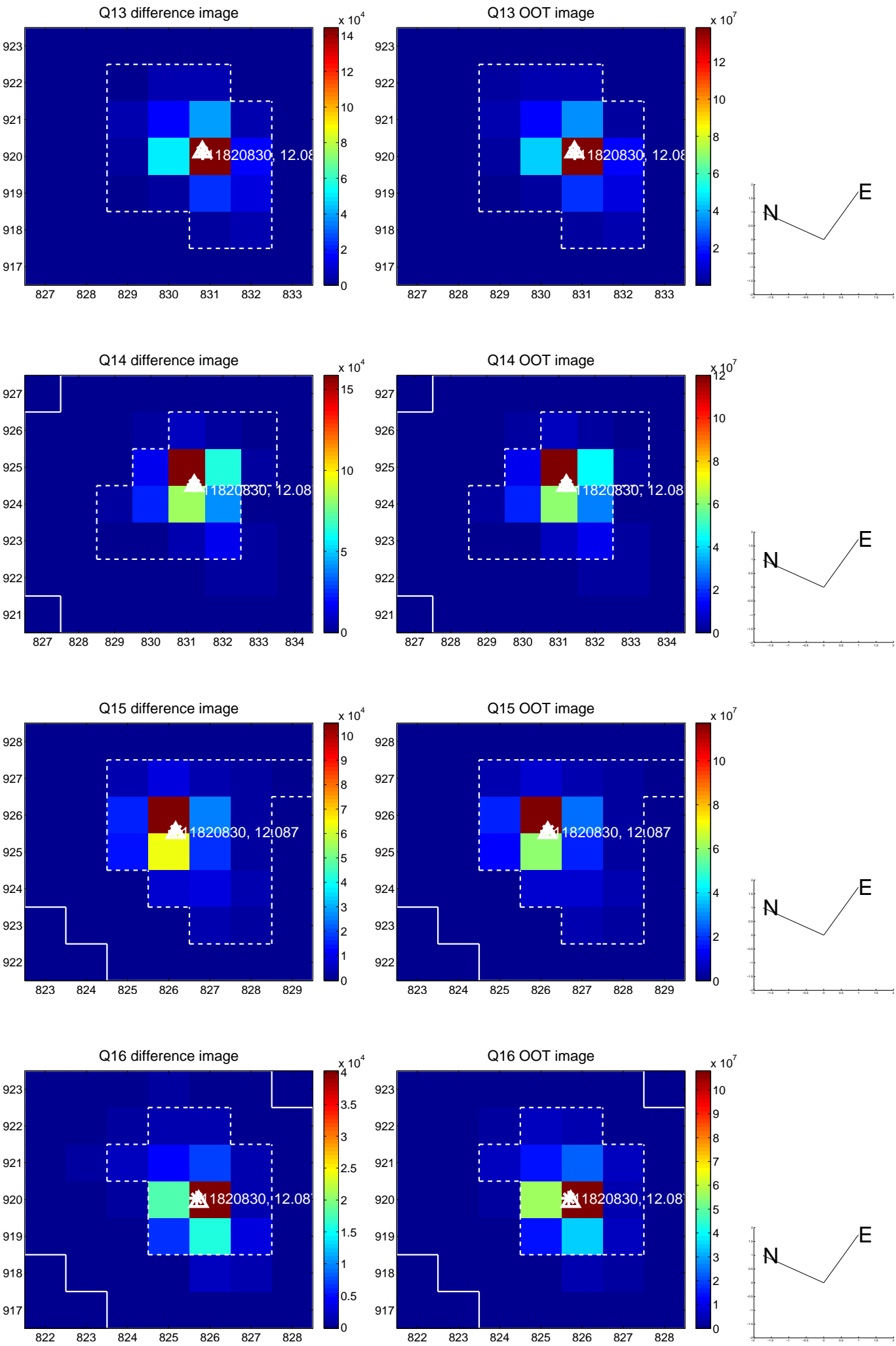
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



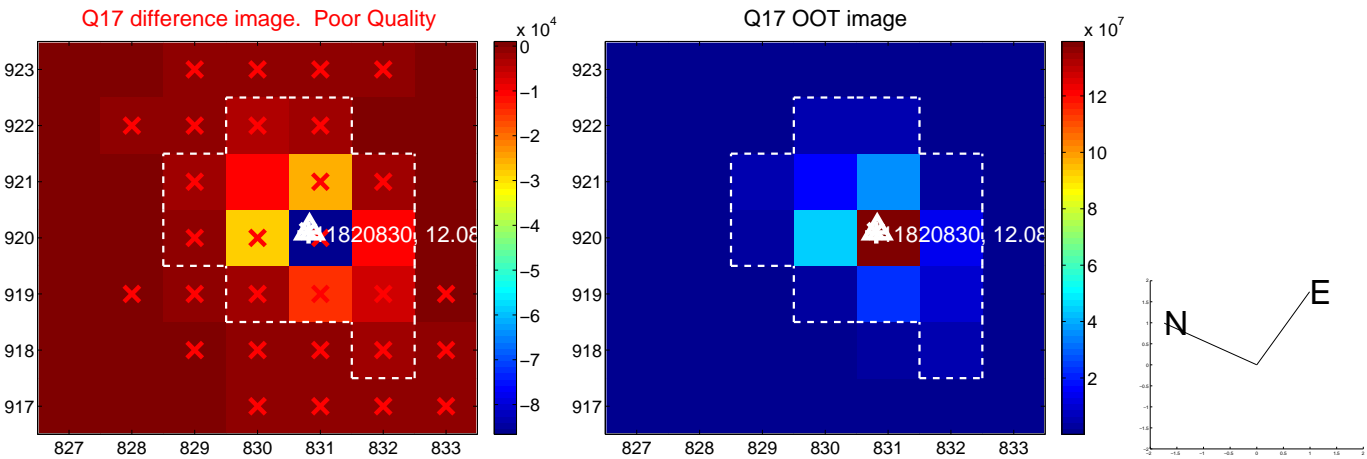
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



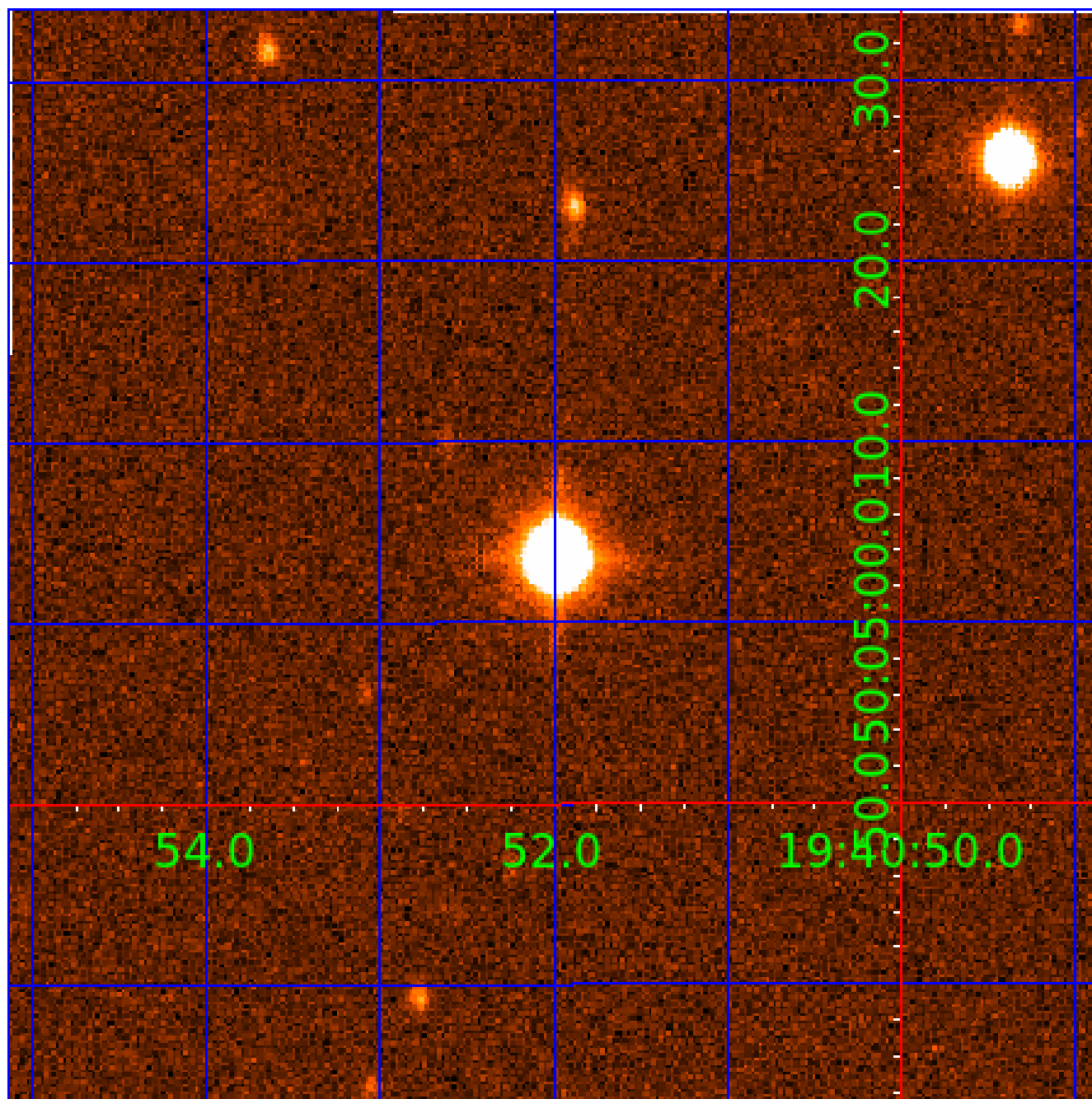
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 011820830

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})
011820830-01	OBS	1728.01	12.731942	138.732216	8810.1	3.294	592.4	536.0	1.57	7238	16.58	406.51
011820830-02	OBS	No	12.731924	138.504745	196.9	1.500	11.0	-1.0	1.57	7238	2.24	406.51
011820830-03	OBS	No	1.820244	132.394622	42.2	6.308	10.7	6.8	1.57	7238	1.18	5437.84
011820830-04	OBS	No	1.820549	131.787509	38.9	11.828	10.0	4.1	1.57	7238	1.05	5436.63
011820830-06	OBS	No	54.581769	142.347683	194.1	7.218	17.4	3.3	1.57	7238	2.37	58.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011820830-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011820830-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
011820830-03	OBS	FP	0.00	1	0	0	0	LPP_DV
011820830-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—SAME_NTL_PERIOD
011820830-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_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.

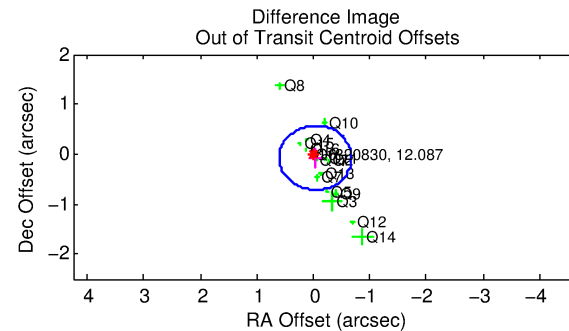
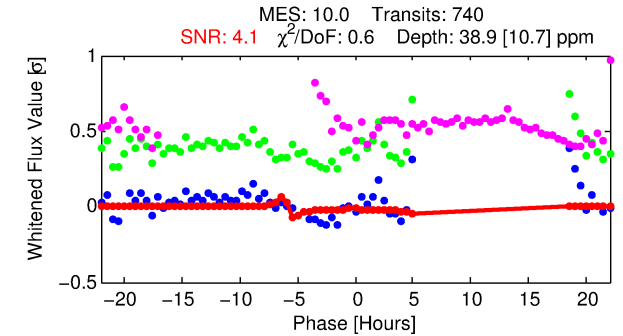
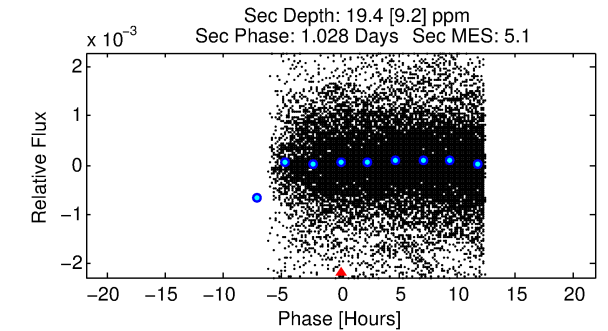
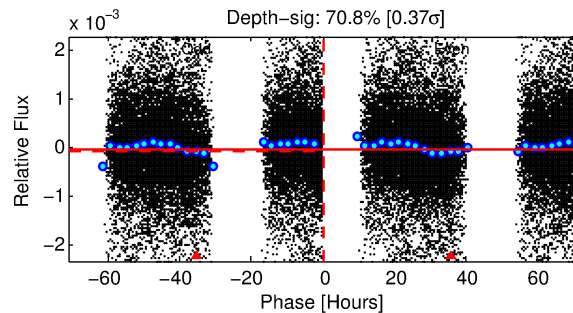
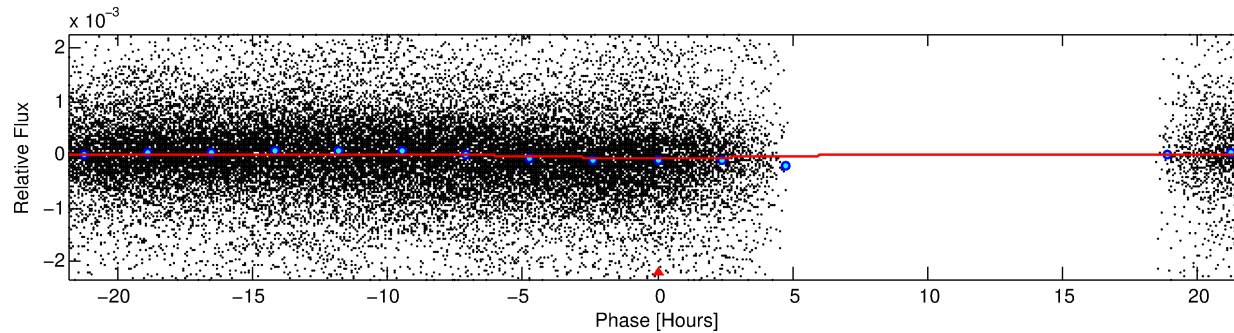
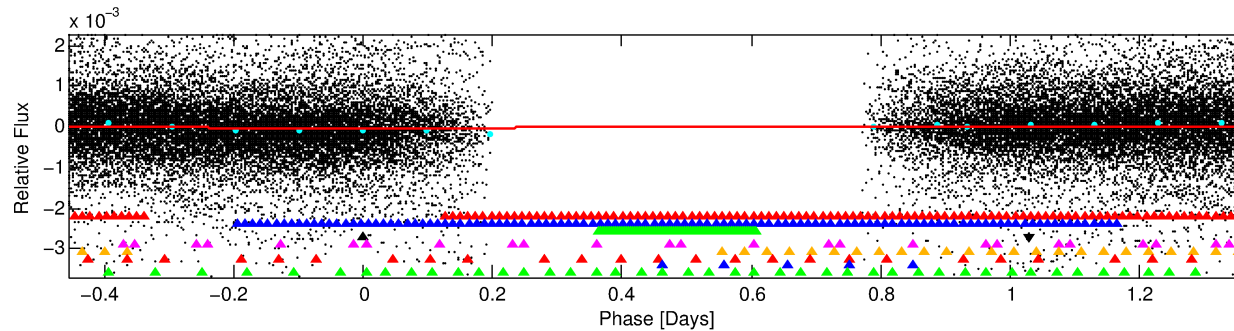
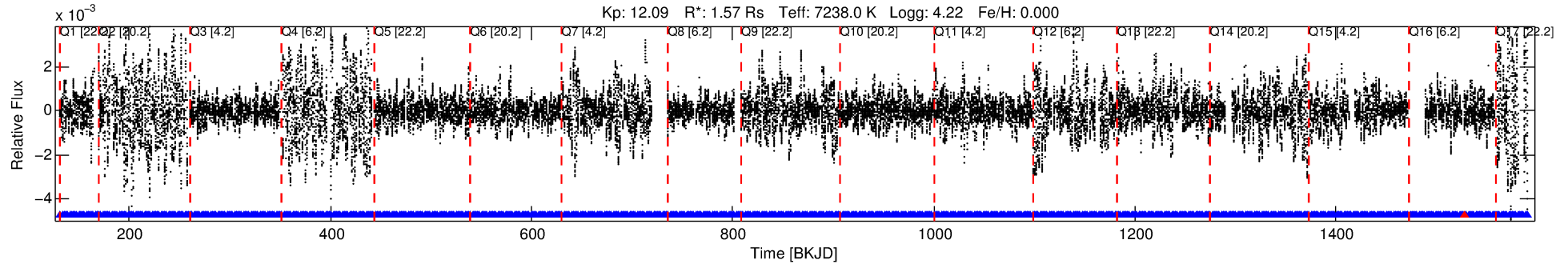
Ephemeris Match Information For 011820830-04

No Significant Match Found

DV One-Page Summary

KIC: 11820830 Candidate: 4 of 9 Period: 1.821 d
KOI: K01728 Corr: No Ephemeris Match

Kp: 12.09 R*: 1.57 Rs Teff: 7238.0 K Logg: 4.22 Fe/H: 0.000



DV Fit Results:

Period = 1.82055 [0.00003] d
Epoch = 131.7875 [0.0239] BKJD
Rp/R* = 0.0061 [0.0026]
a/R* = 1.19 [0.90]
b = 0.70 [1.97]
Seff = 5436.63 [2327.19]
Teq = 2190 [234] K
Rp = 1.05 [0.59] Re
a = 0.0333 [0.0095] AU
Ag = 10.83 [11.52] [0.85σ]
Teffp = 6141 [1532] K [2.55σ]

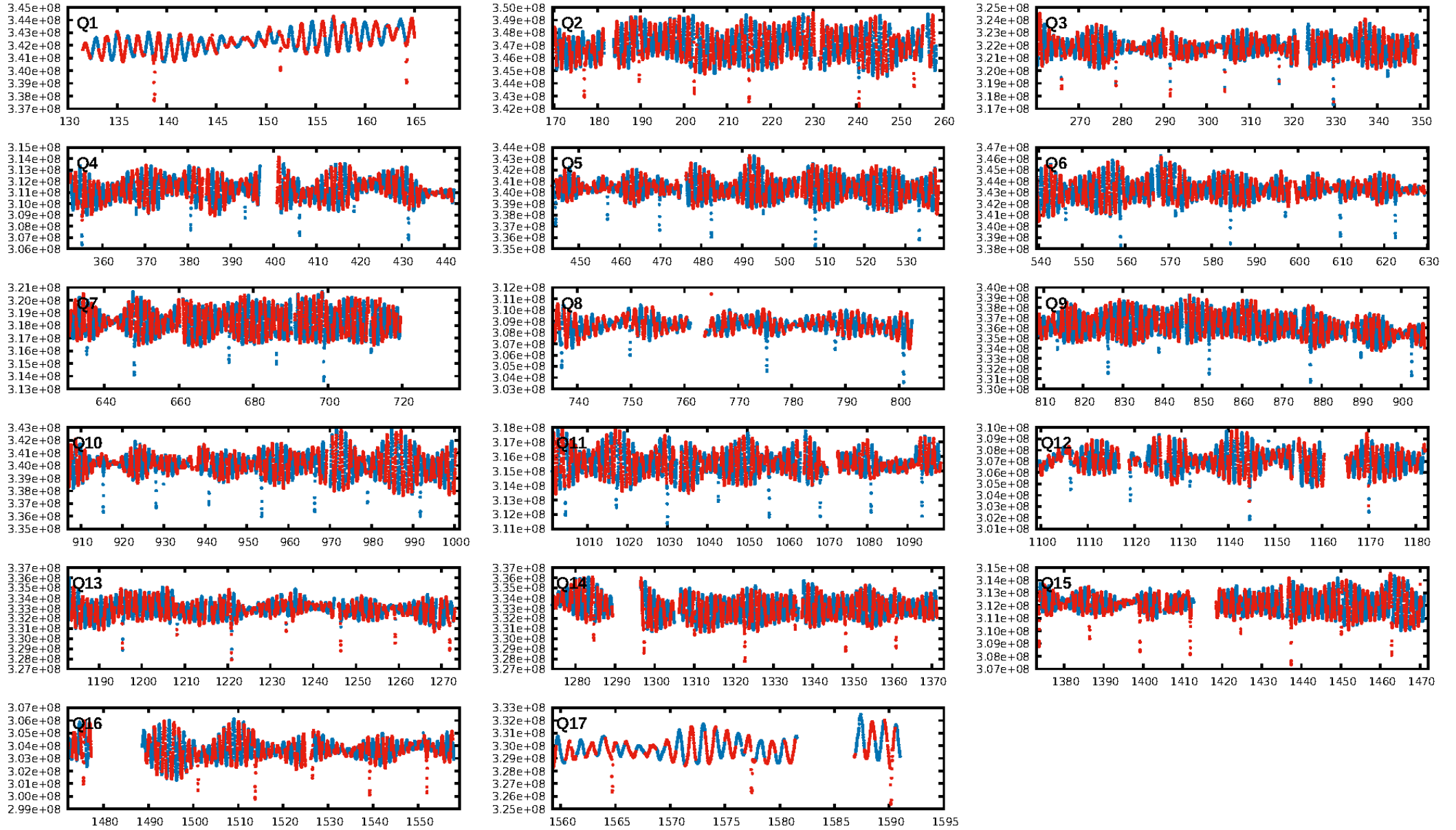
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [21.96σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [706/707]
GhostDiagnostic-chr: 0.9817
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.081 arcsec [0.38σ]
KicOffset-rm: 0.140 arcsec [0.70σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 0.00 [0/17]

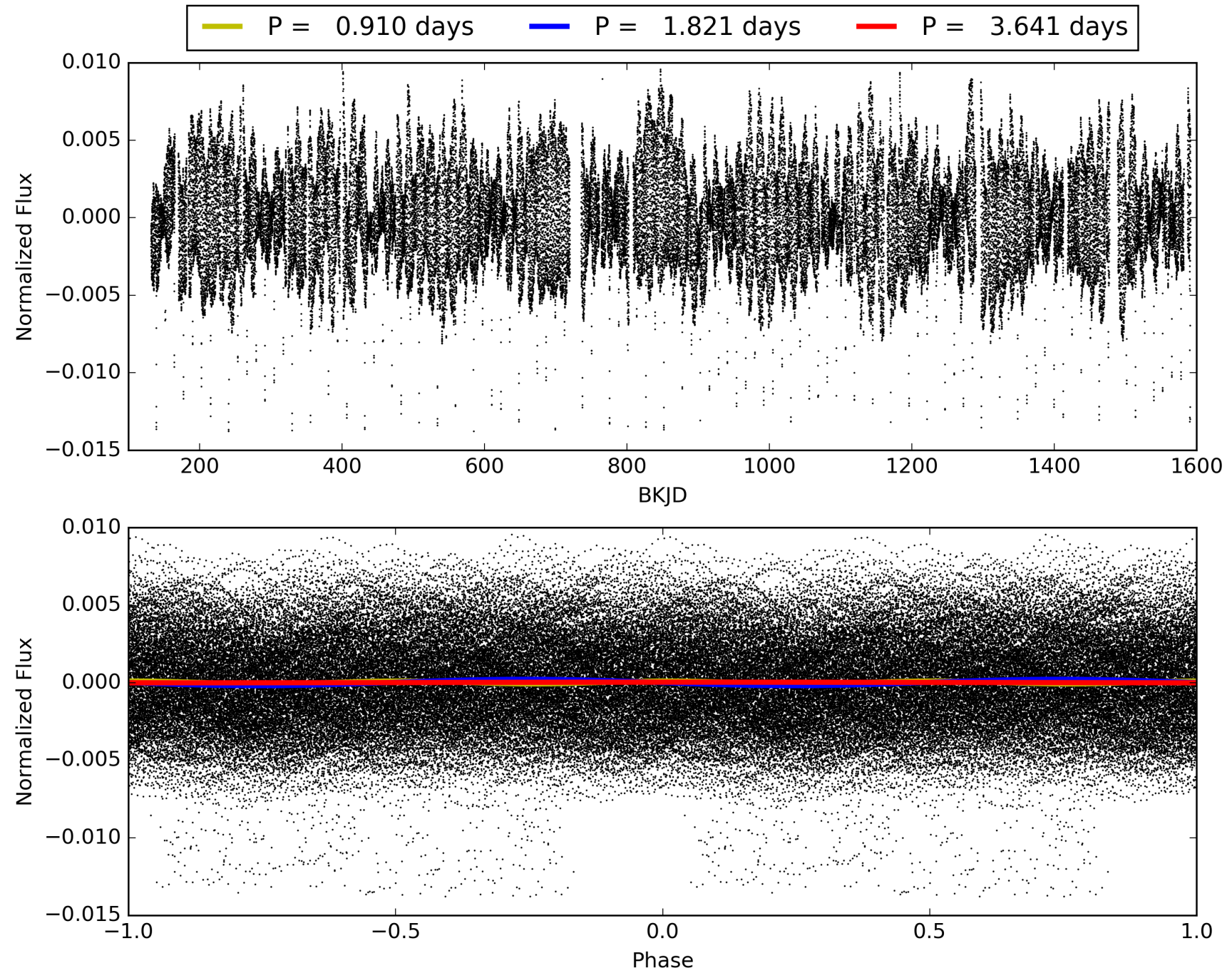
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:29:47 Z

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

TCE 011820830-04, PDC Light Curves

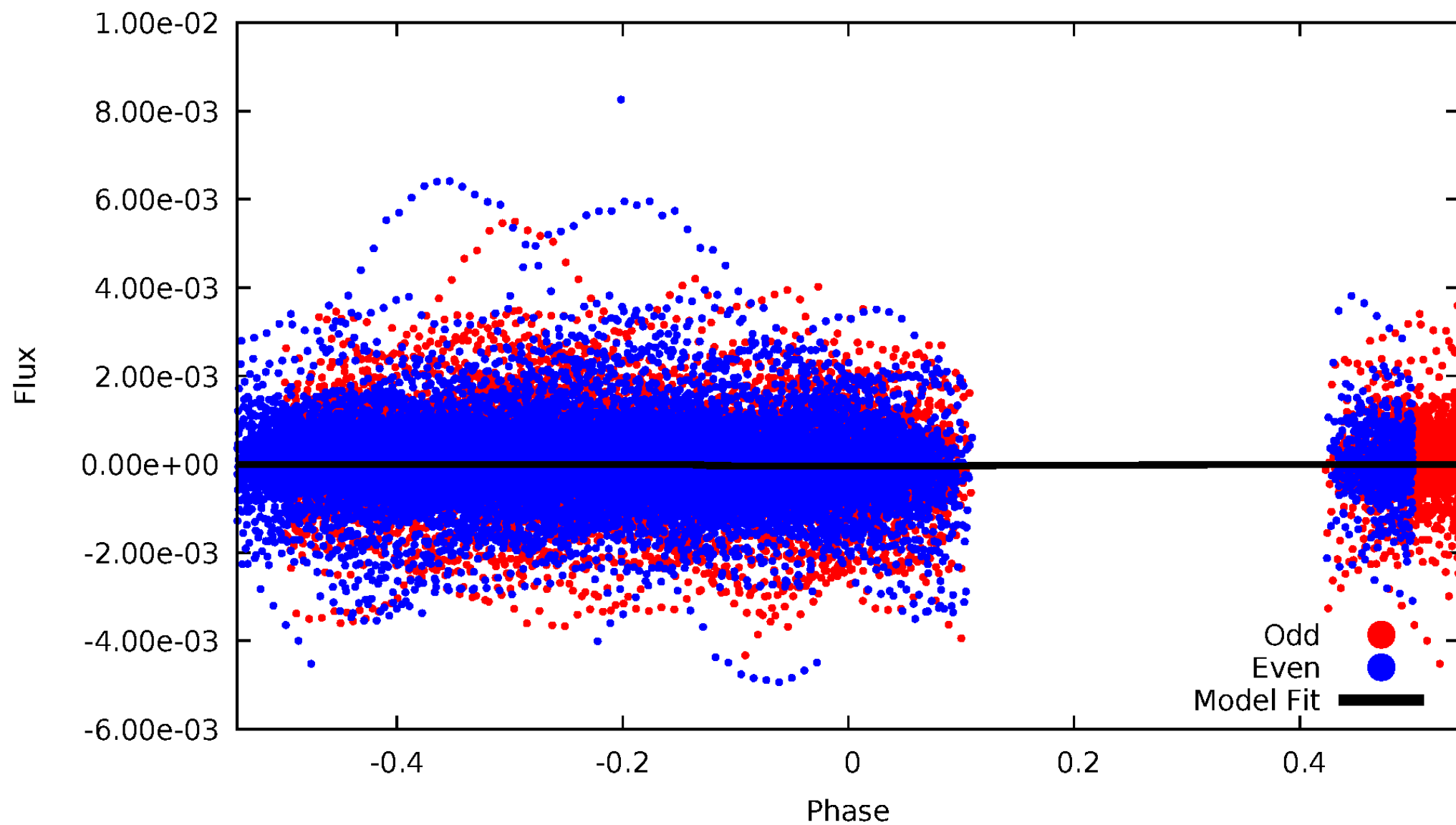


TCE 011820830-04



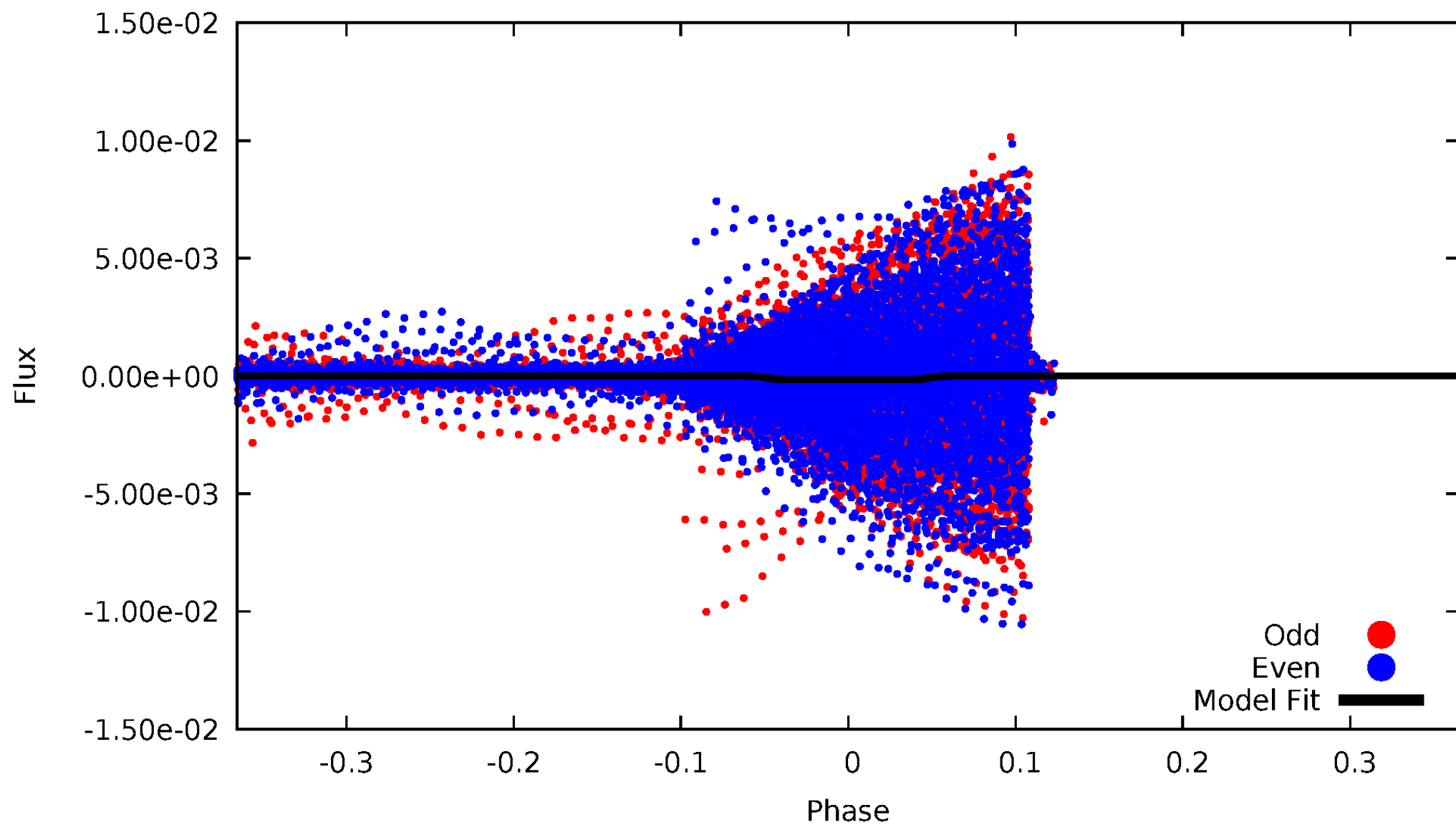
DV Odd/Even

TCE 011820830-04



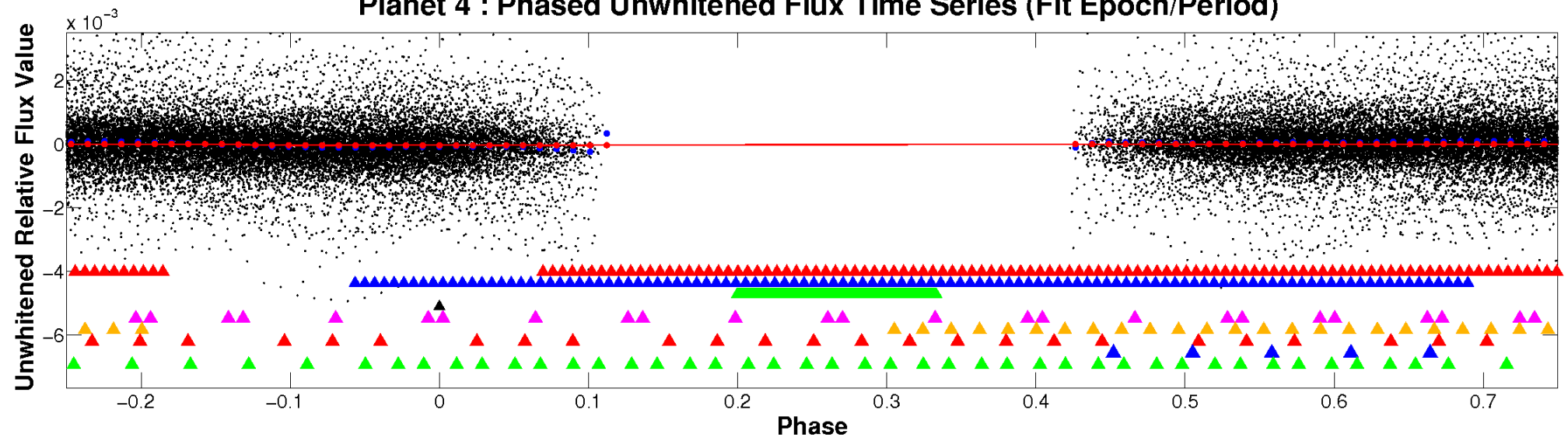
ALT Odd/Even

TCE 011820830-04

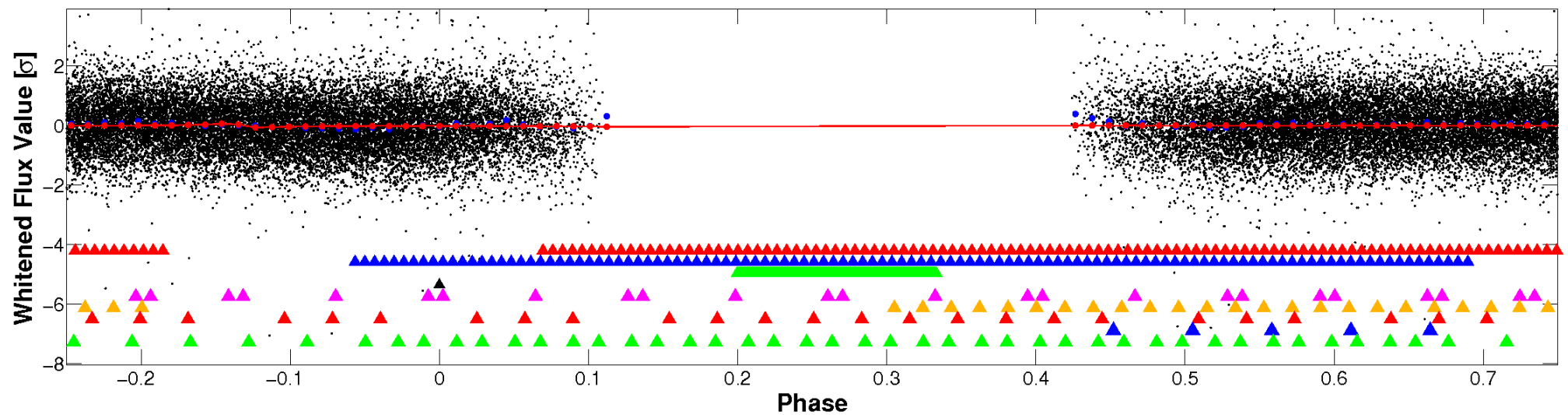


Non-Whitened Vs. Whitened Light Curve

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

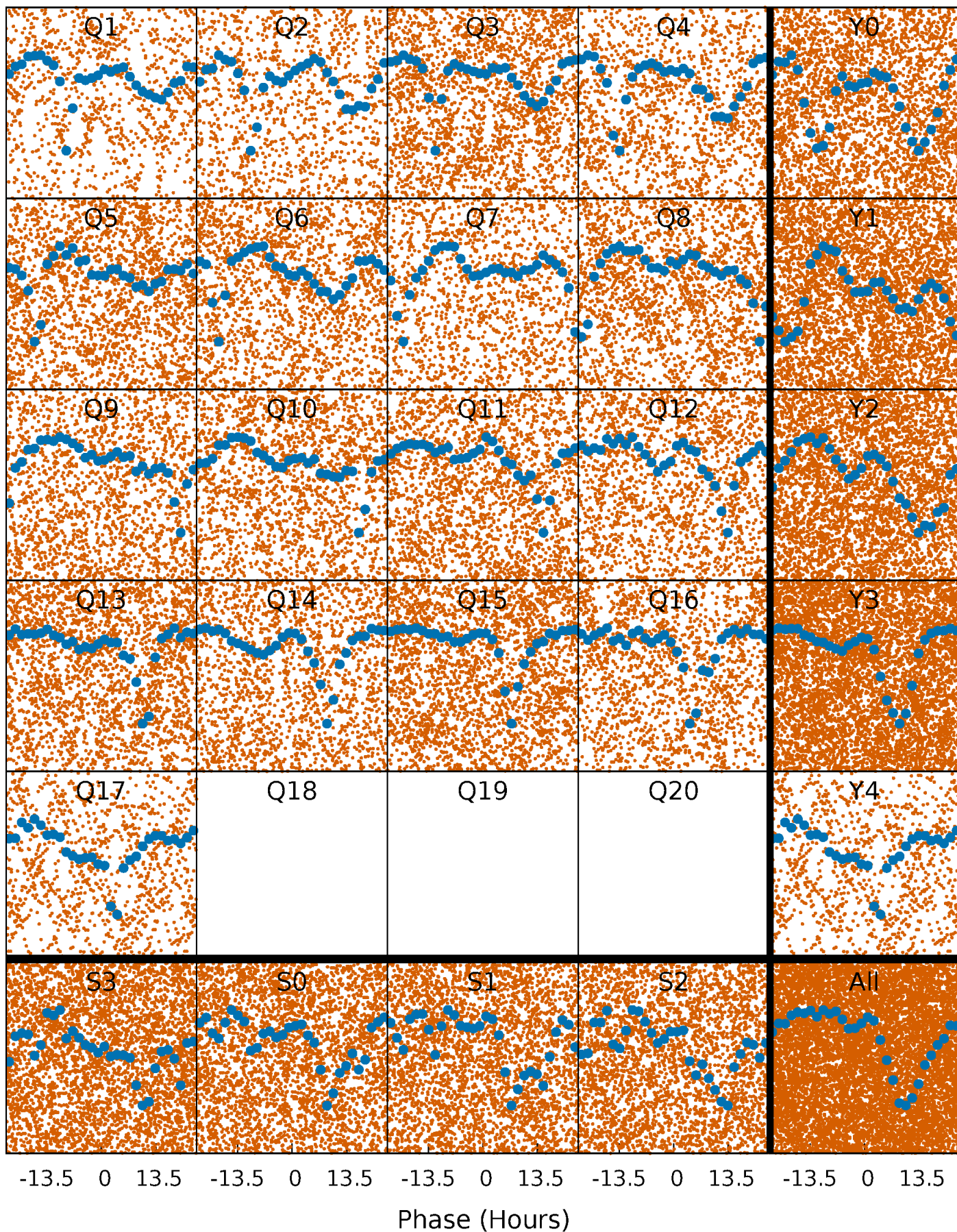


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



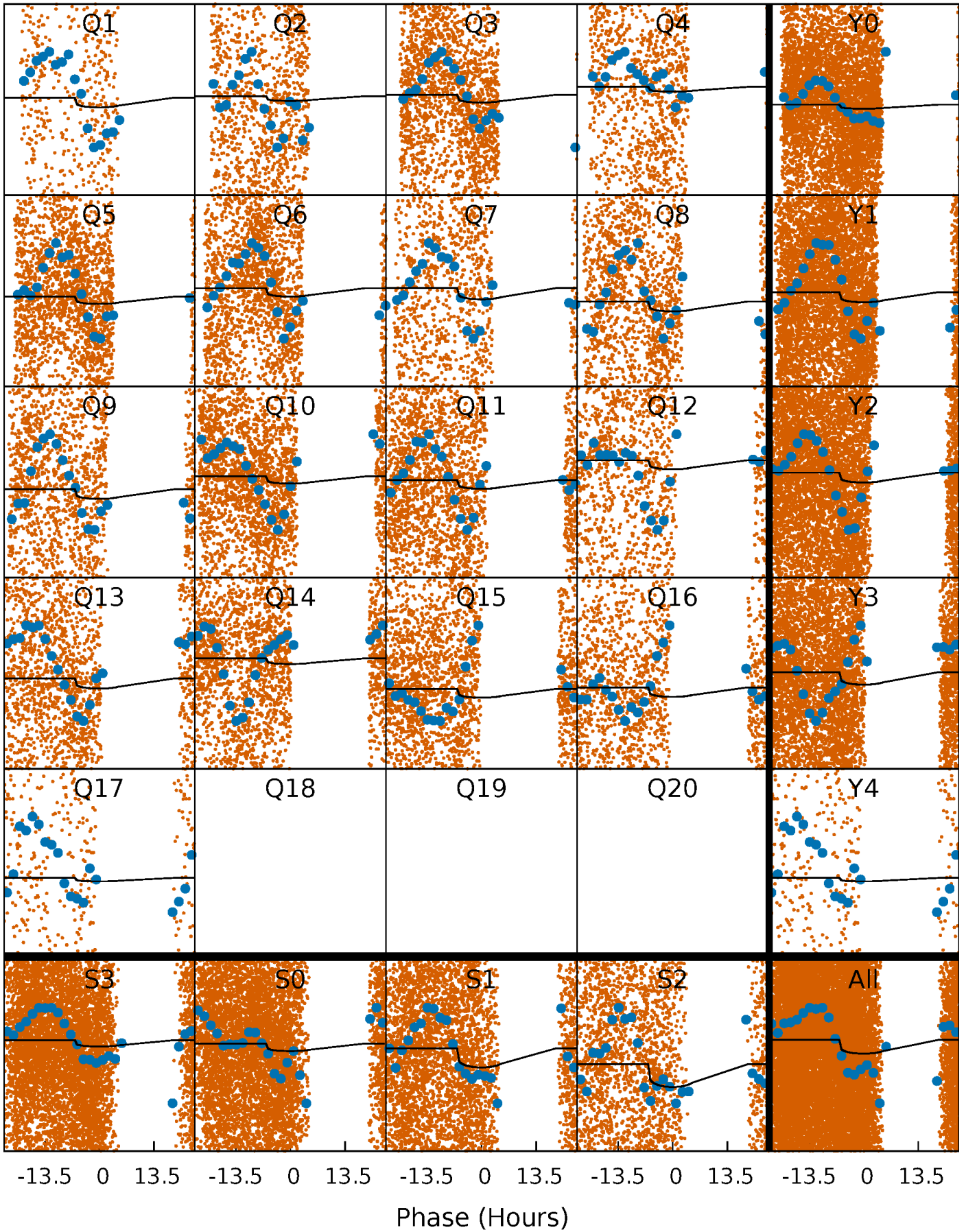
PDC Quarter-Phased Transit Curves

TCE 011820830-04 P= 1.820549 Days $T_0=131.787509$ (BKJD)



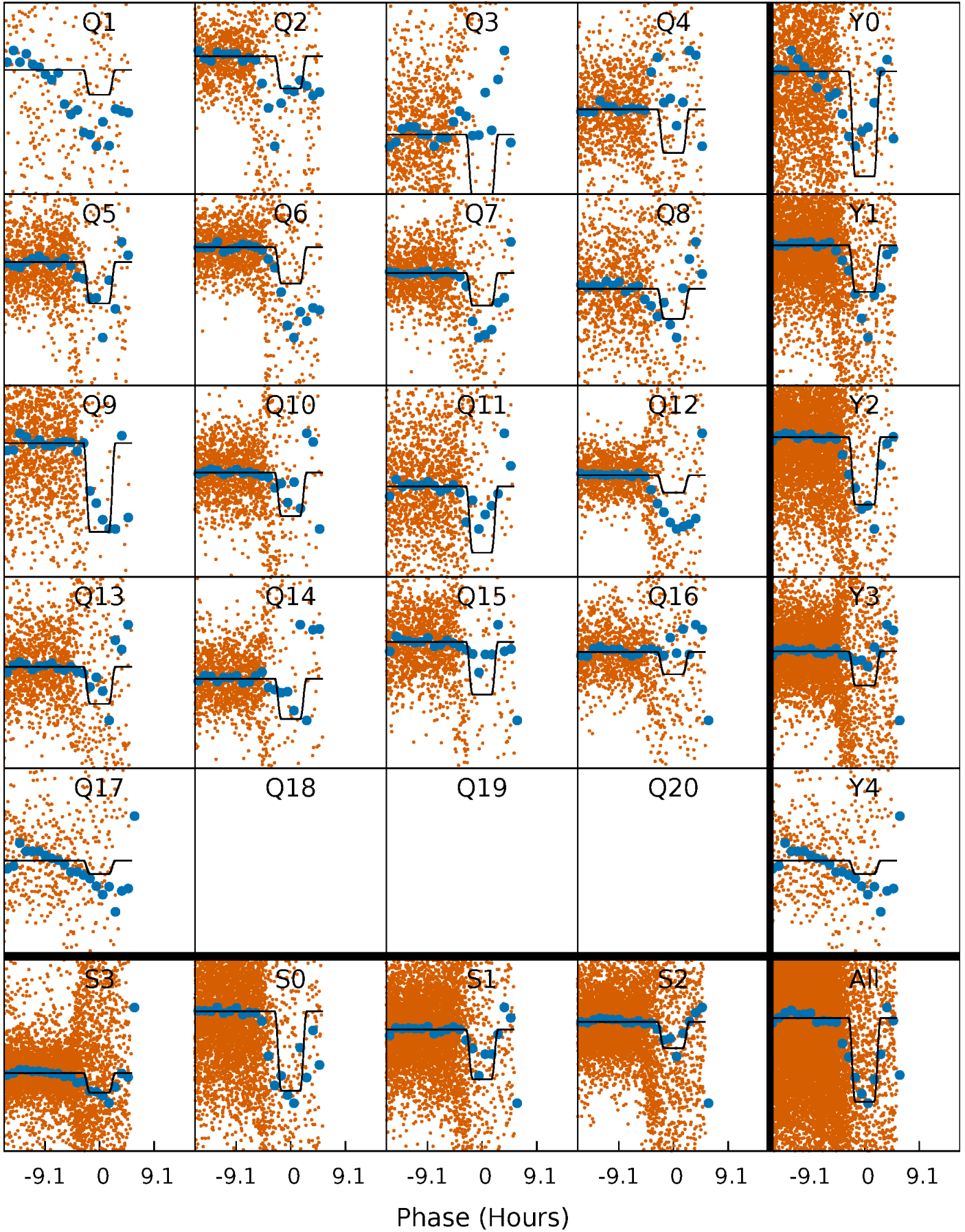
DV Quarter-Phased Transit Curves

TCE 011820830-04 P= 1.820549 Days $T_0=131.787509$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

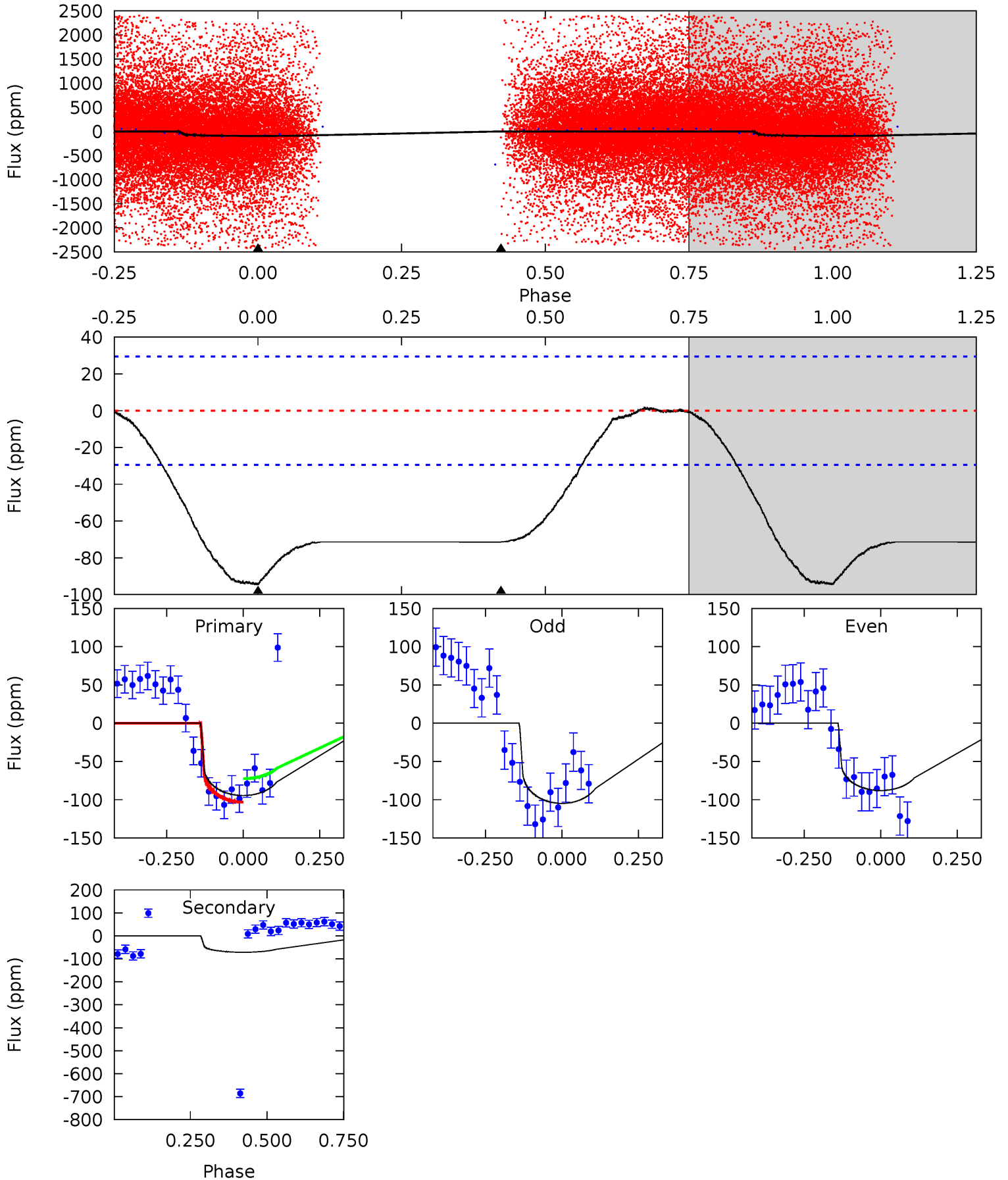
TCE 011820830-04 P= 1.820212 Days $T_0=131.788963$ (BKJD)



DV Model-Shift Uniqueness Test

011820830-04, P = 1.820549 Days, E = 129.966960 Days

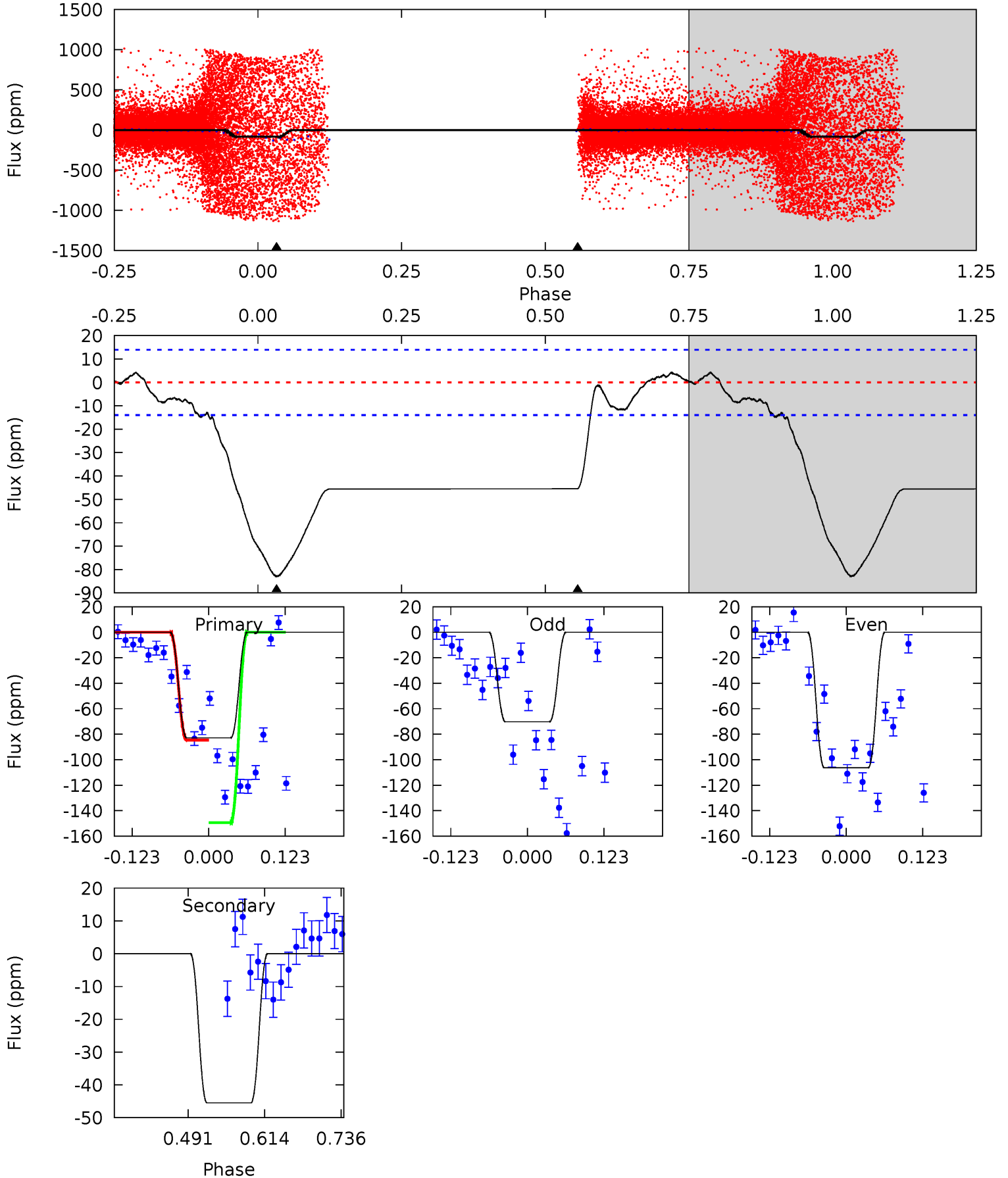
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	10.6	0	0	4.37	1.15	0.17	14.0	14.0	10.6	10.6	1.25	0.83	0.02	1.95



Alt Model-Shift Uniqueness Test

011820830-04, P = 1.820212 Days, E = 129.968751 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.8	14.7	0	0	4.52	1.54	1.83	26.8	26.8	14.7	14.7	5.88	1.36	0.05	1.69



Stellar Parameters For KIC 011820830

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7238^{+201}_{-277}	$4.221^{+0.090}_{-0.210}$	$0.000^{+0.200}_{-0.350}$	$1.568^{+0.556}_{-0.238}$	$1.491^{+0.221}_{-0.199}$	$0.545^{+0.221}_{-0.282}$
	+3%/-4%	+2%/-5%	+inf%/-inf%	+35%/-15%	+15%/-13%	+41%/-52%
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 011820830-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-71 ± 7	$1.09^{+0.47}_{-0.47}$	3087^{+260}_{-173}	8750^{+4547}_{-1744}	36^{+76}_{-18}
Alt.	-45 ± 3	$2.28^{+0.58}_{-0.52}$	3101^{+240}_{-175}	5164^{+608}_{-437}	$5.253^{+3.586}_{-1.789}$

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 $A_{obs} \gg 1.0$

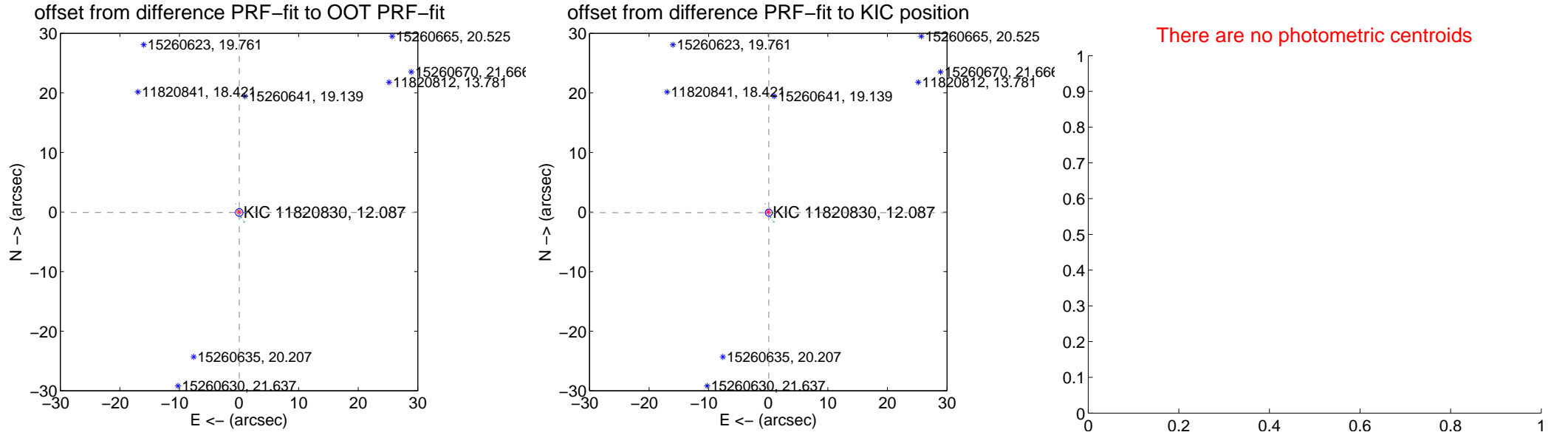
DV Centroid Data

Supplemental centroid analysis for 011820830-04. Kepler magnitude: 12.09. Transit SNR 4.06

There are 8 quarters with good PRF difference image offsets

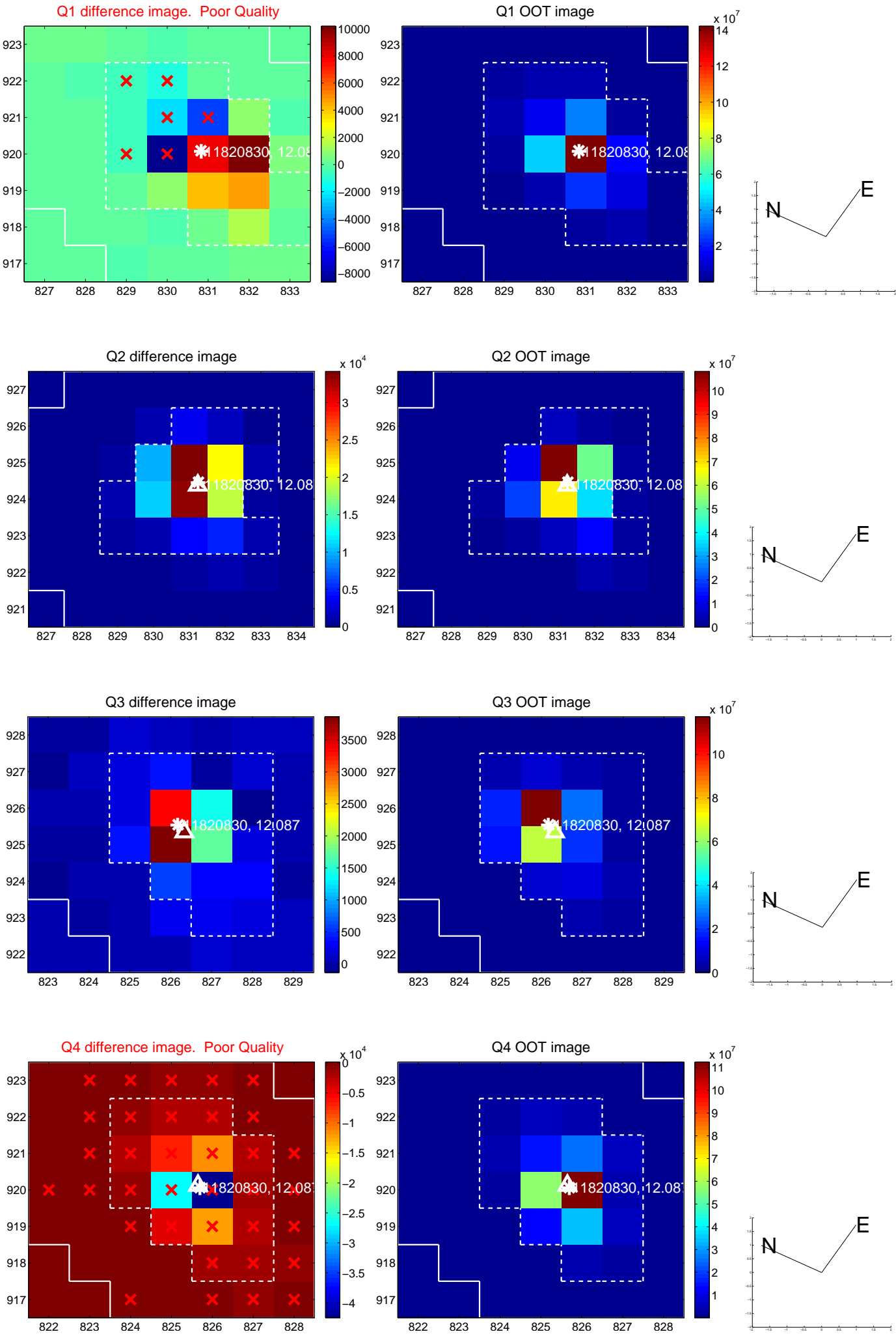
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.081 ± 0.214	0.38	-0.034 ± 0.109	-0.074 ± 0.199
PRF-fit source offset from KIC position	0.140 ± 0.200	0.70	-0.095 ± 0.111	-0.102 ± 0.193
photometric centroid source offset	—	—	—	—

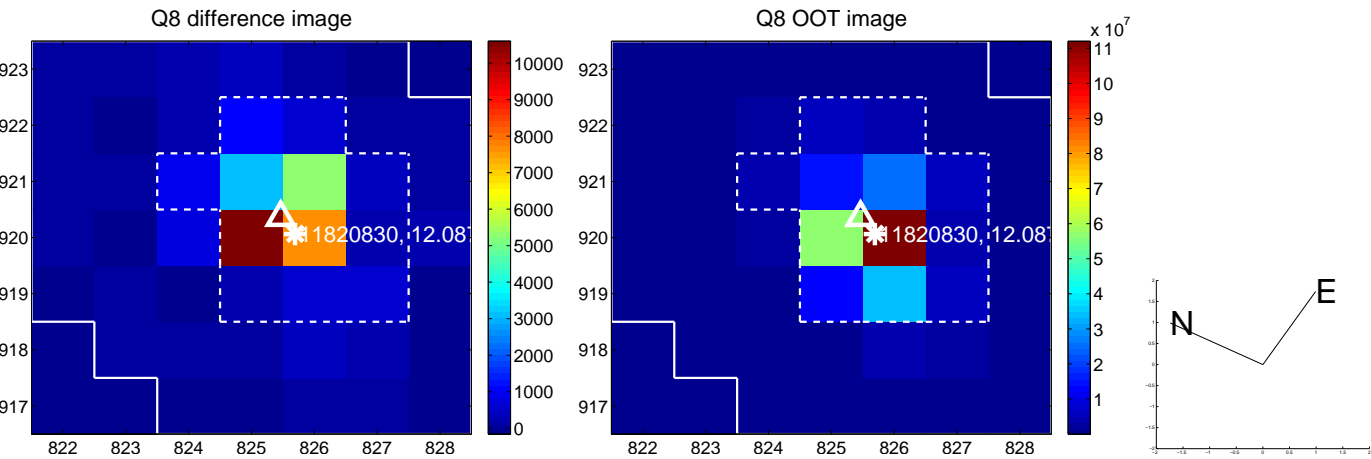
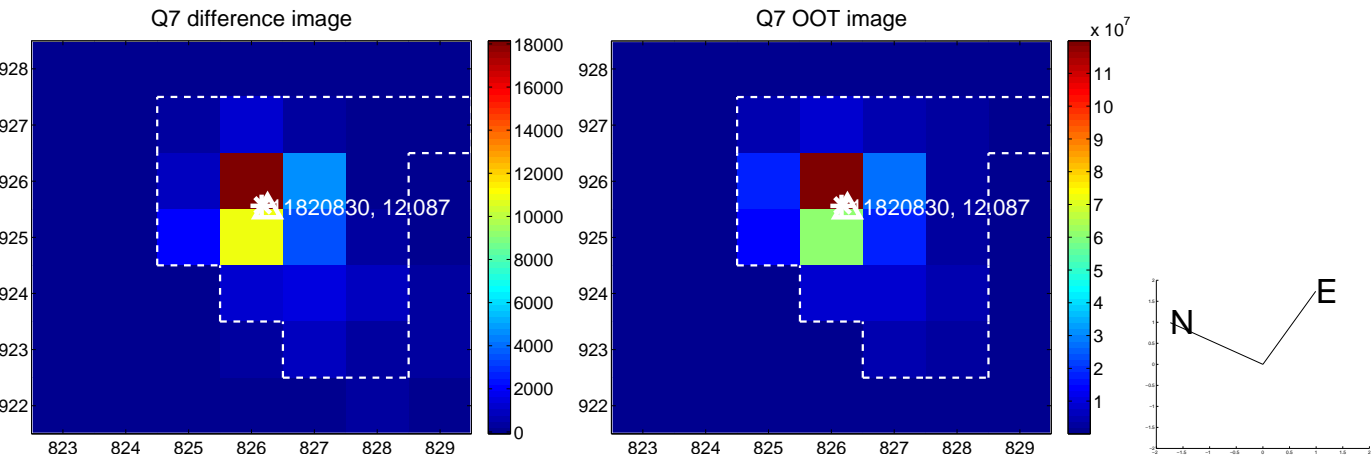
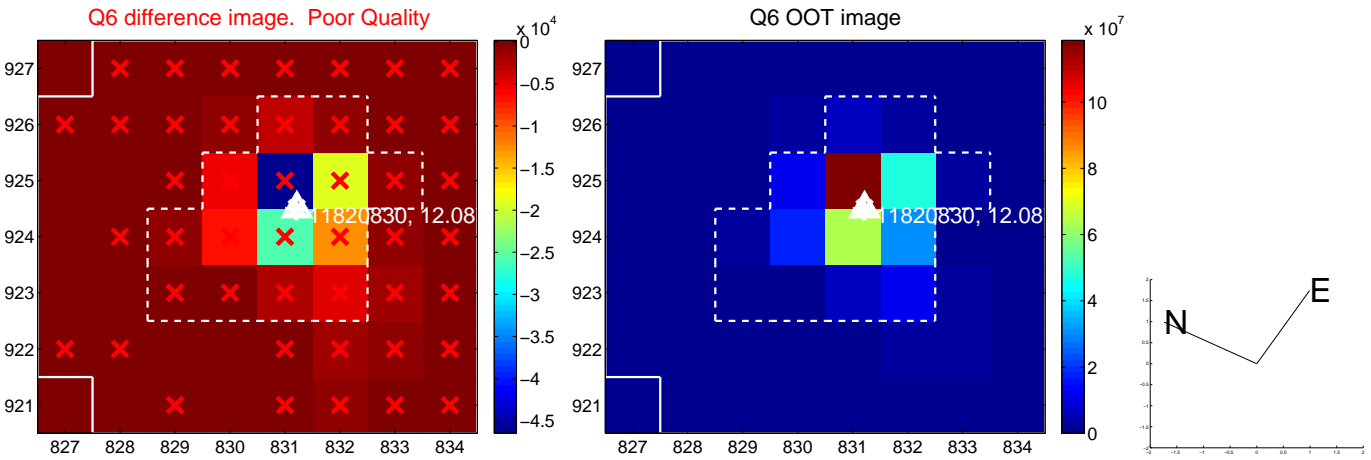
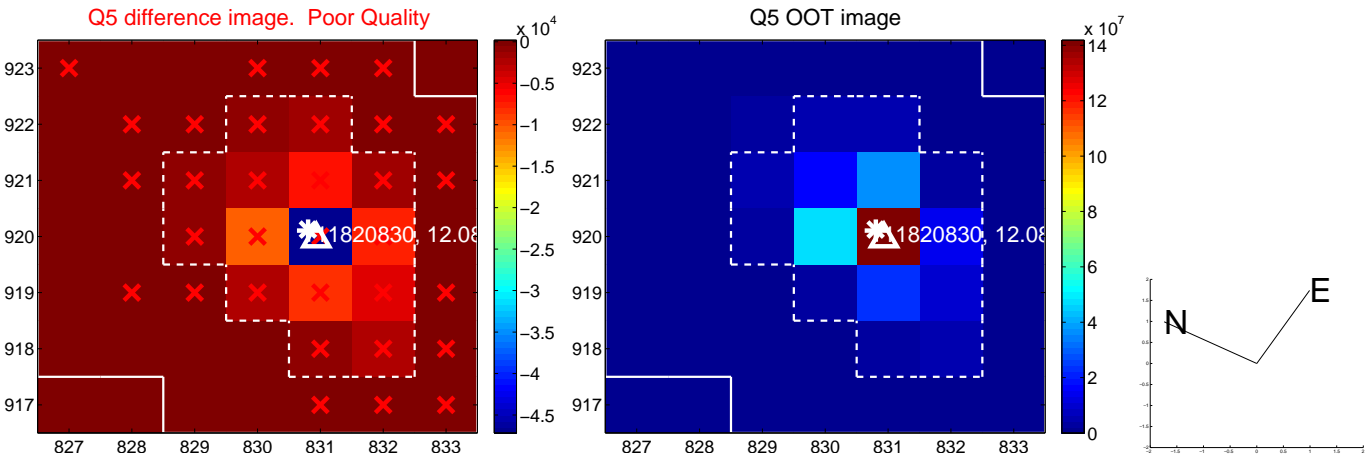


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

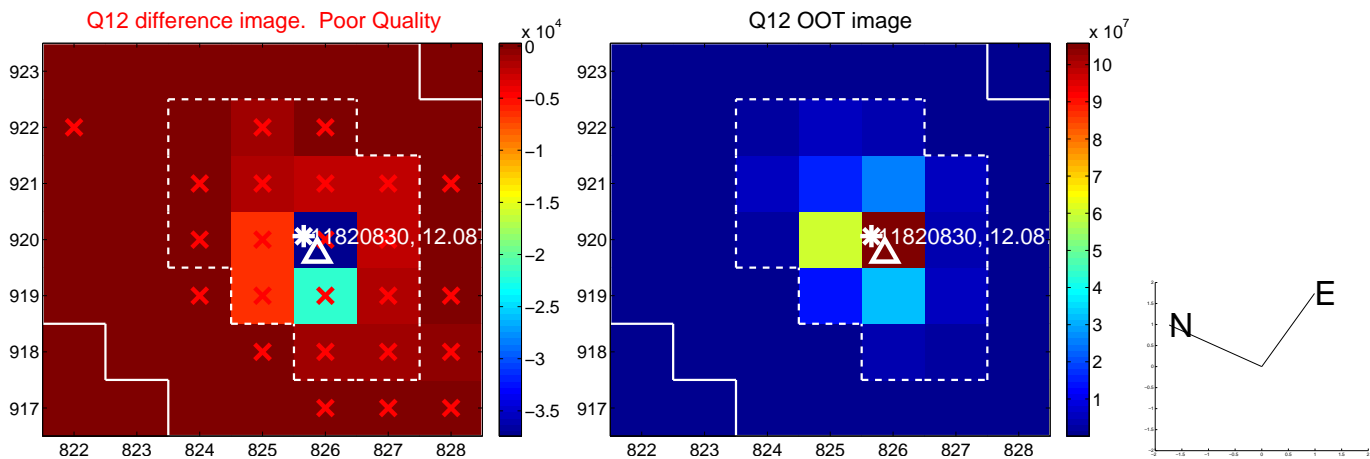
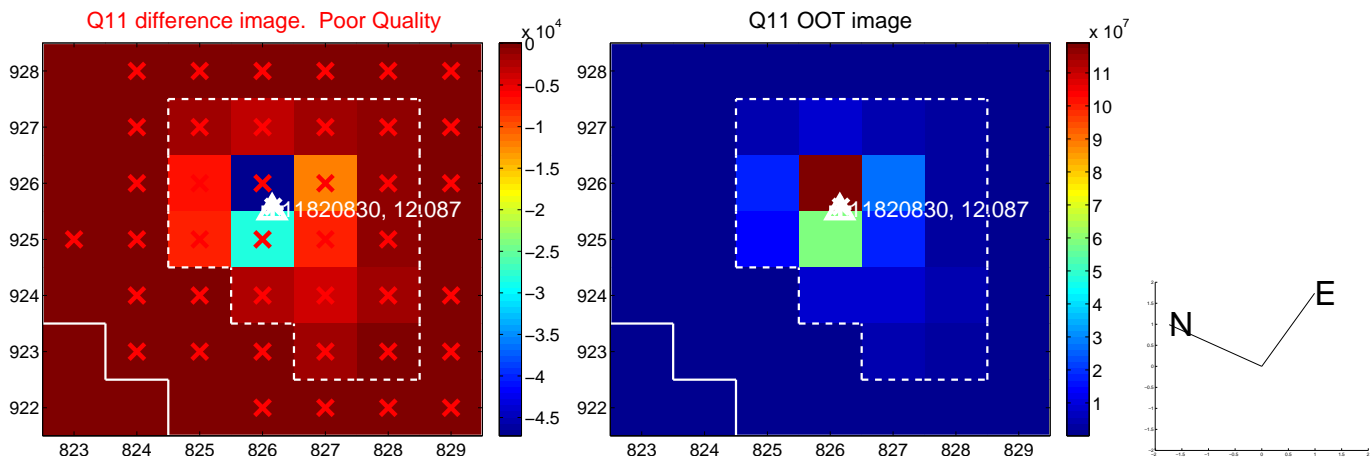
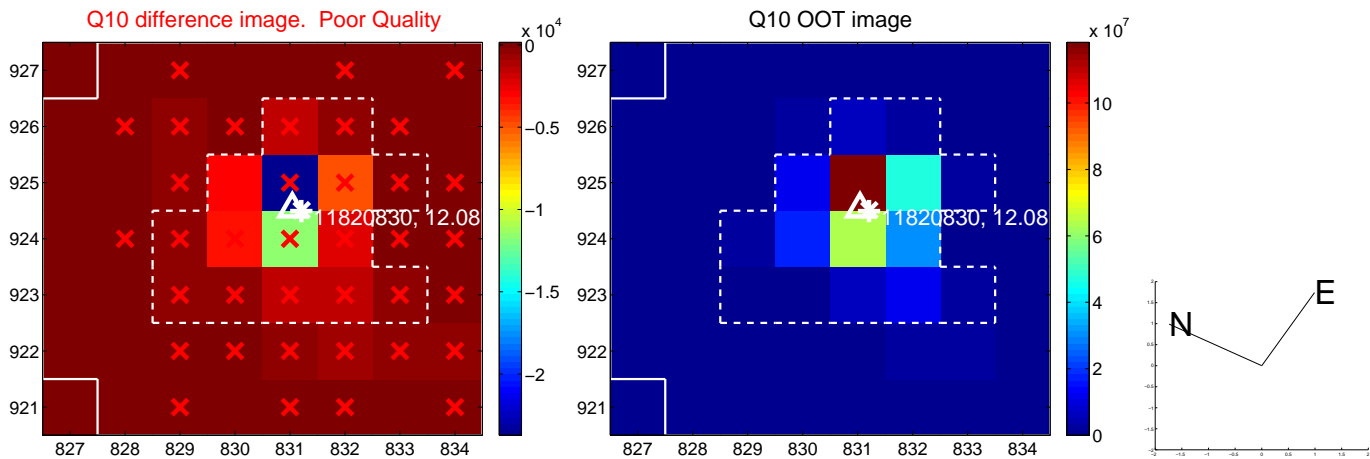
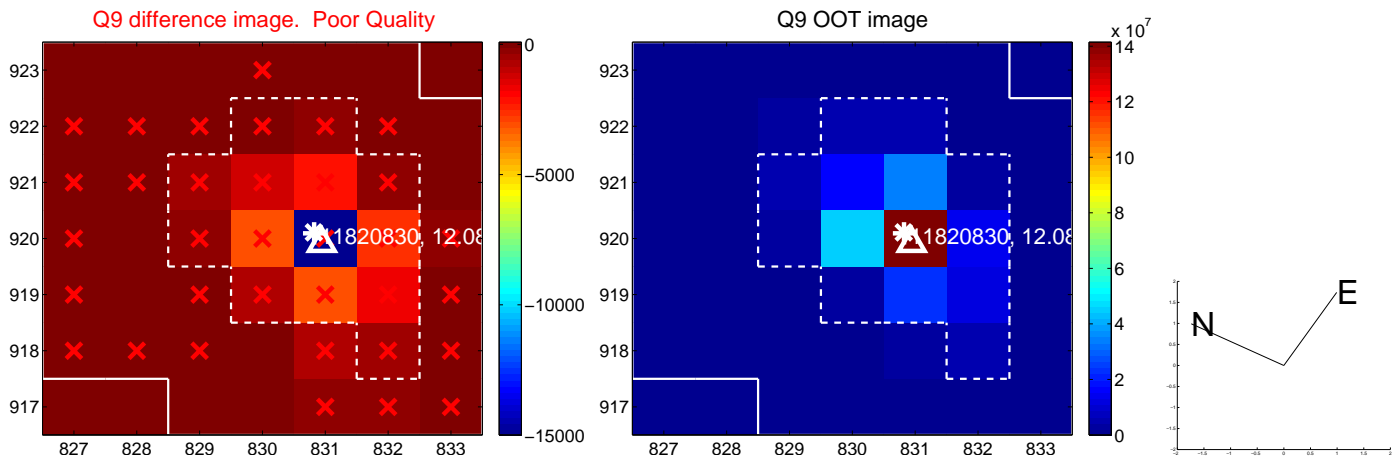
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



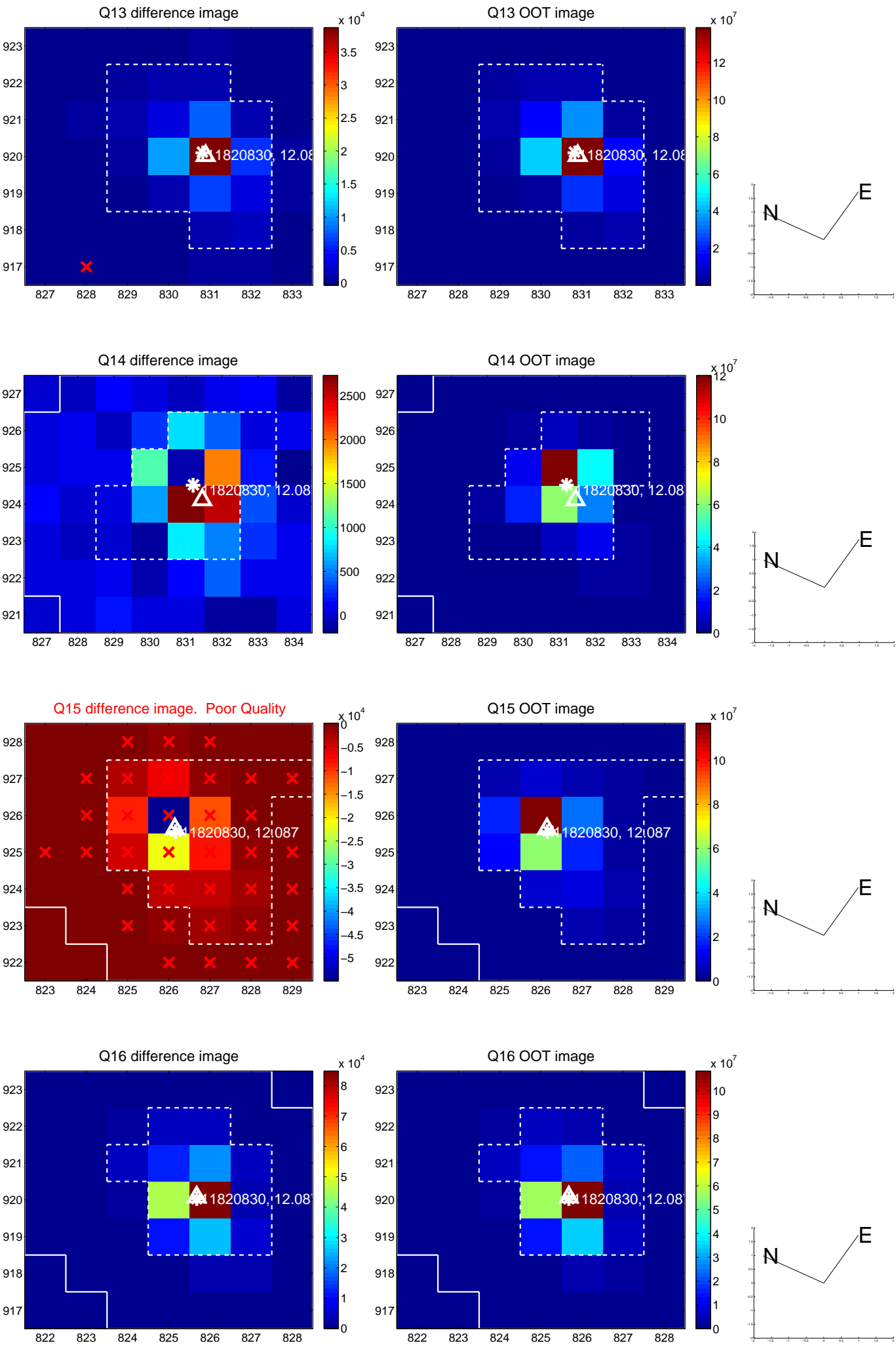
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



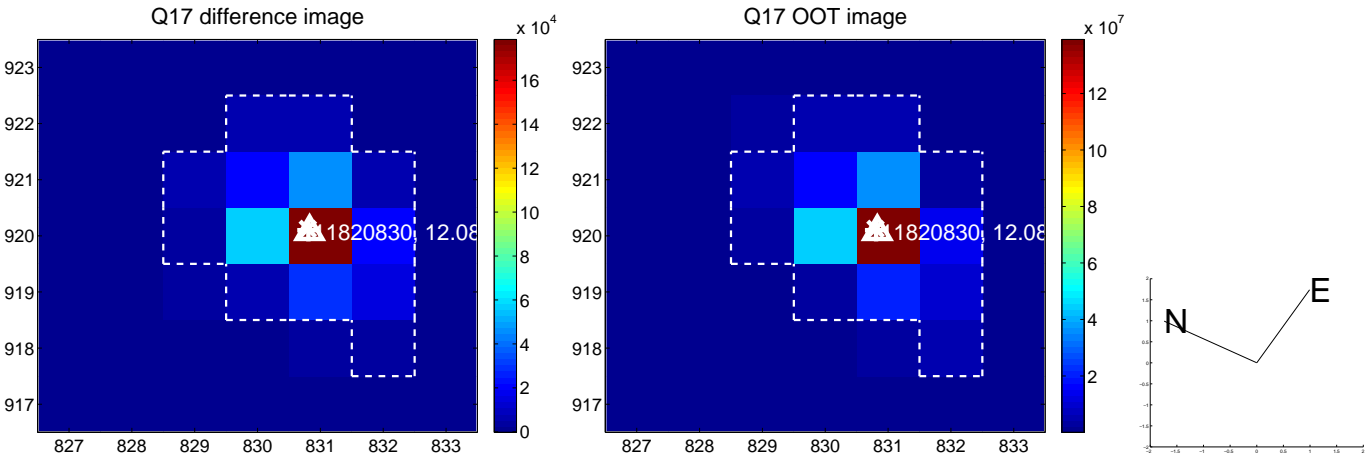
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



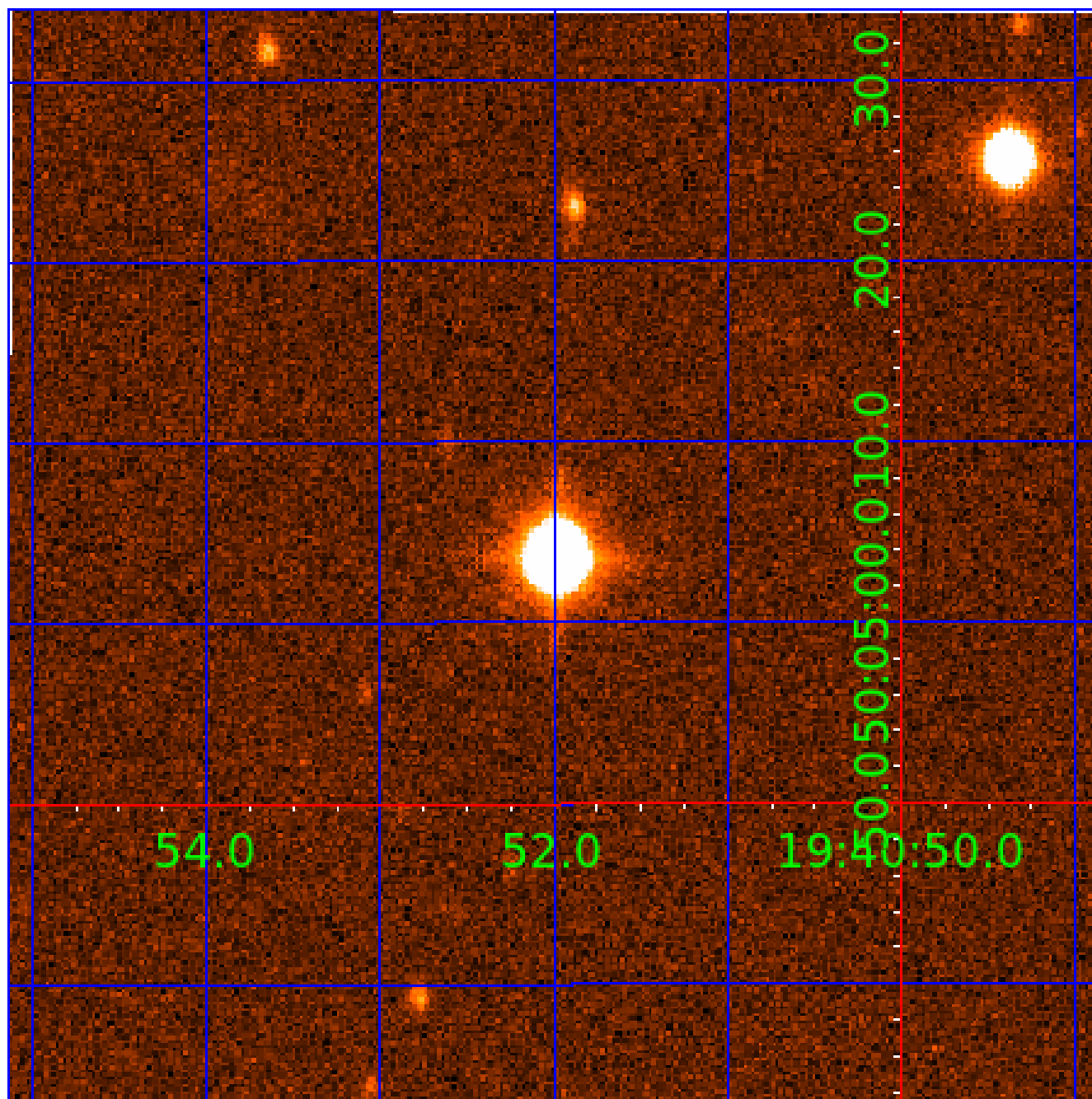
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 011820830

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})
011820830-01	OBS	1728.01	12.731942	138.732216	8810.1	3.294	592.4	536.0	1.57	7238	16.58	406.51
011820830-02	OBS	No	12.731924	138.504745	196.9	1.500	11.0	-1.0	1.57	7238	2.24	406.51
011820830-03	OBS	No	1.820244	132.394622	42.2	6.308	10.7	6.8	1.57	7238	1.18	5437.84
011820830-04	OBS	No	1.820549	131.787509	38.9	11.828	10.0	4.1	1.57	7238	1.05	5436.63
011820830-06	OBS	No	54.581769	142.347683	194.1	7.218	17.4	3.3	1.57	7238	2.37	58.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011820830-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT
011820830-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
011820830-03	OBS	FP	0.00	1	0	0	0	LPP_DV
011820830-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—SAME_NTL_PERIOD
011820830-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_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.

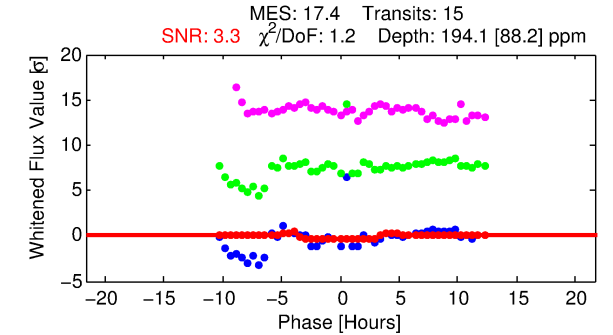
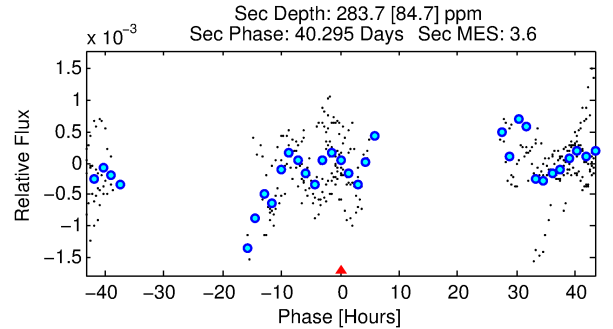
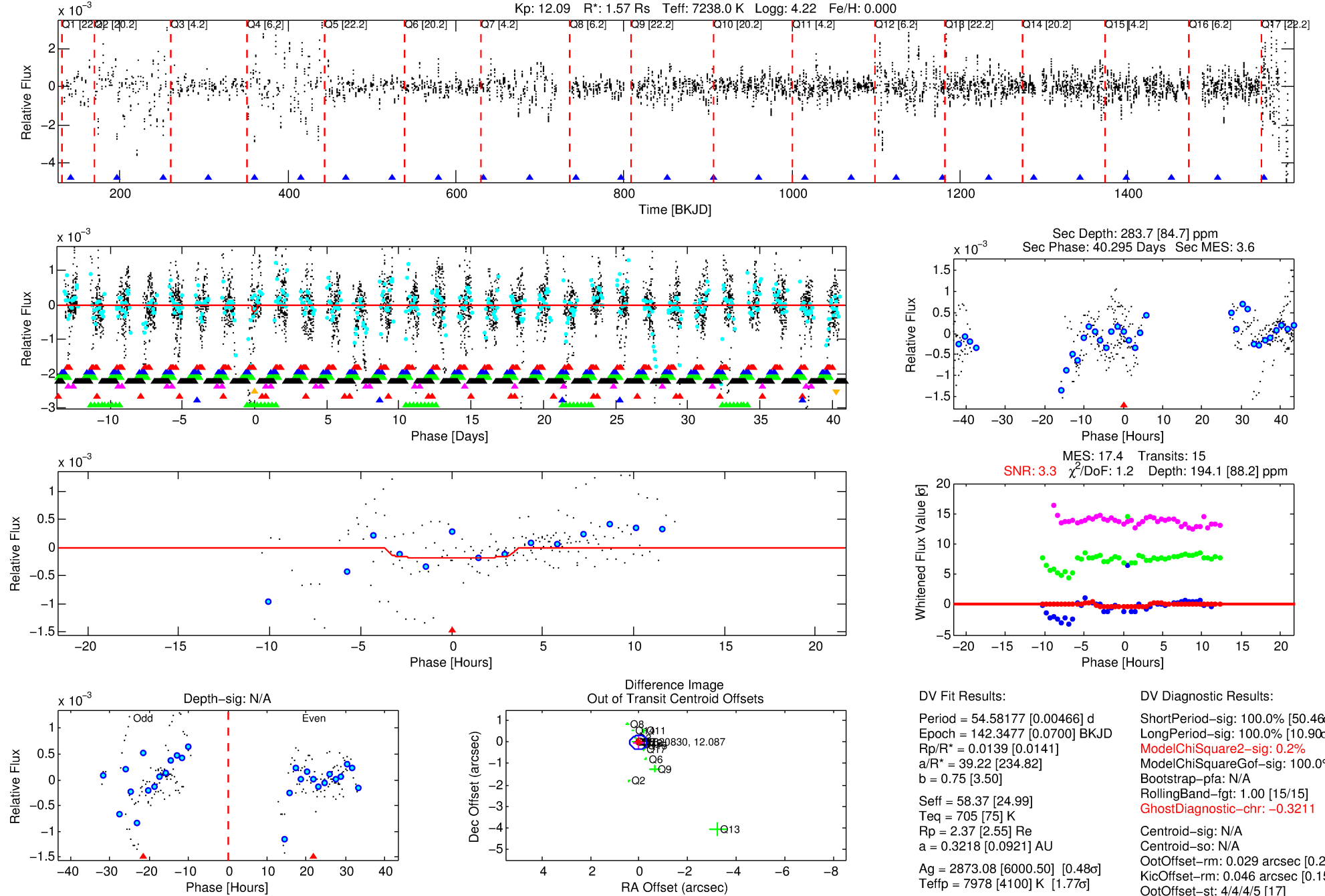
Ephemeris Match Information For 011820830-06

No Significant Match Found

DV One-Page Summary

KIC: 11820830 Candidate: 6 of 9 Period: 54.582 d
KOI: K01728 Corr: No Ephemeris Match

Kp: 12.09 R*: 1.57 Rs Teff: 7238.0 K Logg: 4.22 Fe/H: 0.000



DV Fit Results:

Period = 54.58177 [0.00466] d
Epoch = 142.3477 [0.0700] BKJD
Rp/R* = 0.0139 [0.0141]
a/R* = 39.22 [234.82]
b = 0.75 [3.50]
Seff = 58.37 [24.99]
Teff = 705 [75] K
Rp = 2.37 [2.55] Re
a = 0.3218 [0.0921] AU
Ag = 2873.08 [6000.50] [0.48σ]
Teffp = 7978 [4100] K [1.77σ]

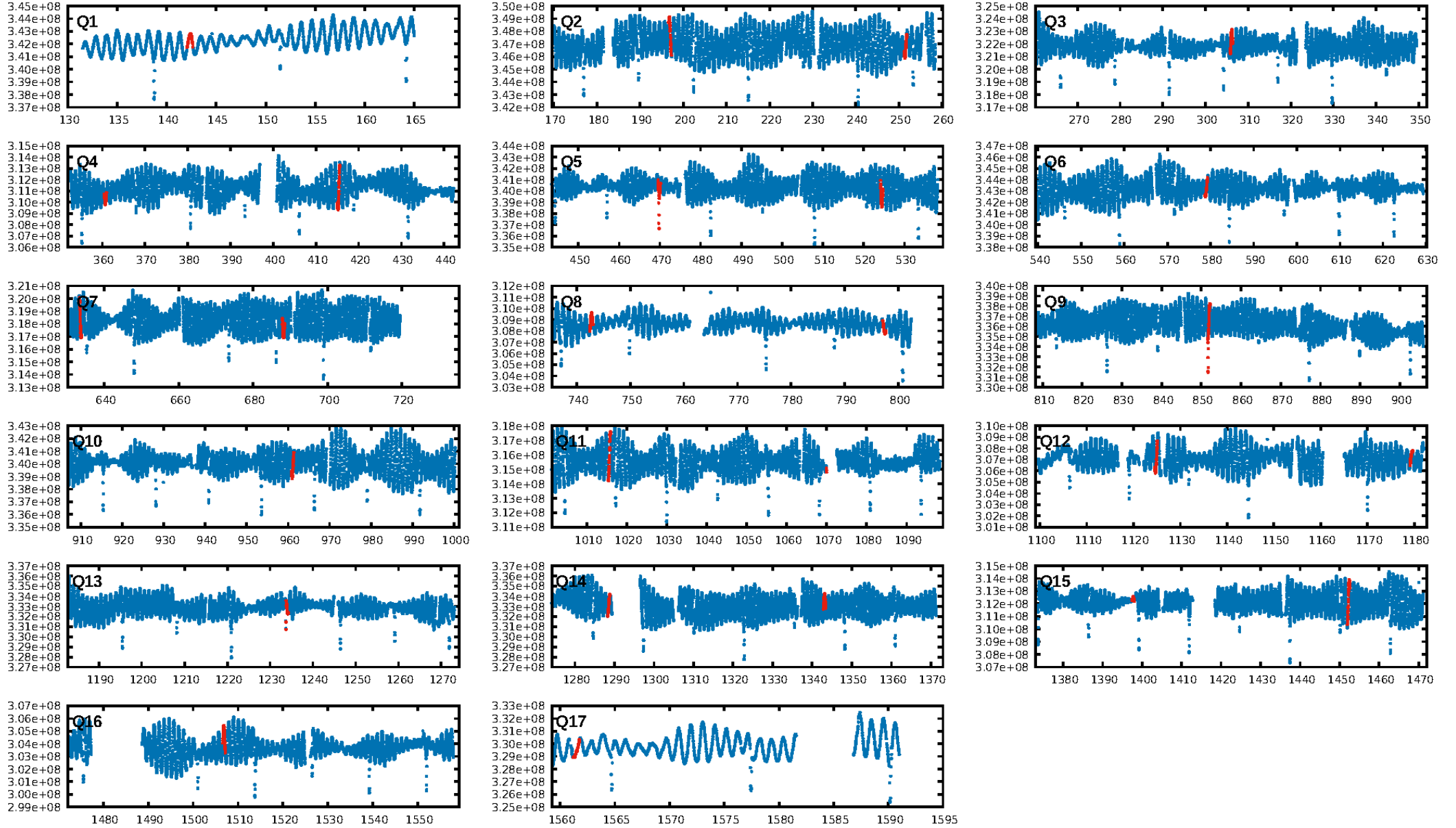
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [50.46σ]
LongPeriod-sig: 100.0% [10.90σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [15/15]
GhostDiagnostic-chr: -0.3211
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.029 arcsec [0.26σ]
KicOffset-rm: 0.046 arcsec [0.15σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.00 [0/17]

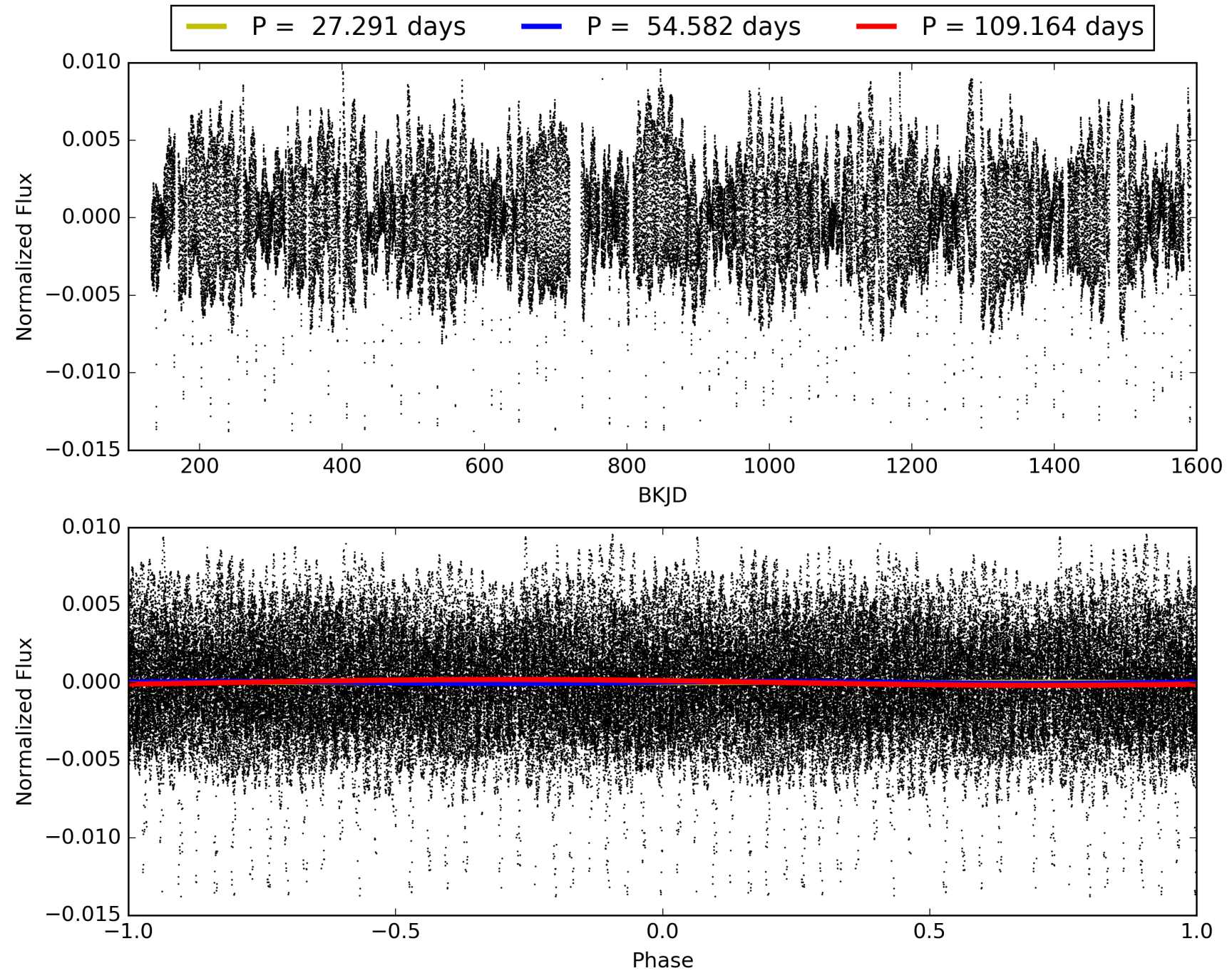
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:29:58 Z

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

TCE 011820830-06, PDC Light Curves

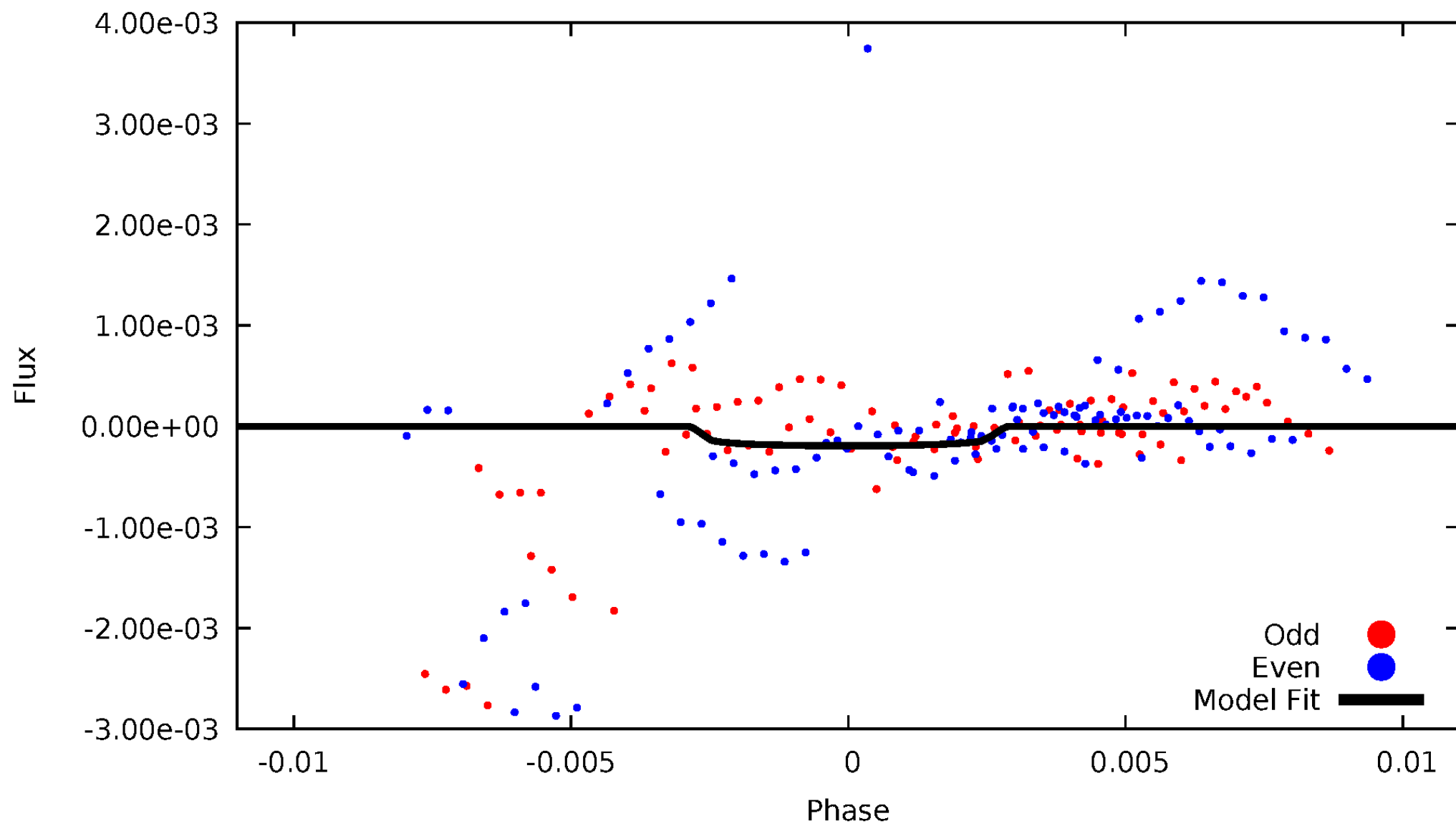


TCE 011820830-06



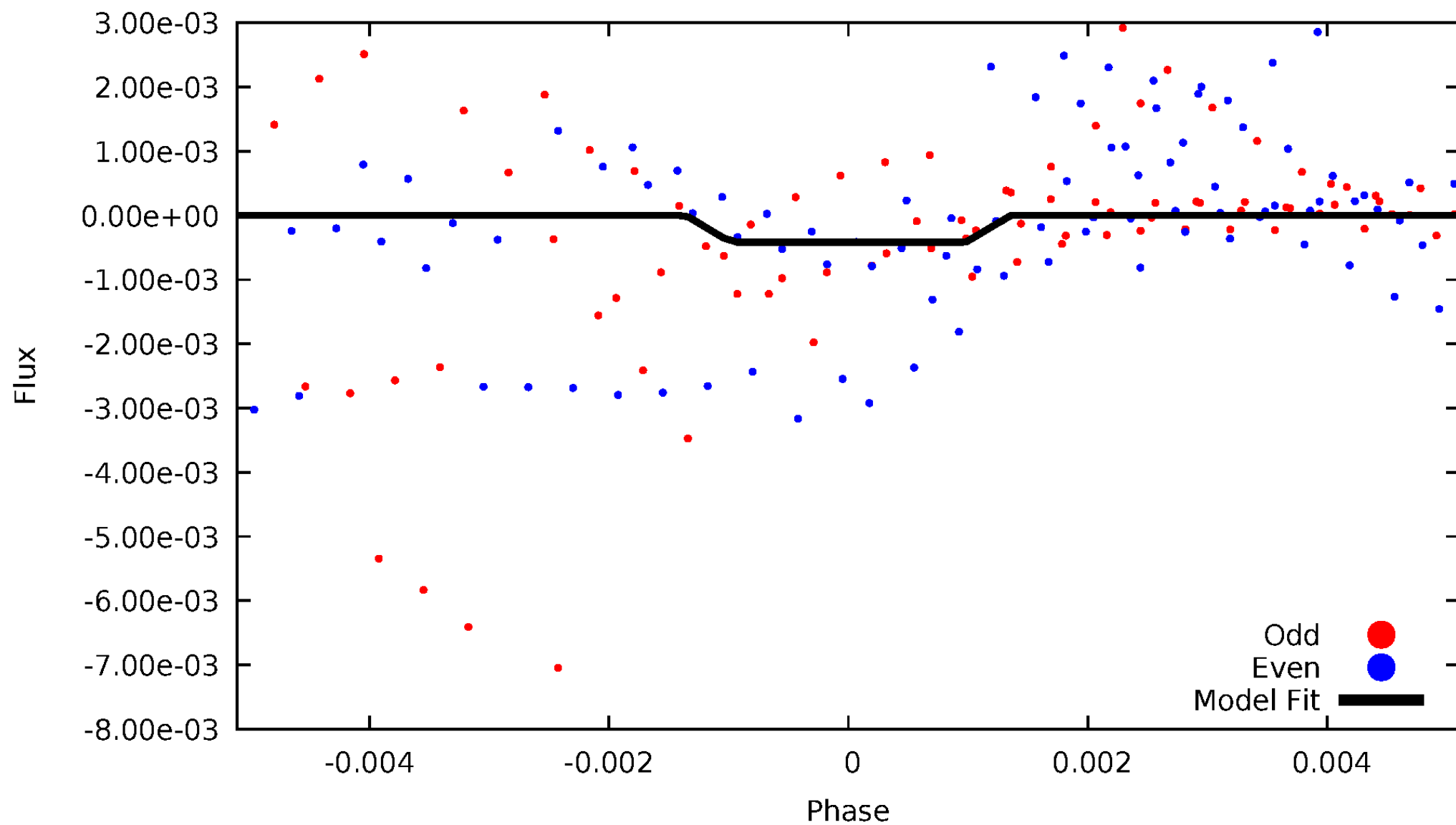
DV Odd/Even

TCE 011820830-06



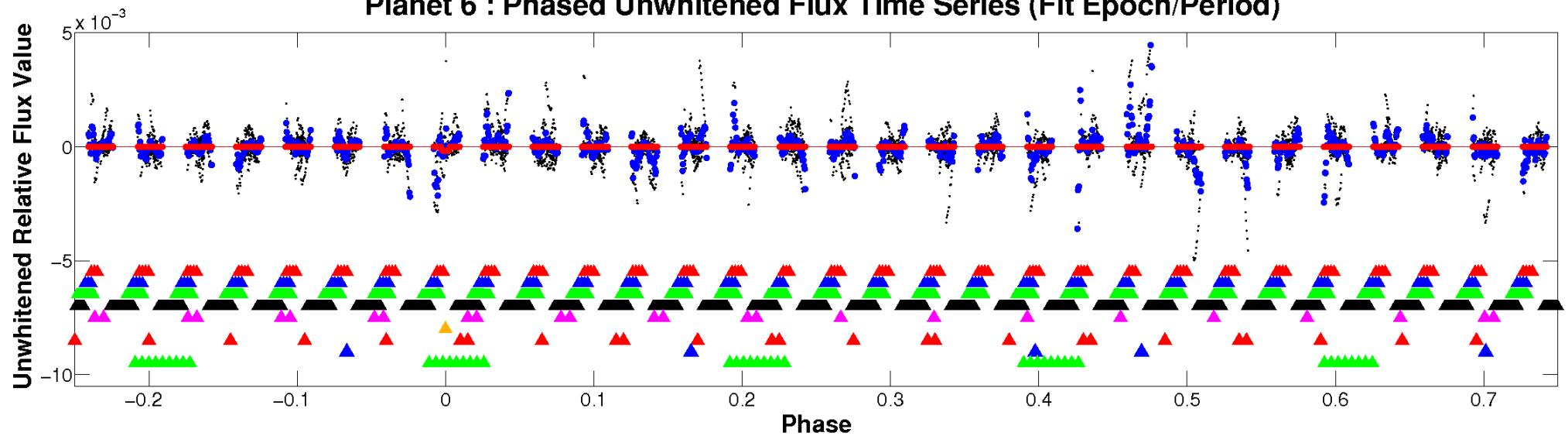
ALT Odd/Even

TCE 011820830-06

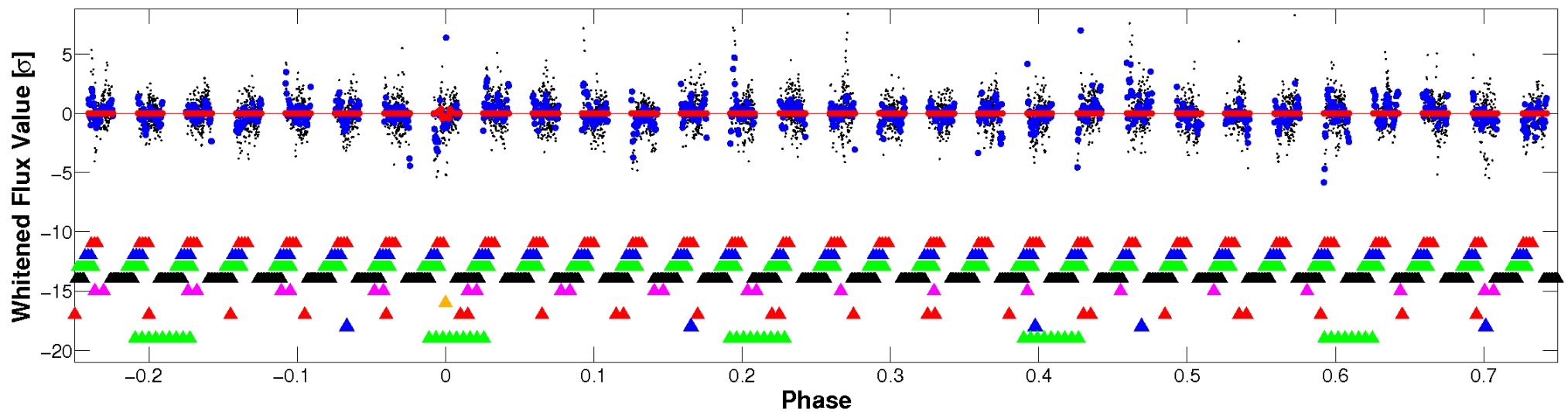


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

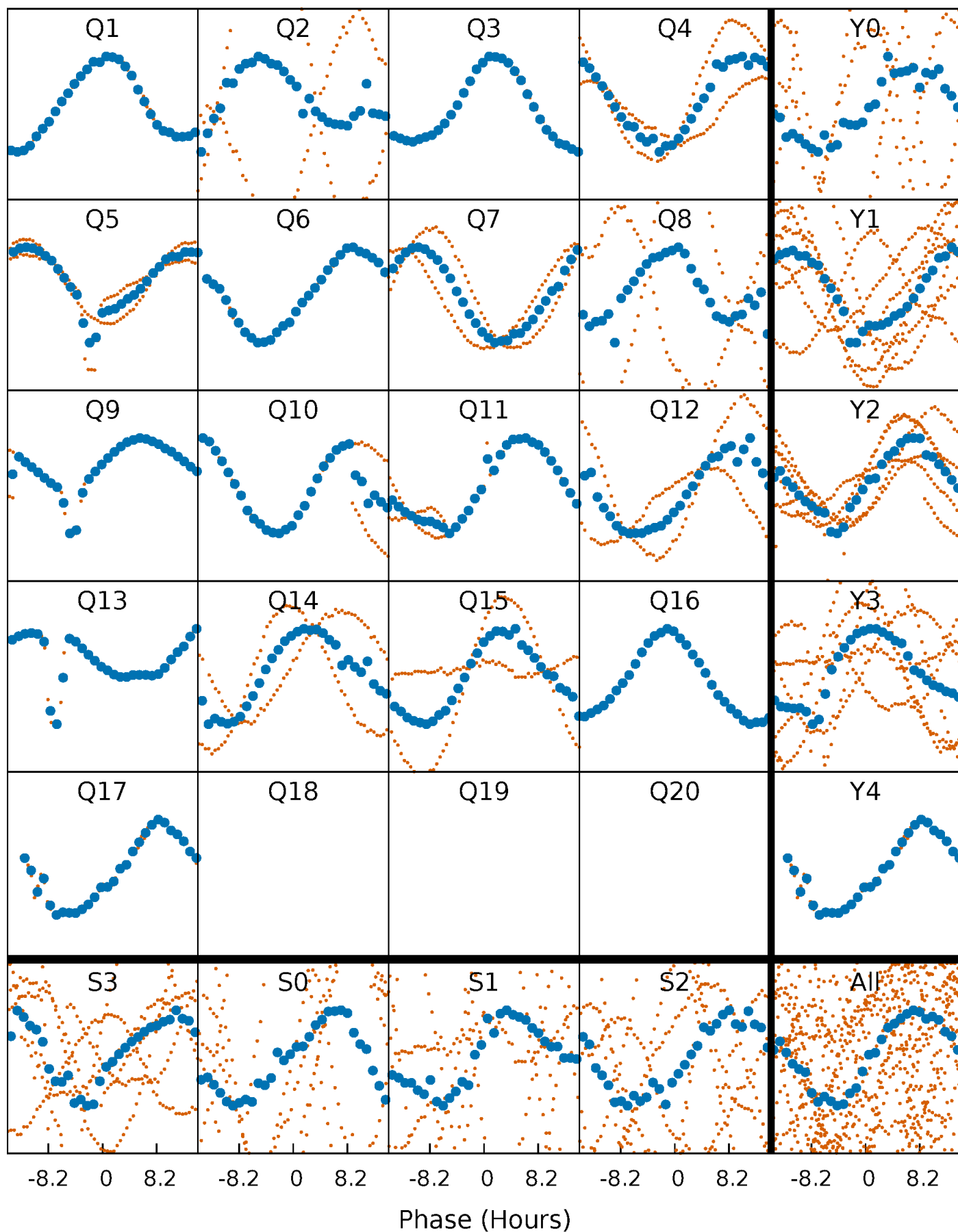


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



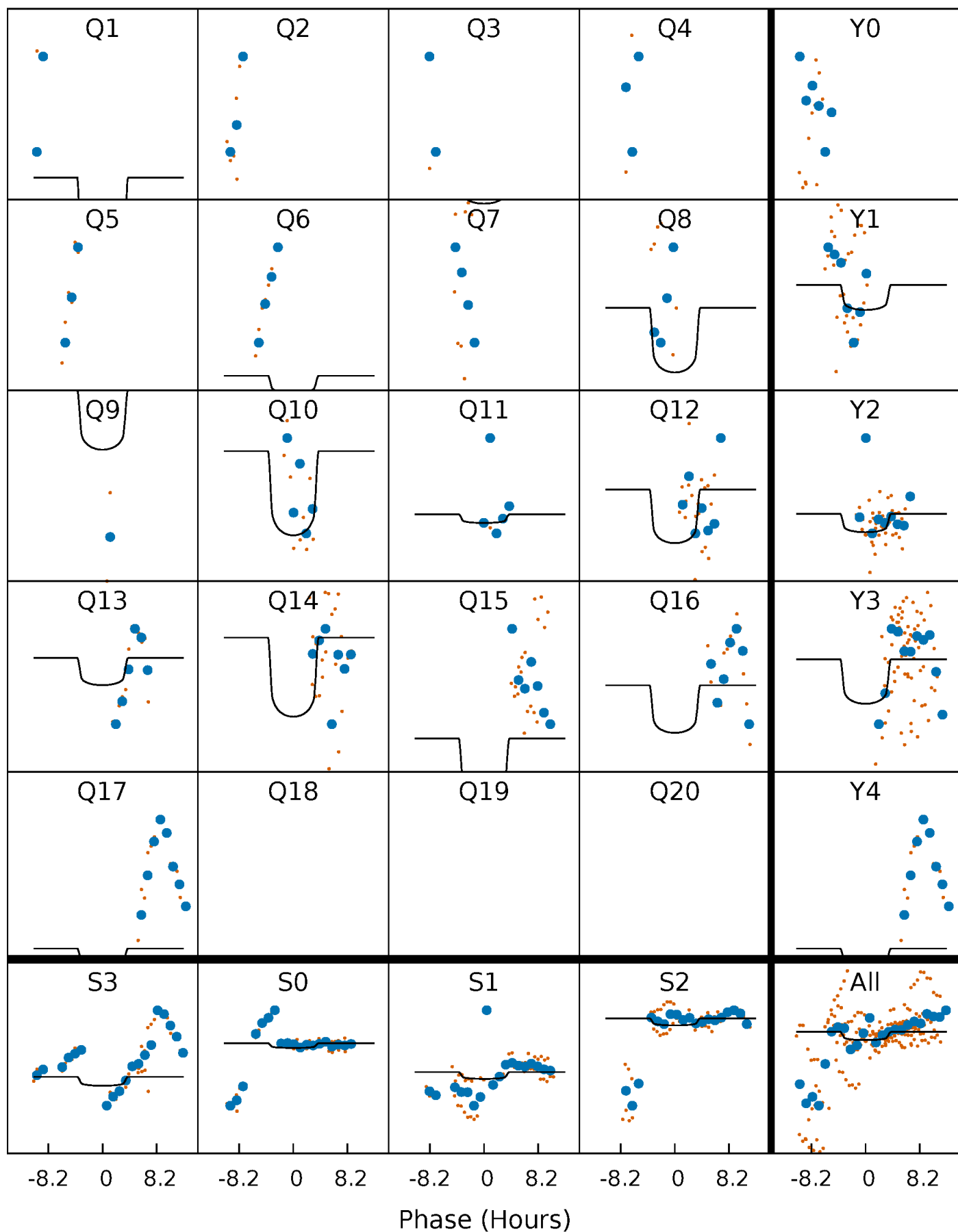
PDC Quarter-Phased Transit Curves

TCE 011820830-06 P= 54.581769 Days $T_0=142.347683$ (BKJD)



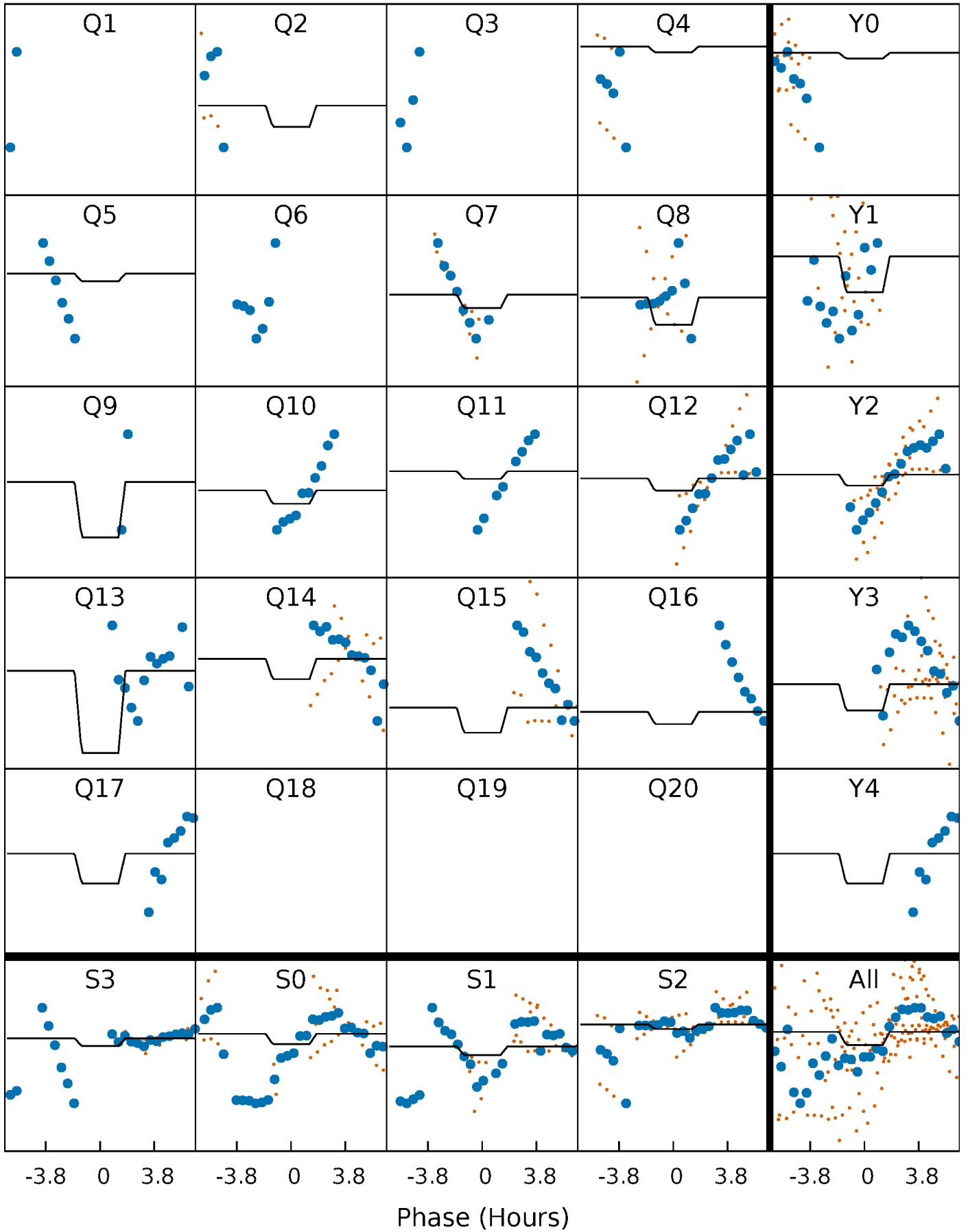
DV Quarter-Phased Transit Curves

TCE 011820830-06 P= 54.581769 Days $T_0=142.347683$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

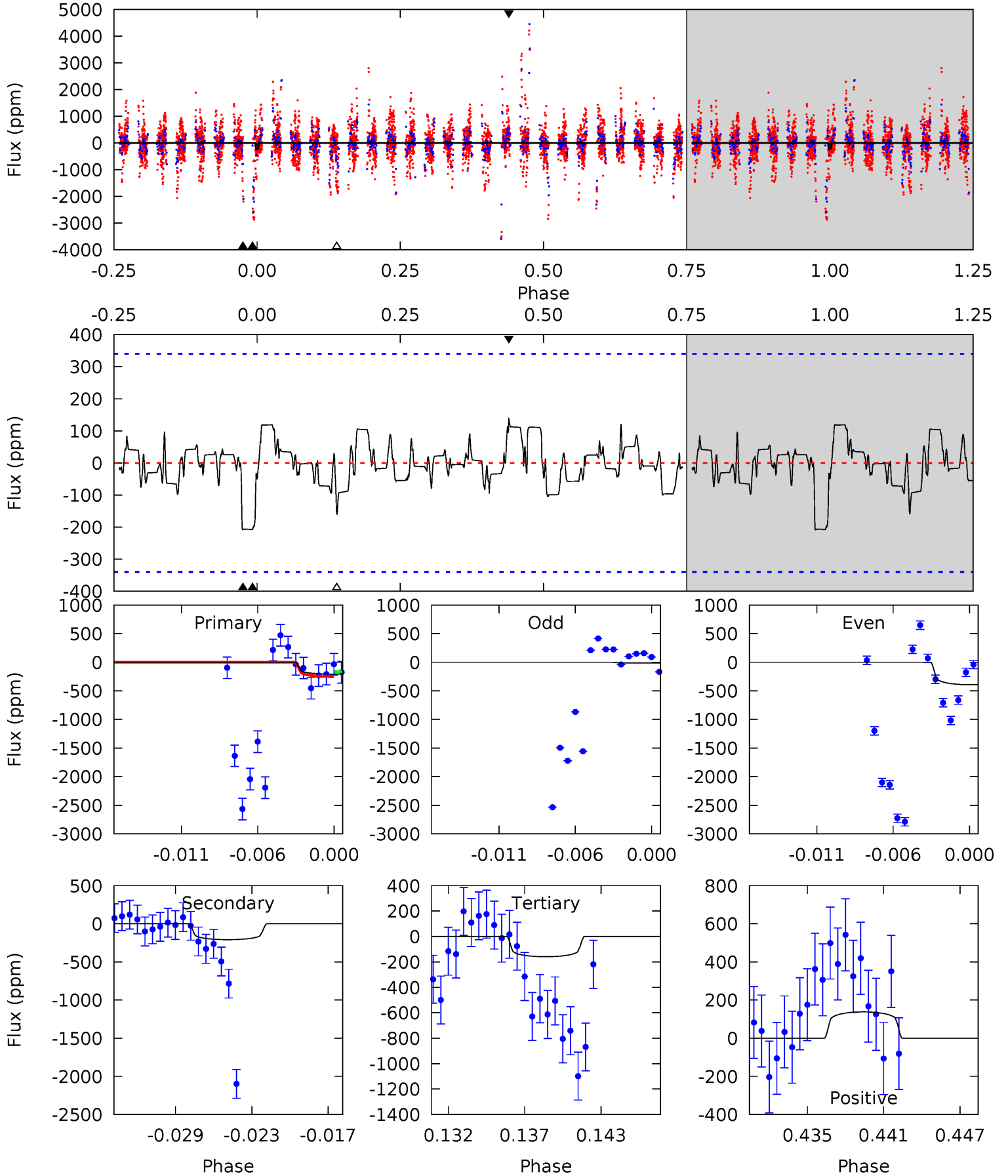
TCE 011820830-06 P= 54.590817 Days $T_0=142.204130$ (BKJD)



DV Model-Shift Uniqueness Test

011820830-06, P = 54.581769 Days, E = 87.765914 Days

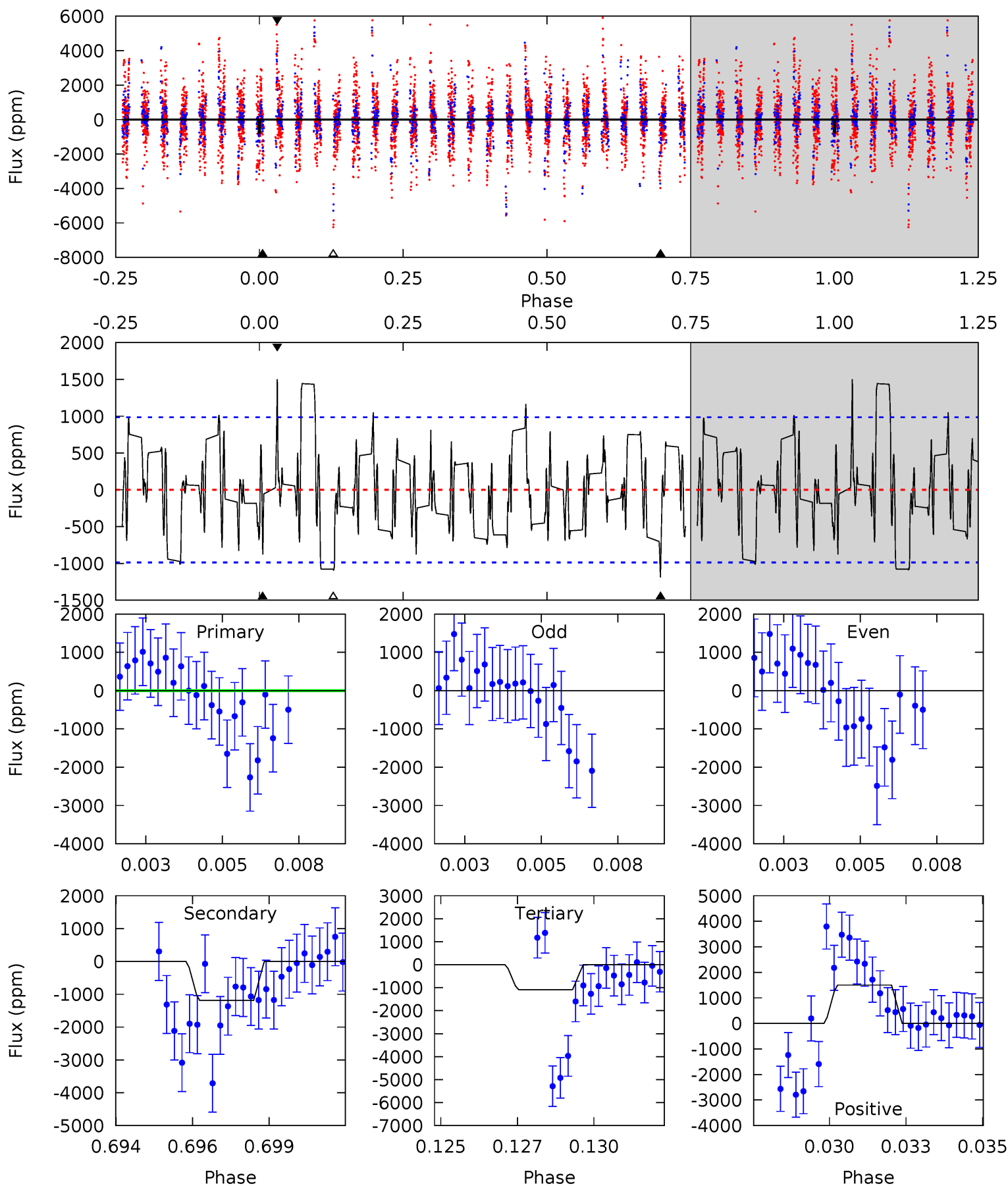
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.13	3.15	2.40	2.08	5.13	2.76	0.71	0.73	1.05	0.74	1.06	2.64	0.60	0.40	0.64



Alt Model-Shift Uniqueness Test

011820830-06, P = 54.590817 Days, E = 87.613313 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.11	6.37	5.81	8.02	5.27	3.00	2.14	-1.70	-3.92	0.56	-1.66	1.61	1.64	0.56	1.03



Stellar Parameters For KIC 011820830

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7238^{+201}_{-277}	$4.221^{+0.090}_{-0.210}$	$0.000^{+0.200}_{-0.350}$	$1.568^{+0.556}_{-0.238}$	$1.491^{+0.221}_{-0.199}$	$0.545^{+0.221}_{-0.282}$
	+3%/-4%	+2%/-5%	+inf%/-inf%	+35%/-15%	+15%/-13%	+41%/-52%
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 011820830-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-208 ± 66	$3.07^{+2.24}_{-1.96}$	995^{+82}_{-54}	6456^{+6281}_{-1544}	1184^{+7365}_{-824}
Alt.	-1191 ± 187	$3.74^{+2.71}_{-2.16}$	997^{+79}_{-55}	9907^{+11071}_{-2818}	4845^{+20994}_{-3206}

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 $A_{obs} \gg 1.0$

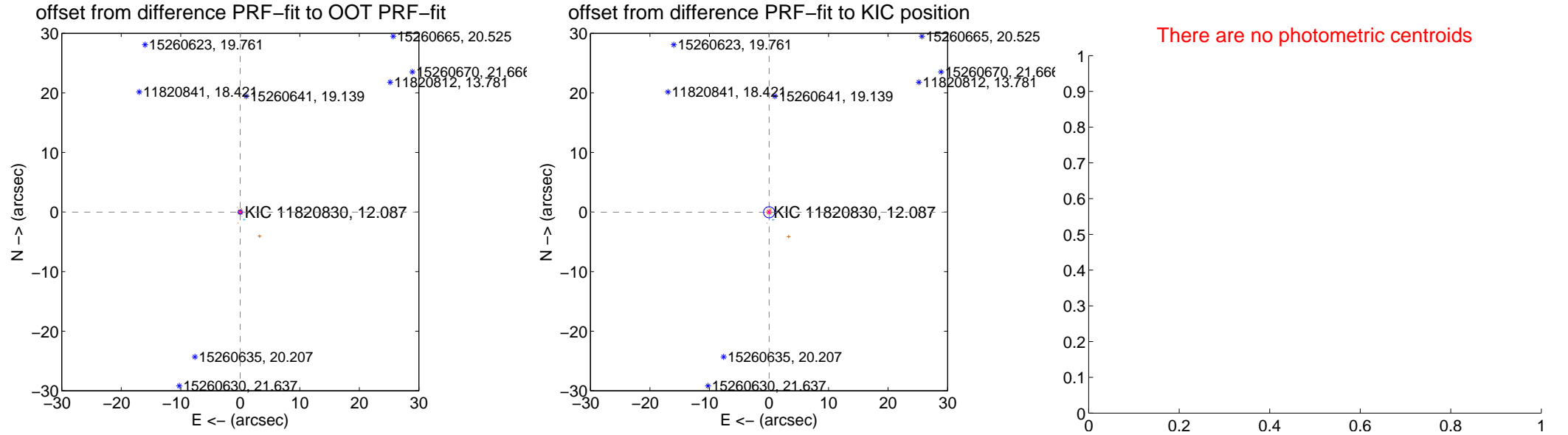
DV Centroid Data

Supplemental centroid analysis for 011820830-06. Kepler magnitude: 12.09. Transit SNR 3.32

There are 8 quarters with good PRF difference image offsets

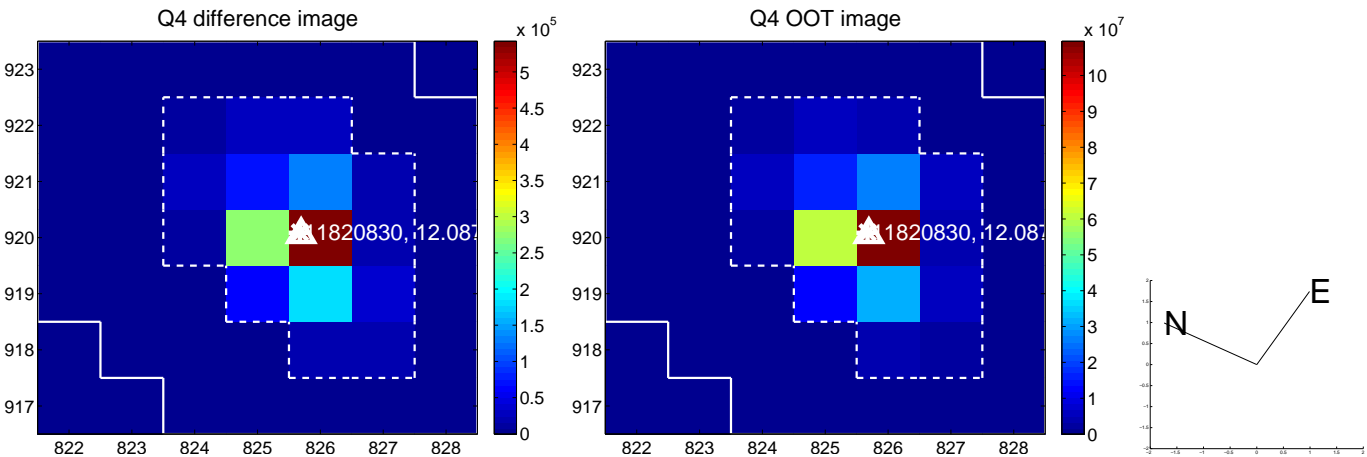
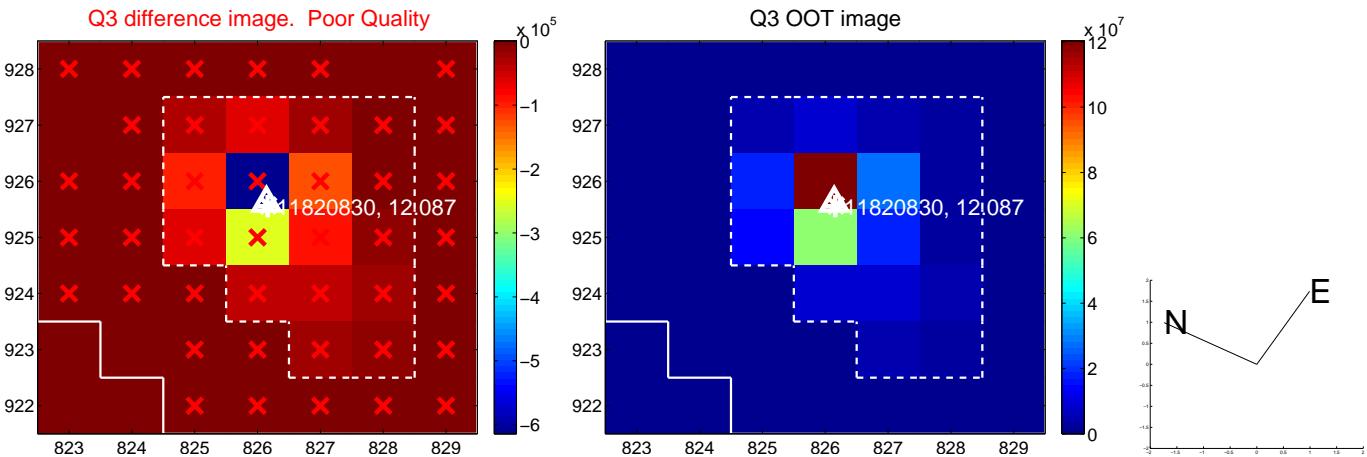
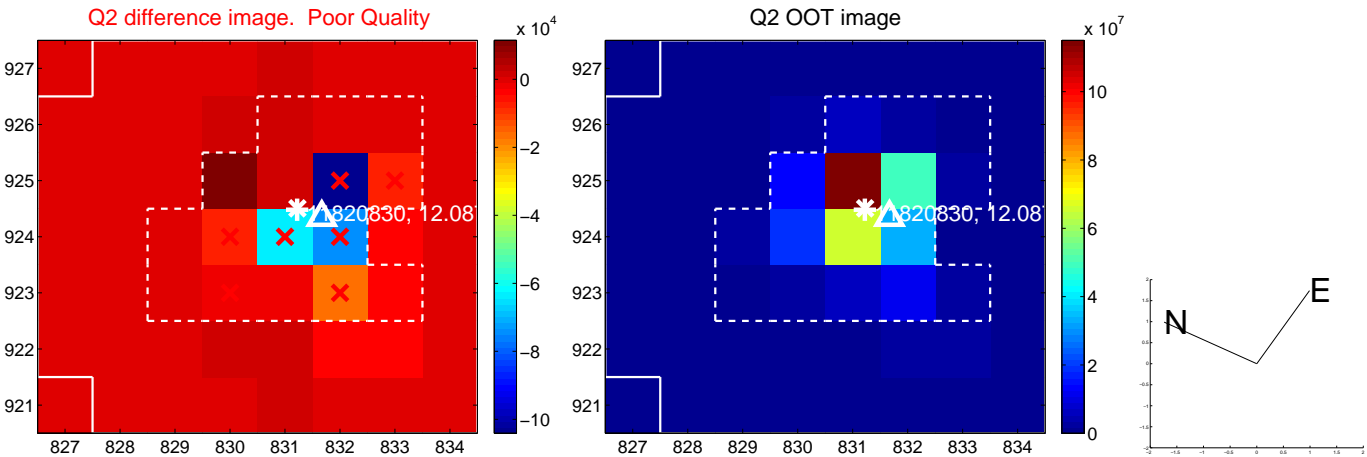
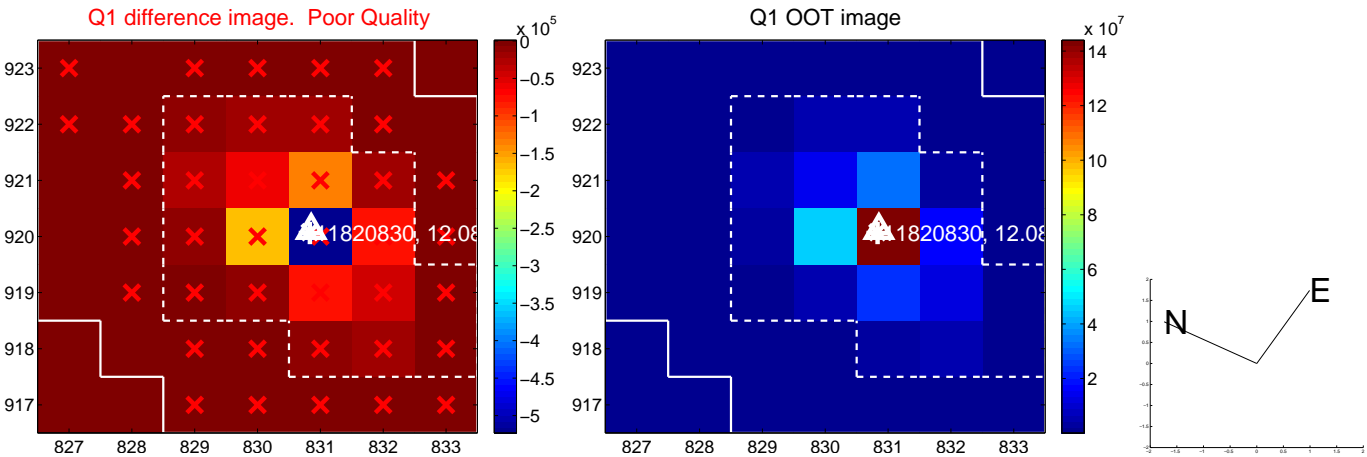
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.029 ± 0.113	0.26	0.023 ± 0.203	-0.018 ± 0.274
PRF-fit source offset from KIC position	0.046 ± 0.312	0.15	-0.018 ± 0.207	-0.042 ± 0.268
photometric centroid source offset	—	—	—	—

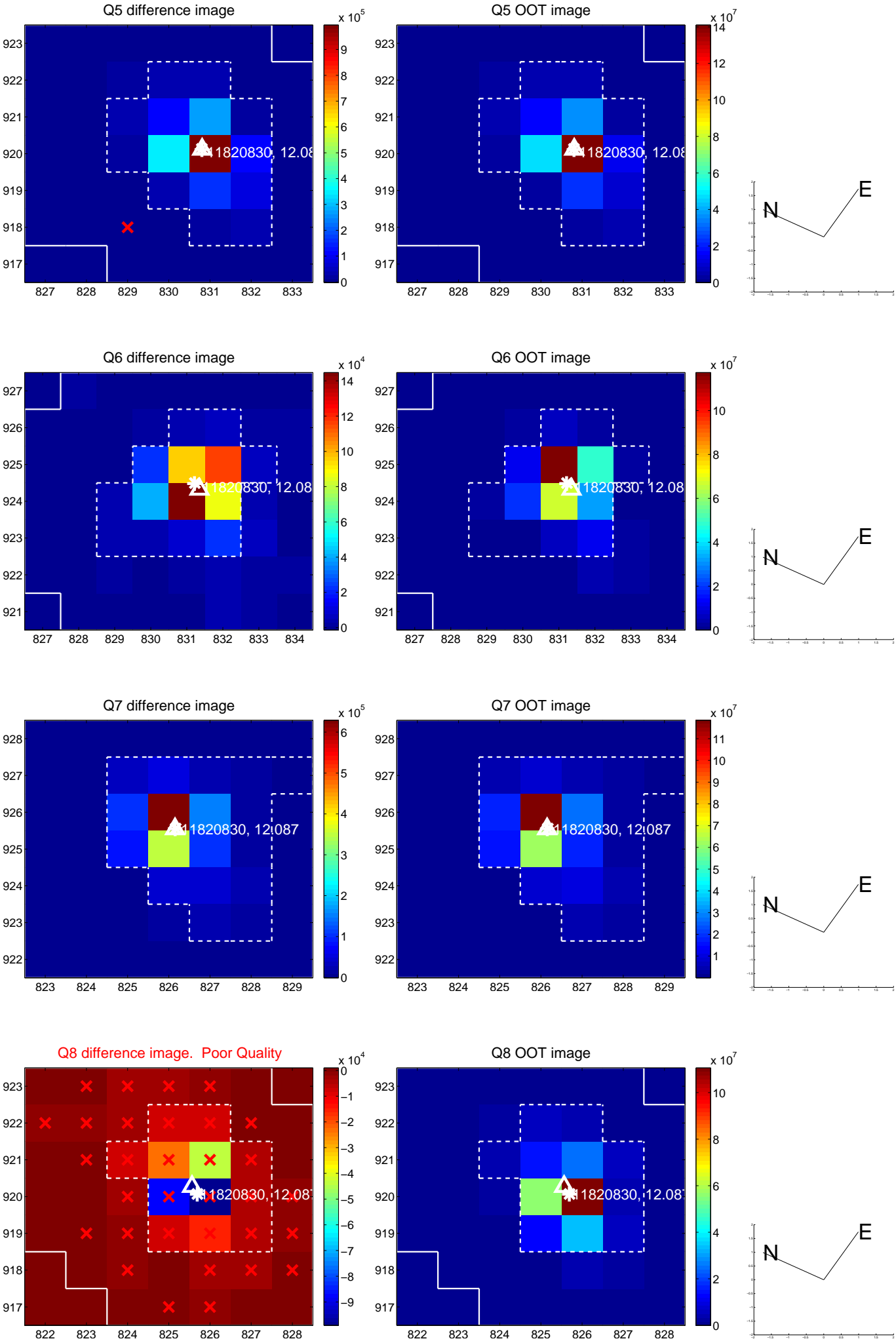


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

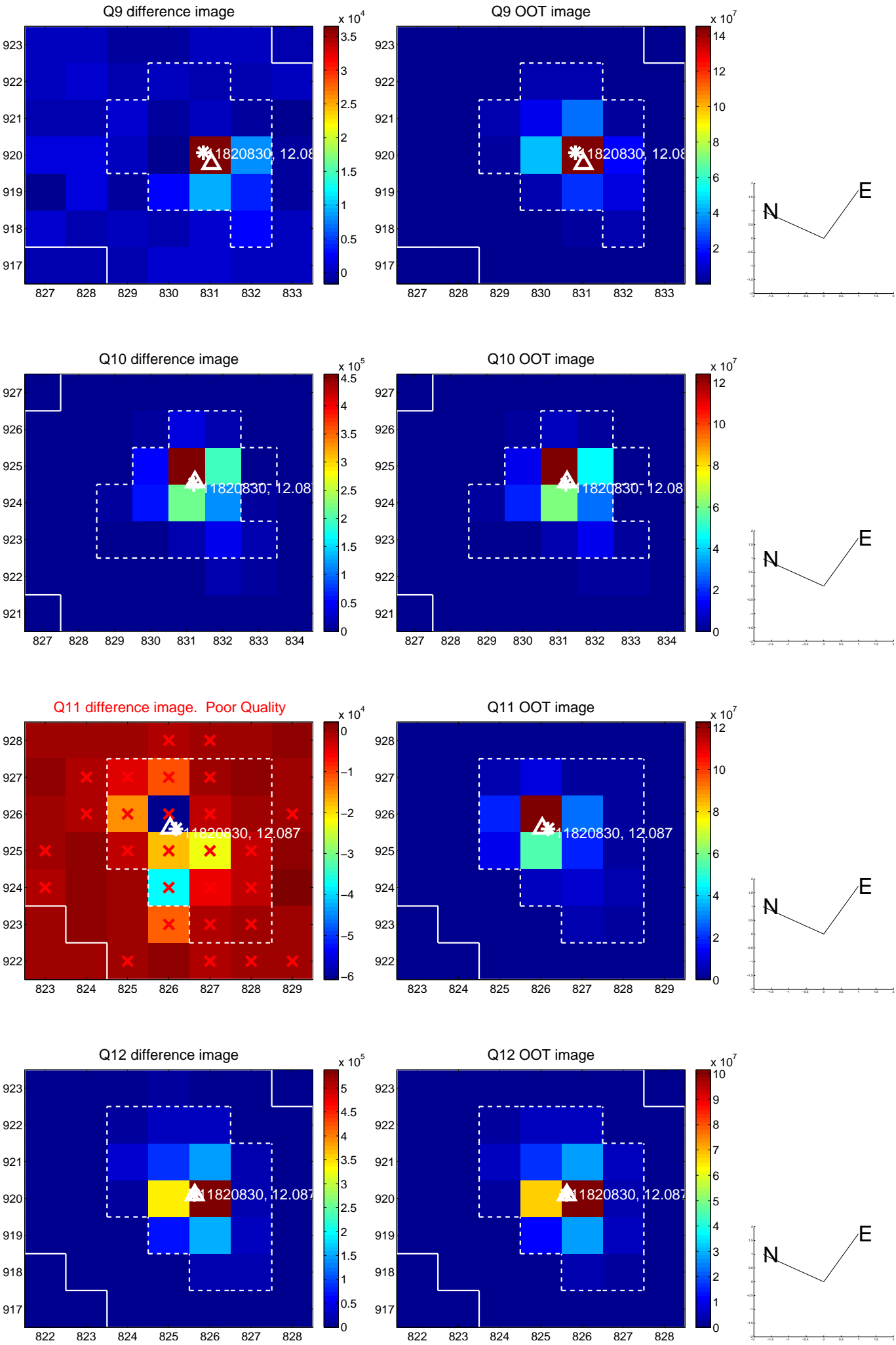
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



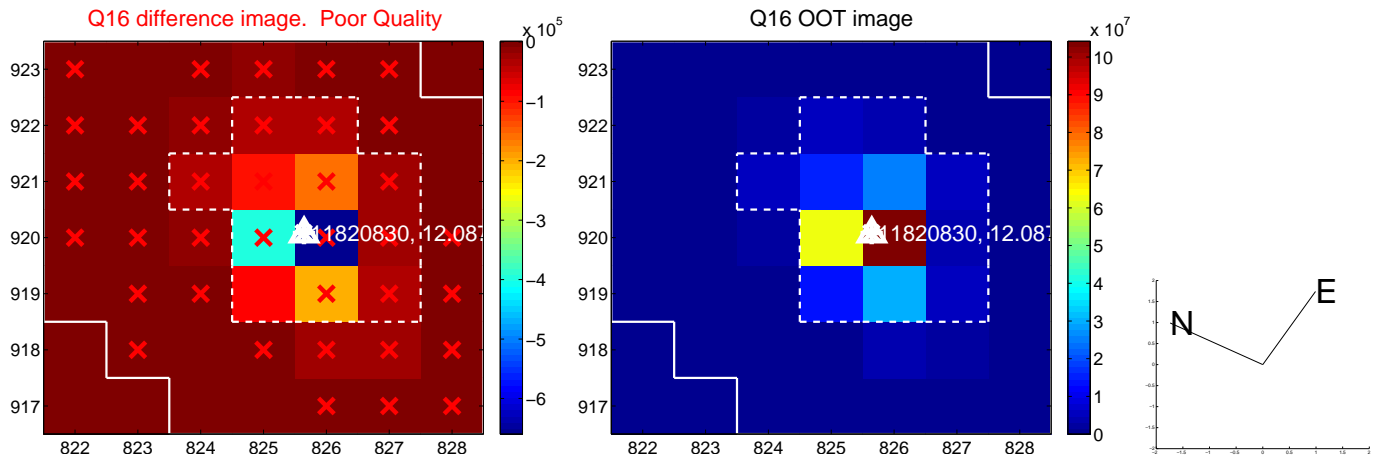
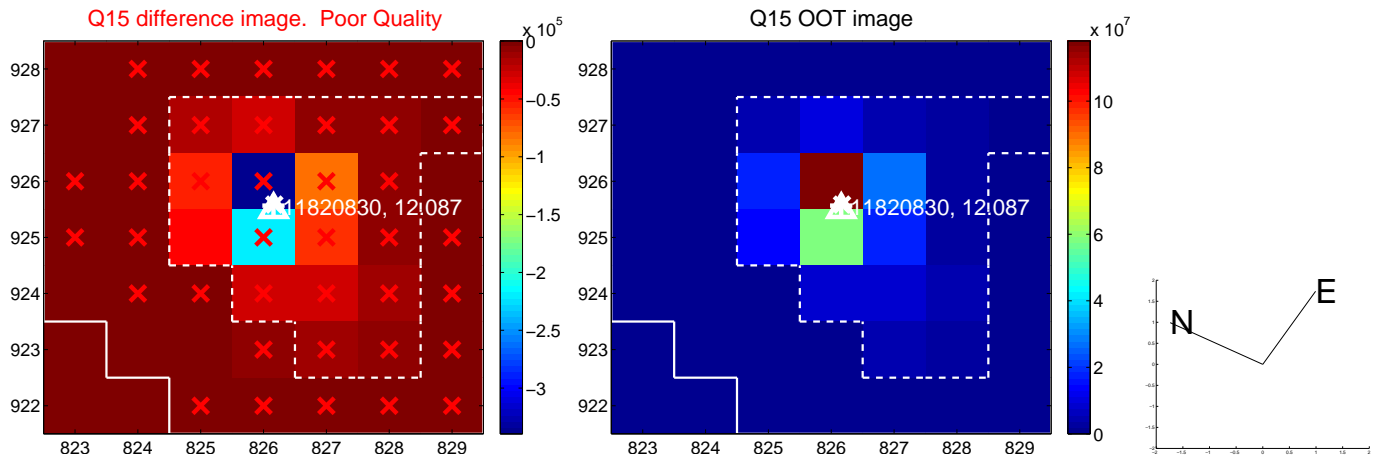
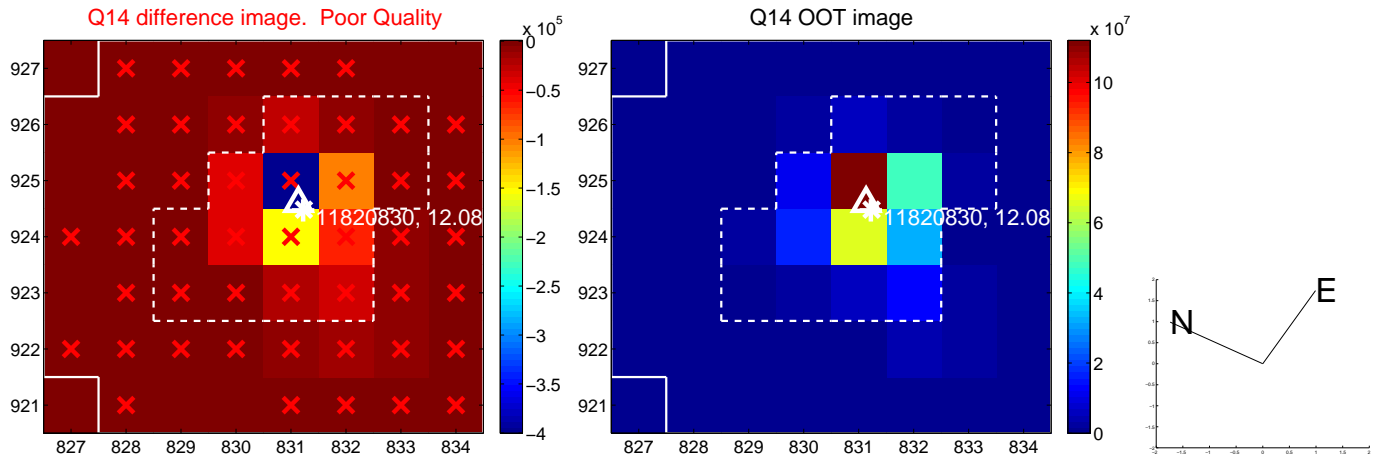
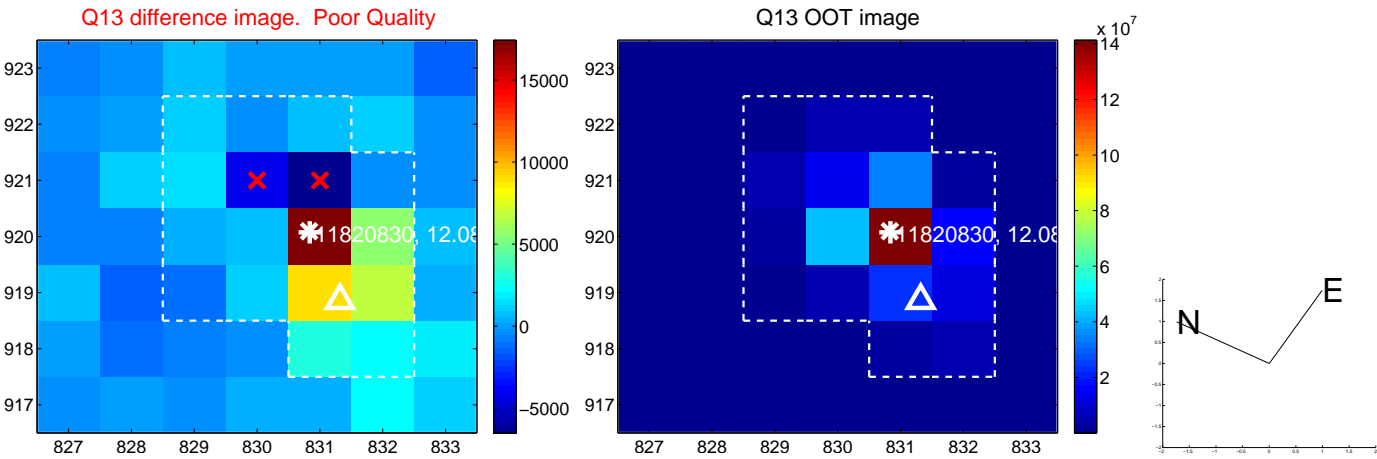
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



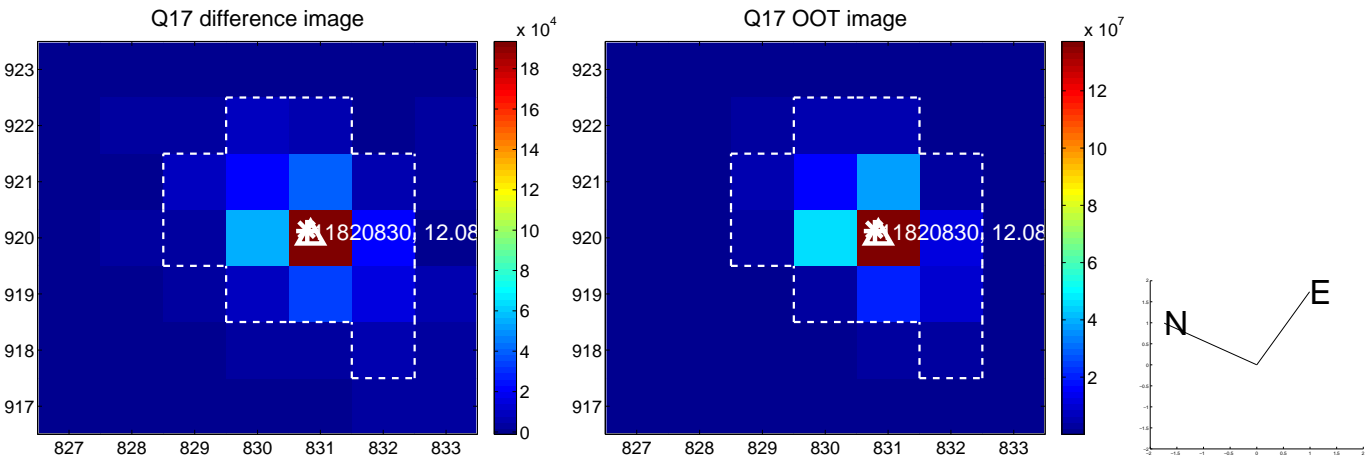
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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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

