Report

Project: 1967_Luiz Goes/Canção da Infância

Key (Global - All Beats): ('d', 'min')
Key (Section 2 Only): ('d', 'min')

Computed median BPM: 38.28

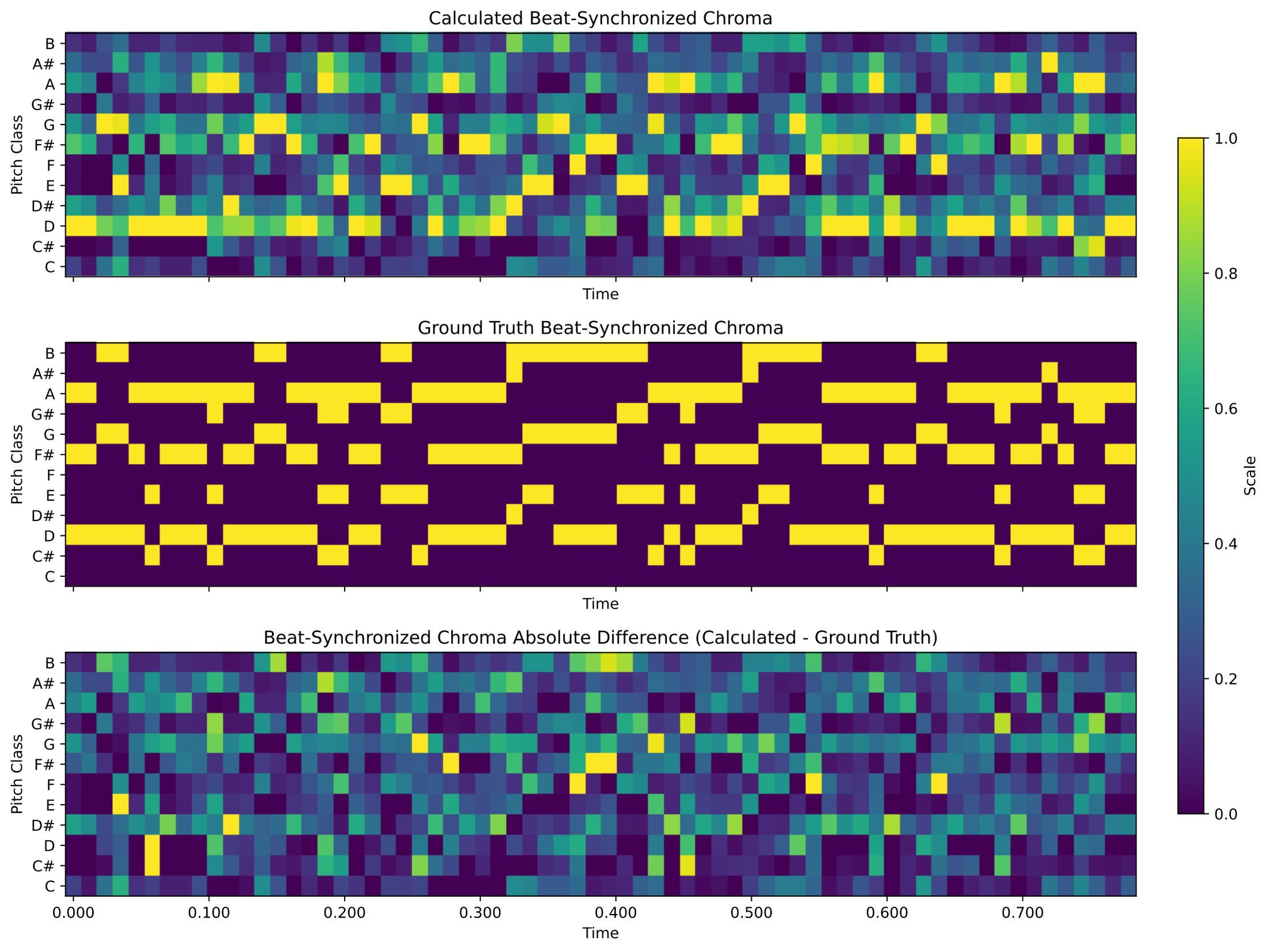
Beat-Synchronized HCF:
Pearson Correlation Coefficient (R): 0.7172
R-squared (R^2): 0.5144
P-value: 0.0000

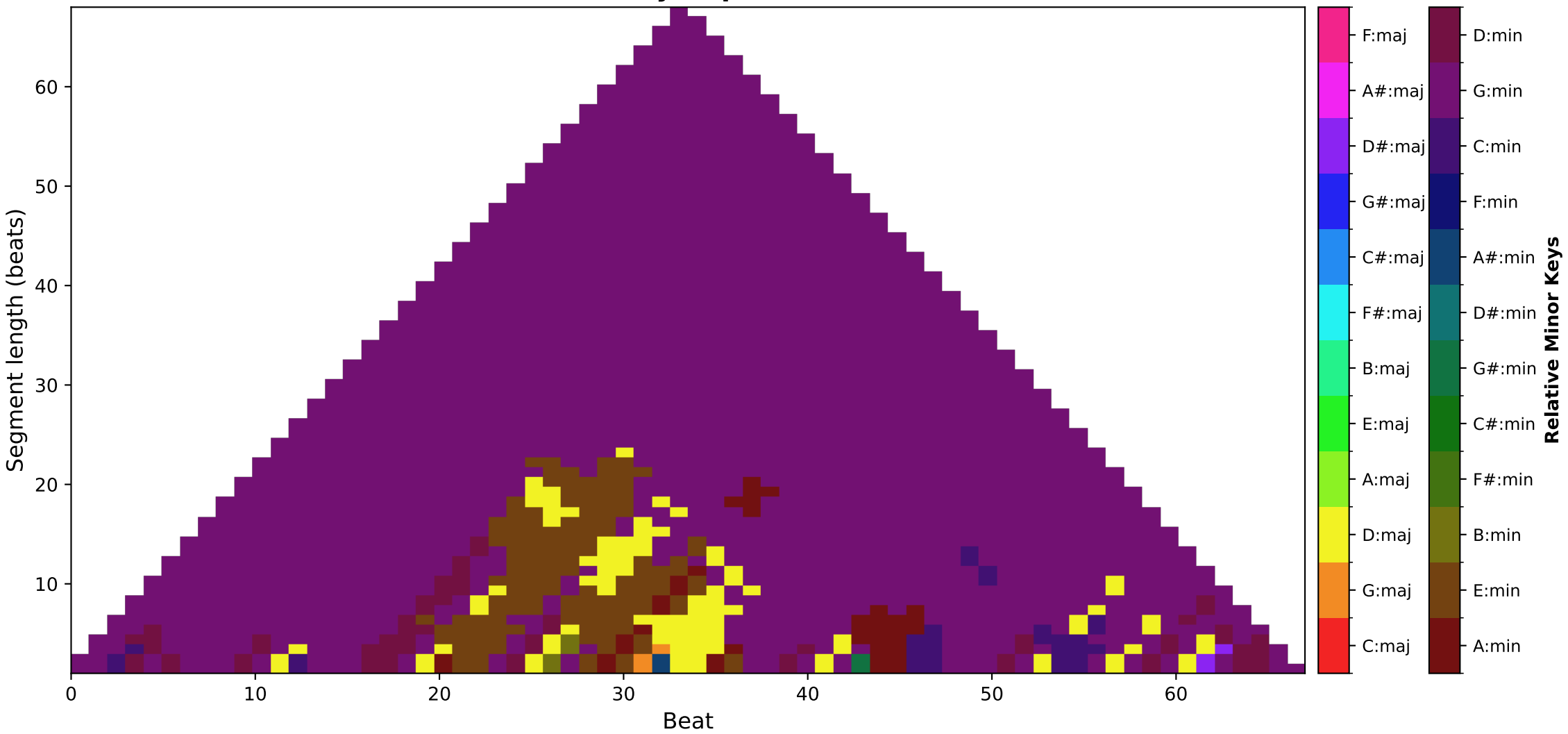
Frame-Level HCF:
Pearson Correlation Coefficient (R): 0.0306
R-squared (R^2): 0.0009
P-value: 0.0006

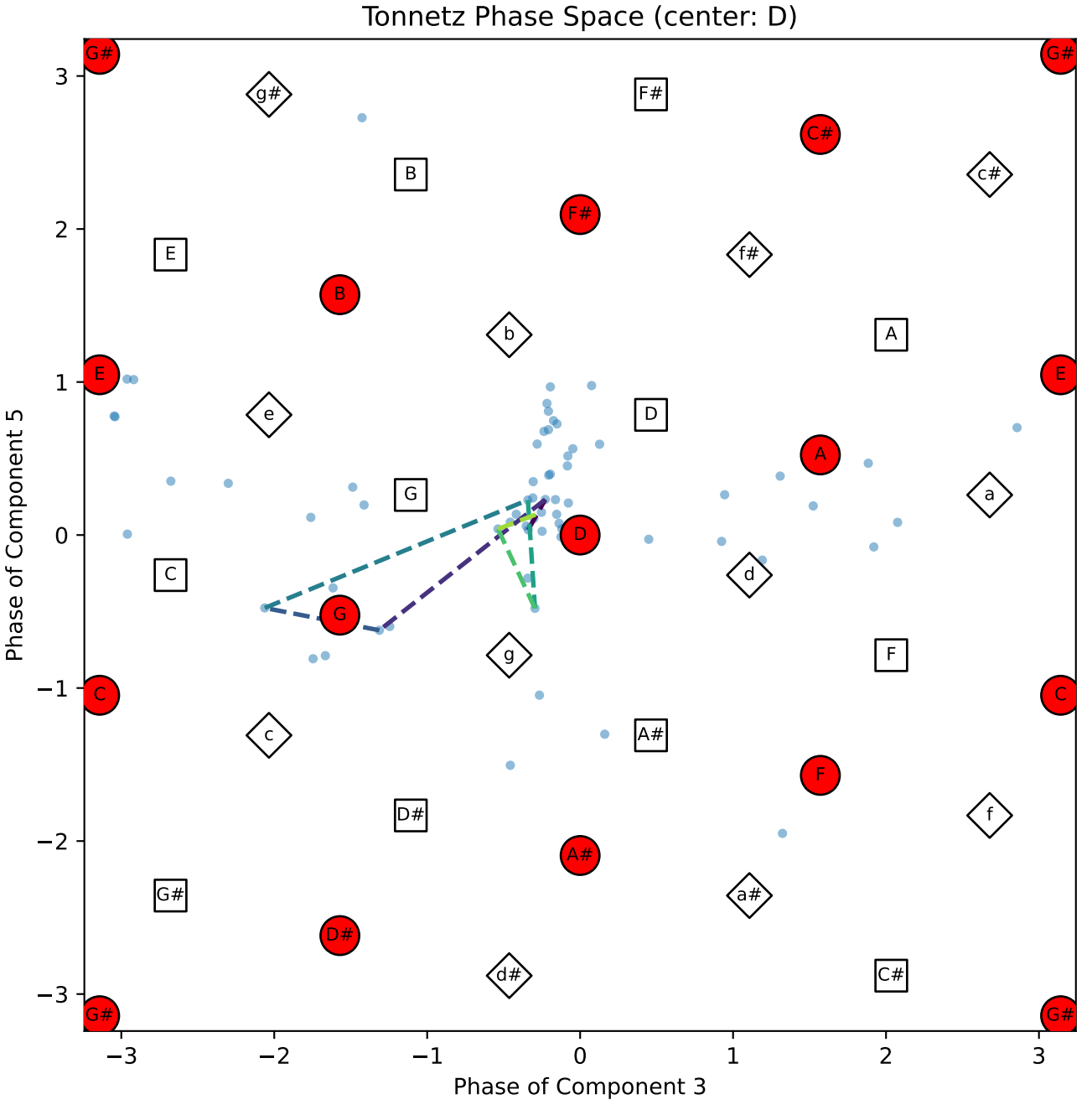
Beat-Synchronized Chroma Comparison:
Pearson Correlation Coefficient (R): 0.6197
R-squared (R^2): 0.3840
P-value: 0.0000
Sum of Absolute Differences: 219.0835
Sum of Squared Differences: 105.4941

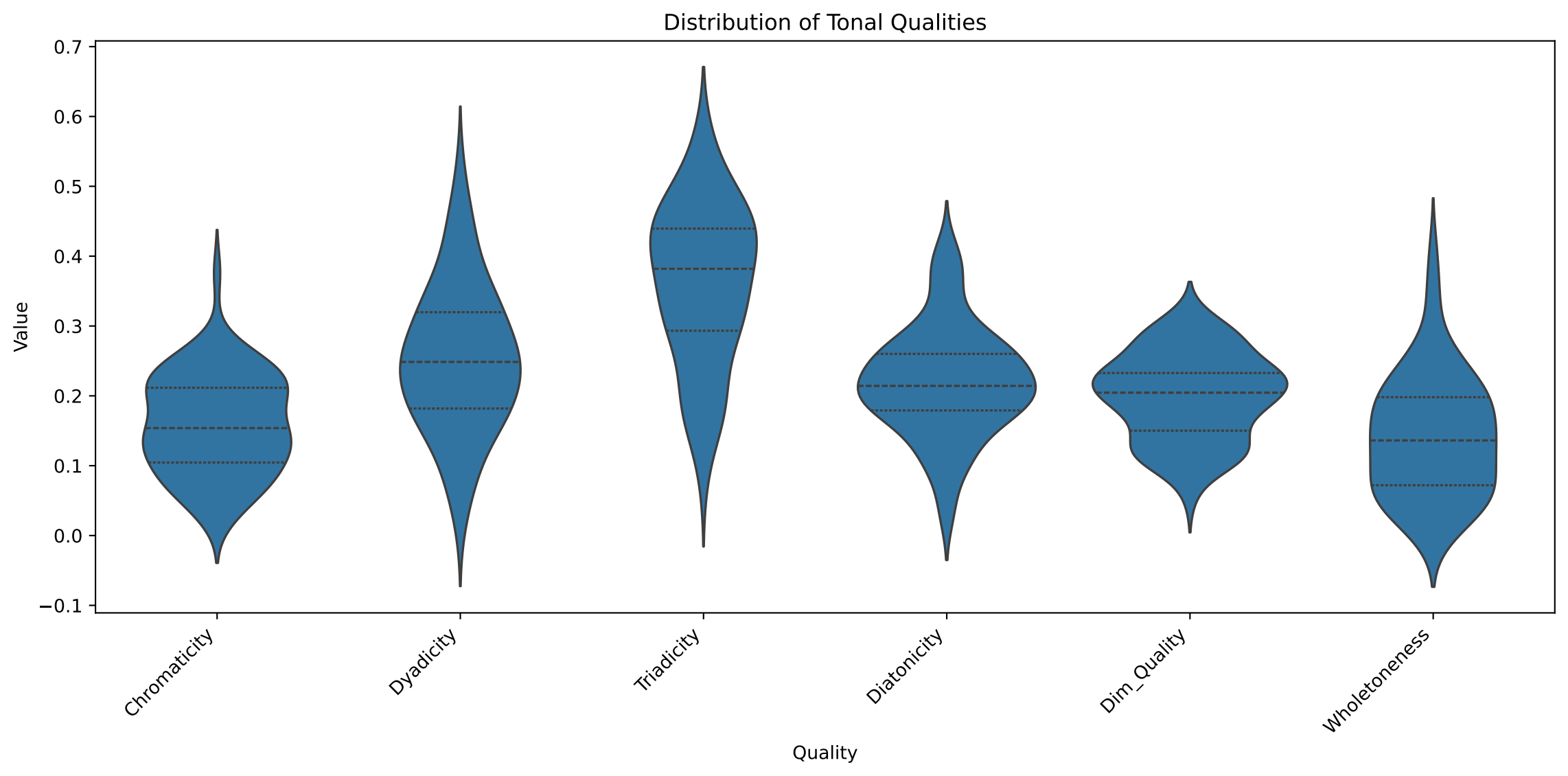
Sensory Dissonance and Tonal Dissonance:
Pearson Correlation Coefficient (R): -0.1053
R-squared (R^2): 0.0111
P-value: 0.3926

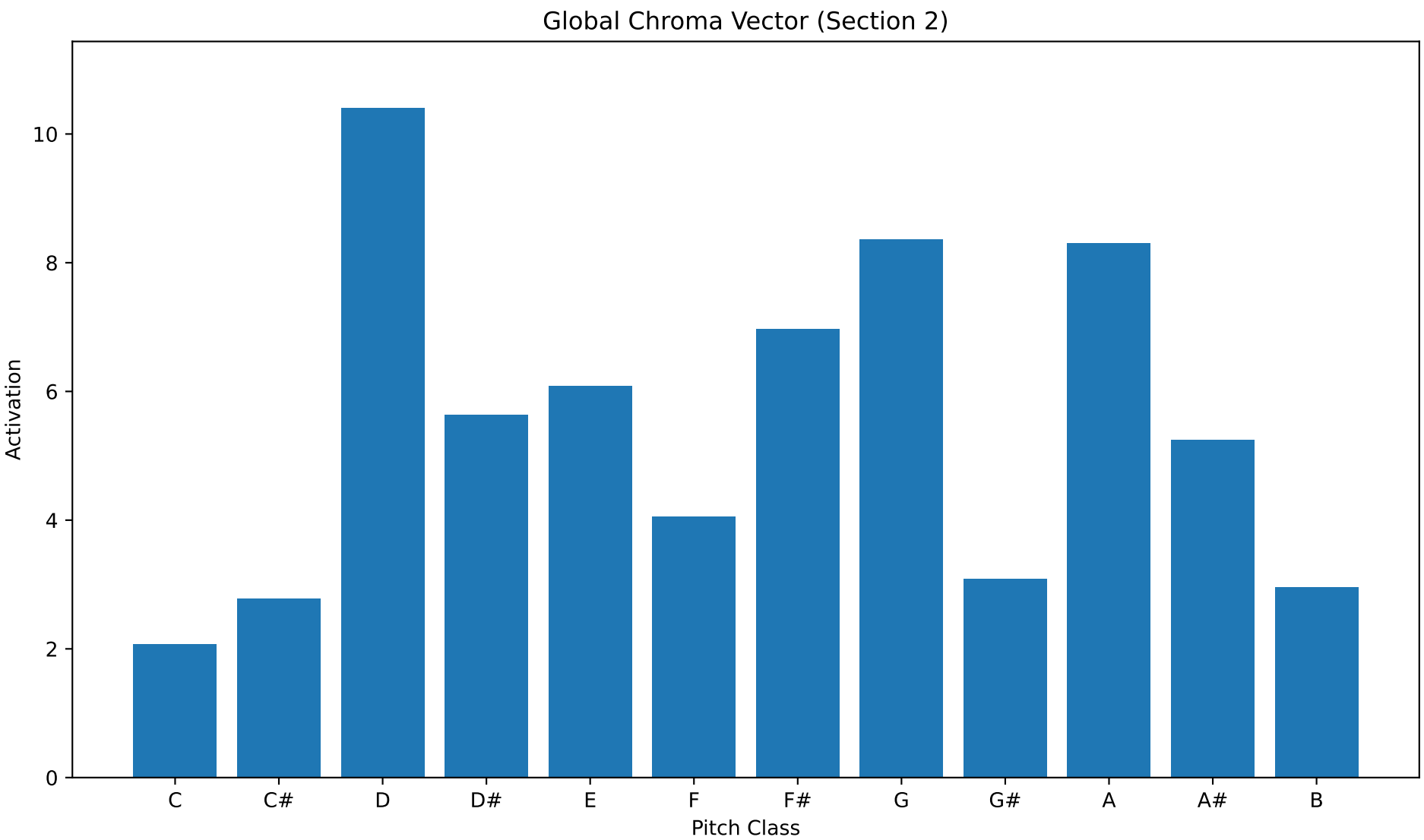
Tonal Dispersion (Audio vs. Ground Truth):
Pearson Correlation Coefficient (R): 0.8276
R-squared (R^2): 0.6849
P-value: 0.0000

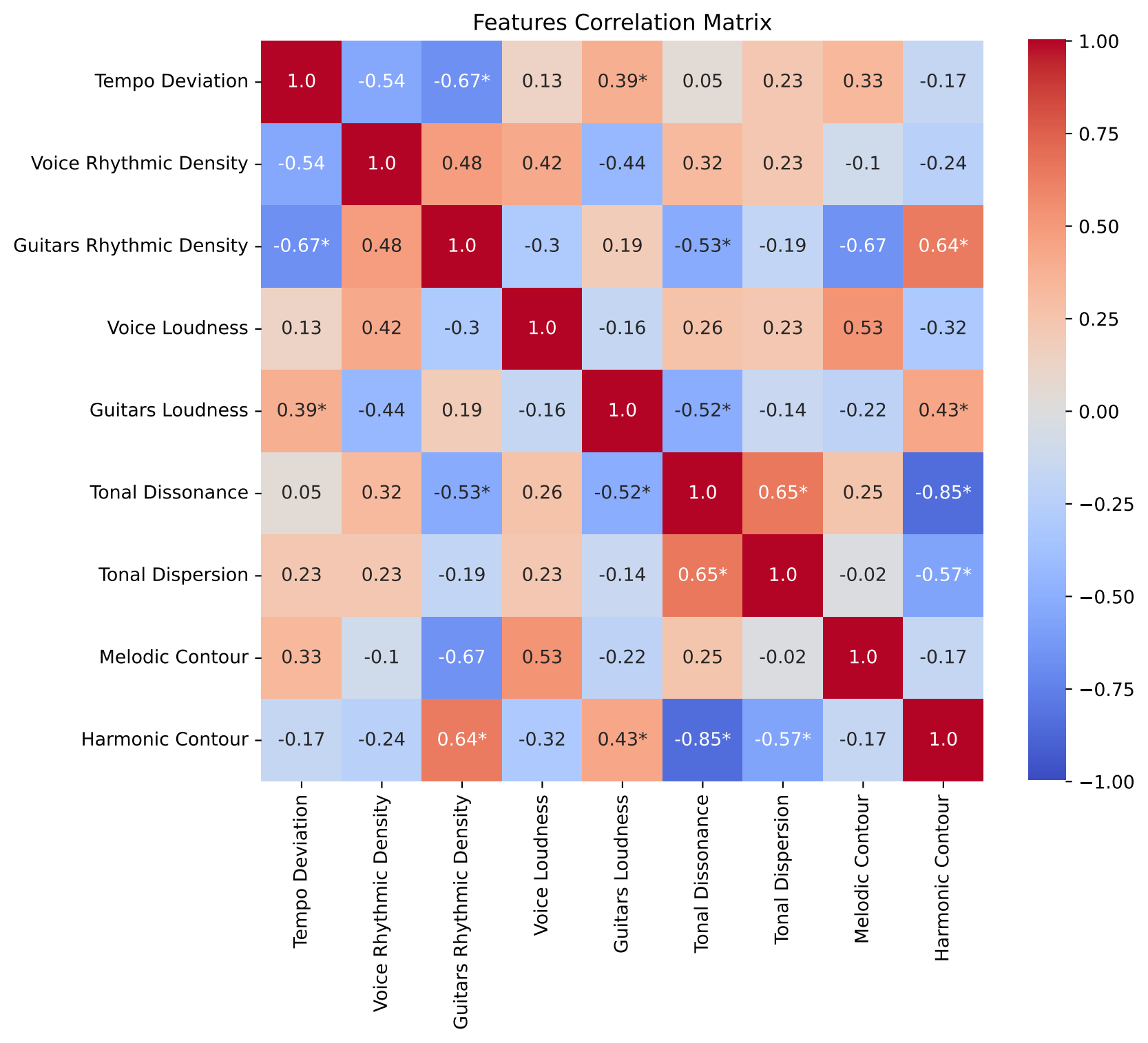

Calculated Beat-Synchronized Chroma
Ground Truth Beat-Synchronized Chroma
Beat-Synchronized Chroma Absolute Difference (Calculated - Ground Truth)
Pitch Class
B
A#
A
G#
G
F#
F
E
D#
D
C#
C
Time
0.000
0.100
0.200
0.300
0.400
0.500
0.600
0.700
Scale
1.0
0.8
0.6
0.4
0.2
0.0

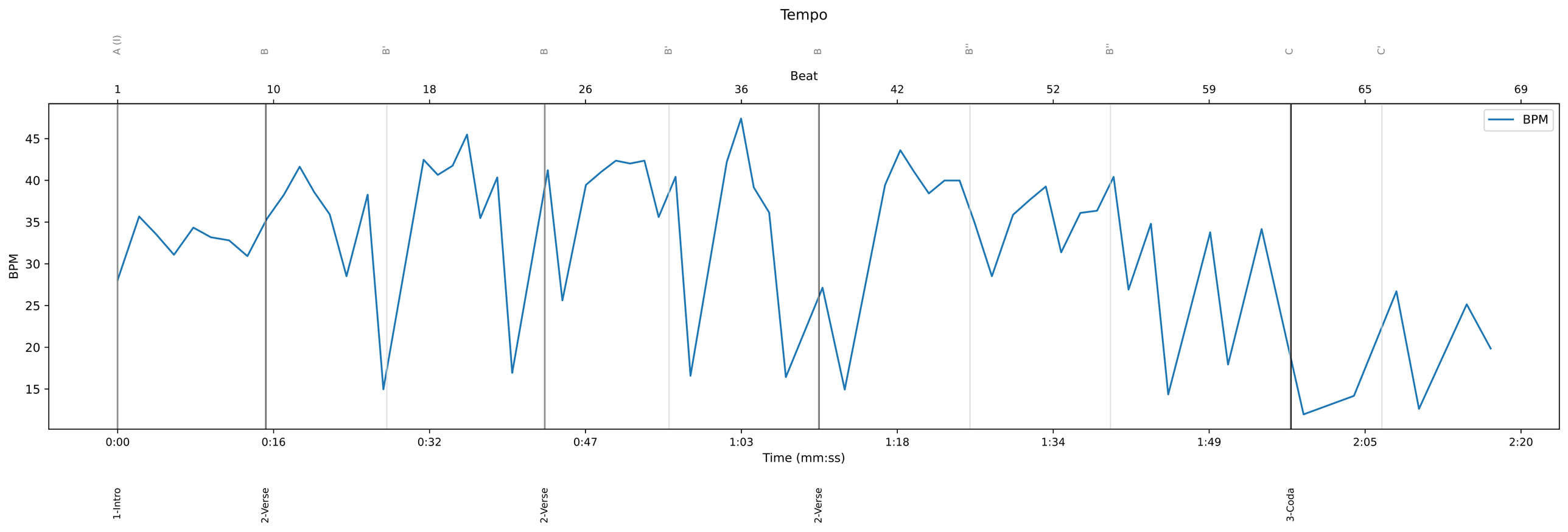

Keyscape
Segment length (beats)
Beat
0
10
20
30
40
50
60
F:maj
A#:maj
D#:maj
G#:maj
C#:maj
F#:maj
B:maj
E:maj
A:maj
D:maj
G:maj
C:maj
D:min
G:min
C:min
F:min
A#:min
D#:min
G#:min
C#:min
F#:min
B:min
E:min
A:min
Relative Minor Keys

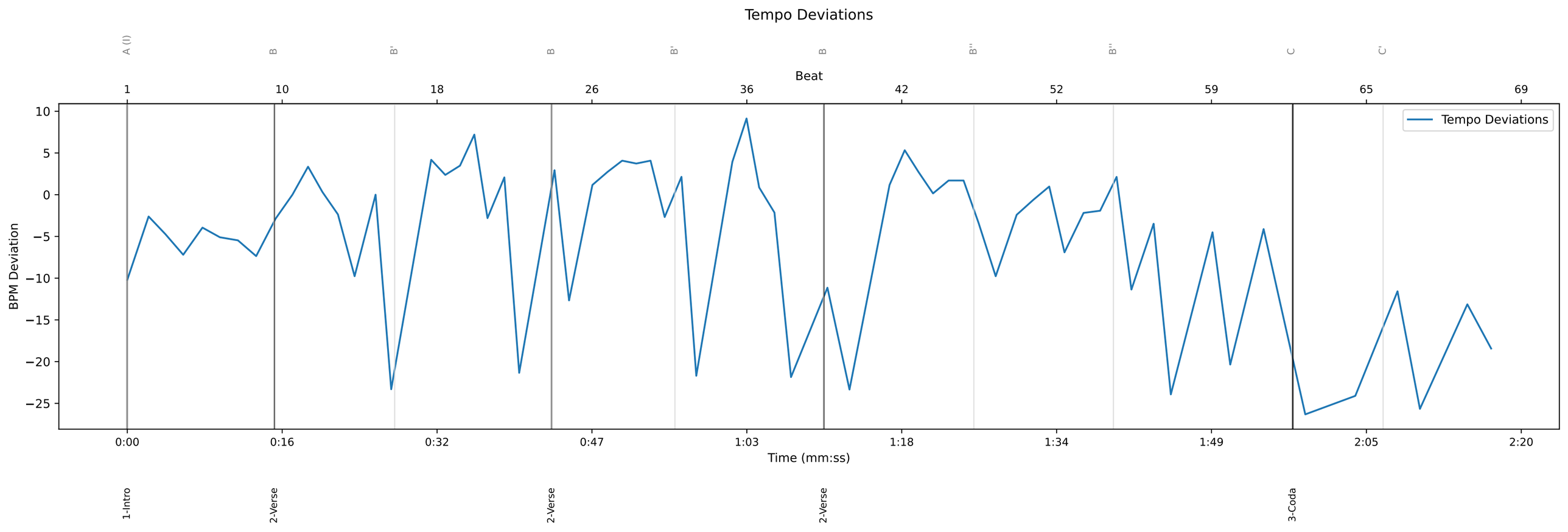

Tonnetz Phase Space (center: D)
Phase of Component 5
Phase of Component 3
3
2
1
0
−1
−2
−3
G#
g#
F#
C#
c#
B
F#
E
f#
B
b
A
E
e
D
A
G
a
D
C
d
G
g
F
C
c
A#
F
D#
f
A#
G#
a#
D#
C#
d#
G#

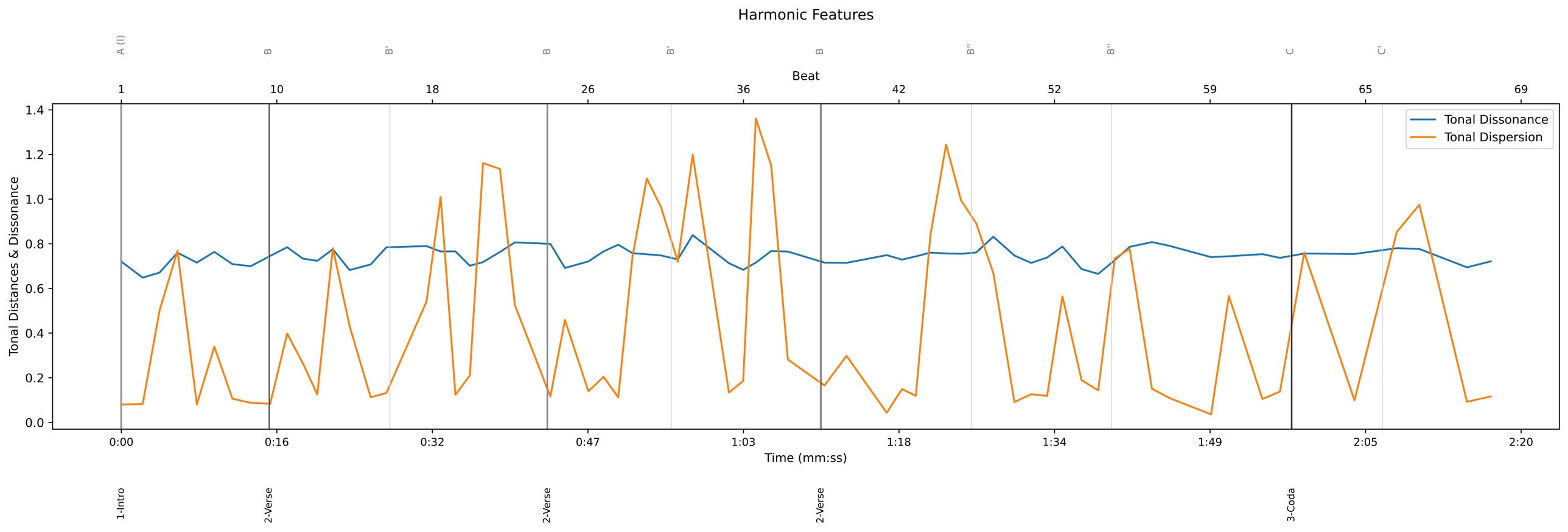

Distribution of Tonal Qualities
Value
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
−0.1
Chromaticity
Dyadicity
Triadicity
Diatonicity
Dim_Quality
Wholetoneness
Quality

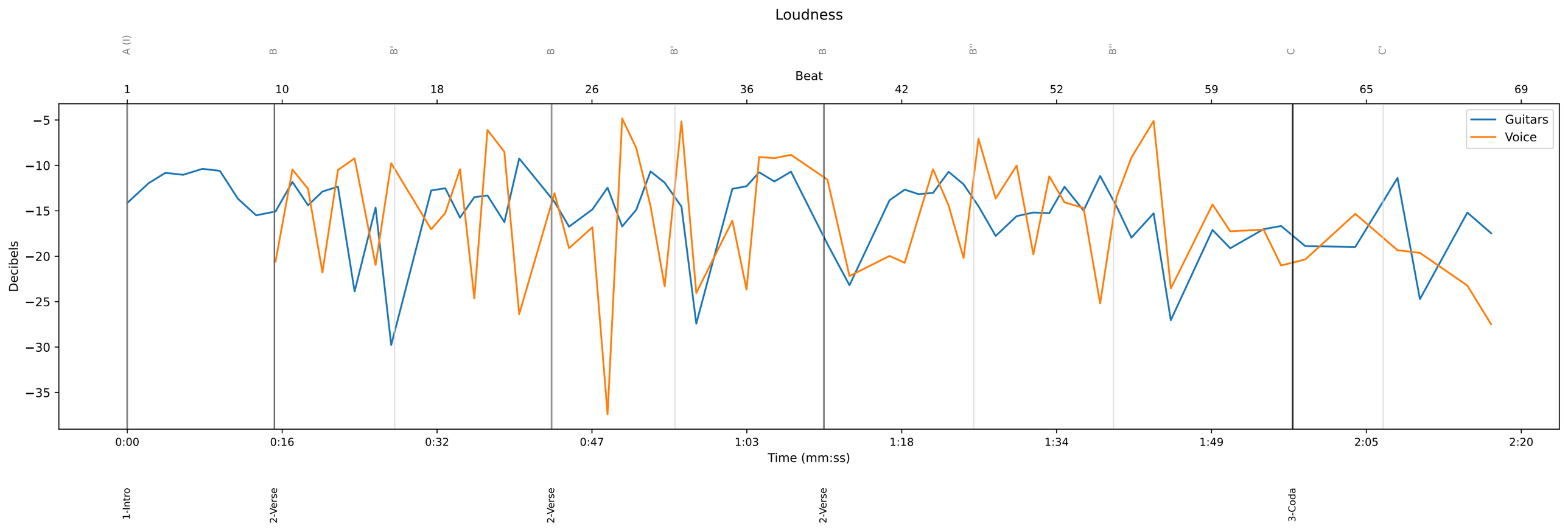

Global Chroma Vector (Section 2)
Activation
0
2
4
6
8
10
C
C#
D
D#
E
F
F#
G
G#
A
A#
B
Pitch Class

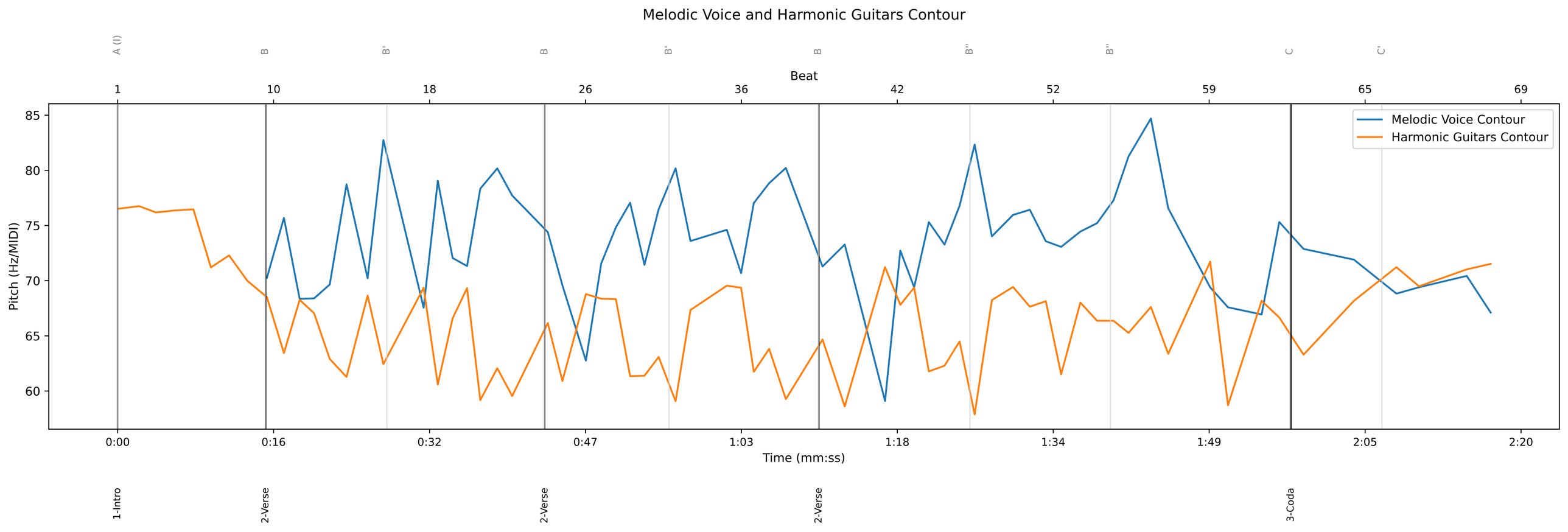

Features Correlation Matrix
Tempo Deviation
Voice Rhythmic Density
Guitars Rhythmic Density
Voice Loudness
Guitars Loudness
Tonal Dissonance
Tonal Dispersion
Melodic Contour
Harmonic Contour
1.0 -0.54 -0.67* 0.13 0.39* 0.05 0.23 0.33 -0.17
-0.54 1.0 0.48 0.42 -0.44 0.32 0.23 -0.1 -0.24
-0.67* 0.48 1.0 -0.3 0.19 -0.53* -0.19 -0.67 0.64*
0.13 0.42 -0.3 1.0 -0.16 0.26 0.23 0.53 -0.32
0.39* -0.44 0.19 -0.16 1.0 -0.52* -0.14 -0.22 0.43*
0.05 0.32 -0.53* 0.26 -0.52* 1.0 0.65* 0.25 -0.85*
0.23 0.23 -0.19 0.23 -0.14 0.65* 1.0 -0.02 -0.57*
0.33 -0.1 -0.67 0.53 -0.22 0.25 -0.02 1.0 -0.17
-0.17 -0.24 0.64* -0.32 0.43* -0.85* -0.57* -0.17 1.0
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00

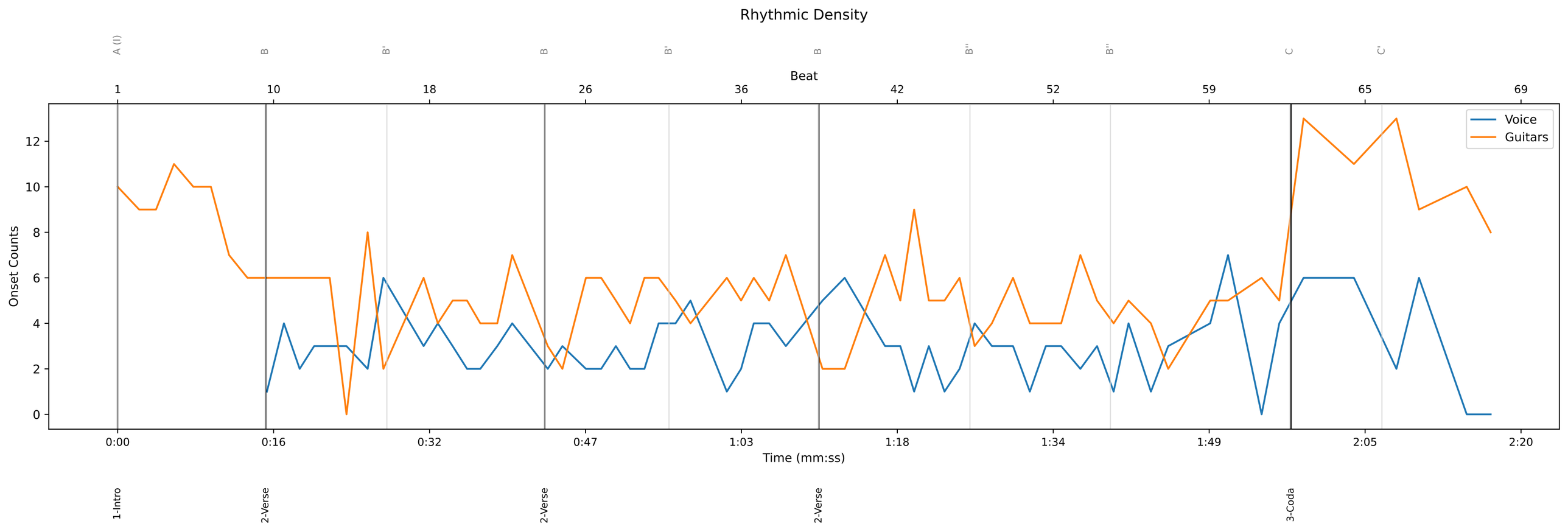

Tempo
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
BPM
45
40
35
30
25
20
15
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

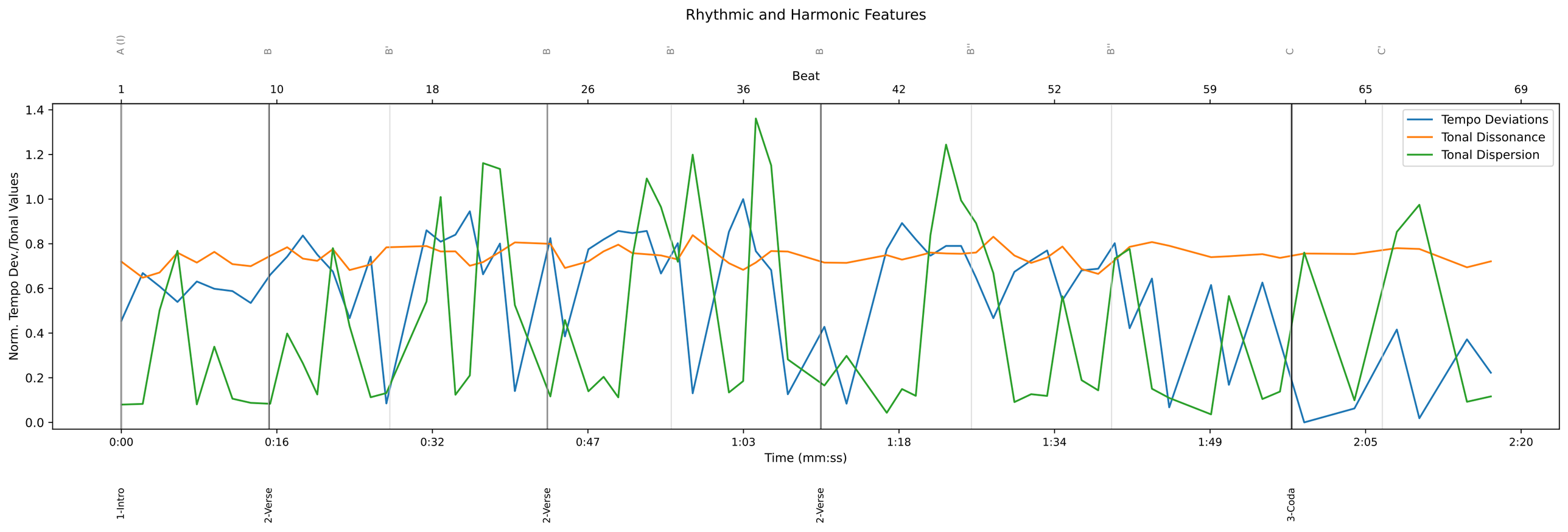

Tempo Deviations
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
10
5
0
−5
−10
−15
−20
−25
BPM Deviation
Tempo Deviations
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

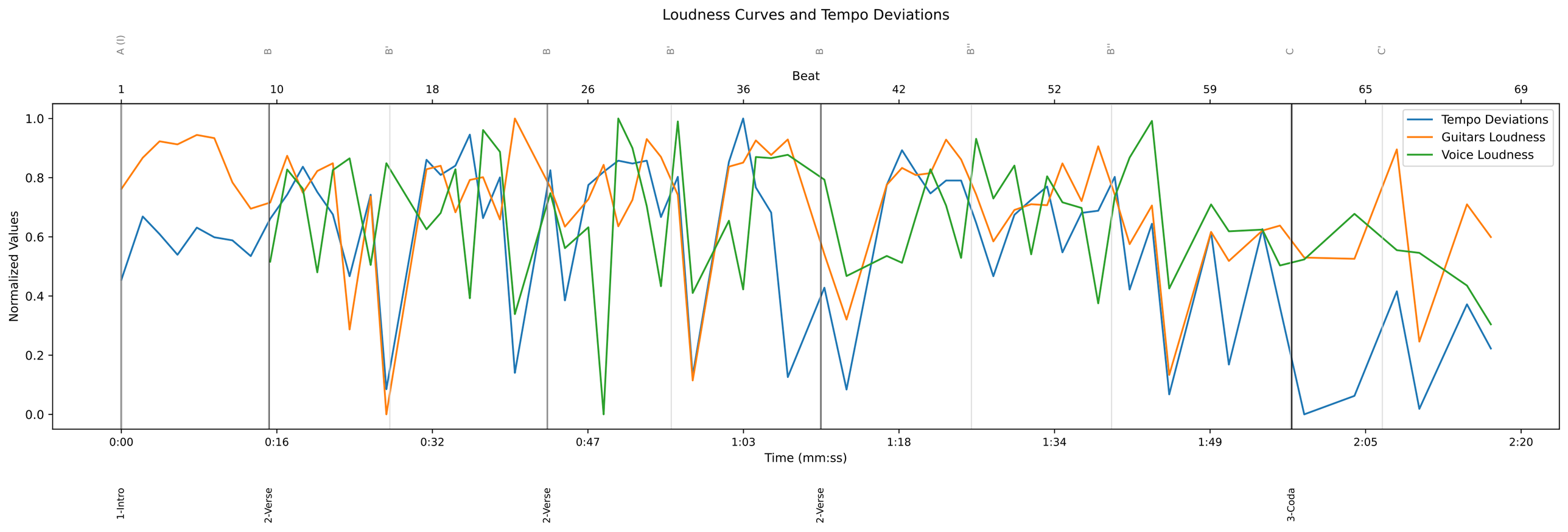

Harmonic Features
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
Tonal Dissonance
Tonal Dispersion
Tonal Distances & Dissonance
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

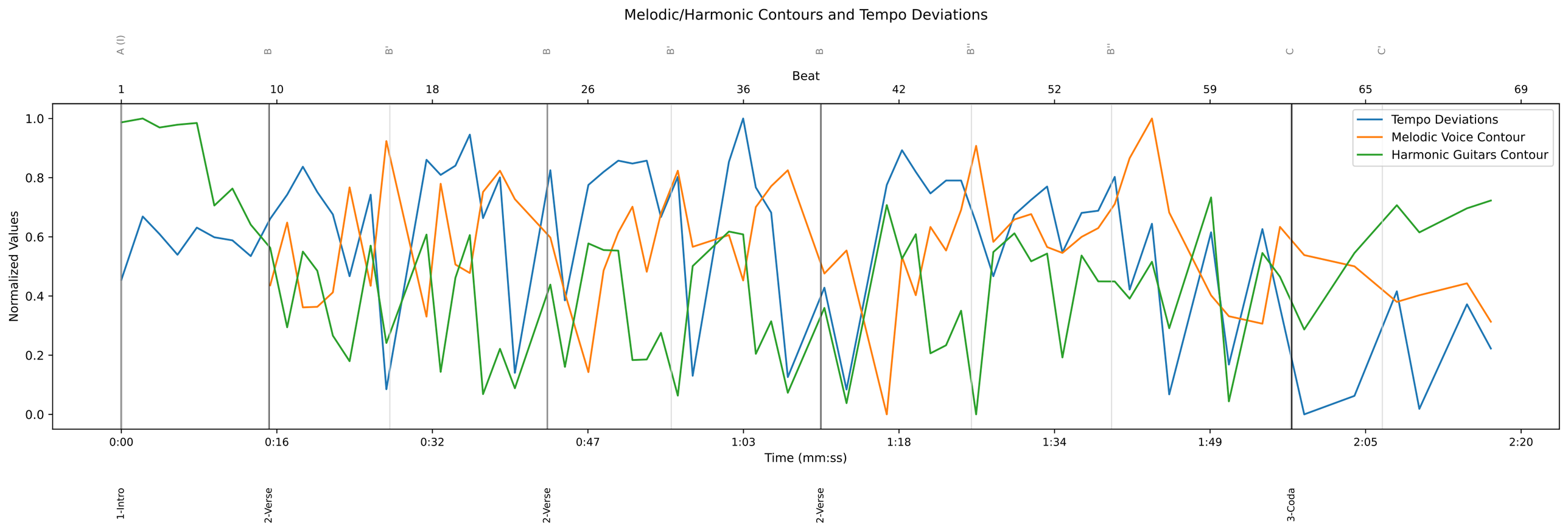

Loudness
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
Guitars
Voice
Decibels
−5
−10
−15
−20
−25
−30
−35
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

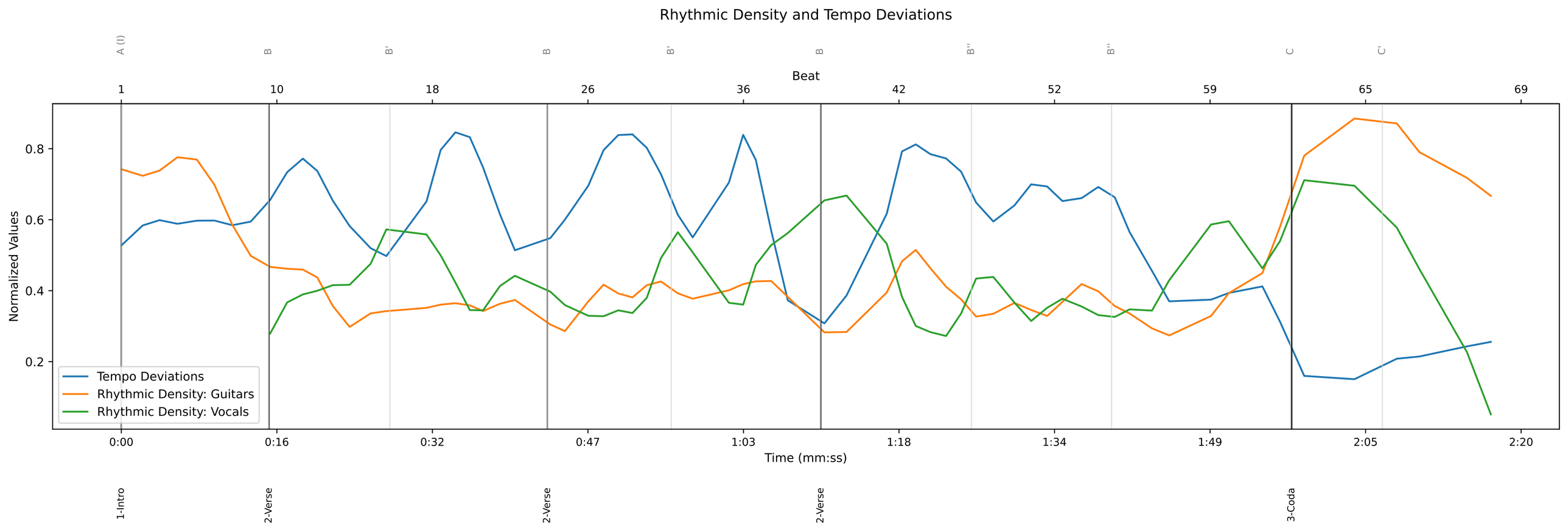

Melodic Voice and Harmonic Guitars Contour
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
Melodic Voice Contour
Harmonic Guitars Contour
Pitch (Hz/MIDI)
85
80
75
70
65
60
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

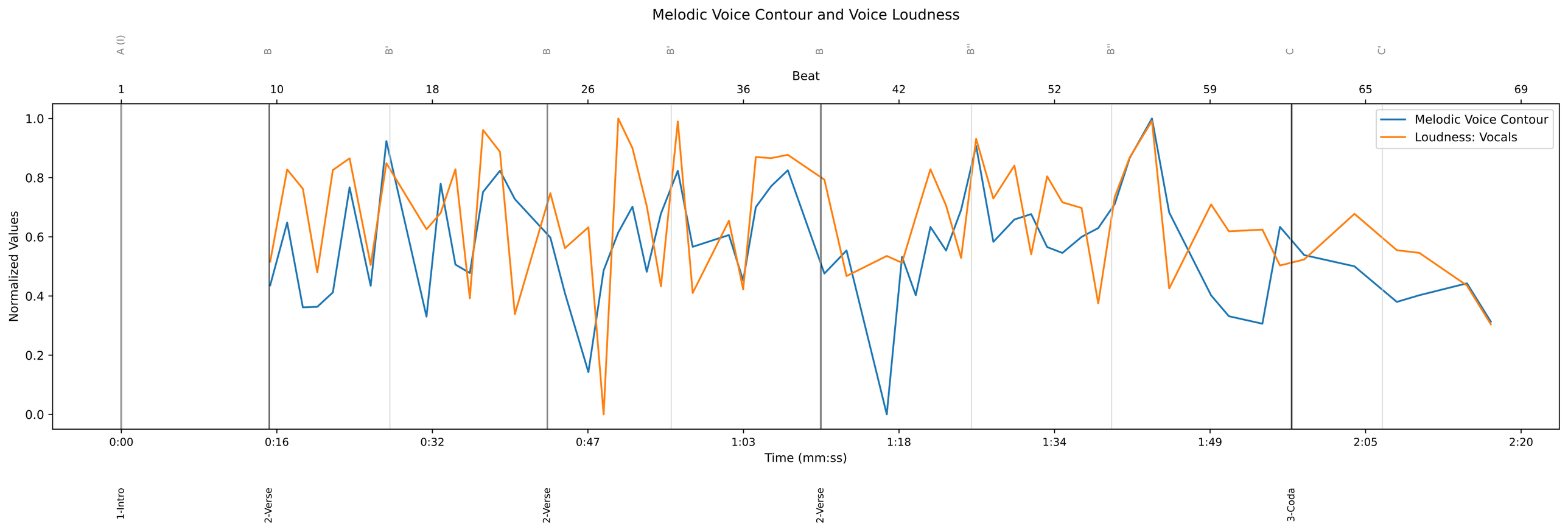

Rhythmic Density
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
Voice
Guitars
Onset Counts
0
2
4
6
8
10
12
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

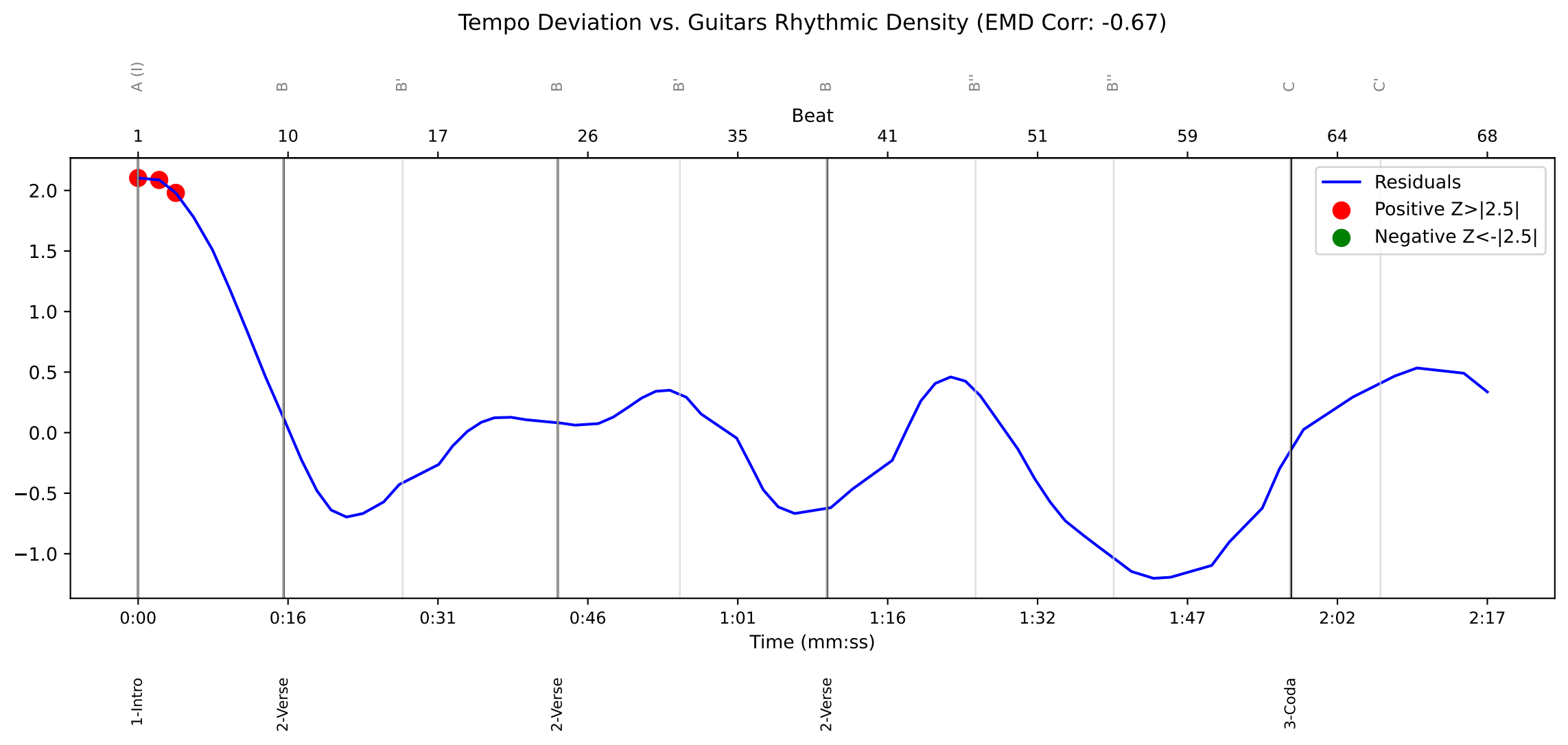

Rhythmic and Harmonic Features
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
Tempo Deviations
Tonal Dissonance
Tonal Dispersion
Norm. Tempo Dev./Tonal Values
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

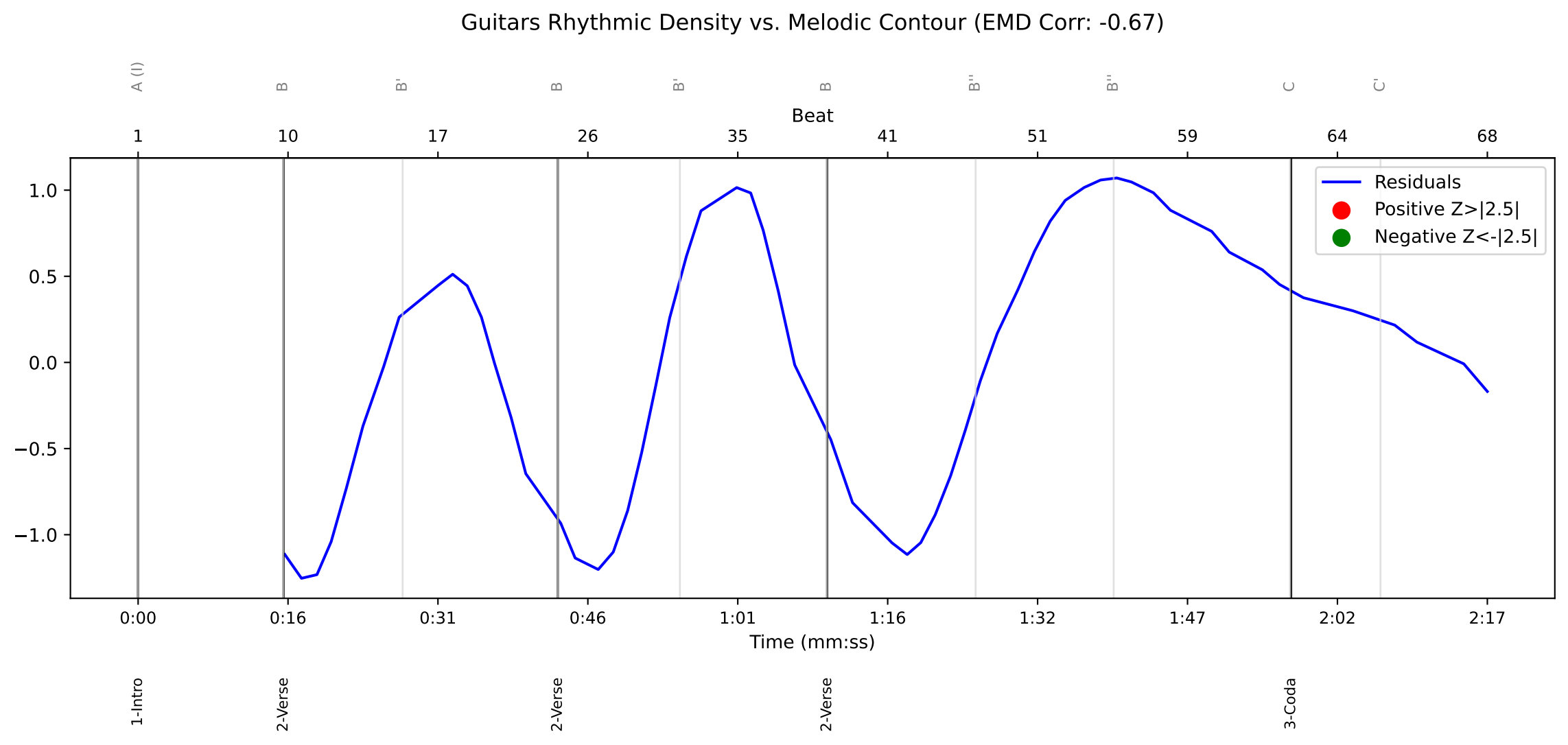

Loudness Curves and Tempo Deviations
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
Normalized Values
1.0
0.8
0.6
0.4
0.2
0.0
Tempo Deviations
Guitars Loudness
Voice Loudness
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

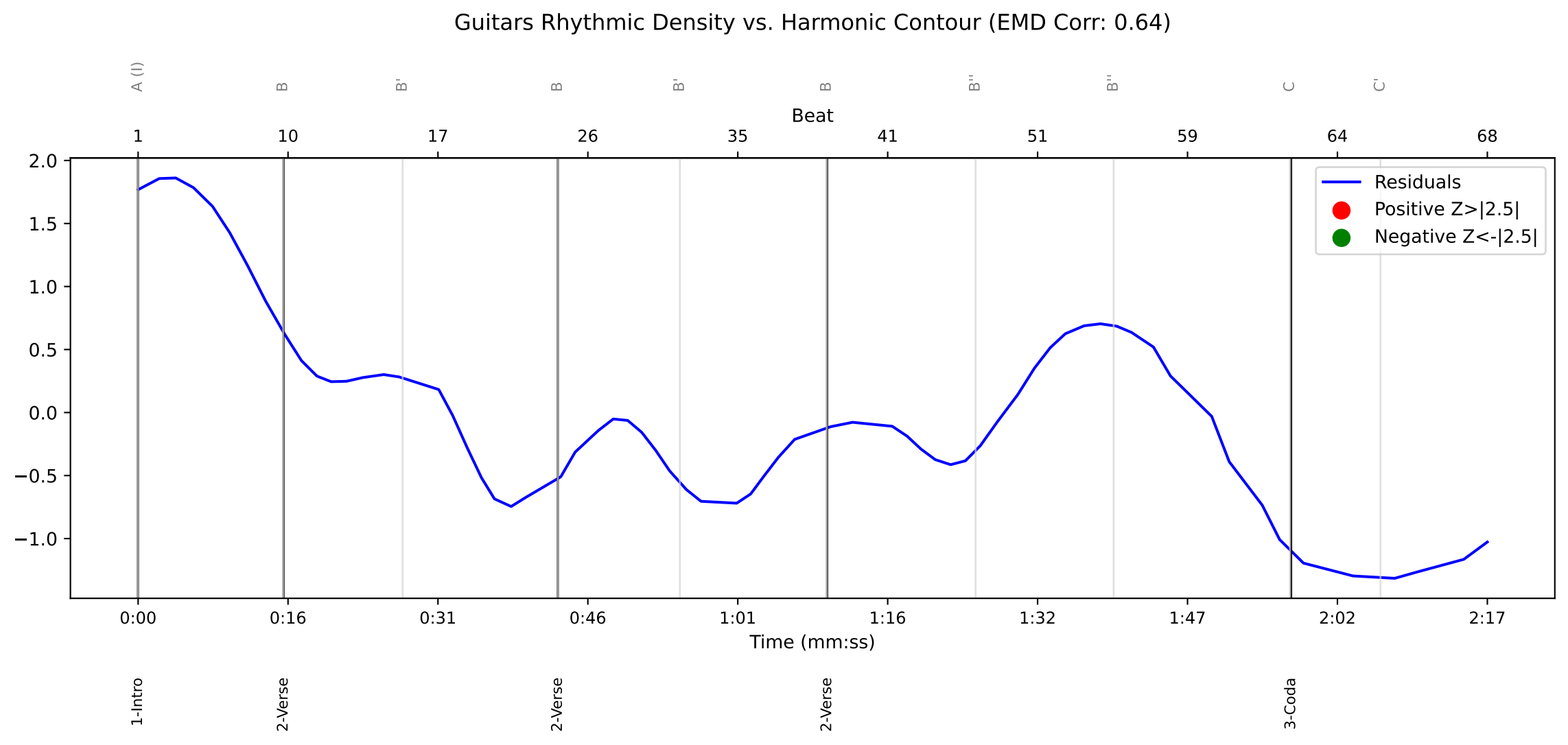

Melodic/Harmonic Contours and Tempo Deviations
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
Normalized Values
1.0
0.8
0.6
0.4
0.2
0.0
Tempo Deviations
Melodic Voice Contour
Harmonic Guitars Contour
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

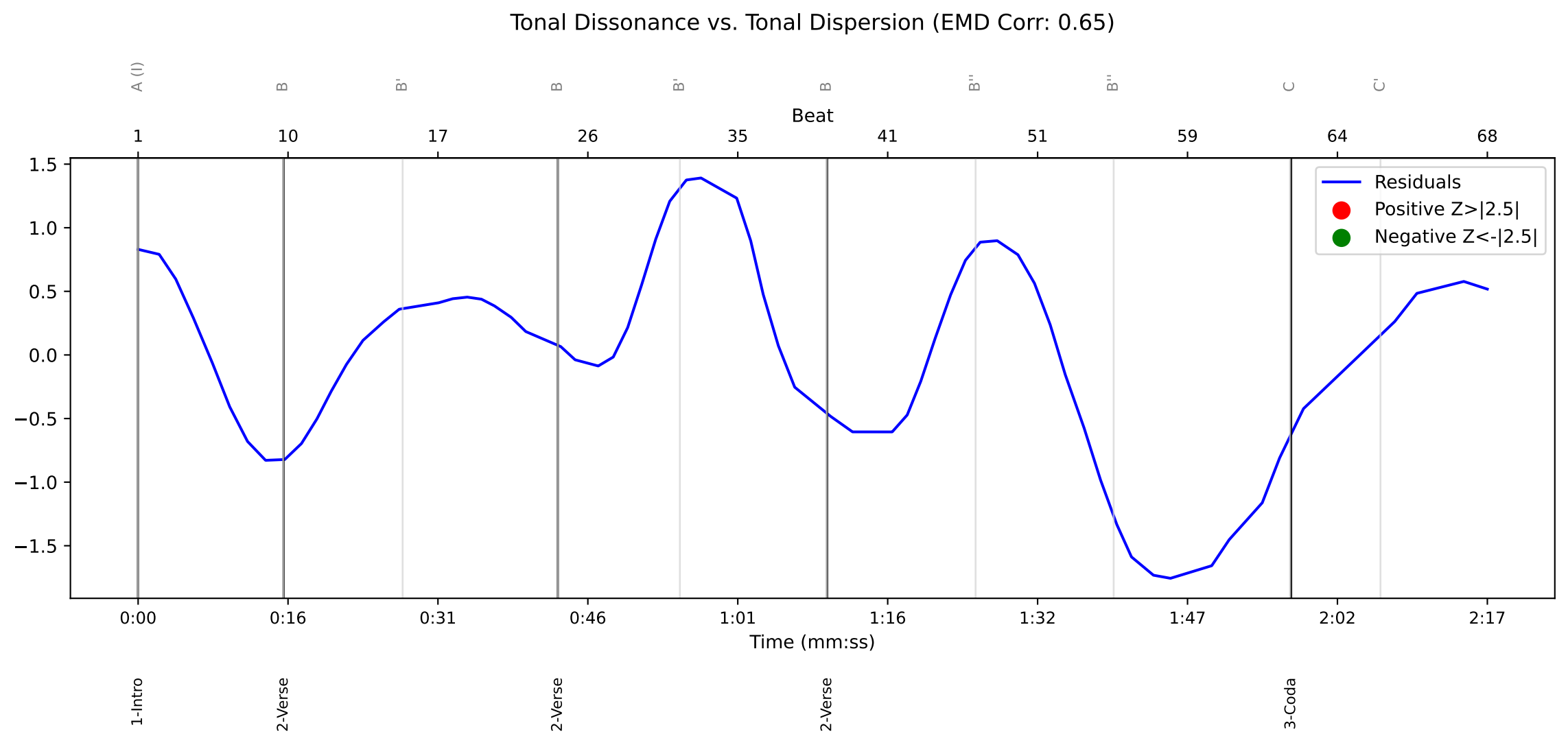

Rhythmic Density and Tempo Deviations
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
Normalized Values
0.8
0.6
0.4
0.2
Tempo Deviations
Rhythmic Density: Guitars
Rhythmic Density: Vocals
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda

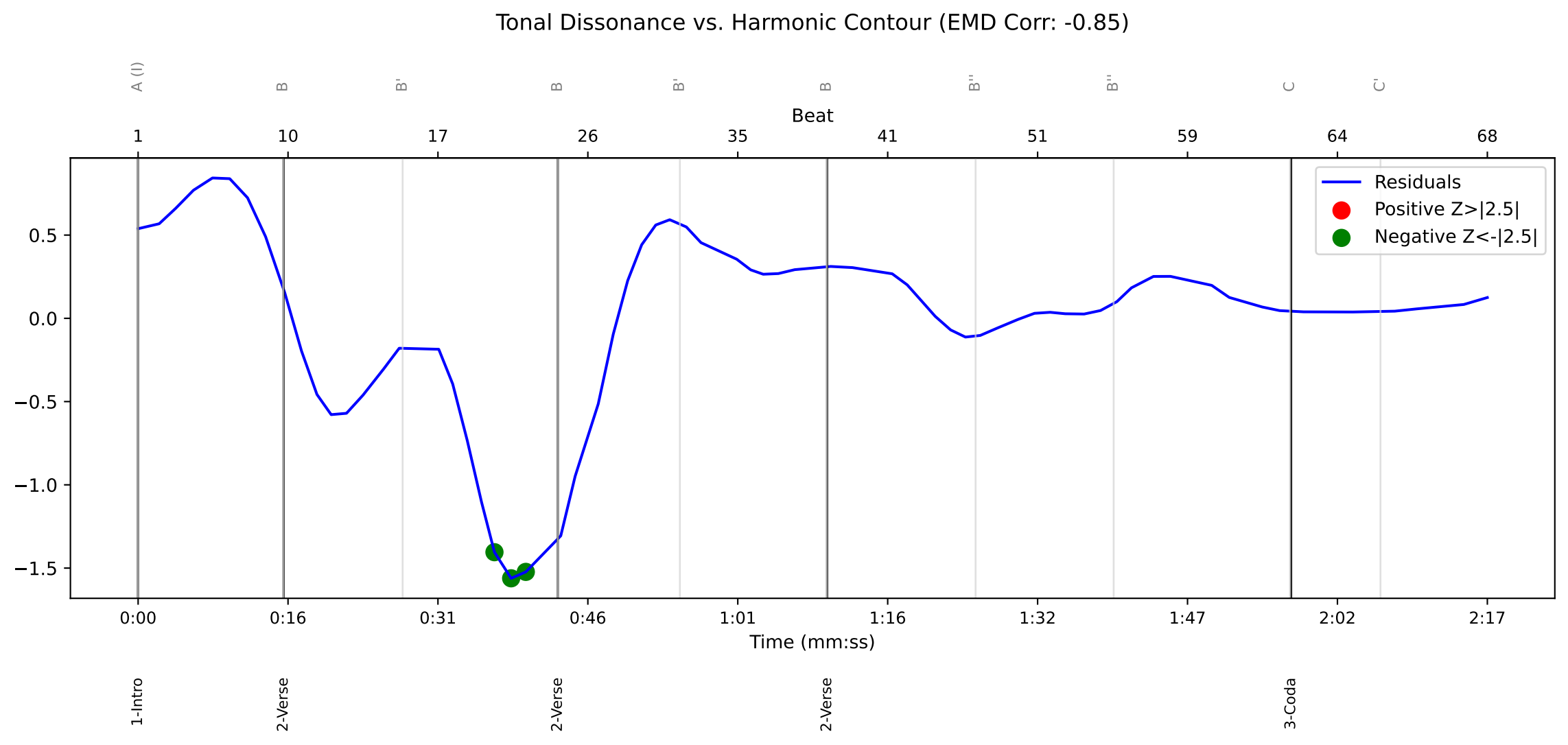

Melodic Voice Contour and Voice Loudness
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
18
26
36
42
52
59
65
69
Melodic Voice Contour
Loudness: Vocals
Normalized Values
1.0
0.8
0.6
0.4
0.2
0.0
0:00
0:16
0:32
0:47
1:03
1:18
1:34
1:49
2:05
2:20
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda


Tempo Deviation vs. Guitars Rhythmic Density (EMD Corr: -0.67)
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
17
26
35
41
51
59
64
68
Residuals
Positive Z>|2.5|
Negative Z<-|2.5|
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
0:00
0:16
0:31
0:46
1:01
1:16
1:32
1:47
2:02
2:17
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda


Guitars Rhythmic Density vs. Melodic Contour (EMD Corr: -0.67)
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
17
26
35
41
51
59
64
68
1.0
0.5
0.0
−0.5
−1.0
Residuals
Positive Z>|2.5|
Negative Z<-|2.5|
0:00
0:16
0:31
0:46
1:01
1:16
1:32
1:47
2:02
2:17
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda


Guitars Rhythmic Density vs. Harmonic Contour (EMD Corr: 0.64)
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
17
26
35
41
51
59
64
68
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
Residuals
Positive Z>|2.5|
Negative Z<-|2.5|
0:00
0:16
0:31
0:46
1:01
1:16
1:32
1:47
2:02
2:17
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda


Tonal Dissonance vs. Tonal Dispersion (EMD Corr: 0.65)
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
17
26
35
41
51
59
64
68
1.5
1.0
0.5
0.0
−0.5
−1.0
−1.5
Residuals
Positive Z>|2.5|
Negative Z<-|2.5|
0:00
0:16
0:31
0:46
1:01
1:16
1:32
1:47
2:02
2:17
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda


Tonal Dissonance vs. Harmonic Contour (EMD Corr: -0.85)
A (I)
B
B'
B
B'
B
B''
B''
C
C'
Beat
1
10
17
26
35
41
51
59
64
68
Residuals
Positive Z>|2.5|
Negative Z<-|2.5|
0.5
0.0
−0.5
−1.0
−1.5
0:00
0:16
0:31
0:46
1:01
1:16
1:32
1:47
2:02
2:17
Time (mm:ss)
1-Intro
2-Verse
2-Verse
2-Verse
3-Coda