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Routine and Isolation

MMus Composition Portfolio

Fred Crase

Submitted in fulfillment of the requirements of the degree of

Mmus (Composition)

School of Culture and Creative Arts

College of Arts

University of Glasgow

January 2014

Abstract

Contained in this thesis are four works (*The Last Day, Isolation Psychosis, Routines,* and *Intention)* and their respective commentaries, and filmed performances of the guitar-based works (*Isolation Psychosis* and *Intention*) which comprise the body of my MMus composition portfolio, completed 2013. The music in this portfolio challenges the idea of traditional guitar performance techniques (*Isolation Psychosis* and *Intention*), and binary code as a system of composition (*Routines*). I take a different physical approach to the instrument of guitar in order to challenge my own technical capabilities, as well as those of other performers who may wish to perform my work. This approach was also taken to generate new technique-driven musical material with interesting and beautiful results. The commentaries exist to provide both technical and psychological insight into the creation of these works.

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Additional Material: One data-DVD of video files (.wmv) of the filmed performances of *Isolation Psychosis* and *Intention*

Acknowledgements

I would like to acknowledge and thank my supervising Professor Bill Sweeney. All of his help and critique helped make these compositions what they are. I would also like to thank Dr. Nick Fells and Dr. Drew Hammond for their help as well.

The Last Day

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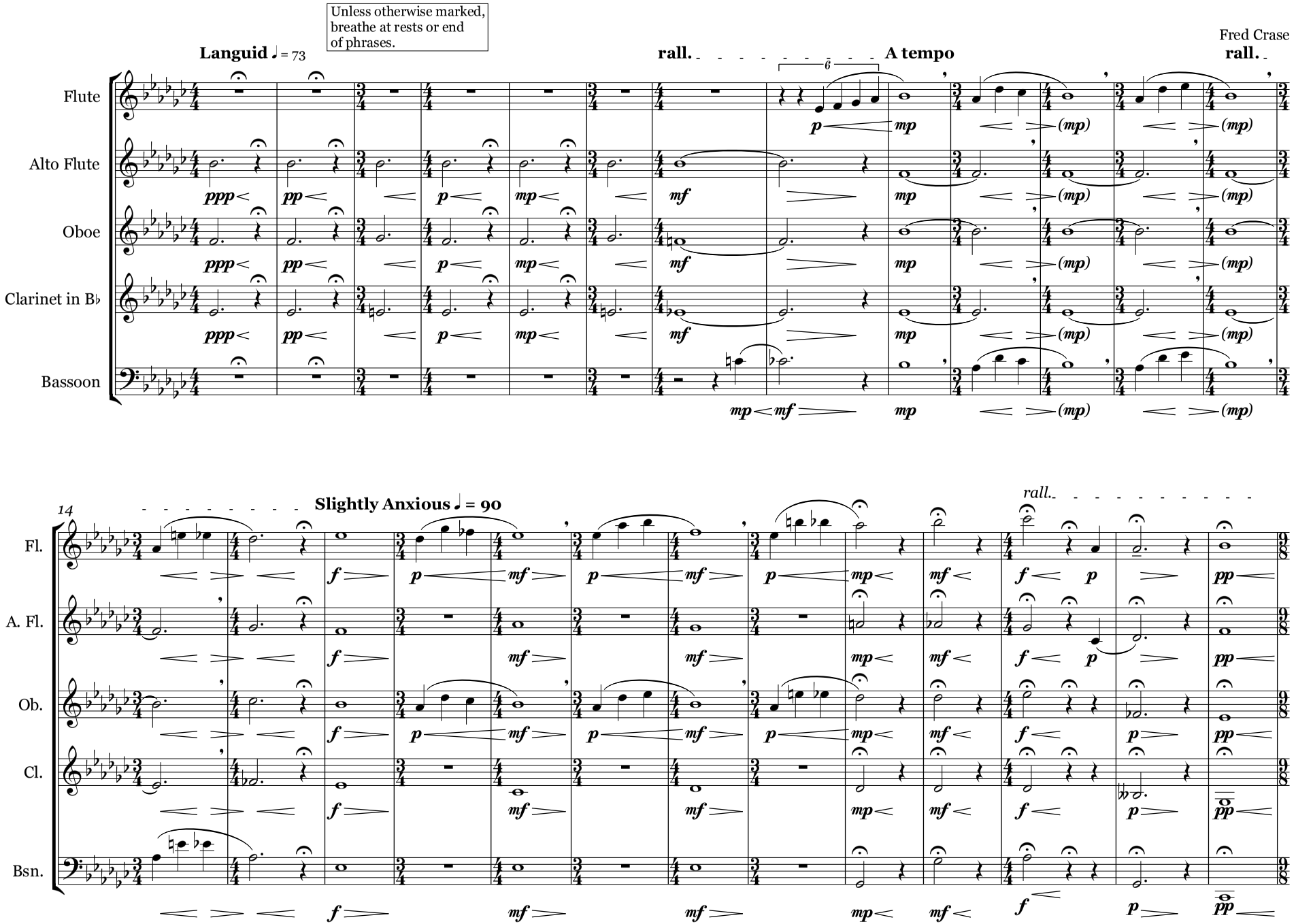
The Last Day



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Overwhelmed ♩. = 100

27

Fl.

A. Fl.

Ob.

Cl.

Bsn.

34

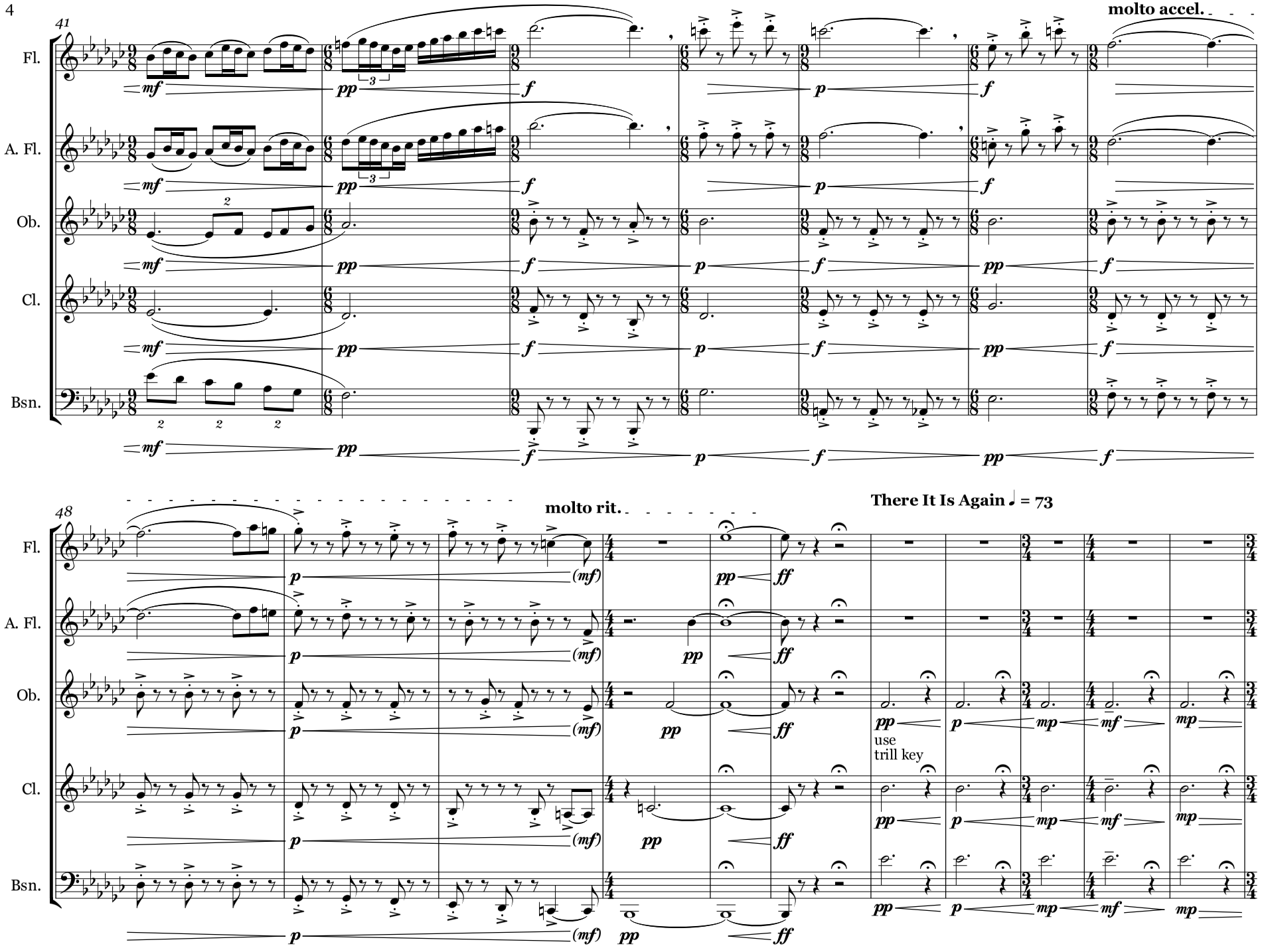
Fl.

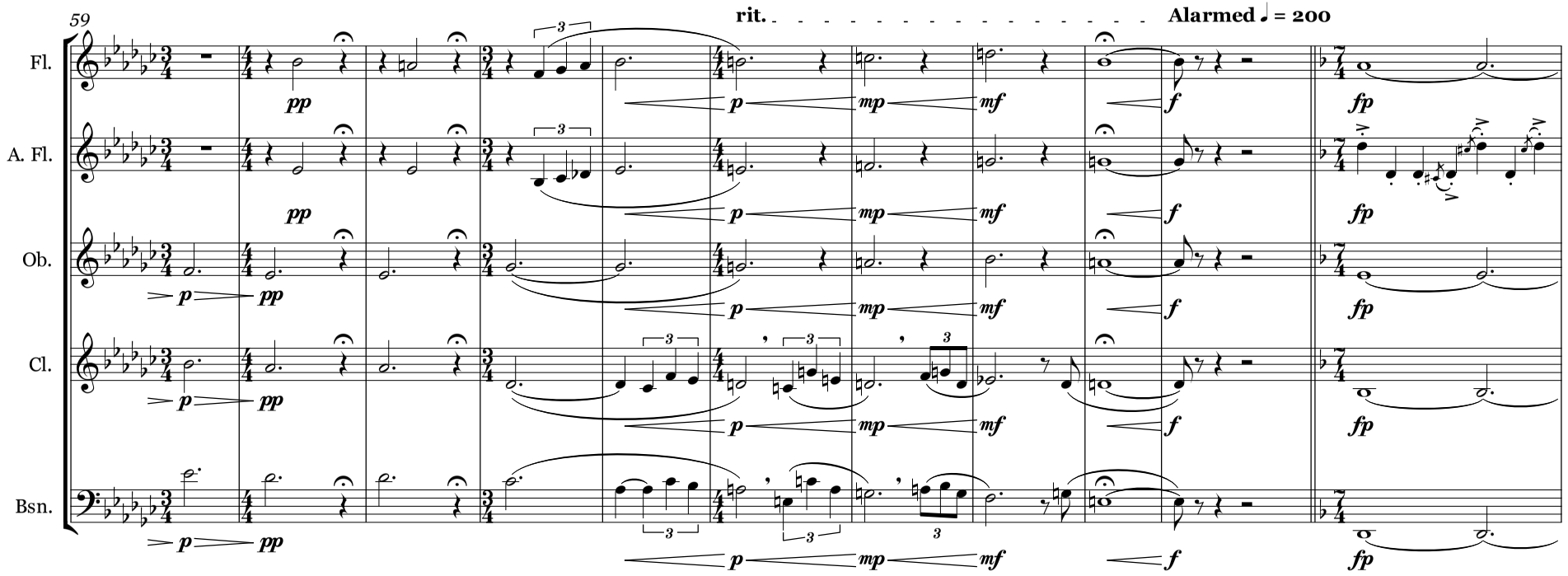
A. Fl.

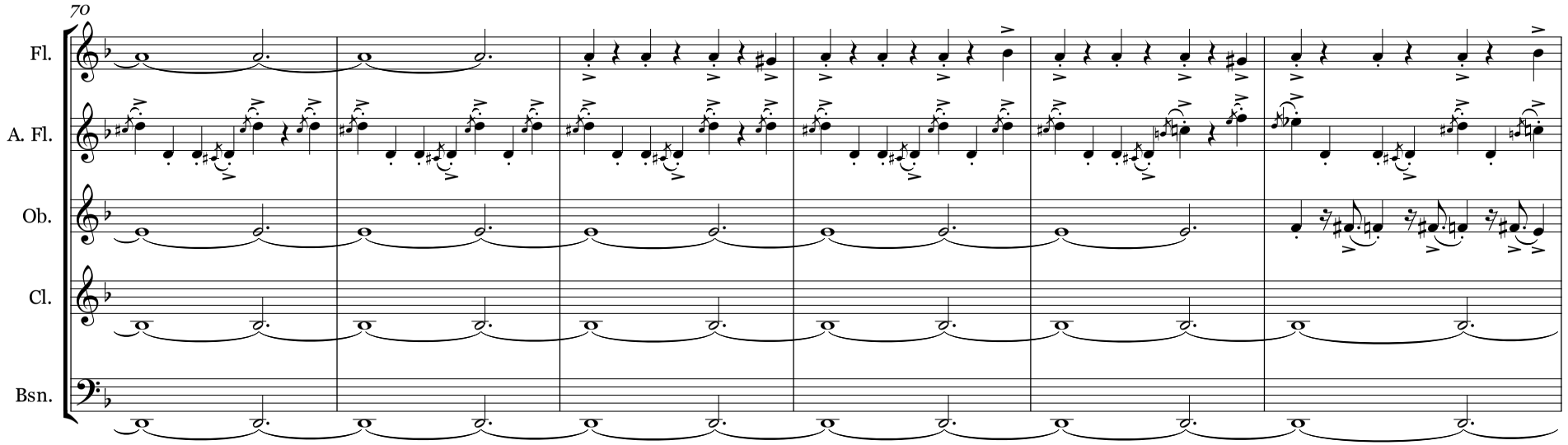
Ob.

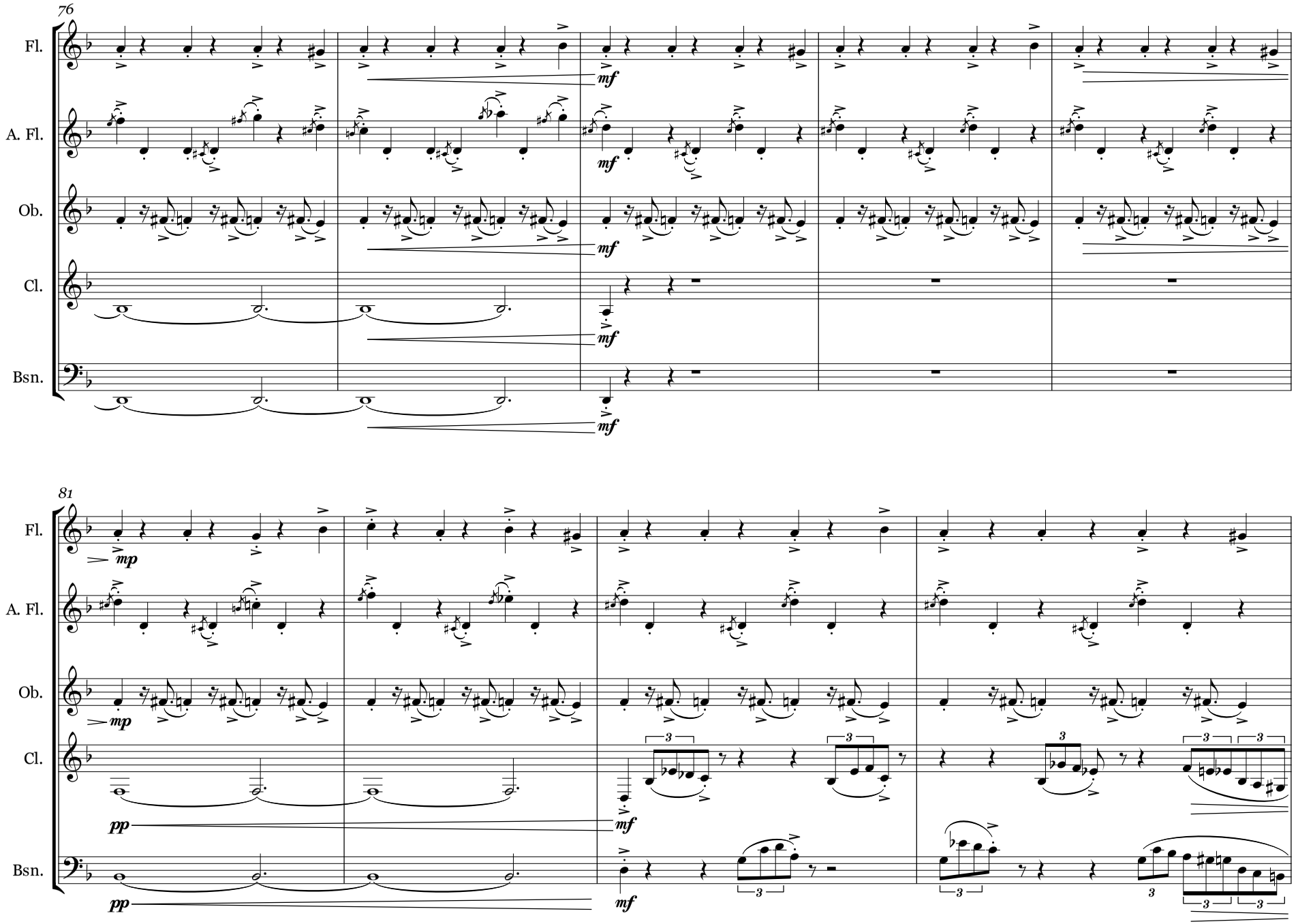
Cl.

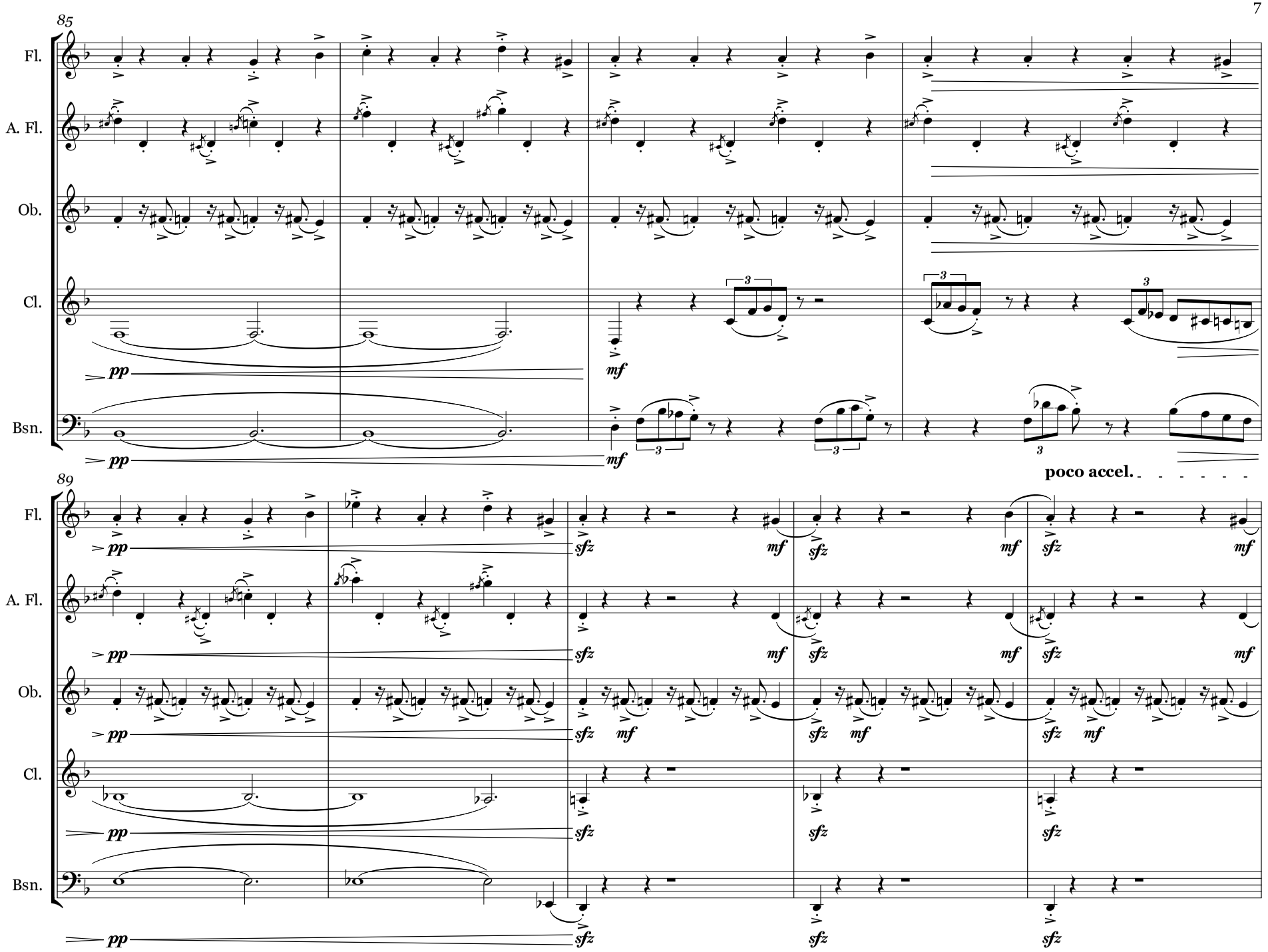
Bsn.


41
molto accel.
Fl.
A. Fl.
Ob.
Cl.
Bsn.
mf
pp
f
p
48
molto rit.
There It Is Again ♩ = 73
(mf)
ff
mp
use
trill key


59
rit.
Alarmed ♩ = 200
Fl.
A. Fl.
Ob.
Cl.
Bsn.
pp
p
mp
mf
f
fp


70
Fl.
A. Fl.
Ob.
Cl.
Bsn.


76
Fl.
A. Fl.
Ob.
Cl.
Bsn.
mf
81
mp
pp


85
Fl.
A. Fl.
Ob.
Cl.
Bsn.
pp
mf
poco accel.
89
sfz
mf

A Sudden Memory ♩ = 120

94

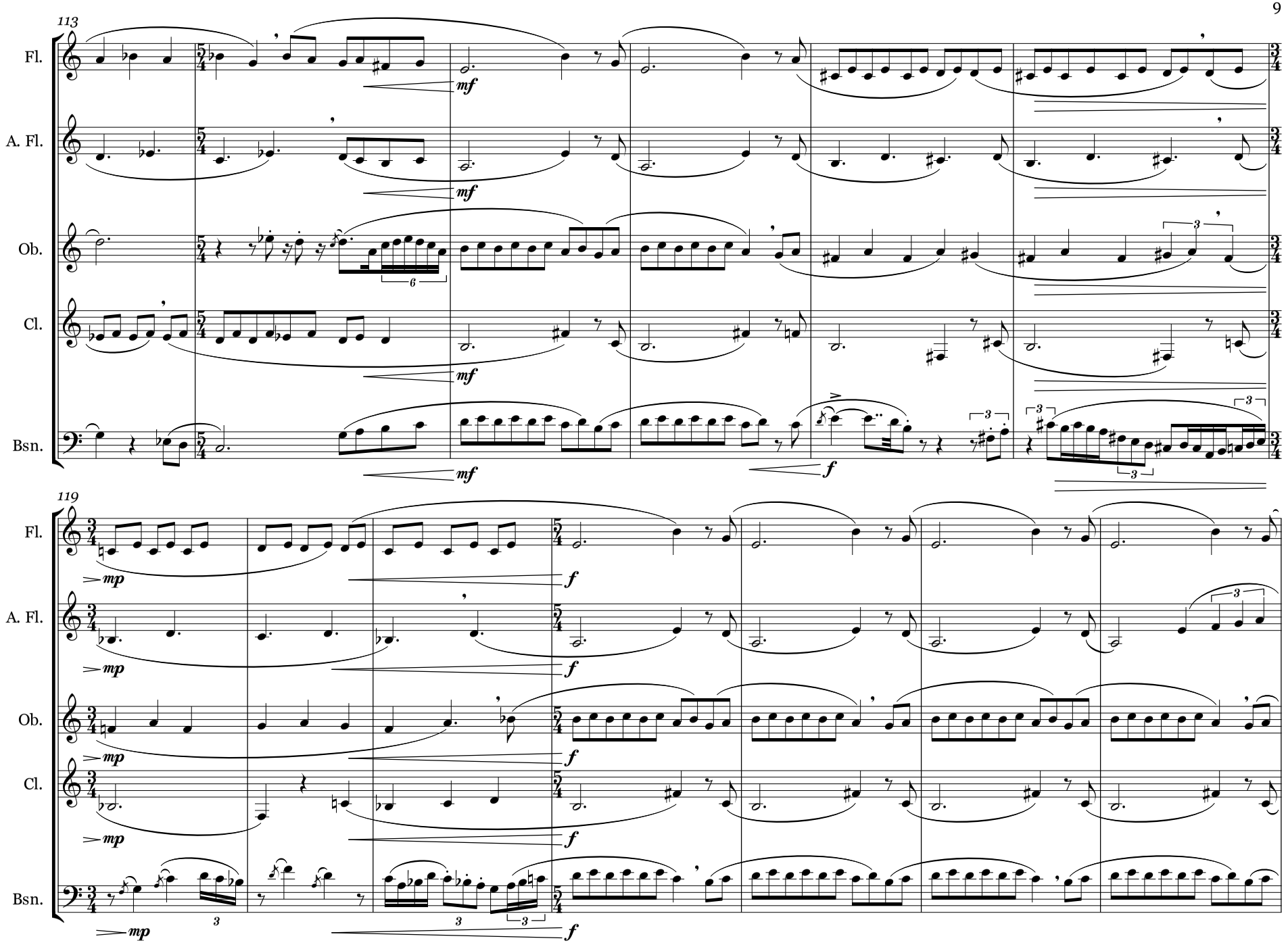
Fl.
A. Fl.
Ob.
Cl.
Bsn.

ff mp (mp) mp

103

Fl.
A. Fl.
Ob.
Cl.
Bsn.

mf p mp


113
Fl.
A. Fl.
Ob.
Cl.
Bsn.
mf
f
119
mp
f

126

Becoming Disorganized poco accel.

Fl.

A. Fl.

Ob.

Cl.

Bsn.

131

A Quiet Panic ♩ = 150

Fl.

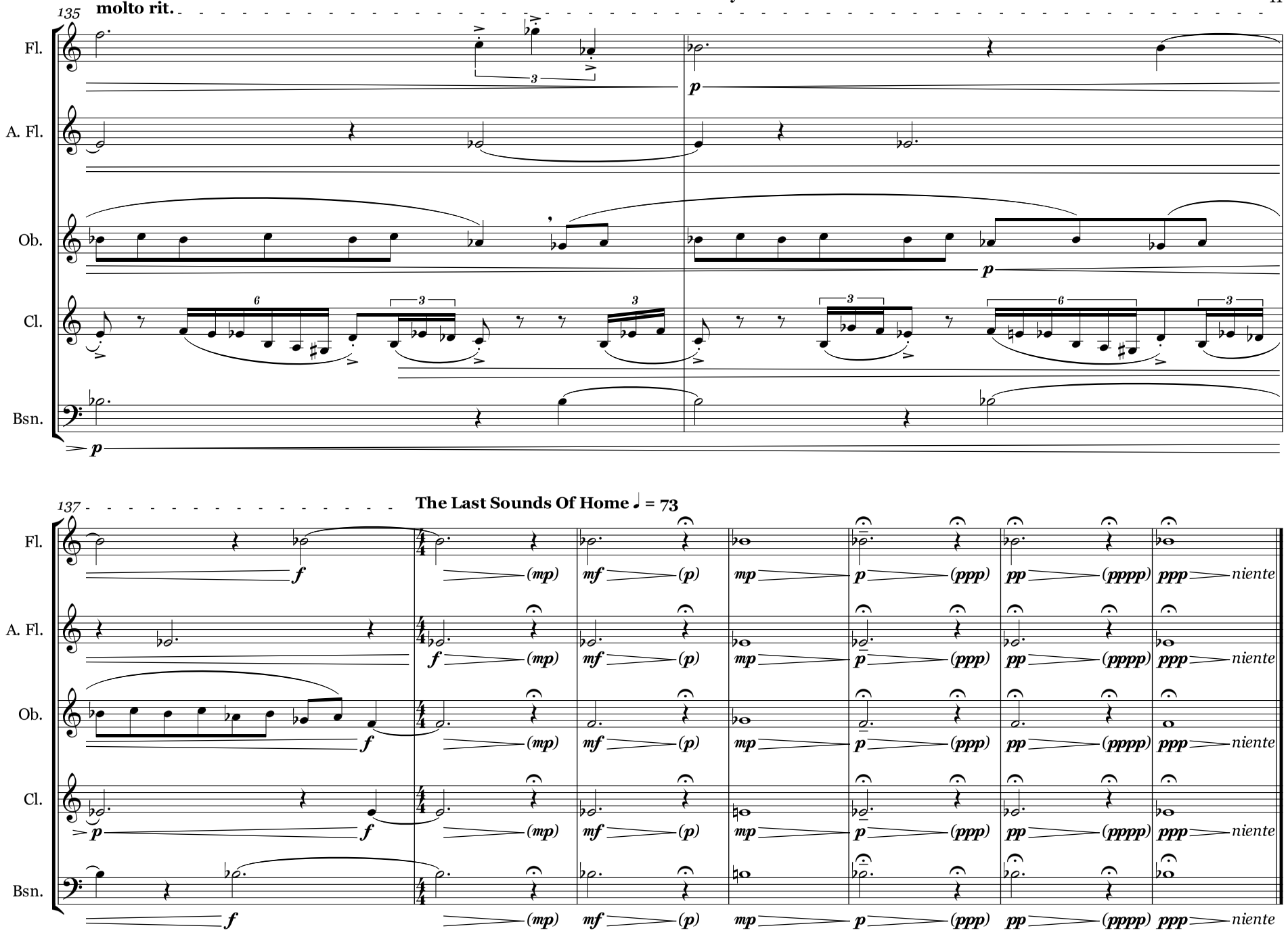
A. Fl.

p

Ob.

Cl.

Bsn.


135
molto rit.
Fl.
A. Fl.
Ob.
Cl.
Bsn.
137
The Last Sounds Of Home ♩ = 73
niente

Isolation Psychosis

Fred Crase

Although there are two instruments in this piece, it is to be played by a single player in an ambidextrous setup. The 12-string Banjo is to be placed on the left of the player, and the 12-string guitar is to be placed on the right, and each instrument is to be played with the corresponding hand.

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People Are Strange
When You're A Stranger ♩ = 80

12-string Guitar (DADGAD, capo 3)

12-string Banjo (DADGAD)

molto rall.

9

Gtr.

Bjo.

molto accel. **rall.** **rall.**

15

A tempo ♩ = 80

Gtr.

Bjo.

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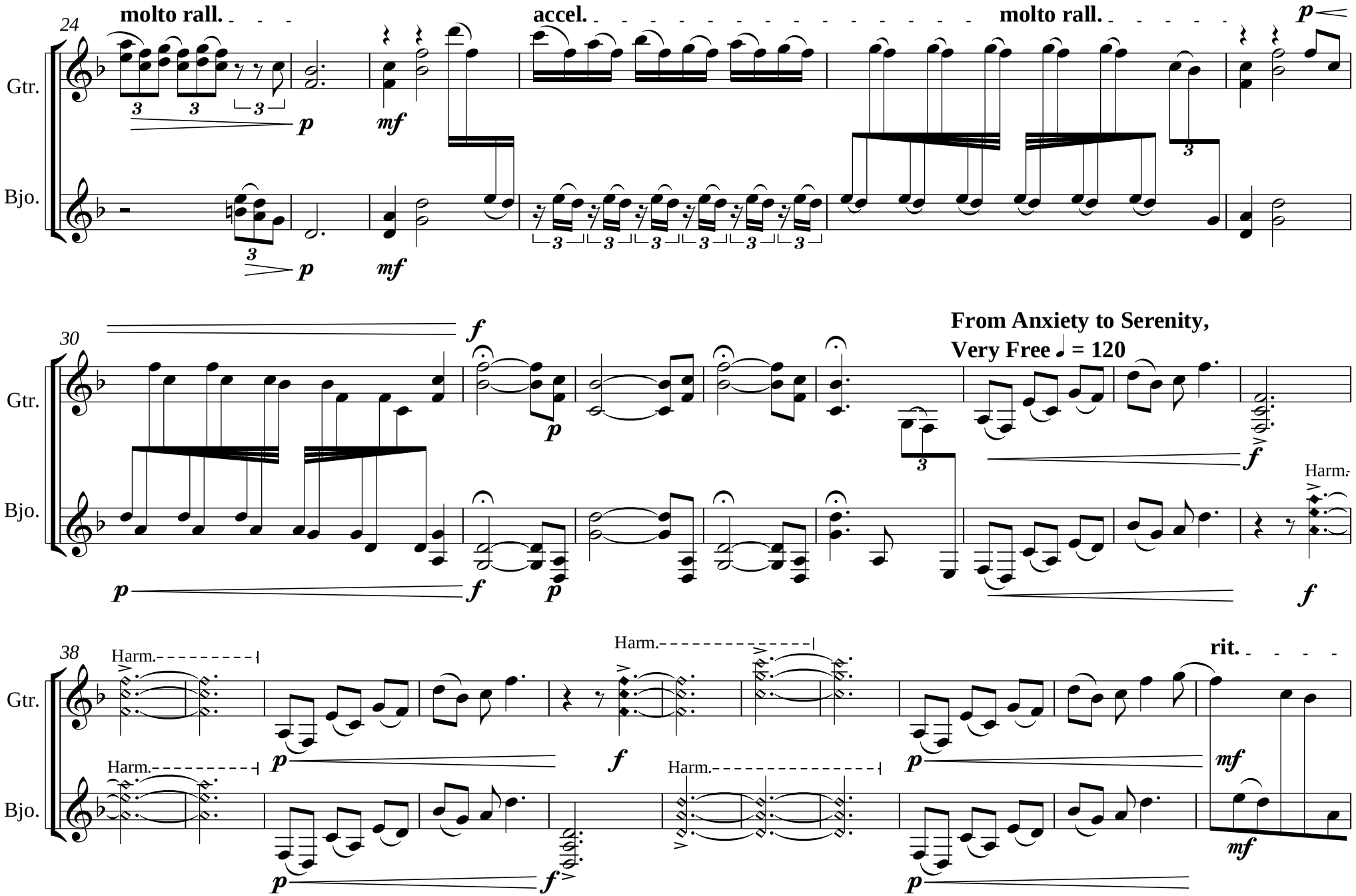
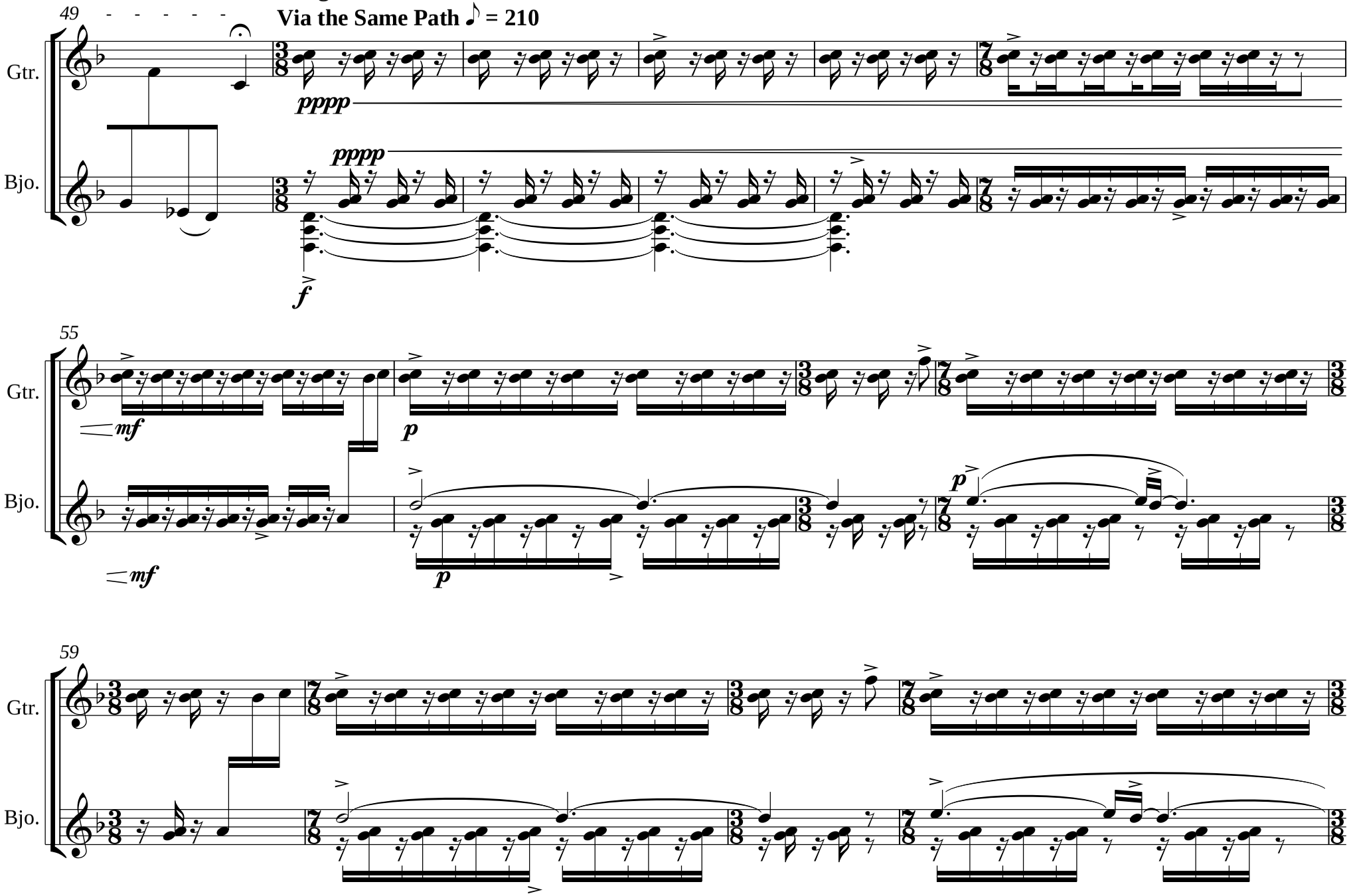
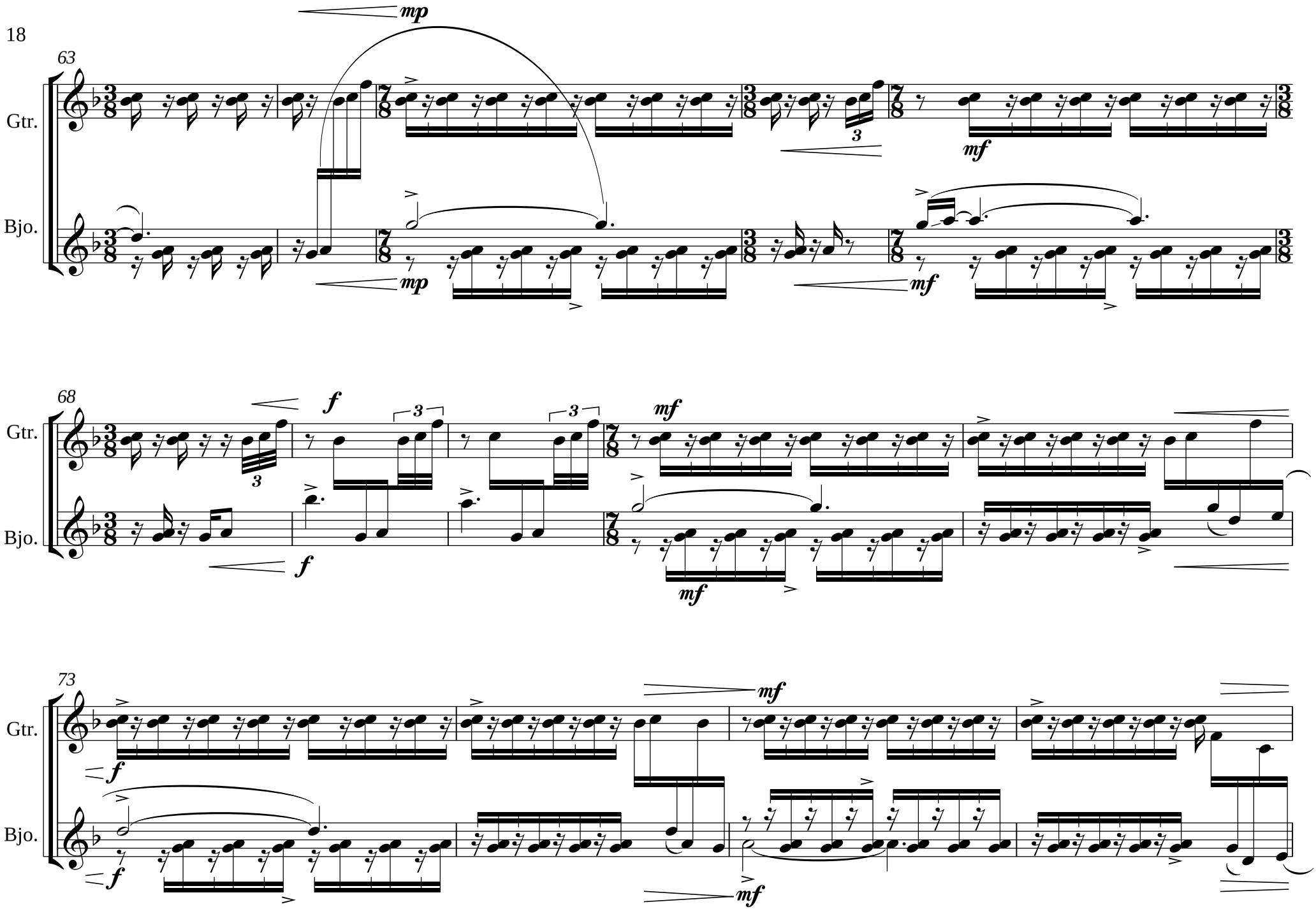
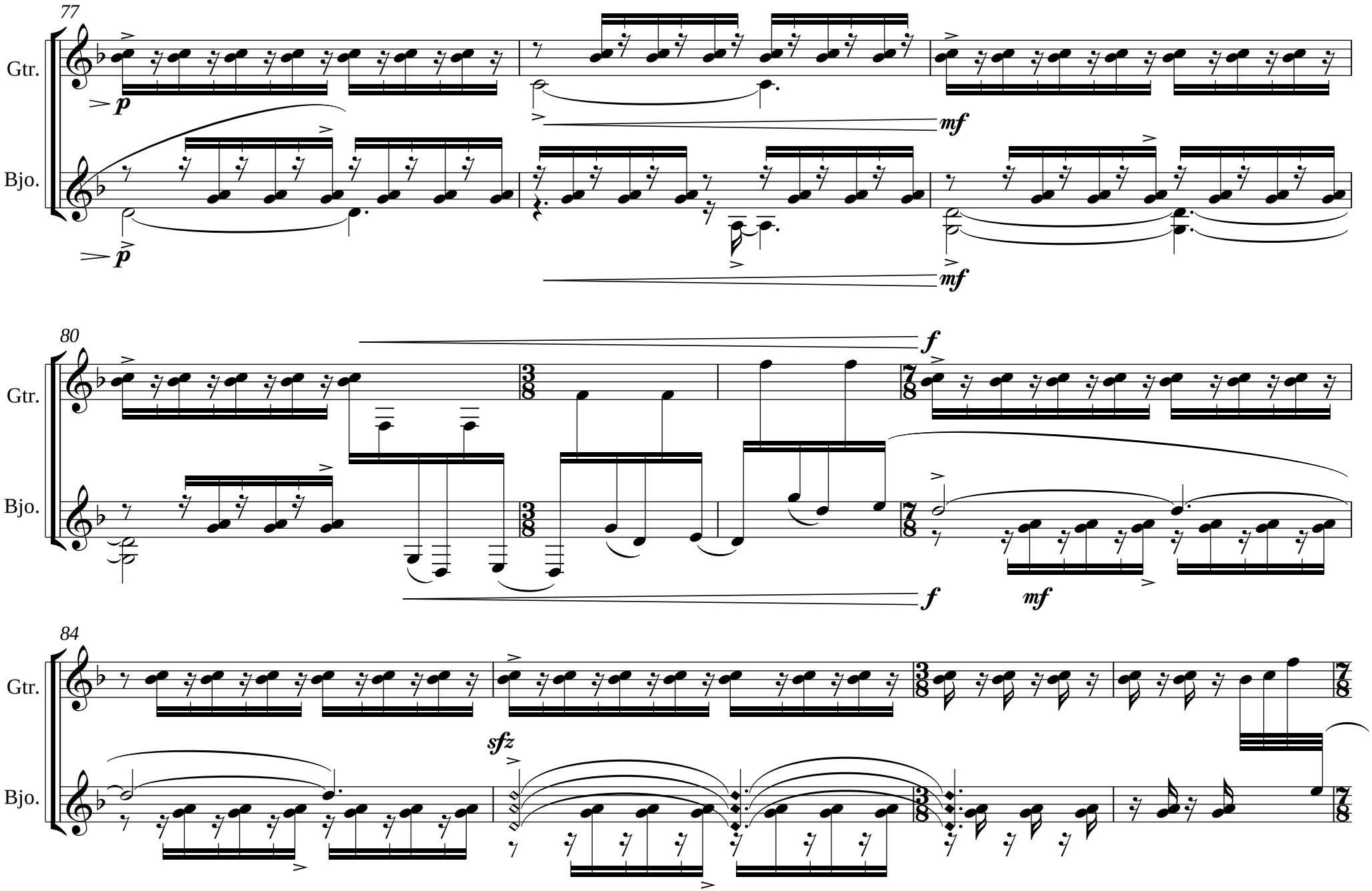
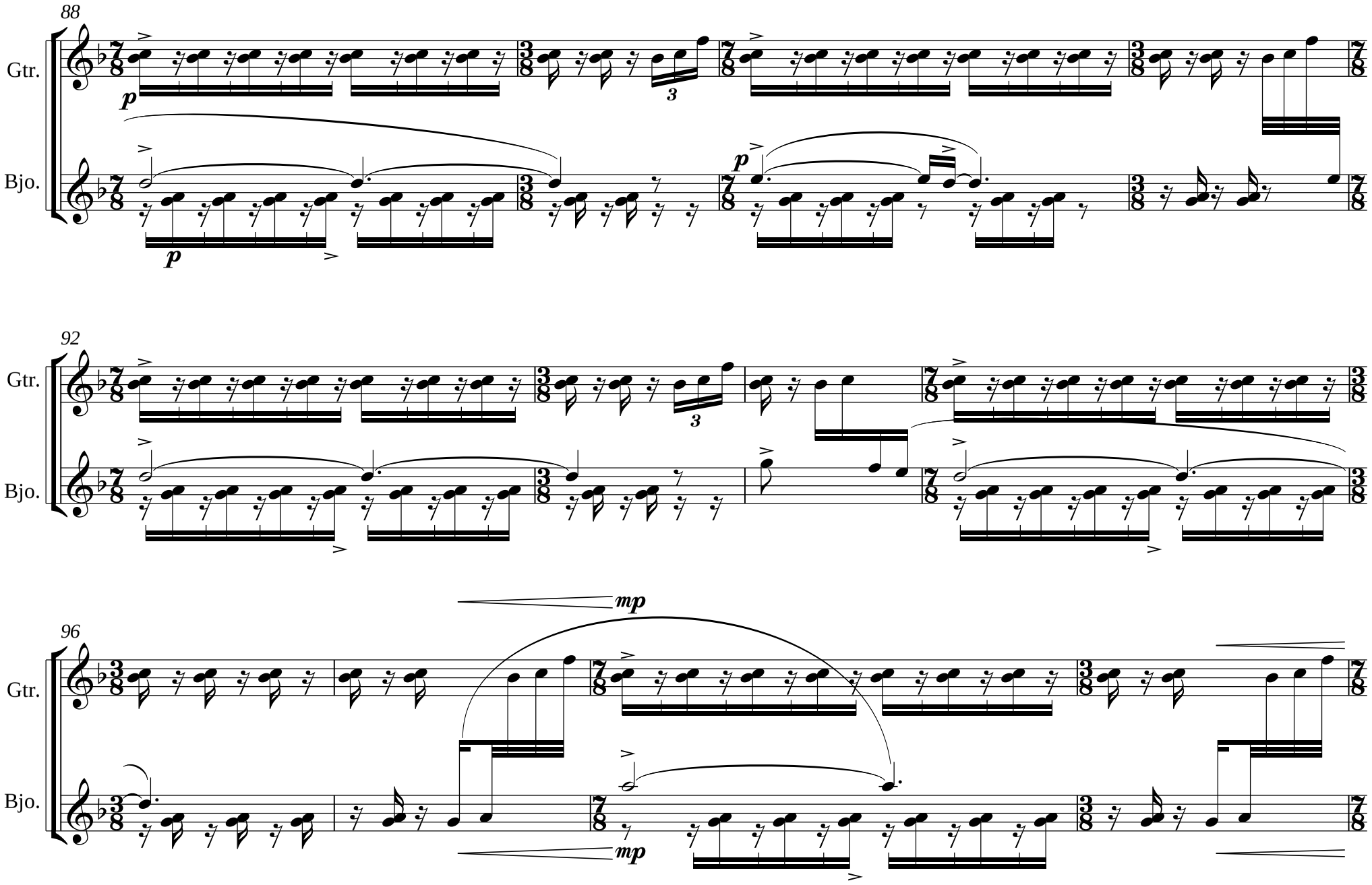

24
molto rall.
accel.
molto rall.
Gtr.
Bjo.
30
From Anxiety to Serenity,
Very Free ♩ = 120
Harm.
38
rit.

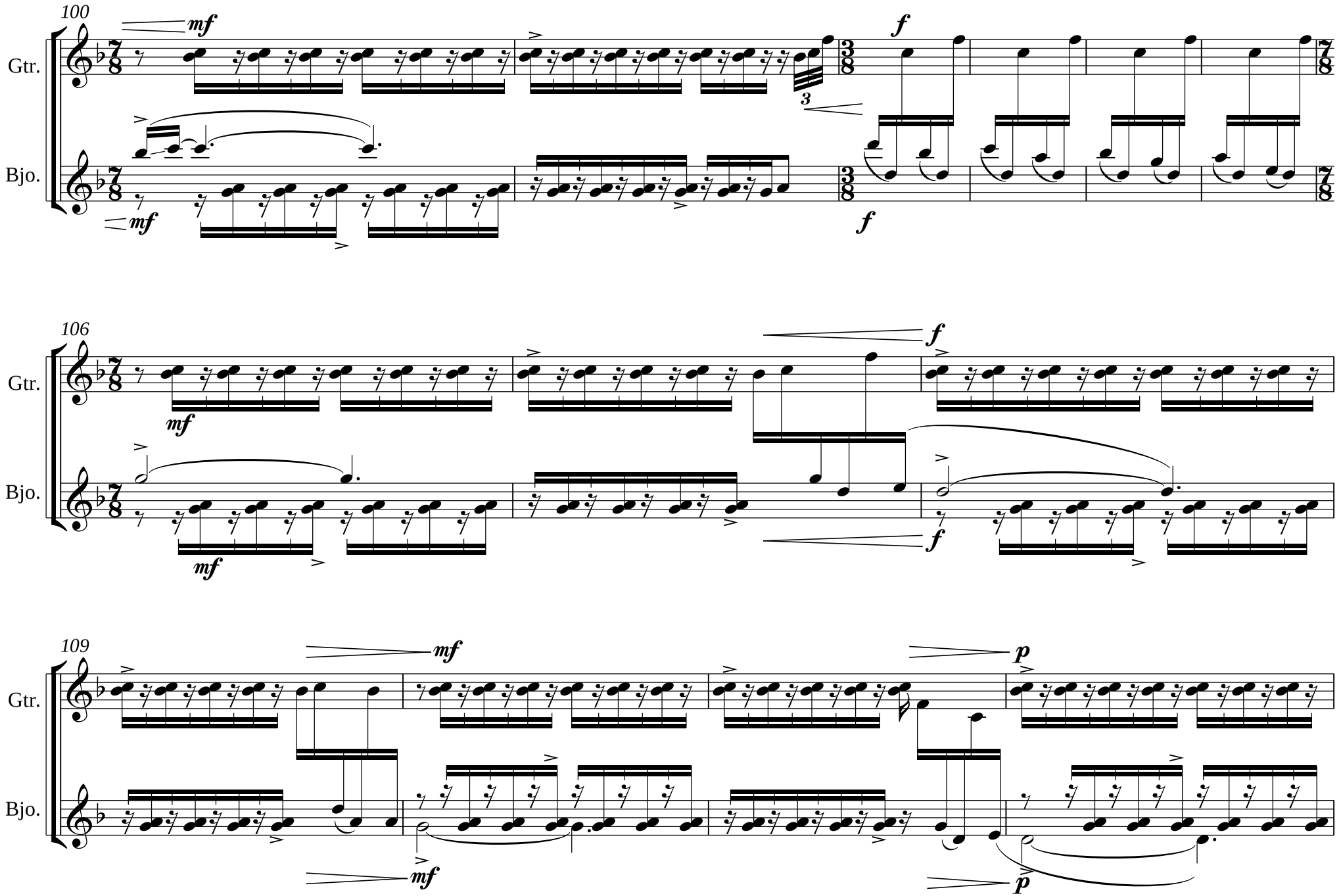
Enlightenment and Madness Are Reached
Via the Same Path ♪ = 210

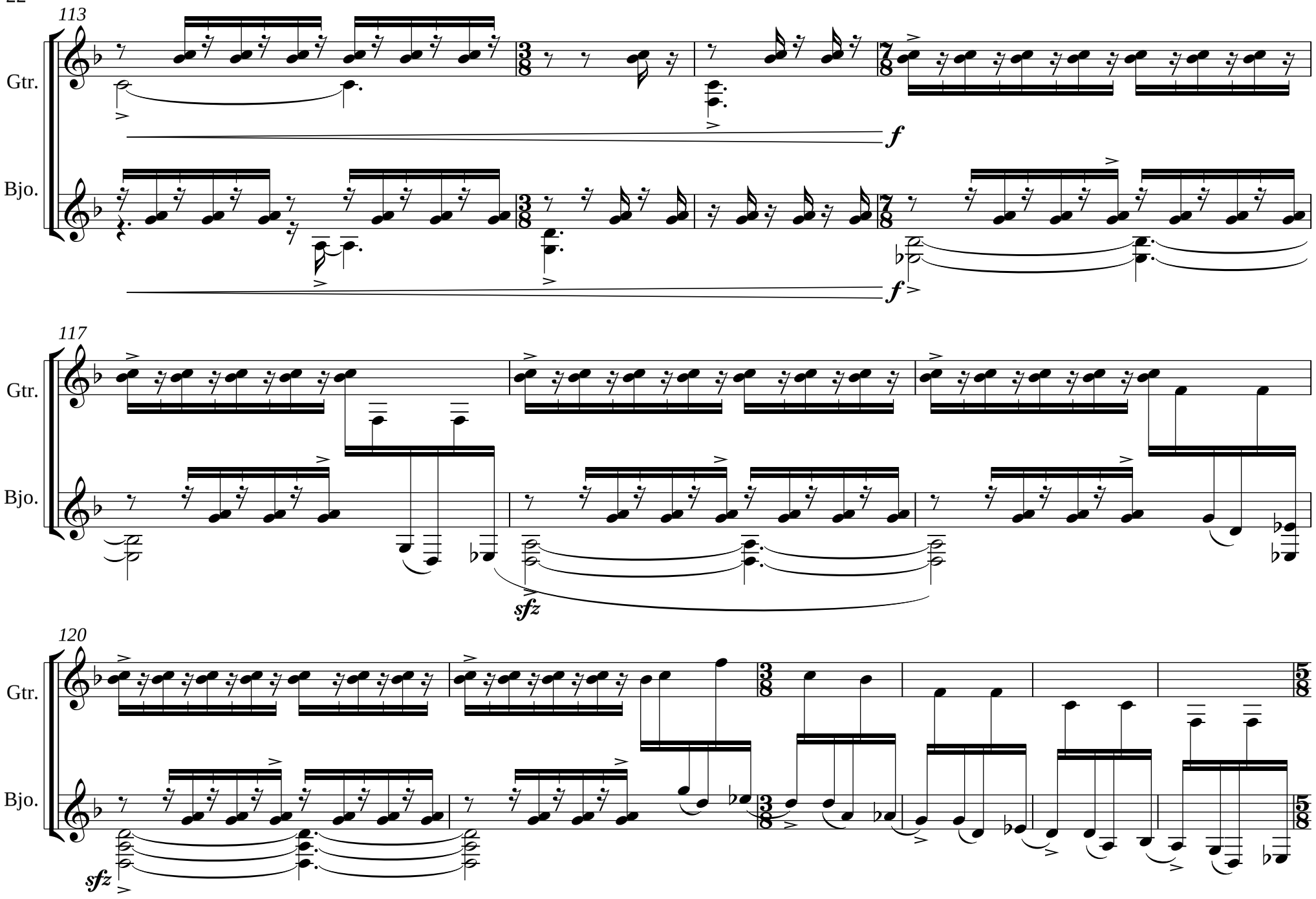


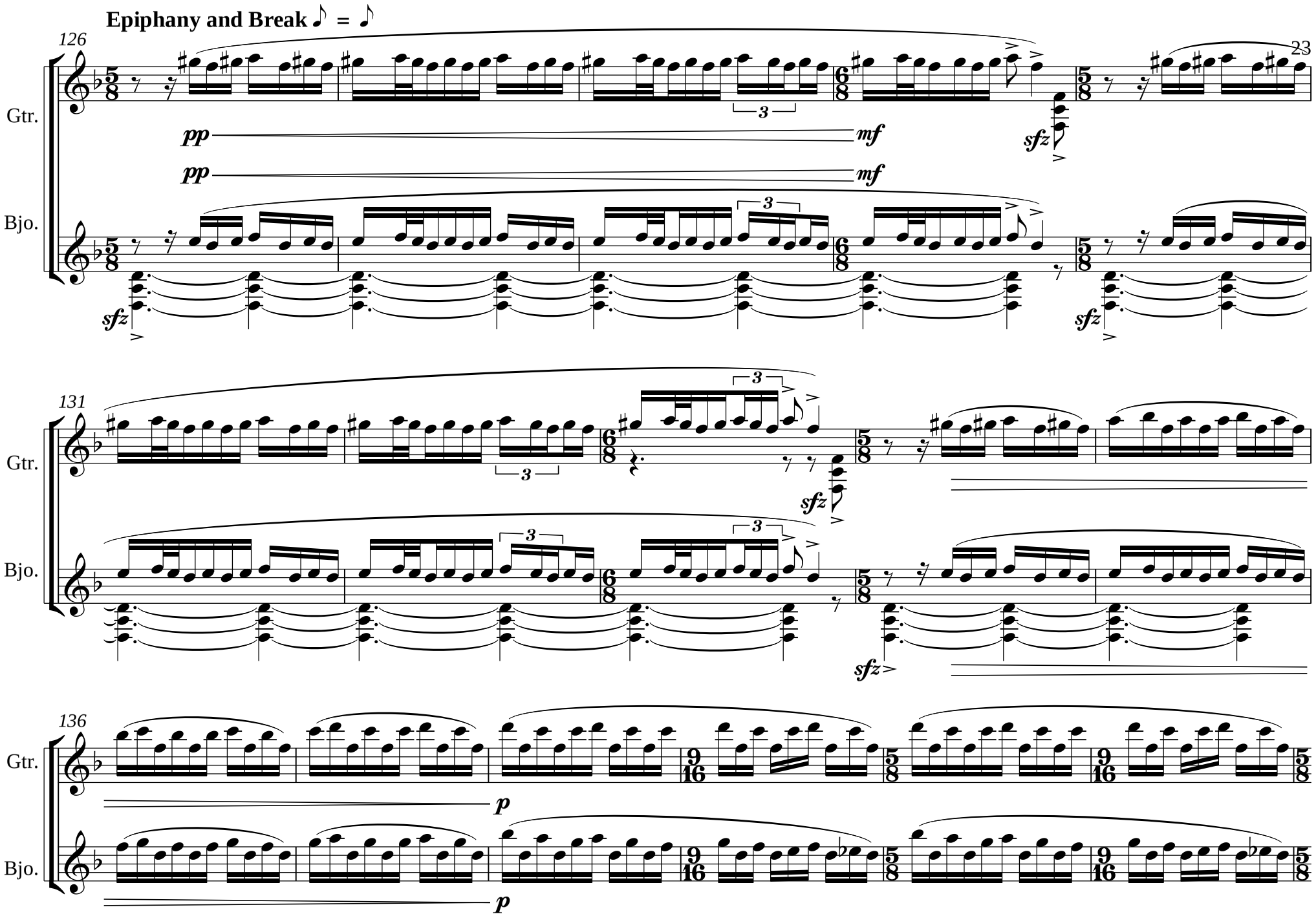

63
Gtr.
Bjo.
mp
mf
68
f
mf
73
f
mf

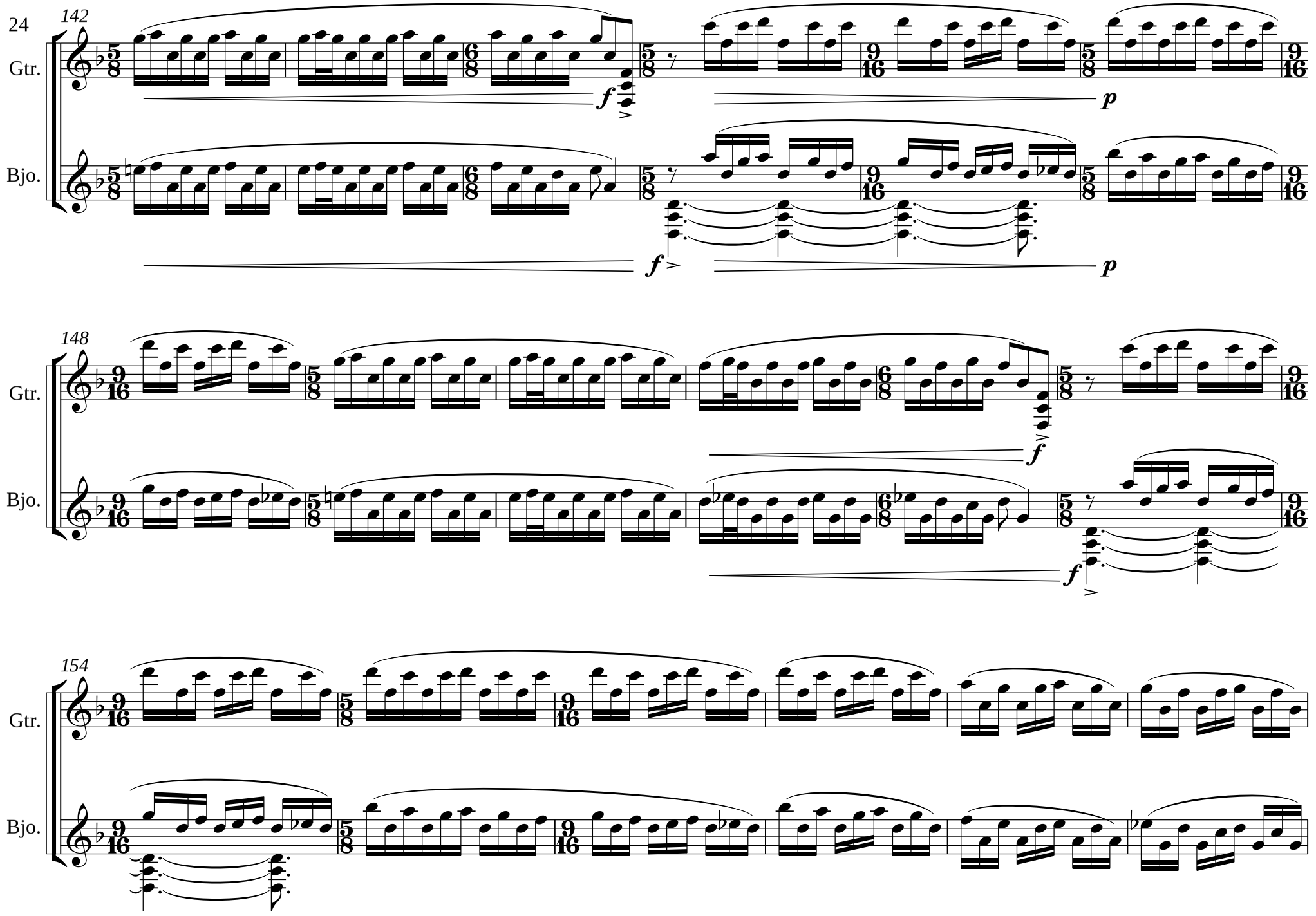

77
Gtr.
Bjo.
p
mf
80
f
mf
84
sfz

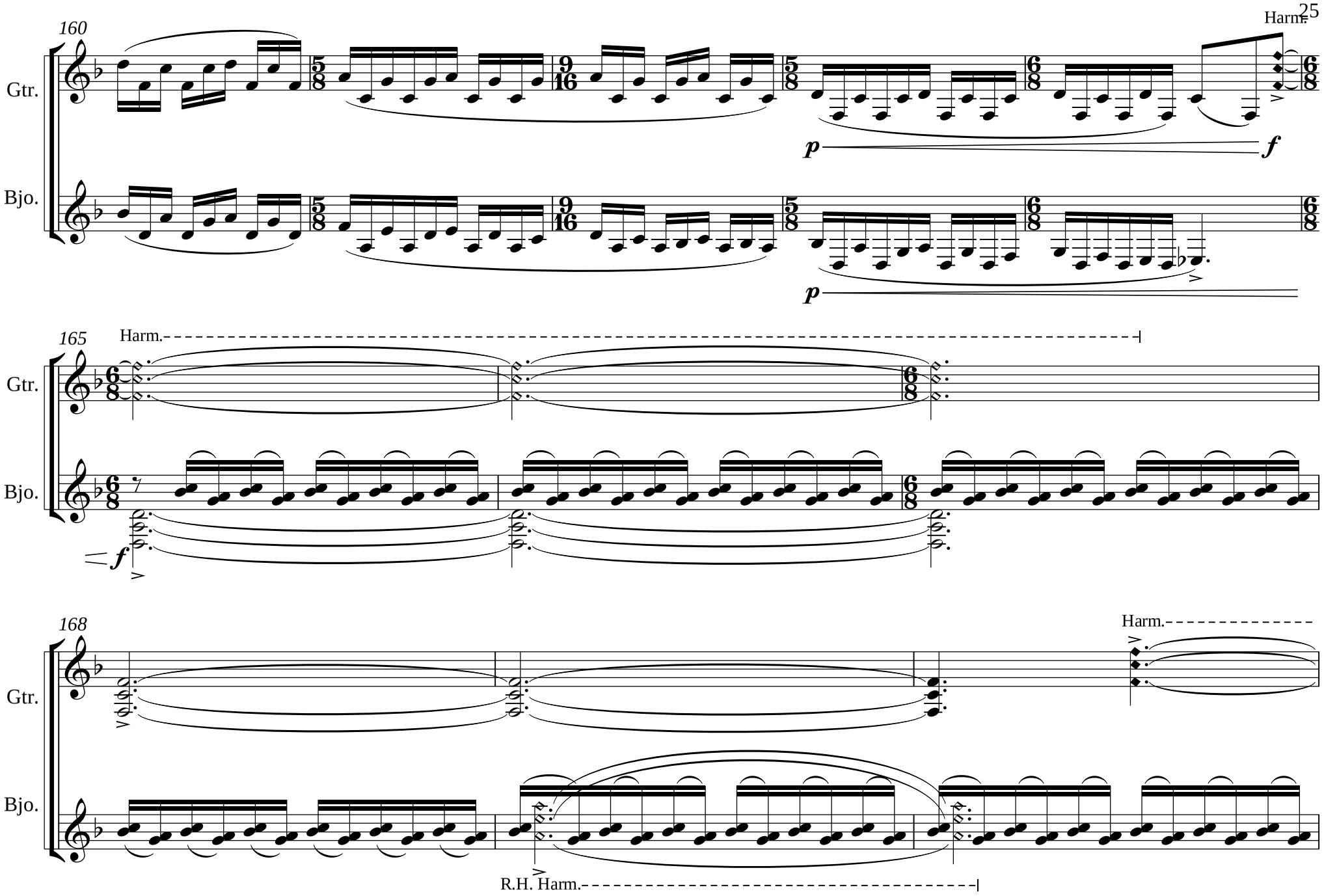

88
Gtr.
Bjo.
p
3
92
Gtr.
Bjo.
3
96
Gtr.
Bjo.
mp
mp

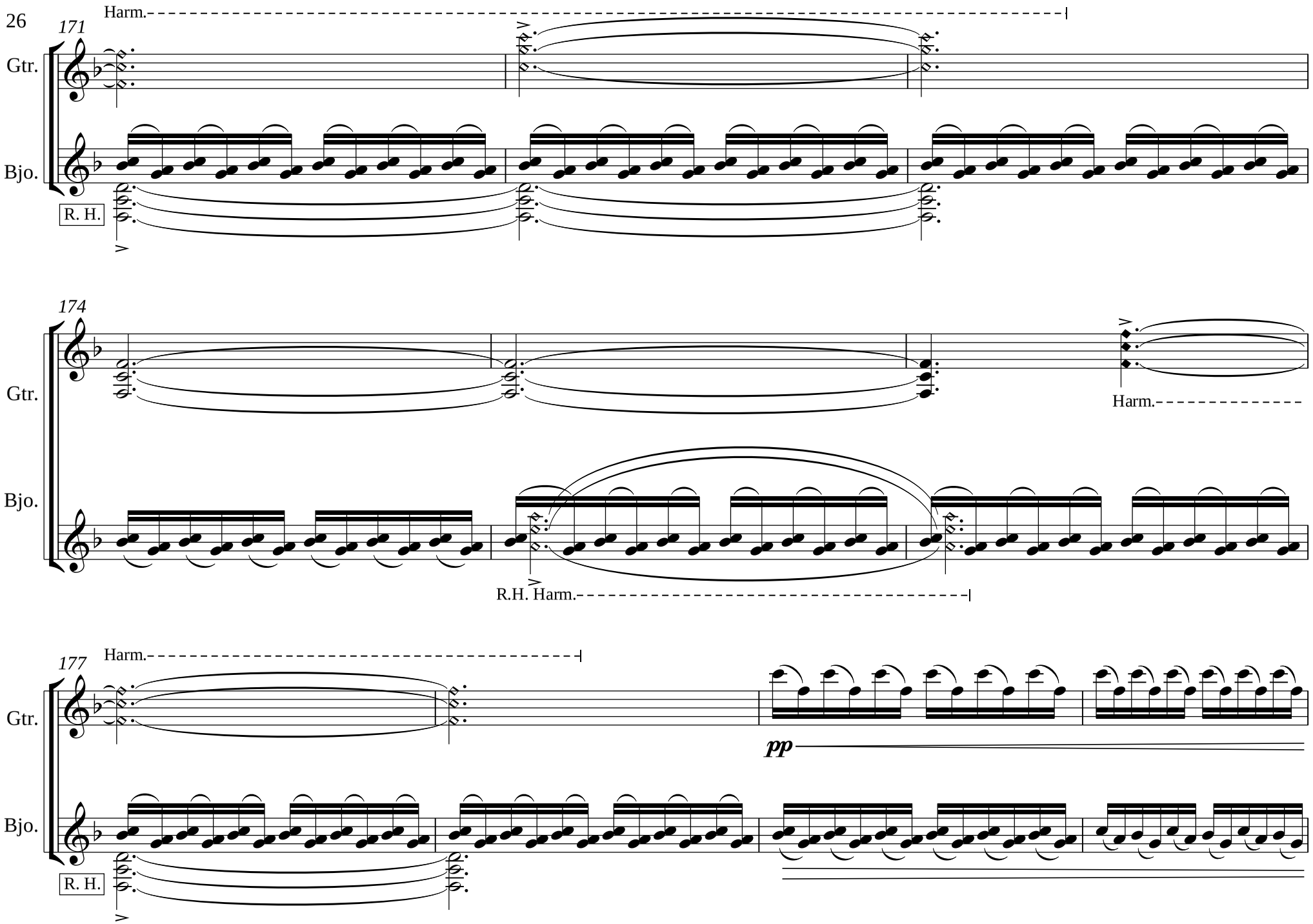

100
Gtr.
Bjo.
mf
f
3
106
109
p

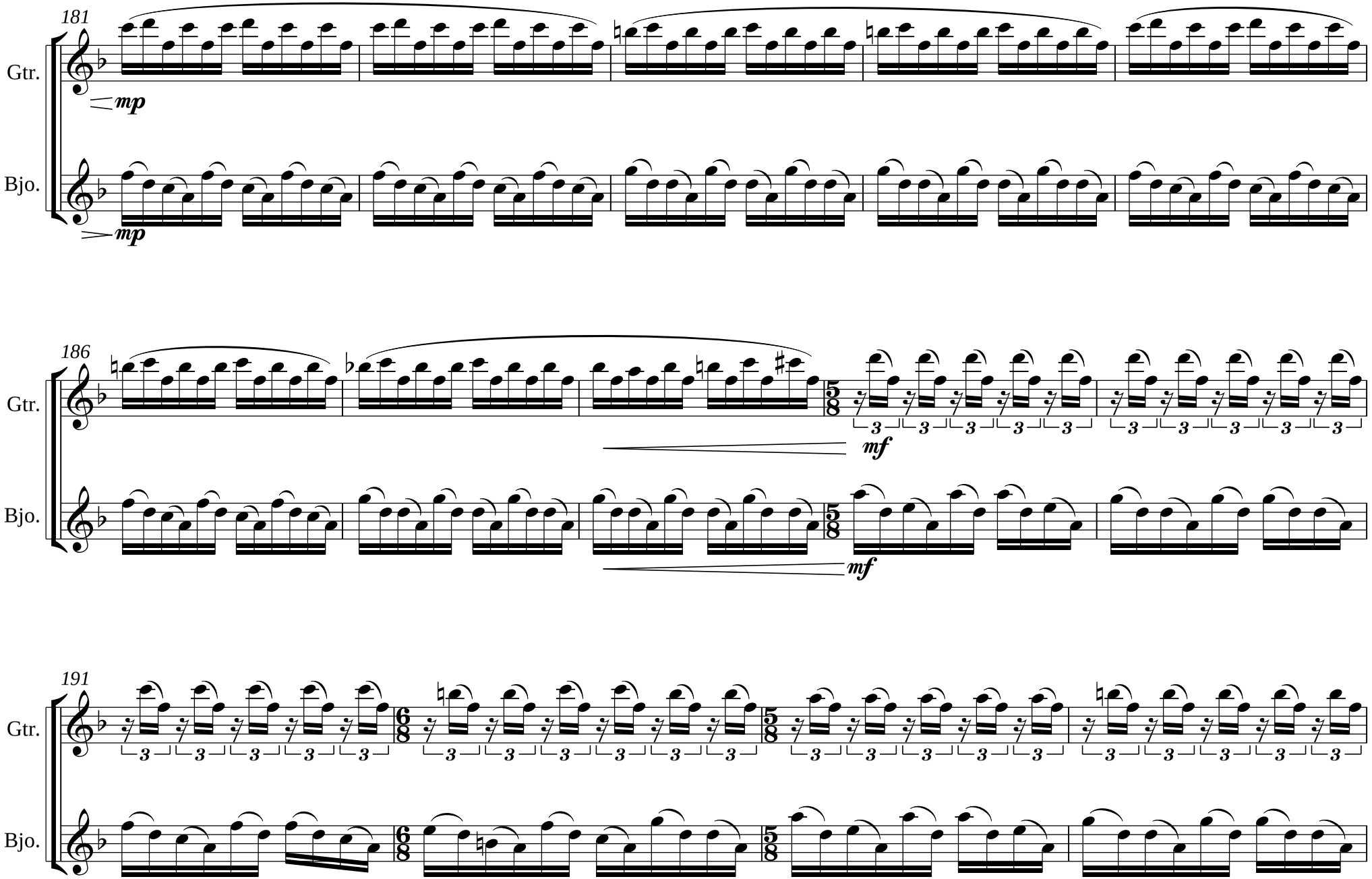

113
Gtr.
Bjo.
f
f
117
Gtr.
Bjo.
sfz
120
Gtr.
Bjo.
sfz

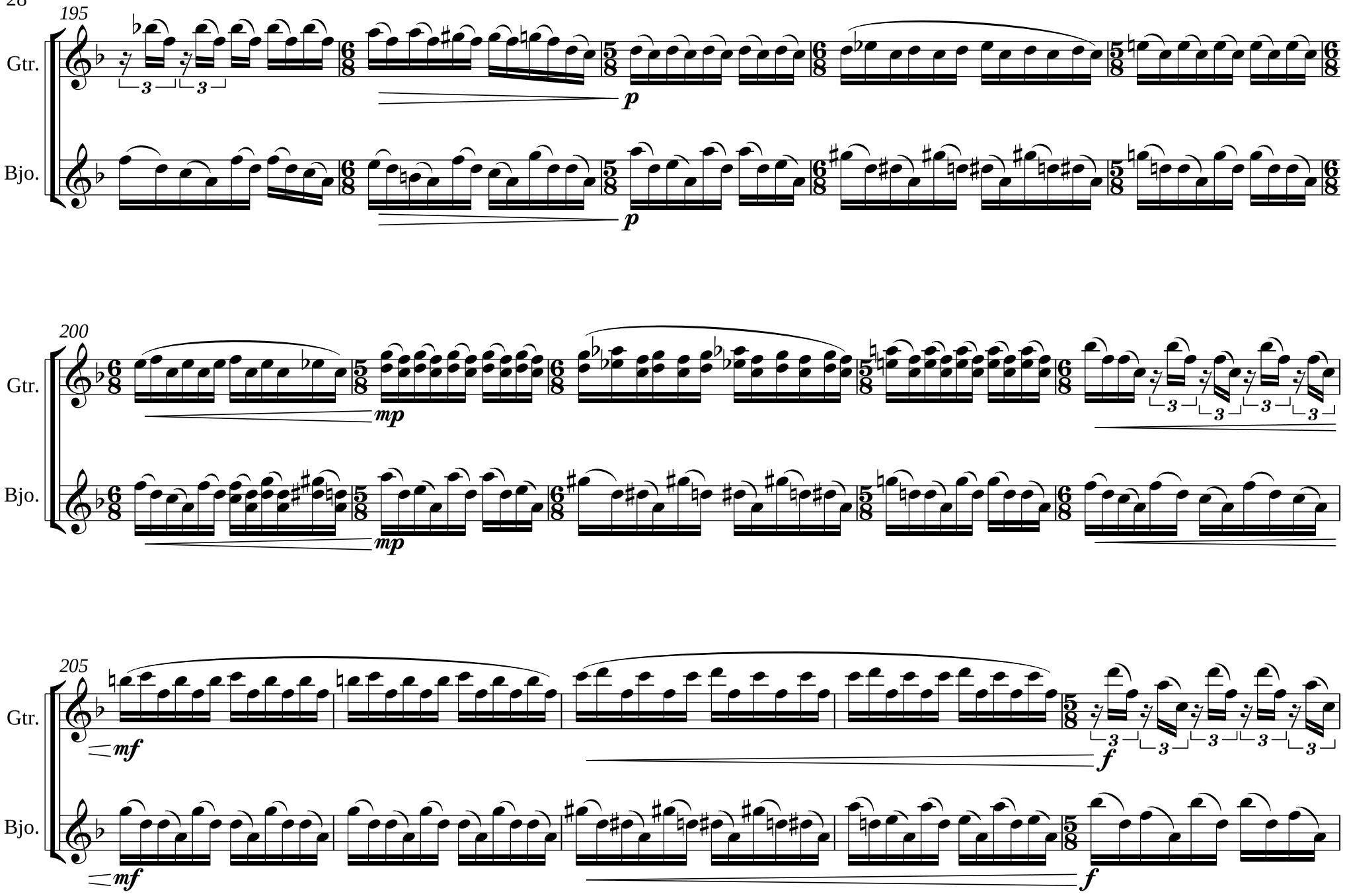

Epiphany and Break ♪ = ♪
126
Gtr.
Bjo.
pp
mf
sfz
131
136
p

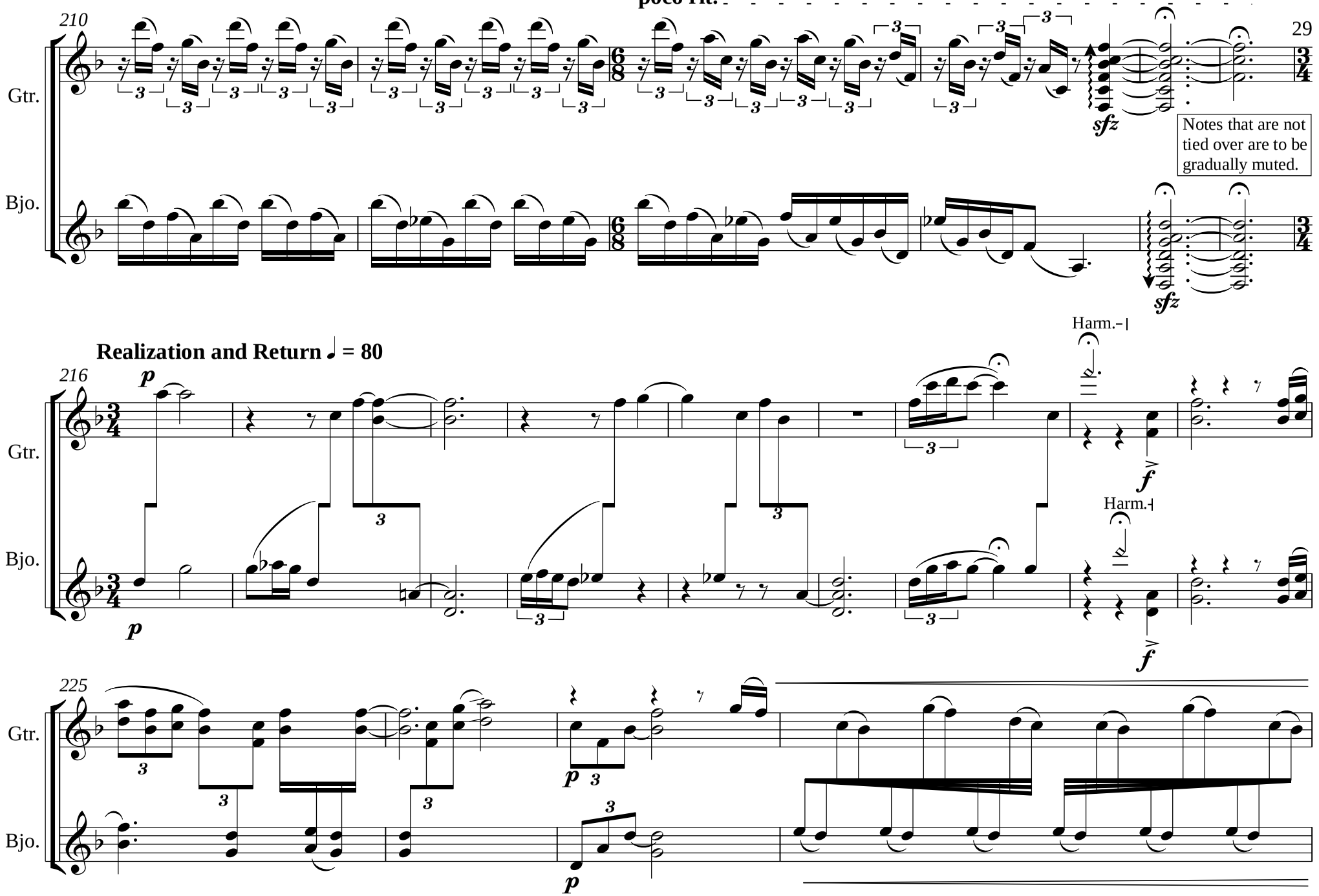

24
142
Gtr.
Bjo.
148
154

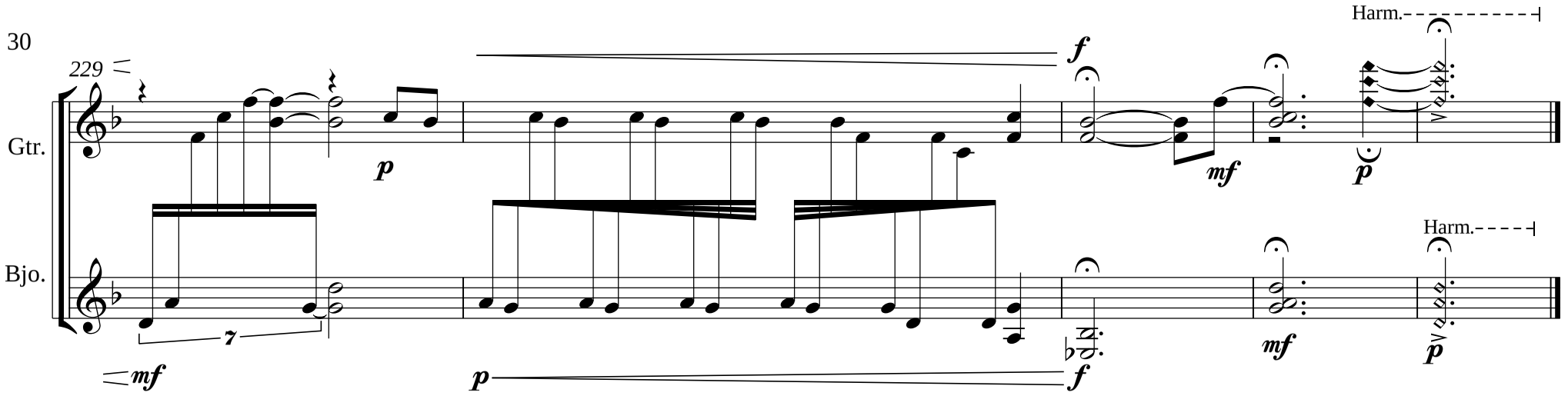

160
Gtr.
Bjo.
Harm.
p
f
p
165
Harm.
Gtr.
Bjo.
f
168
Harm.
Gtr.
Bjo.
R.H. Harm.


171
Harm.
Gtr.
Bjo.
R. H.
174
Gtr.
Harm.
Bjo.
R.H. Harm.
177
Harm.
Gtr.
pp
Bjo.
R. H.


181
Gtr.
mp
Bjo.
mp
186
Gtr.
mf
Bjo.
mf
191
Gtr.
Bjo.


195
Gtr.
Bjo.
p
p
200
Gtr.
Bjo.
mp
mp
205
Gtr.
Bjo.
mf
mf
f
f


poco rit.
210
29
Gtr.
Bjo.
sfz
Notes that are not tied over are to be gradually muted.
Realization and Return ♩ = 80
216
p
Harm.
f
225


30
229
Gtr.
Bjo.
Harm.
Harm.
7
mf
p
f
mf
p
p
f
mf
p

routines

fred crase

All bars of 7/8 are subdivided 4+3+3+4 (16ths). Some parts with sustained notes and/or cross rhythms are not beamed in accordance with this subdivision in the score. However, the performance parts will have guidance for the players.

Coming out of a dream ♪ = 135

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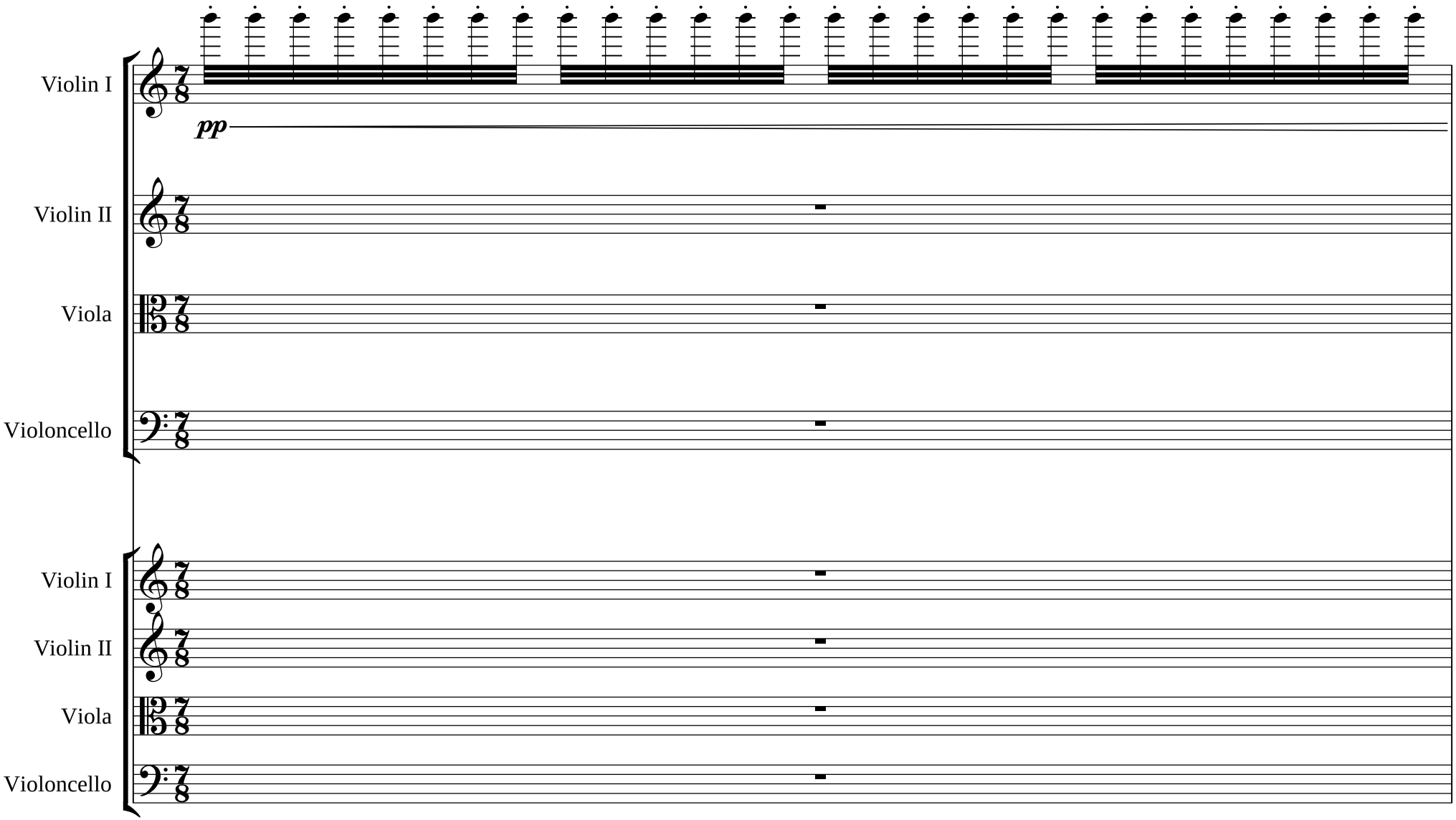

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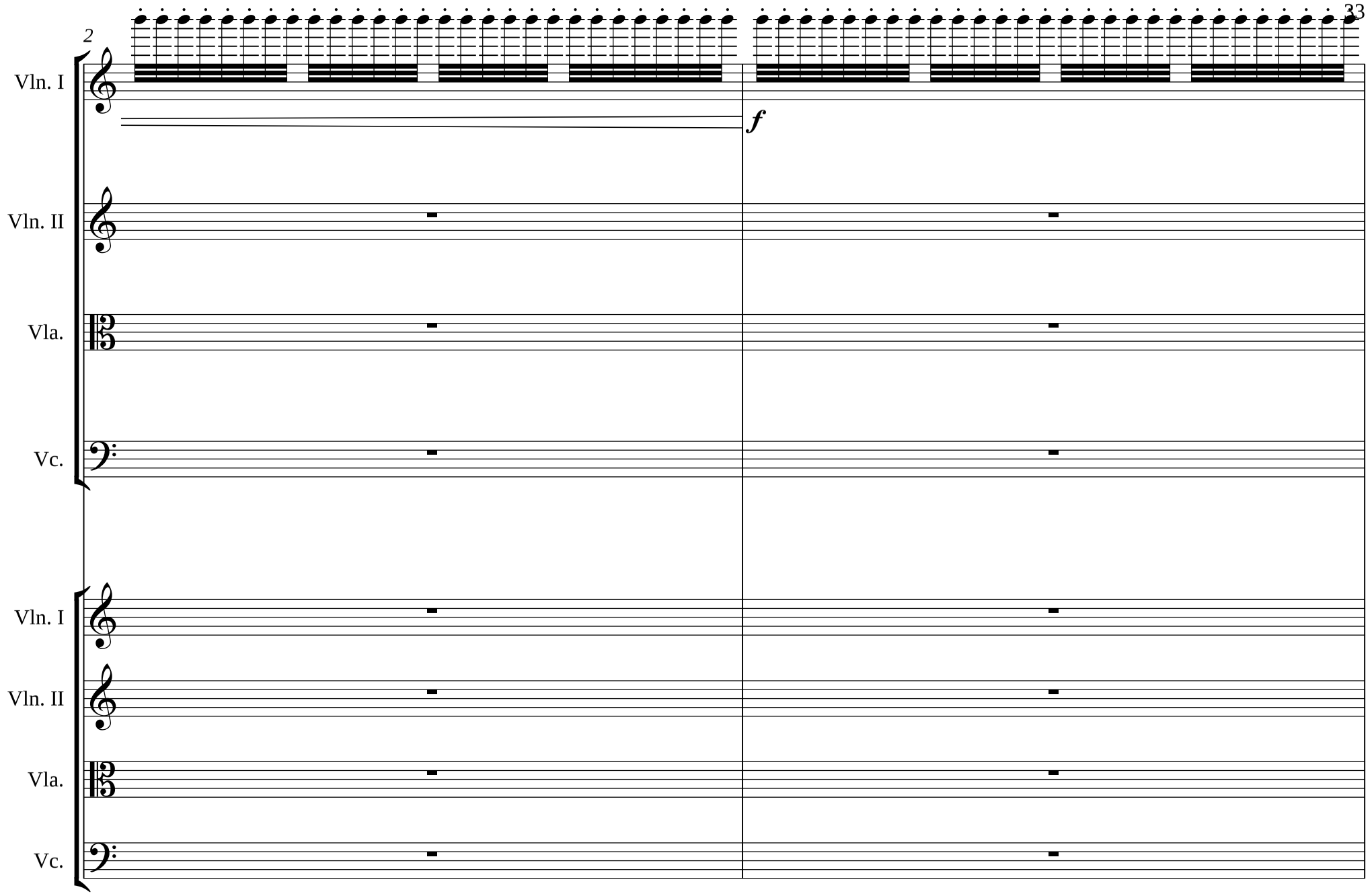
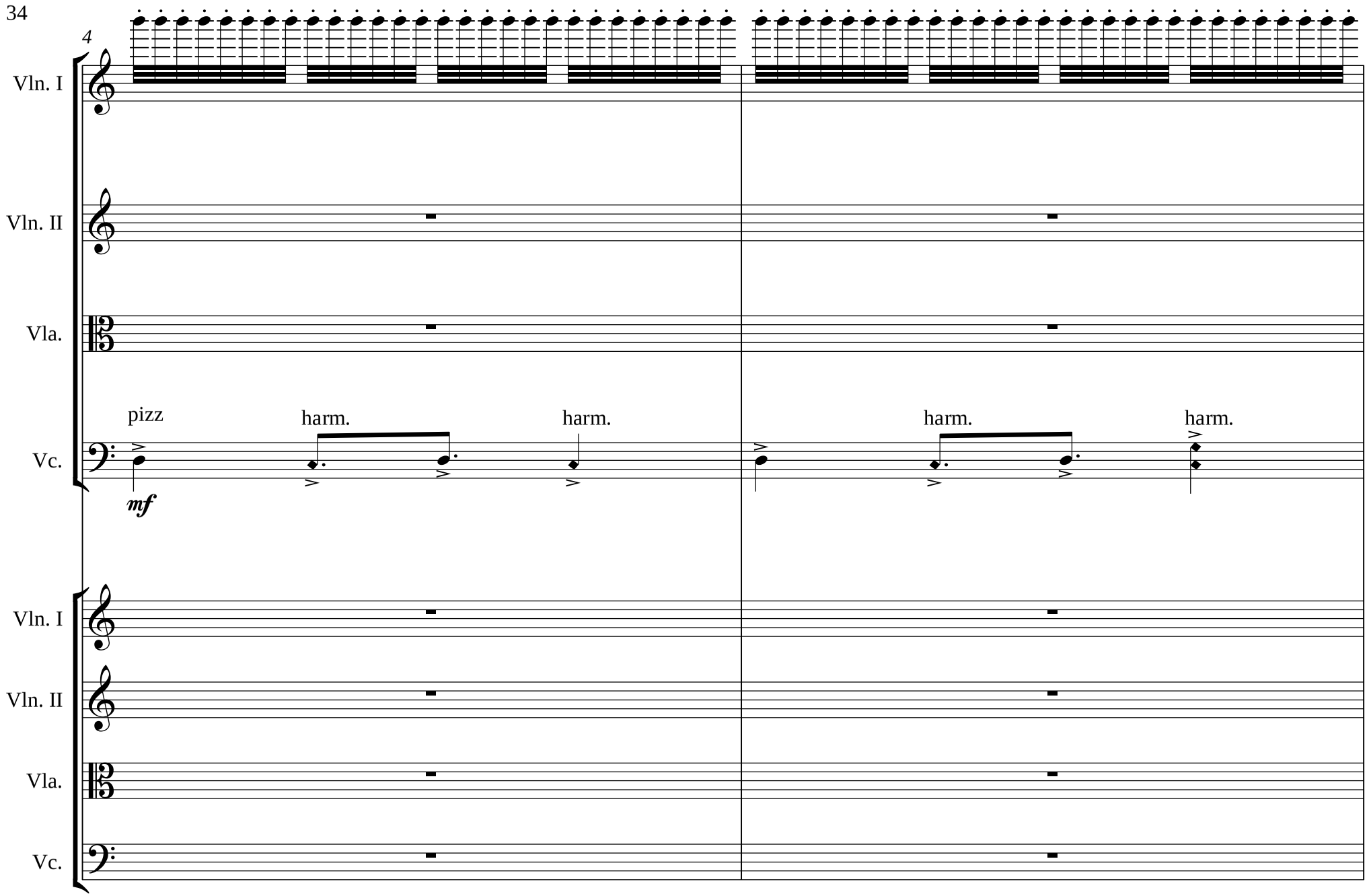
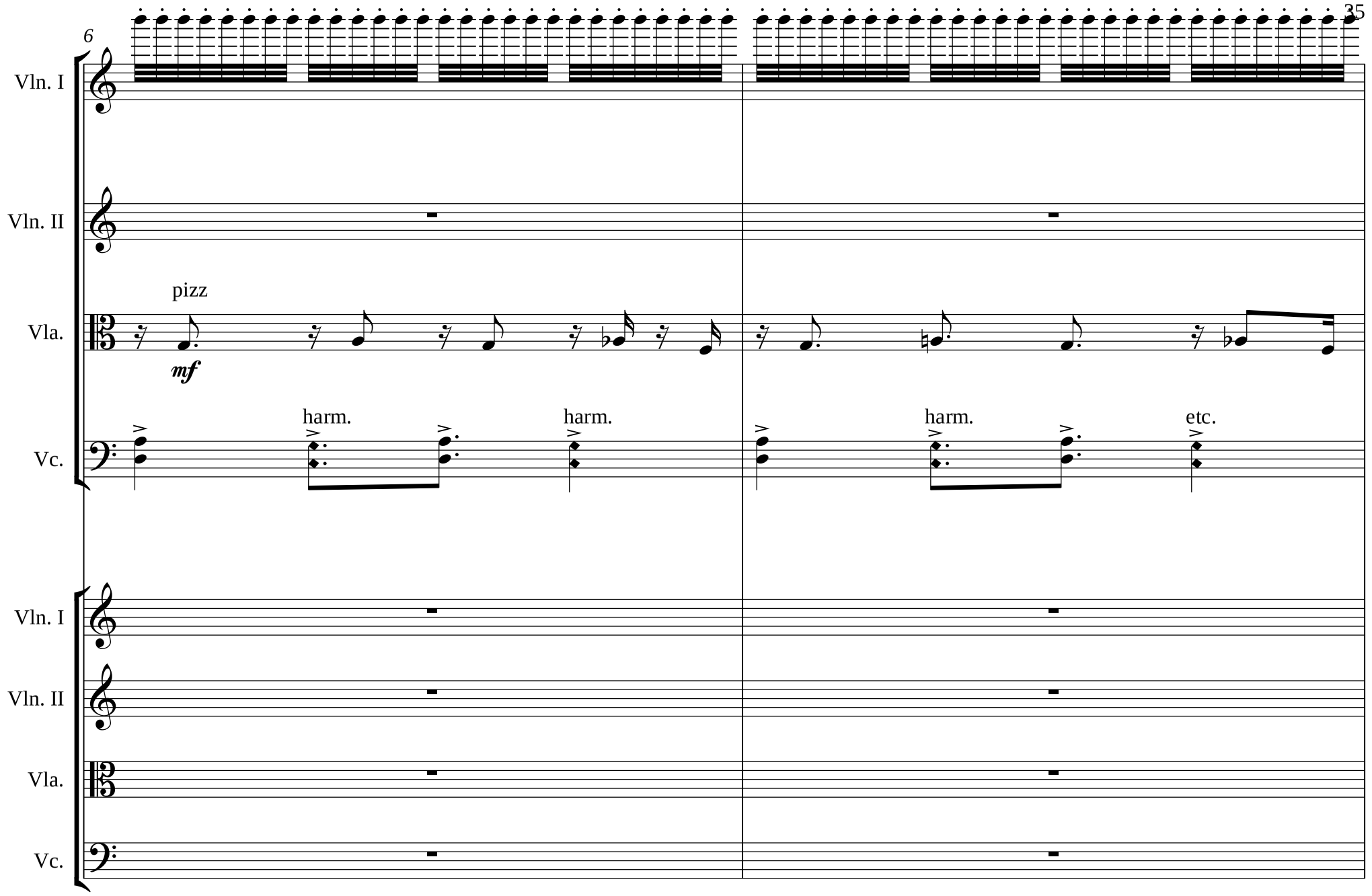
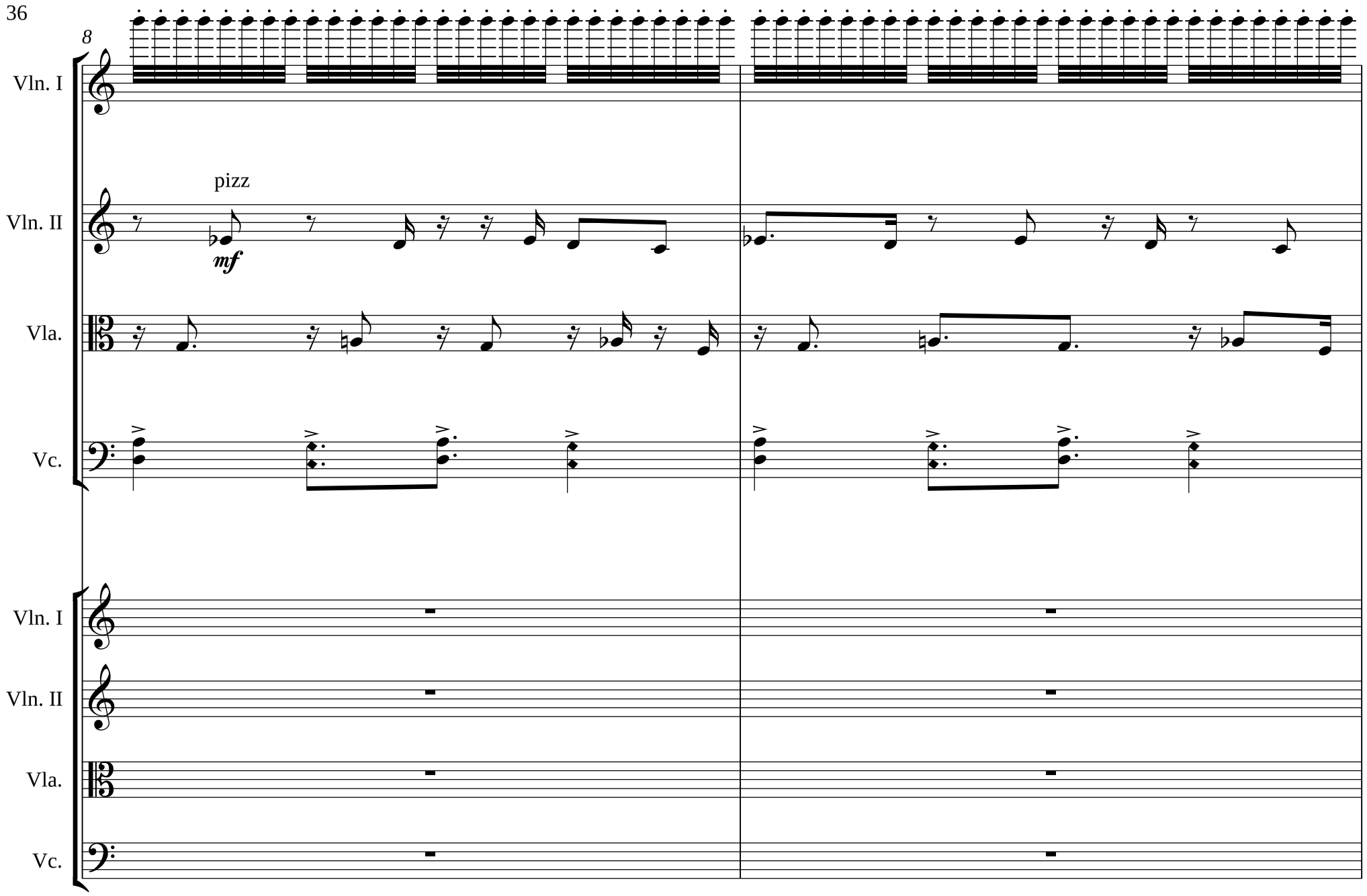
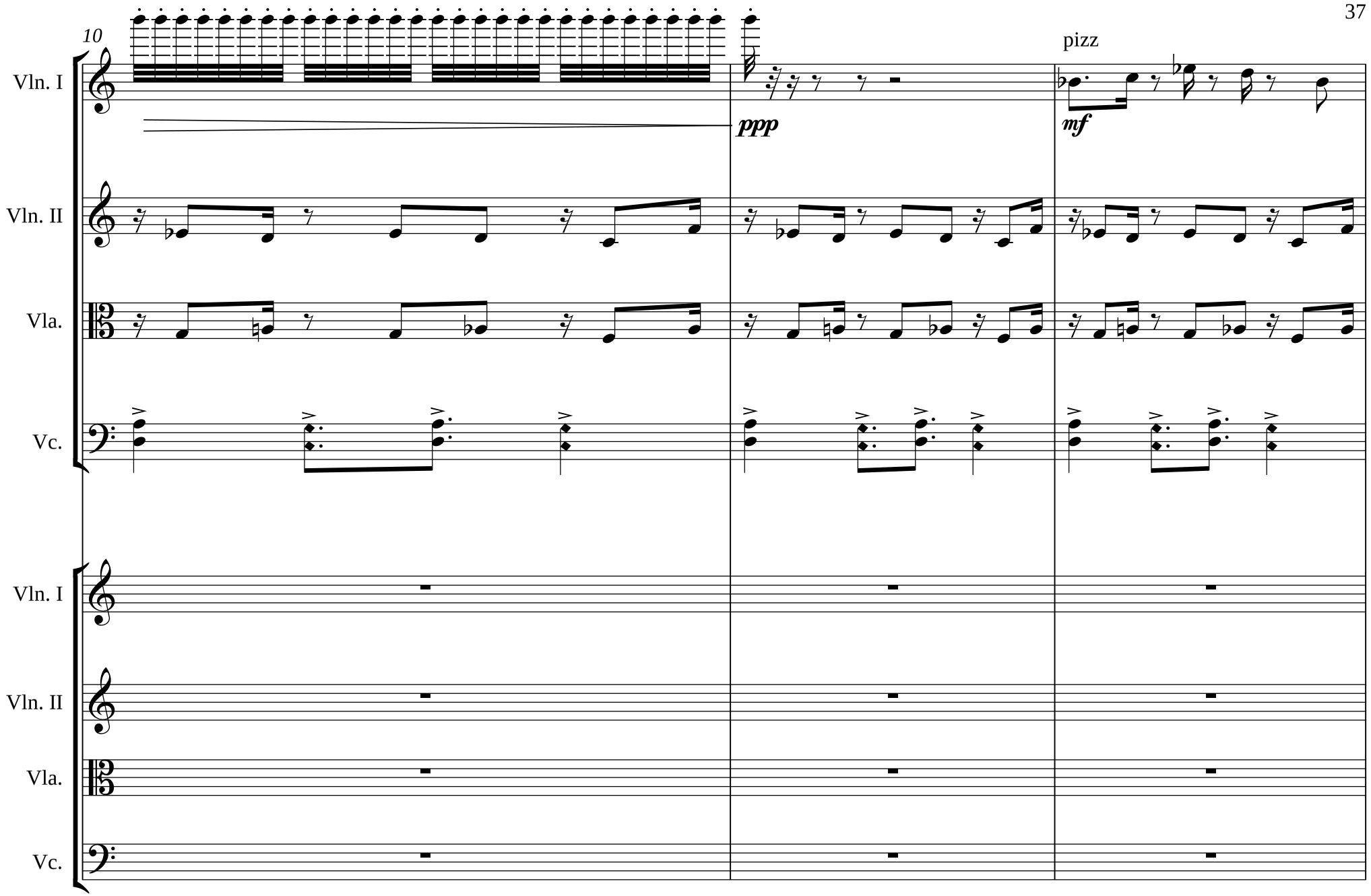
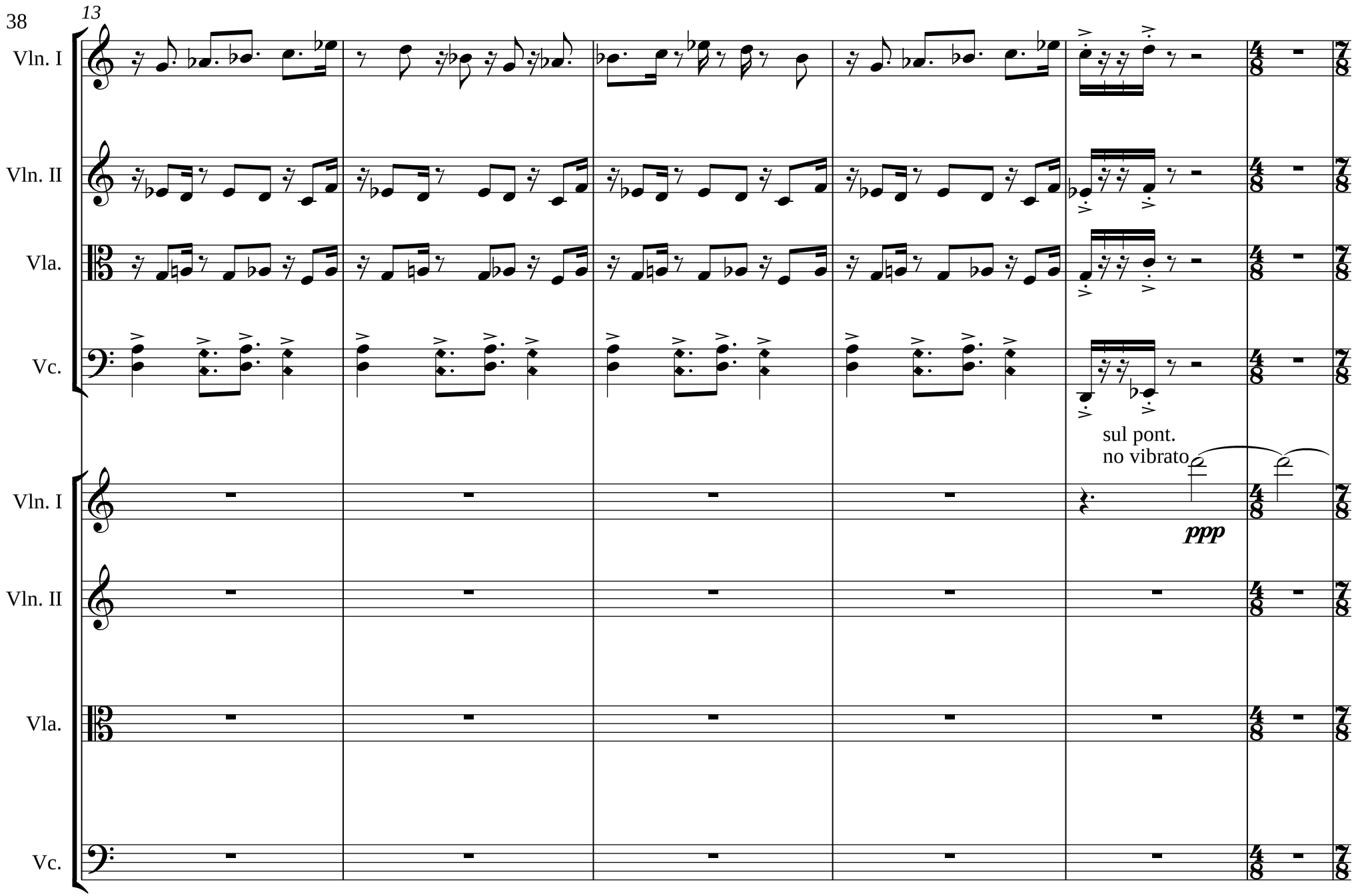

2
Vln. I
Vln. II
Vla.
Vc.
f
Vln. I
Vln. II
Vla.
Vc.

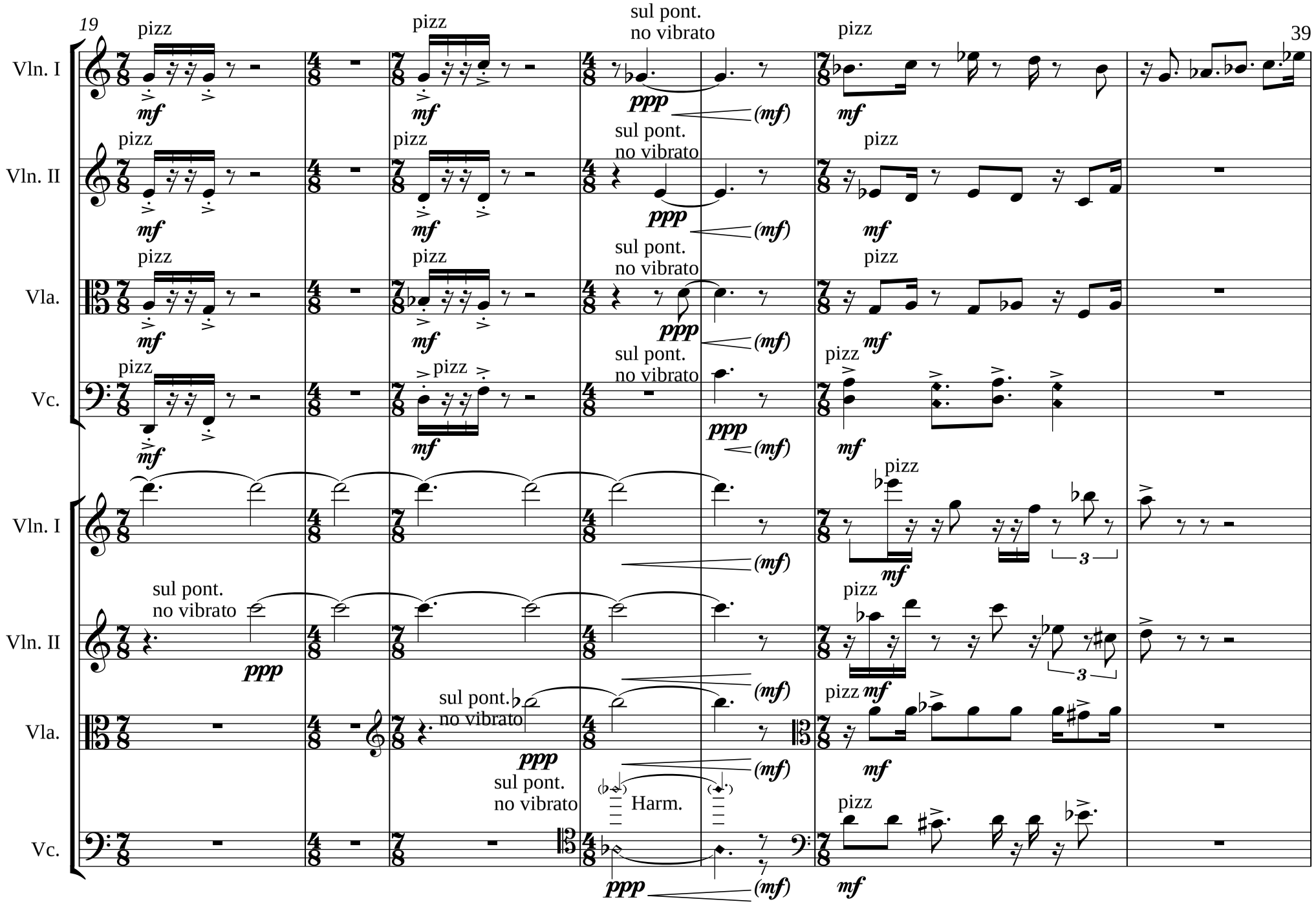

4
Vln. I
Vln. II
Vla.
Vc.
pizz
mf
harm.
harm.
harm.
harm.
Vln. I
Vln. II
Vla.
Vc.

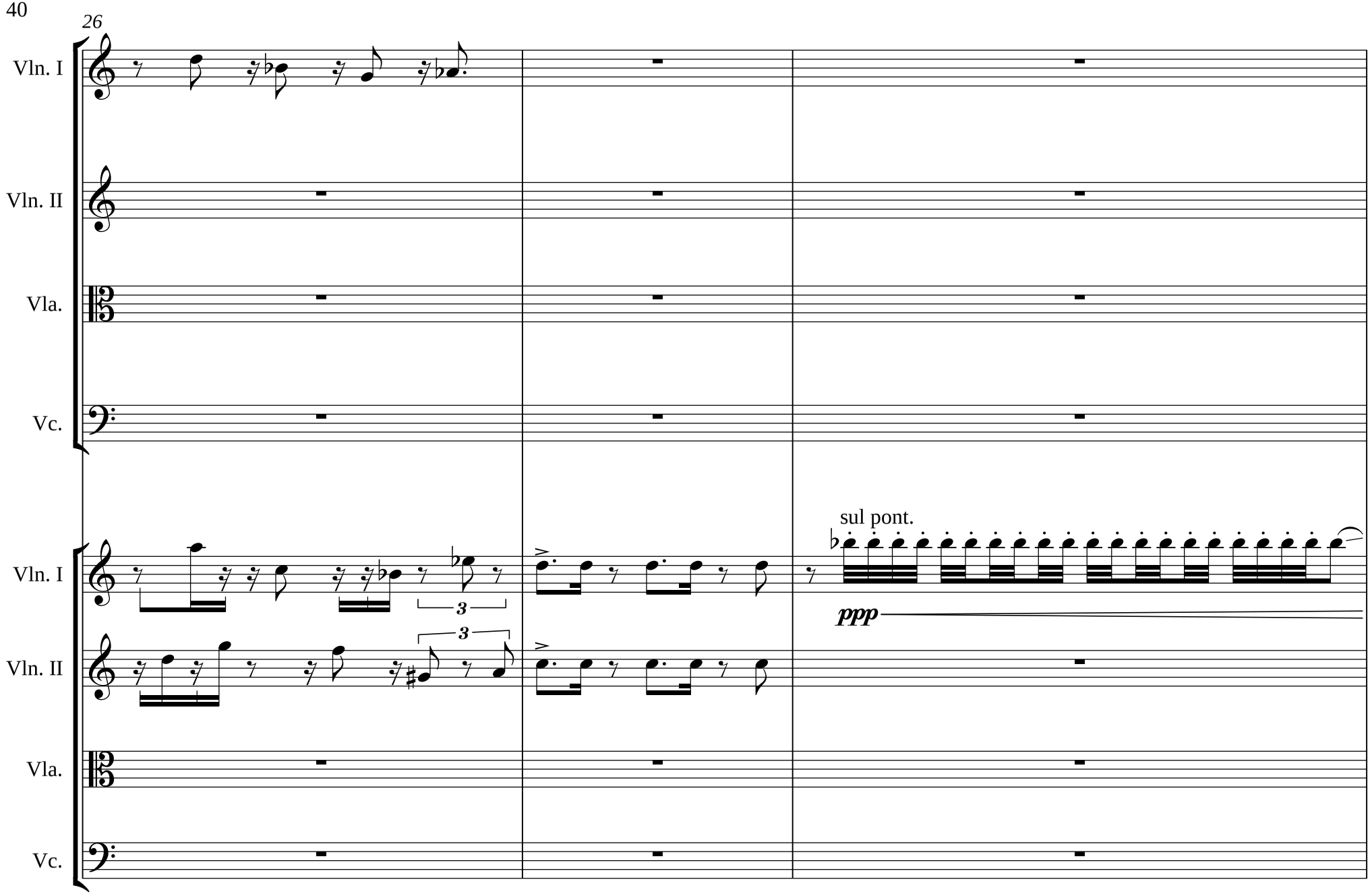

6
Vln. I
Vln. II
pizz
Vla.
mf
Vc.
harm.
harm.
harm.
etc.
Vln. I
Vln. II
Vla.
Vc.

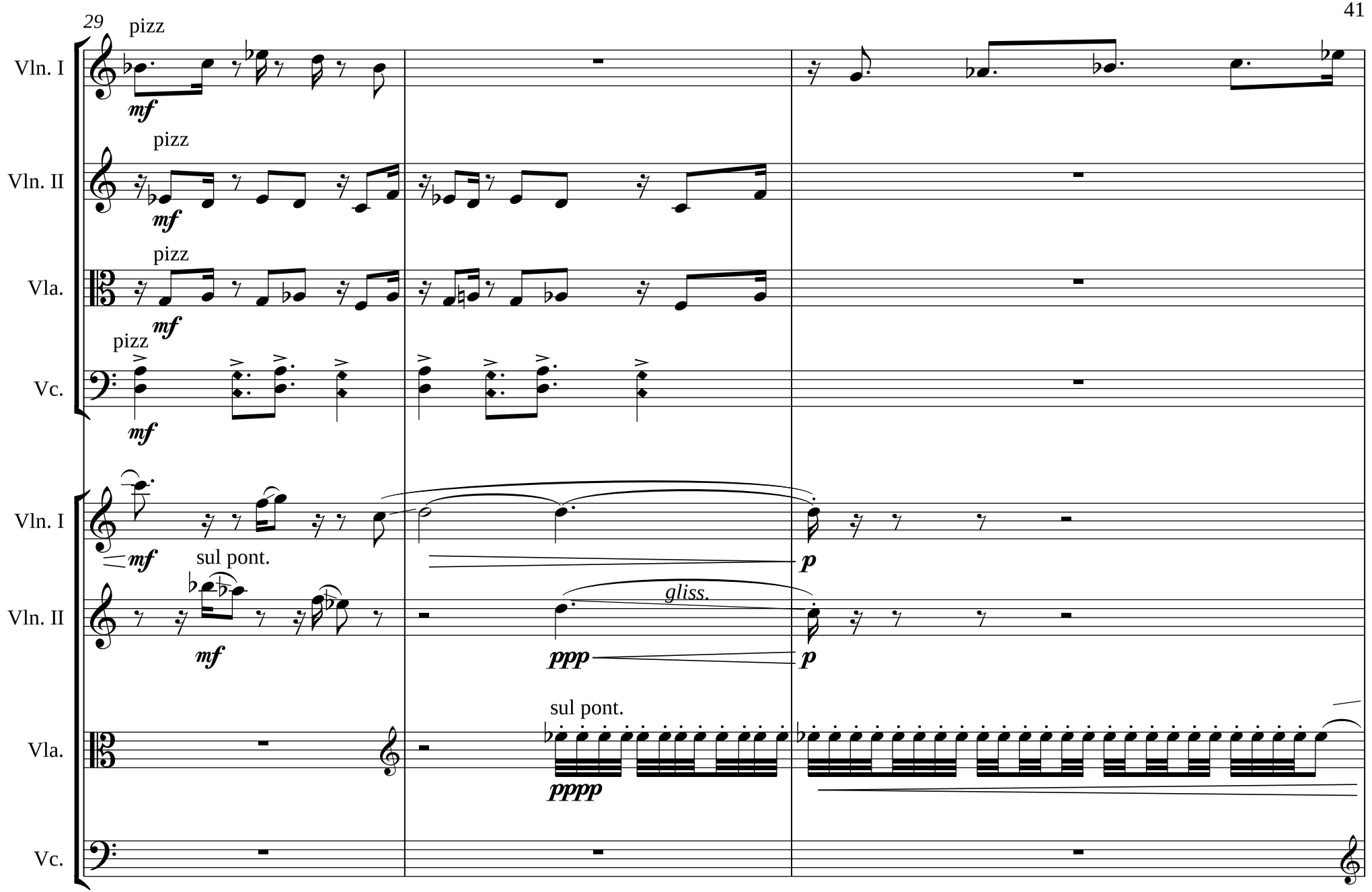

8
Vln. I
pizz
Vln. II
mf
Vla.
Vc.
Vln. I
Vln. II
Vla.
Vc.

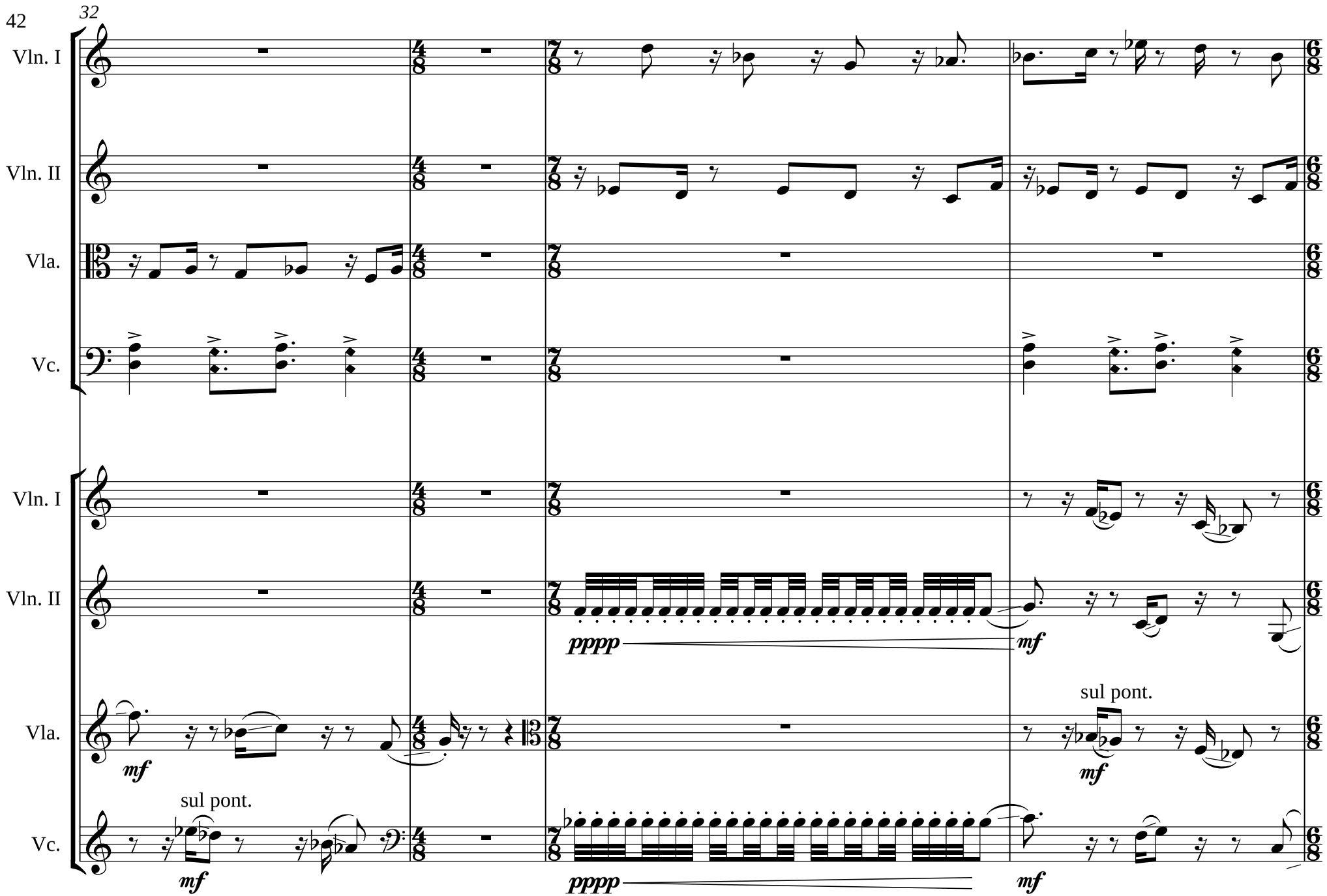

10
Vln. I
Vln. II
Vla.
Vc.
ppp
pizz
mf
Vln. I
Vln. II
Vla.
Vc.

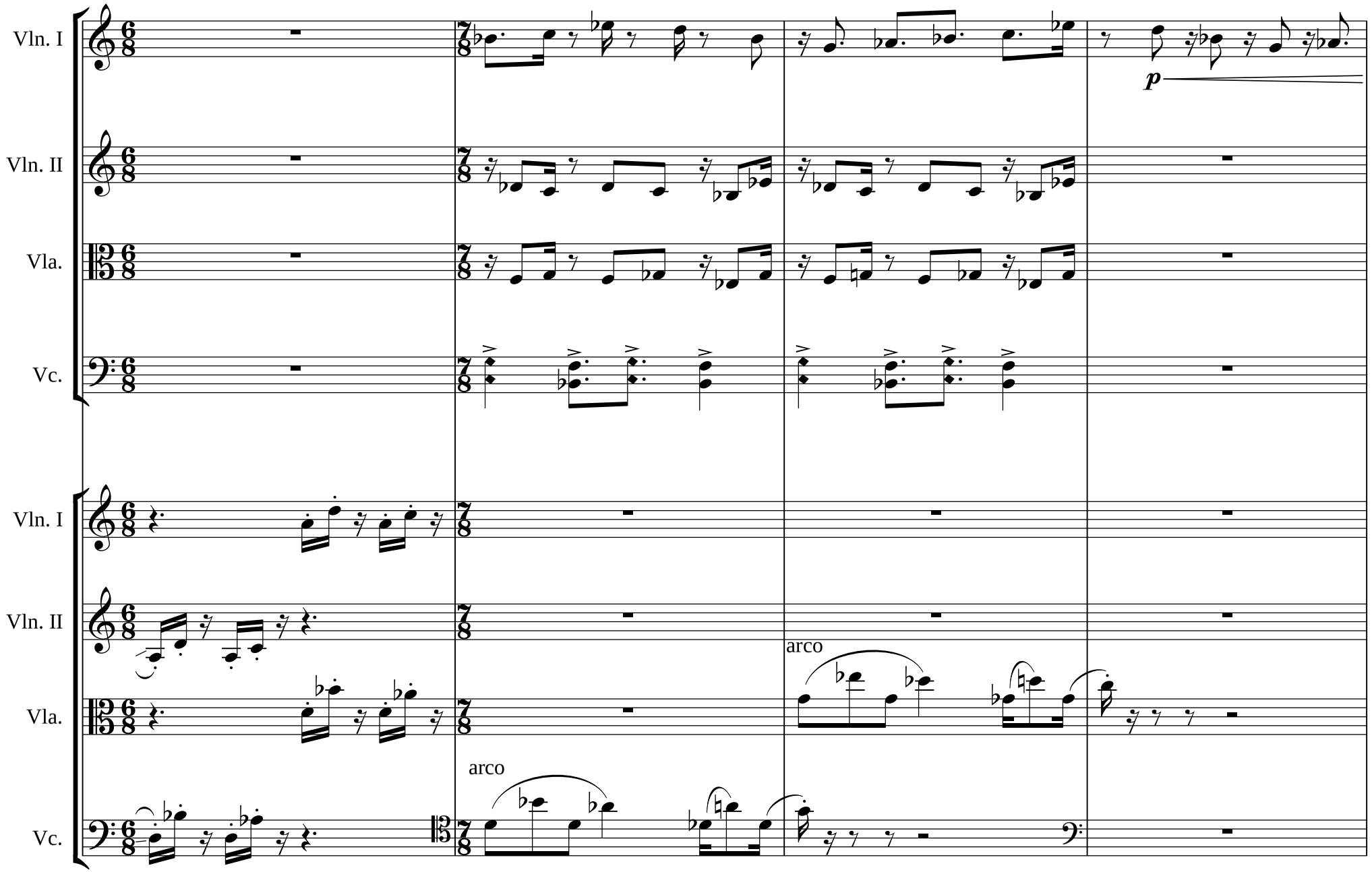

13
Vln. I
Vln. II
Vla.
Vc.
sul pont.
no vibrato
ppp
Vln. I
Vln. II
Vla.
Vc.

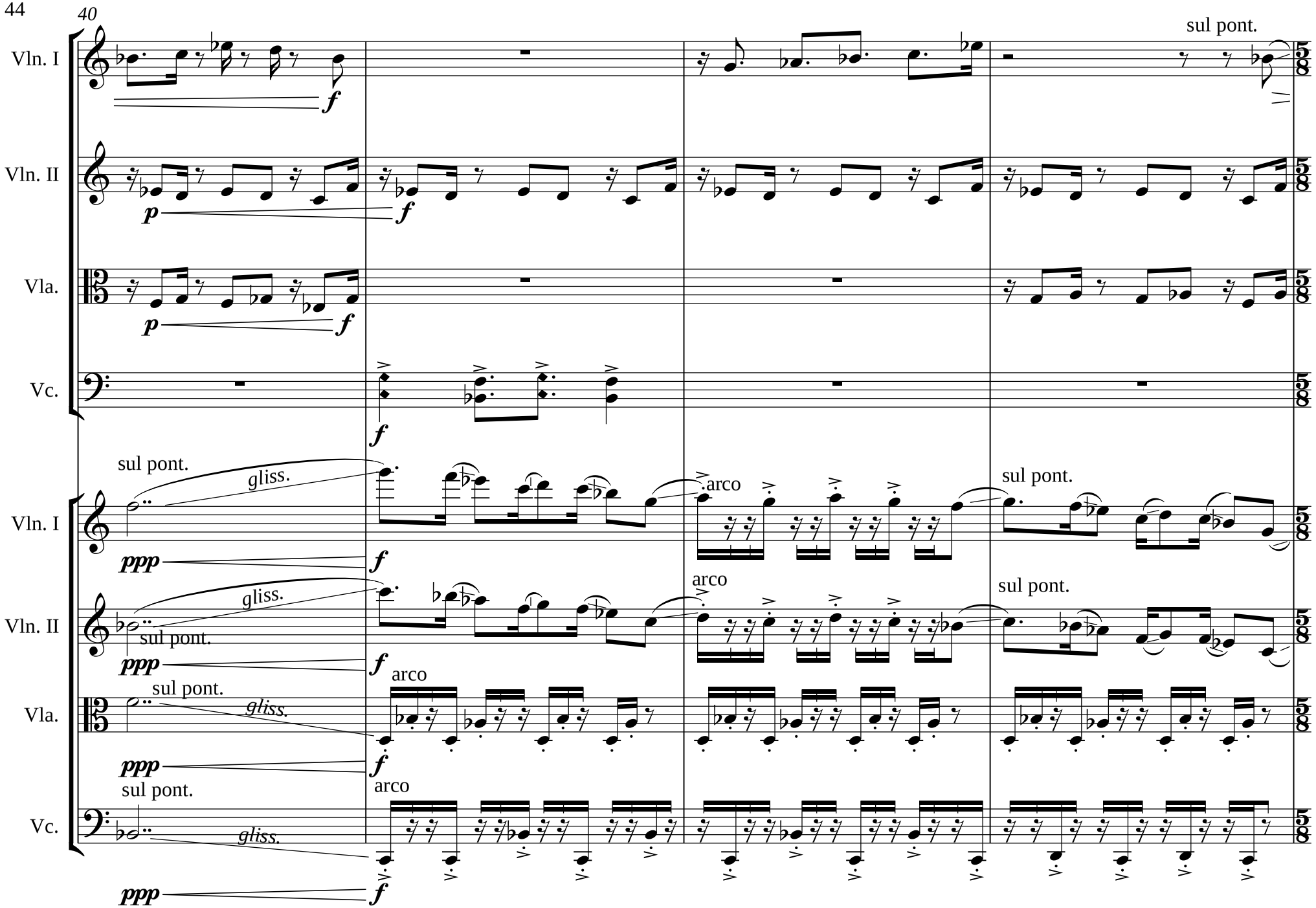

19
39
Vln. I
Vln. II
Vla.
Vc.
pizz
sul pont.
no vibrato
Harm.
mf
ppp
(mf)
3

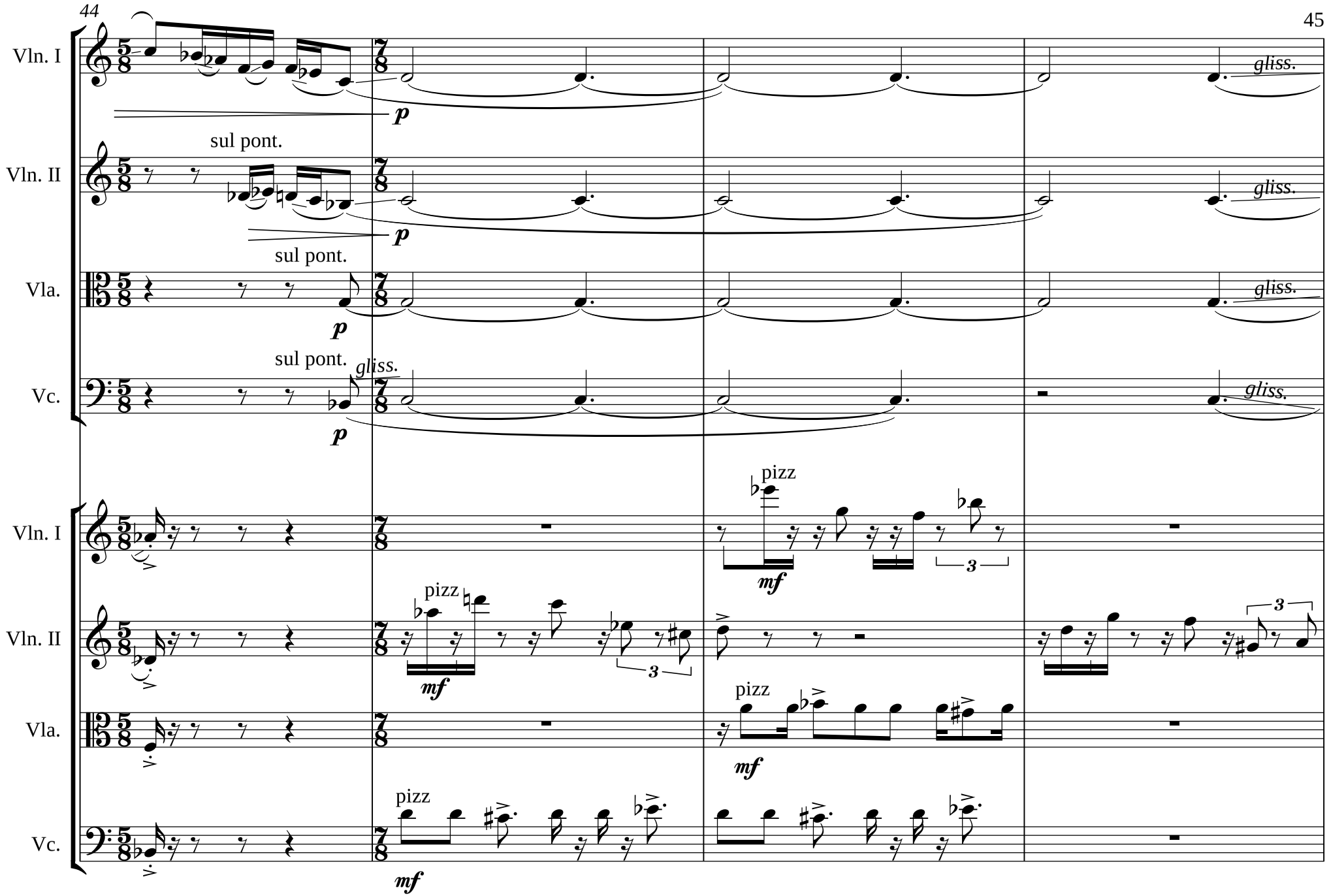

26
Vln. I
Vln. II
Vla.
Vc.
Vln. I
Vln. II
Vla.
Vc.
3
3
sul pont.
ppp

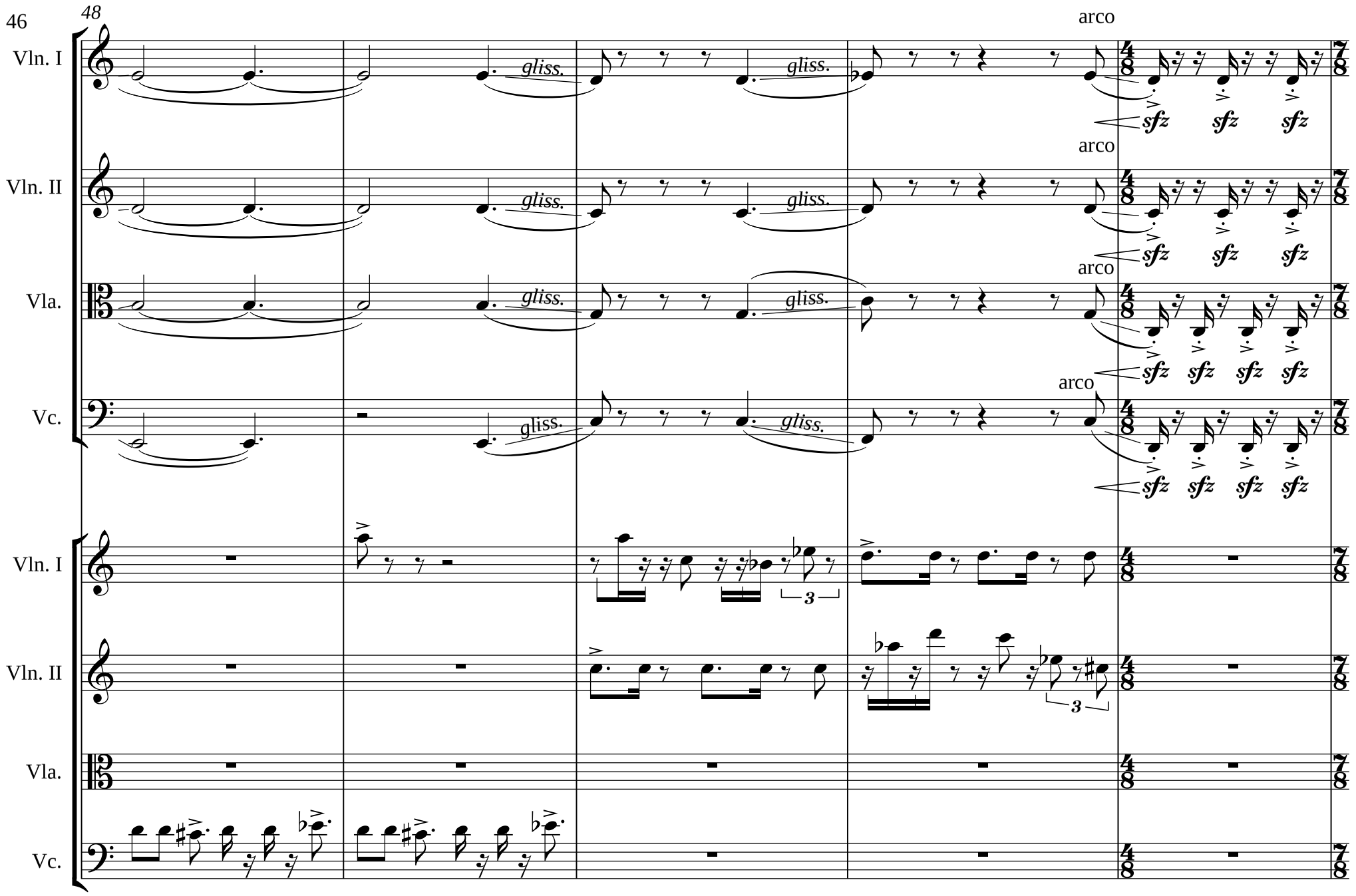

29
pizz
Vln. I
mf
pizz
Vln. II
mf
pizz
Vla.
mf
pizz
Vc.
mf
Vln. I
mf
sul pont.
p
Vln. II
mf
gliss.
ppp
p
sul pont.
Vla.
pppp
Vc.

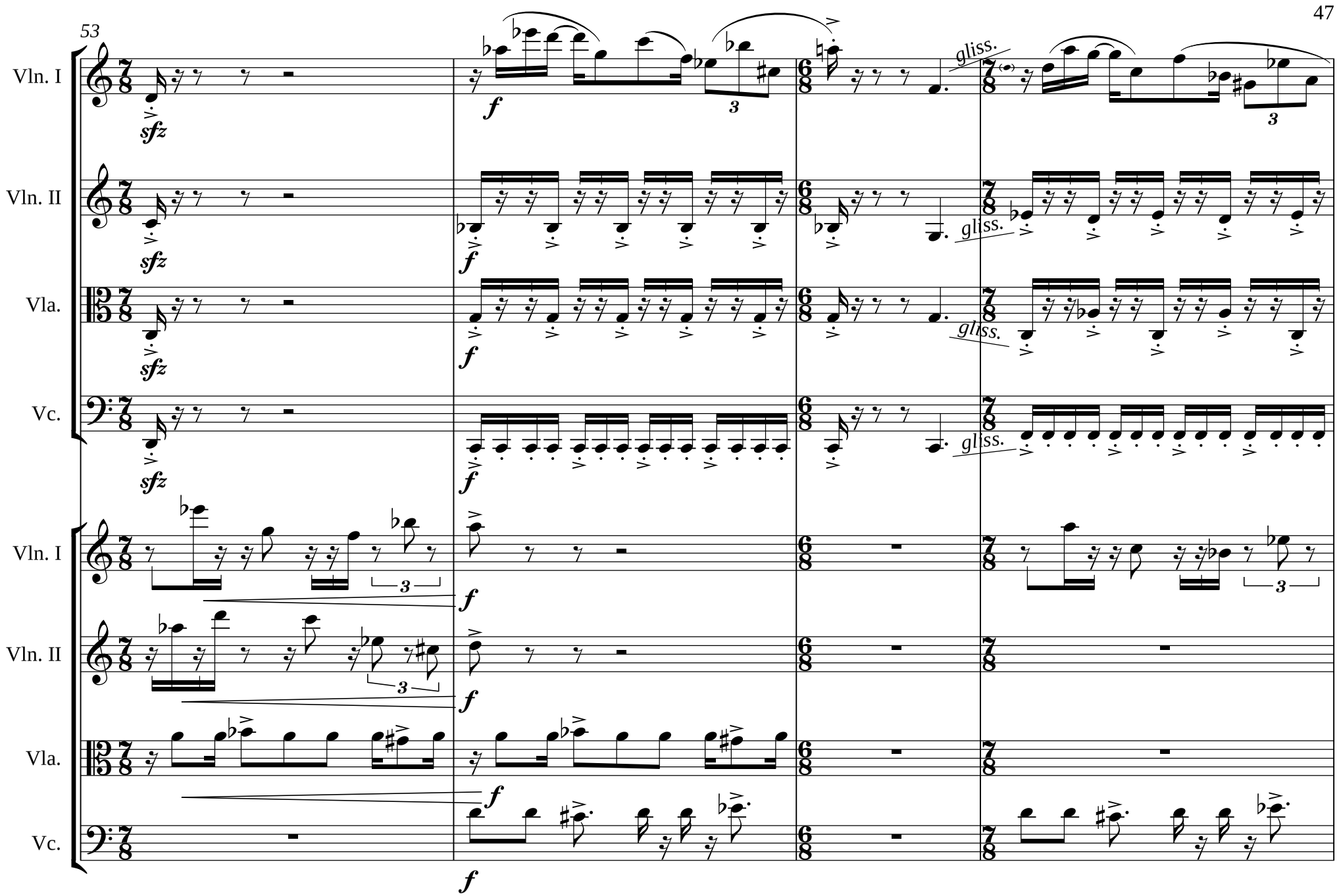

32
Vln. I
Vln. II
Vla.
Vc.
Vln. I
Vln. II
Vla.
Vc.
pppp
mf
sul pont.
mf
sul pont.
mf
pppp
mf

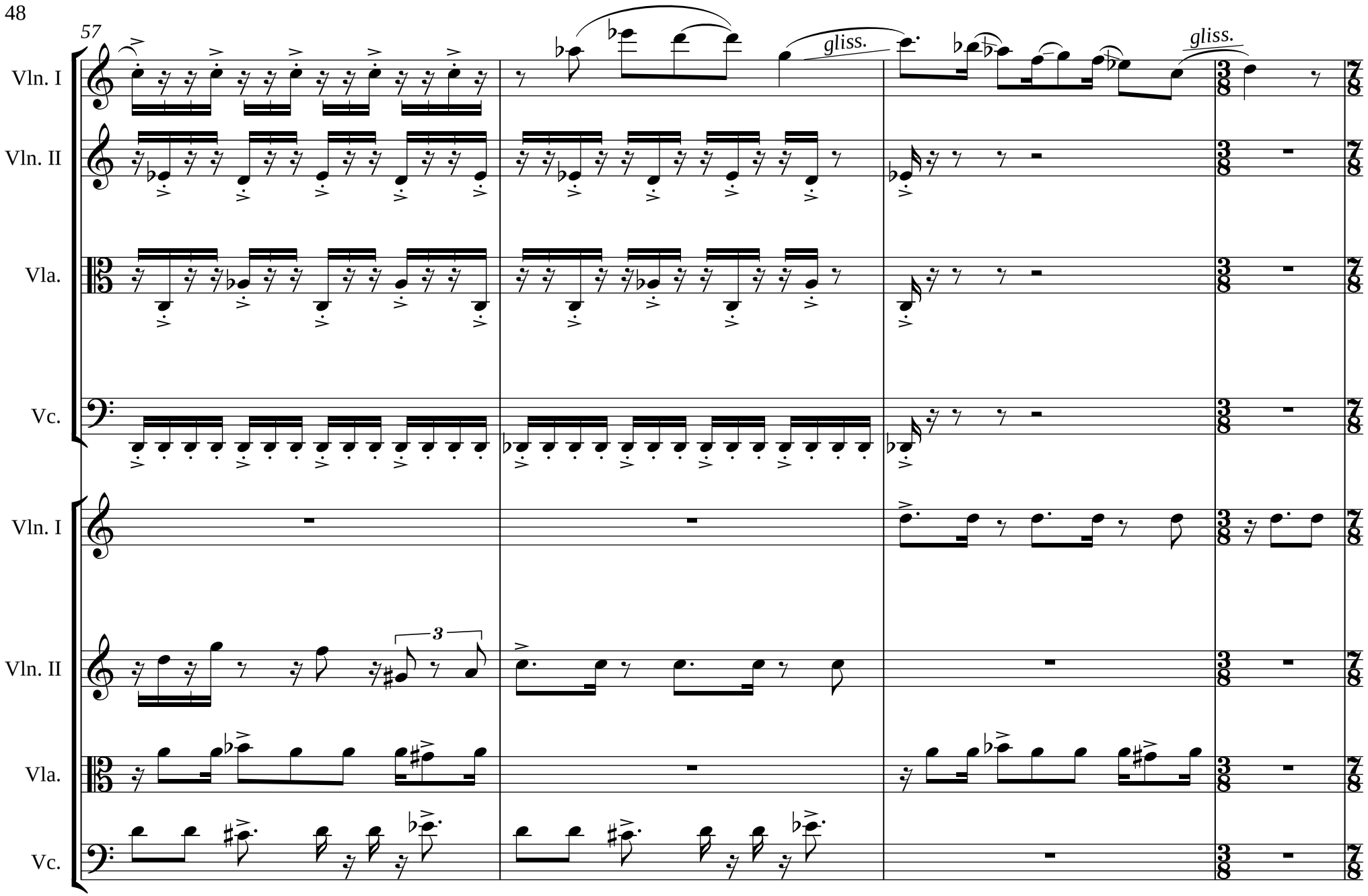

Vln. I
Vln. II
Vla.
Vc.
p
Vln. I
Vln. II
arco
Vla.
arco
Vc.

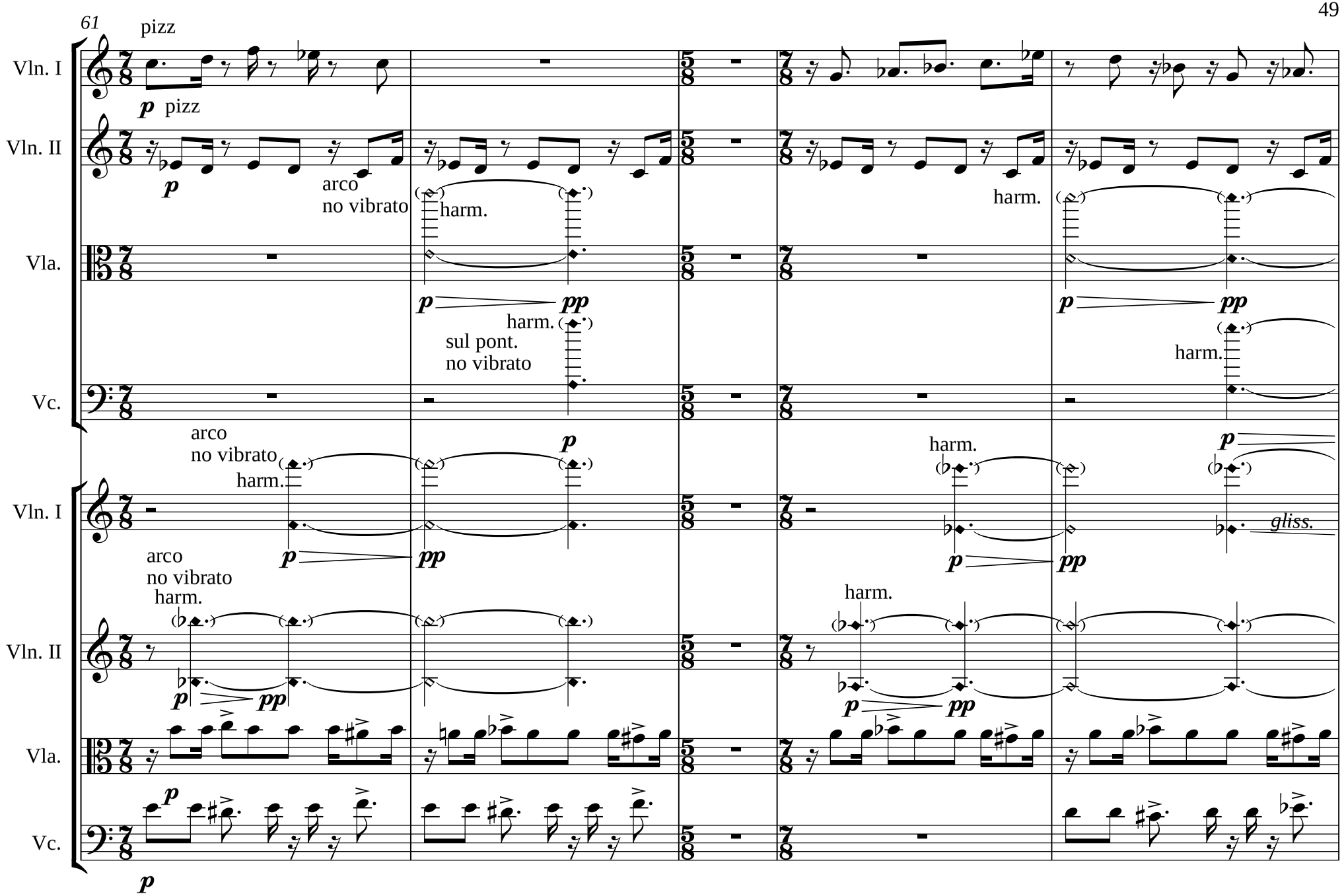

40
Vln. I
Vln. II
Vla.
Vc.
sul pont.
gliss.
arco
ppp
f
p

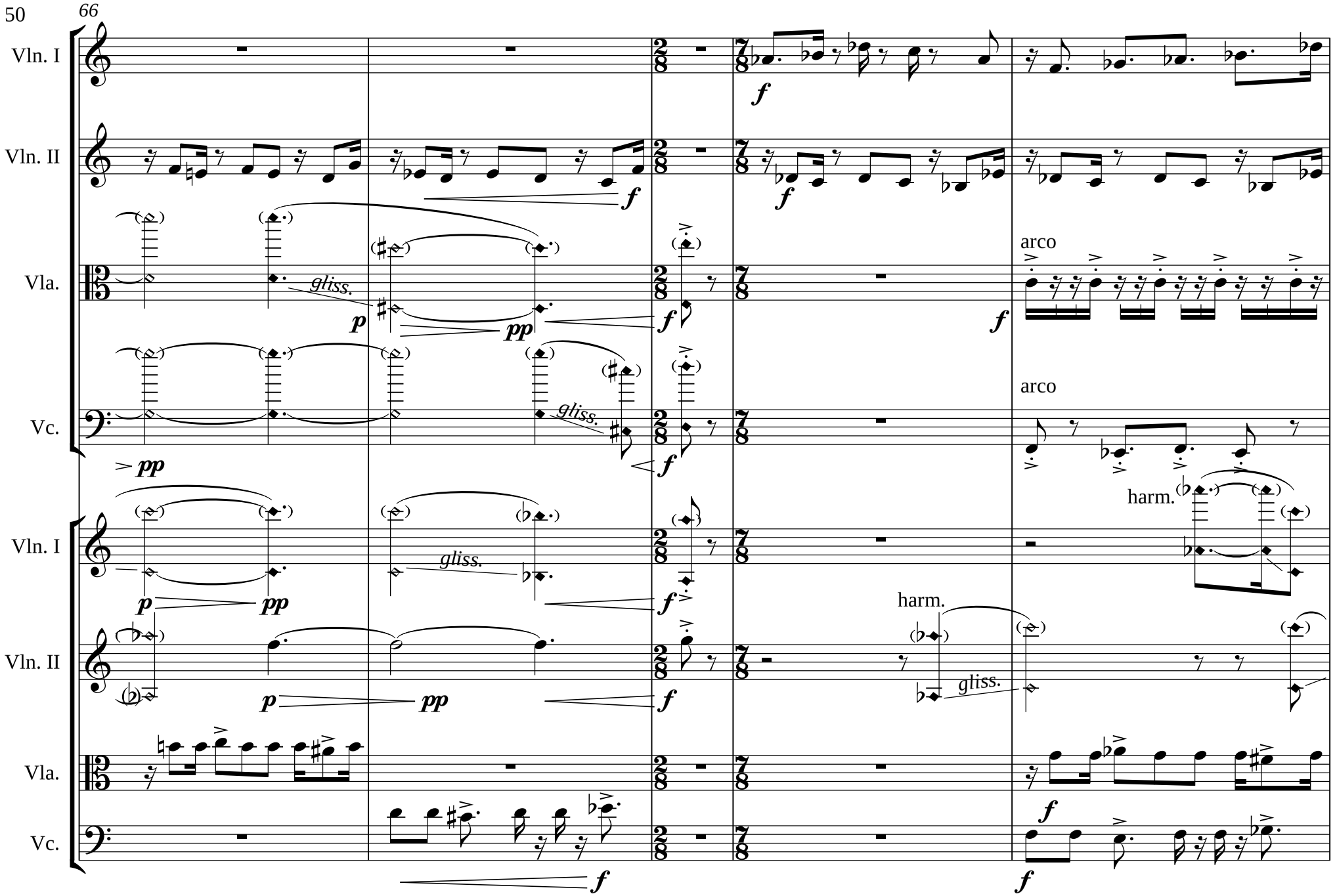

Vln. I
Vln. II
Vla.
Vc.
sul pont.
gliss.
p
pizz
mf
3

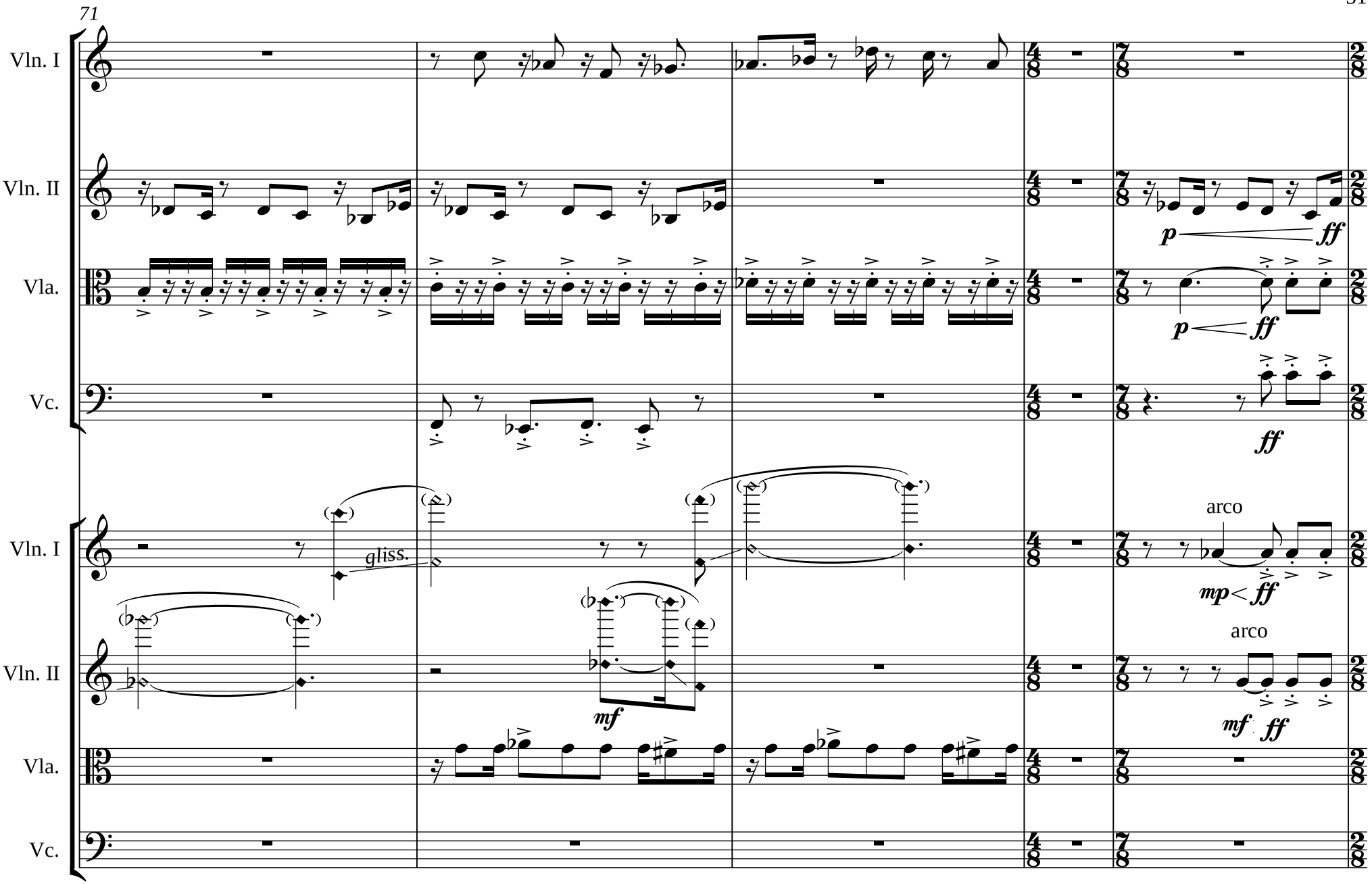

48
Vln. I
Vln. II
Vla.
Vc.
gliss.
arco
sfz
3

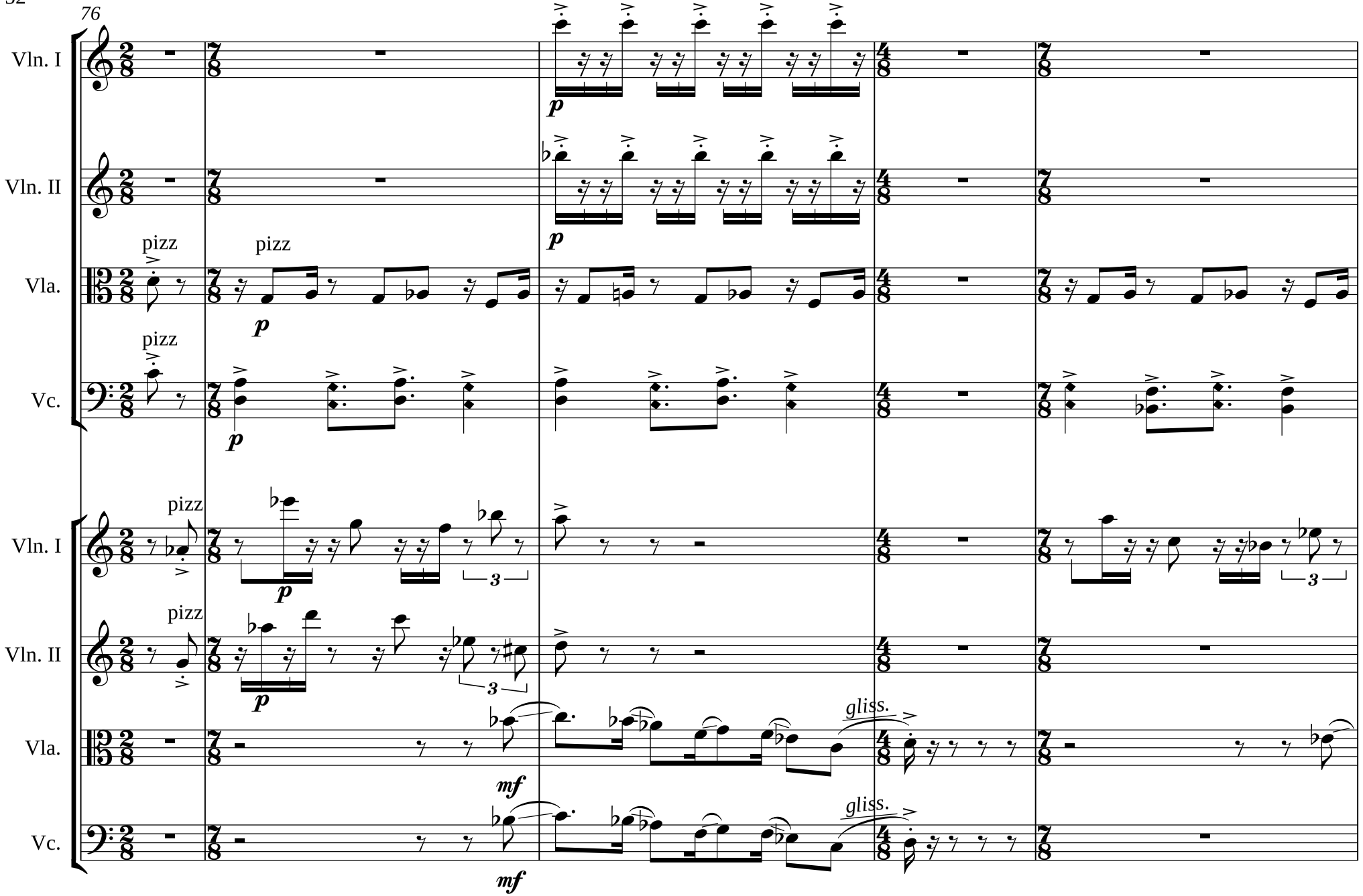

53
Vln. I
Vln. II
Vla.
Vc.
sfz
f
gliss.
3

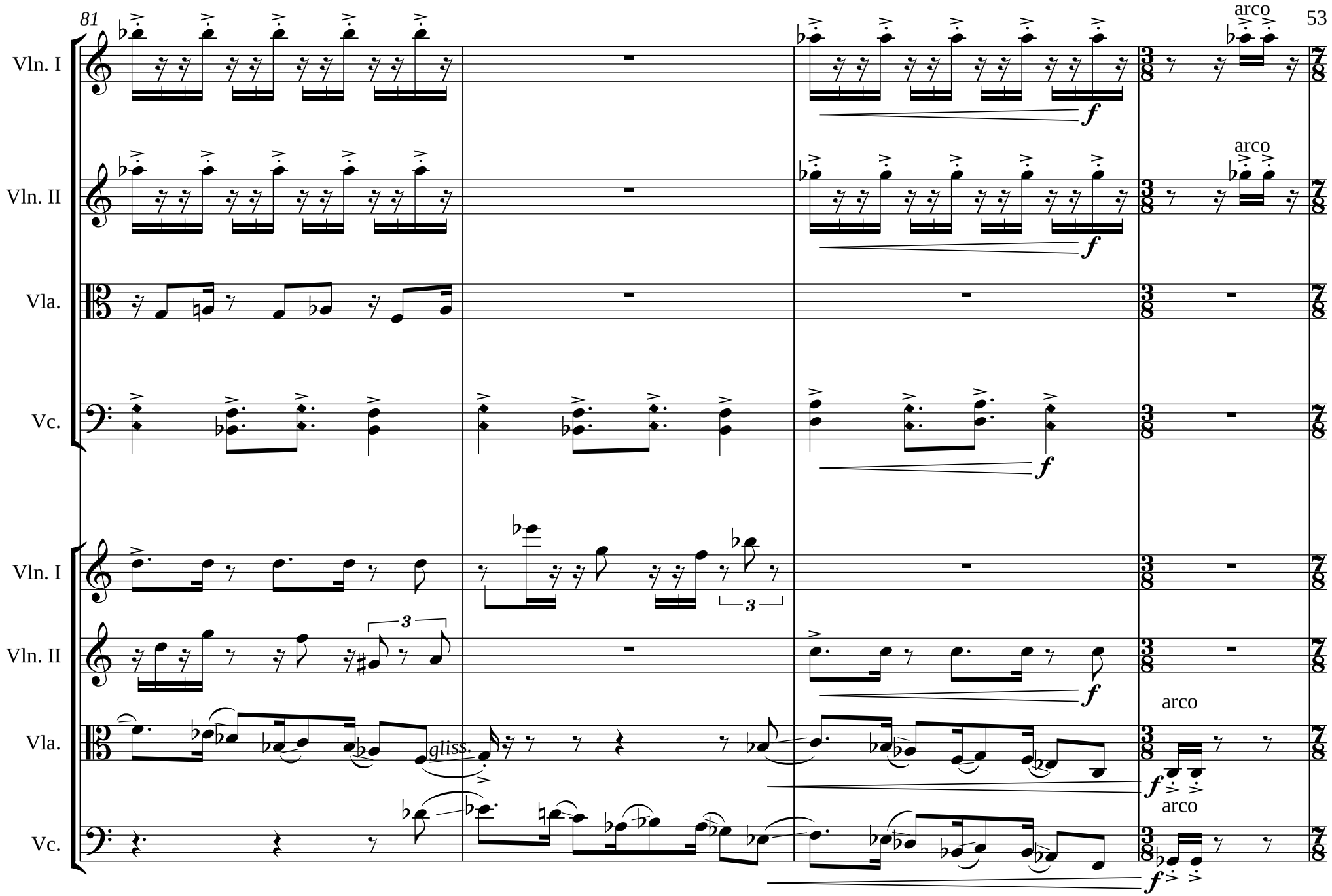

57
Vln. I
Vln. II
Vla.
Vc.
gliss.
gliss.
3

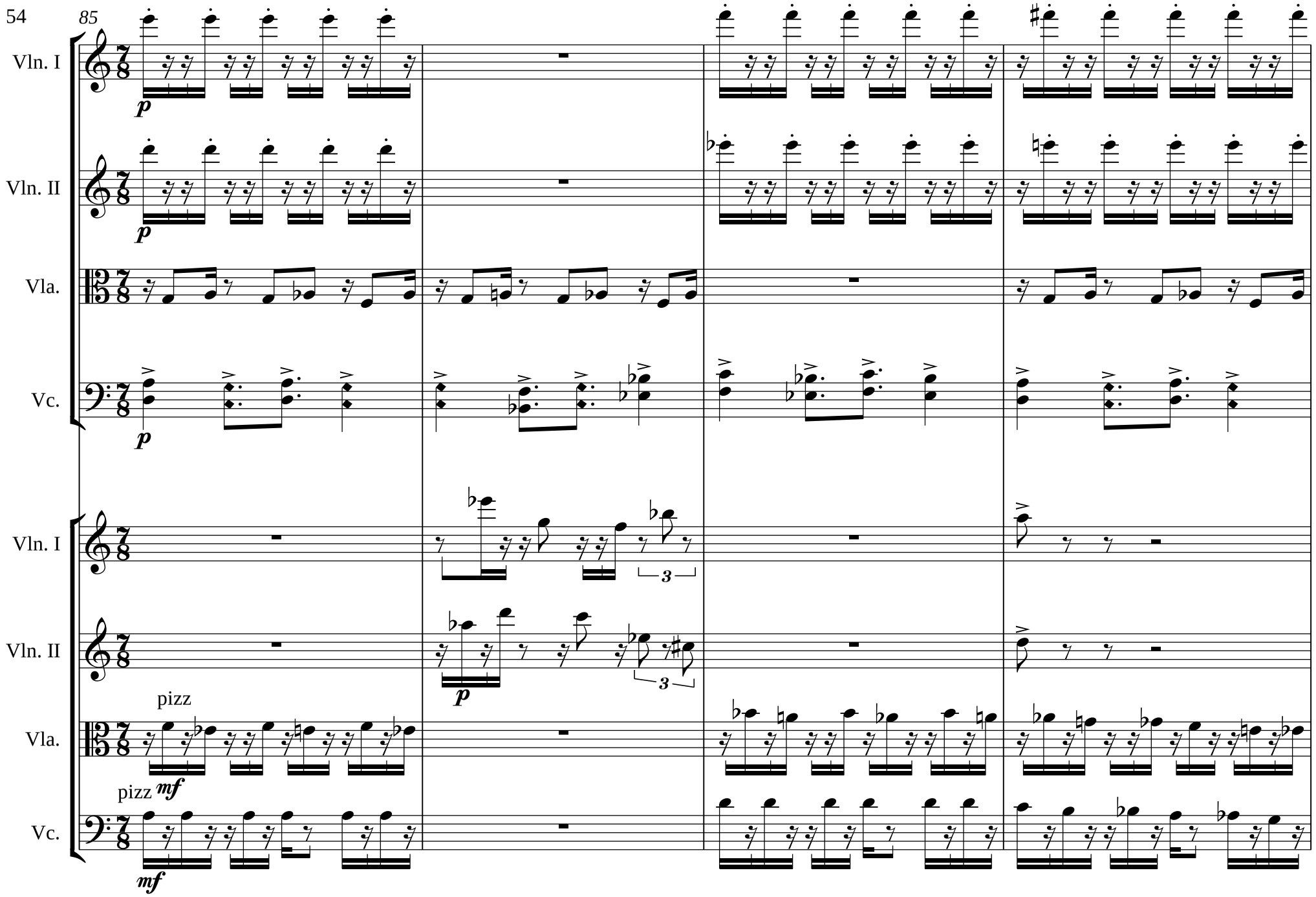

61
pizz
Vln. I
p pizz
Vln. II
p
arco
no vibrato
harm.
harm.
Vla.
p
pp
harm.
sul pont.
no vibrato
p
pp
harm.
Vc.
arco
no vibrato
harm.
p
pp
p
harm.
p
pp
p
gliss.
Vln. I
arco
no vibrato
harm.
p
pp
harm.
p
pp
Vln. II
p
pp
Vla.
p
Vc.
p

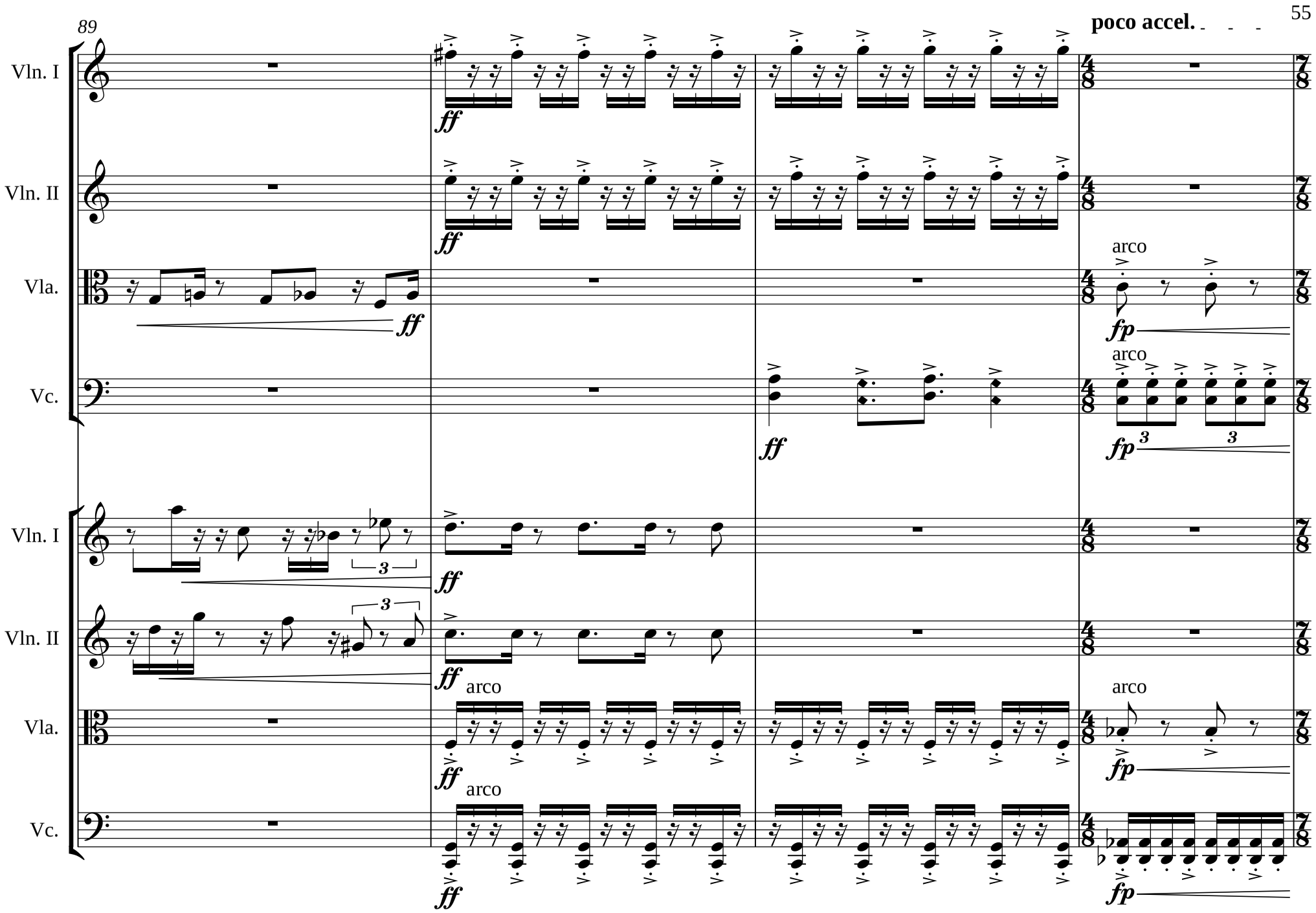

66
Vln. I
Vln. II
Vla.
Vc.
gliss.
arco
harm.

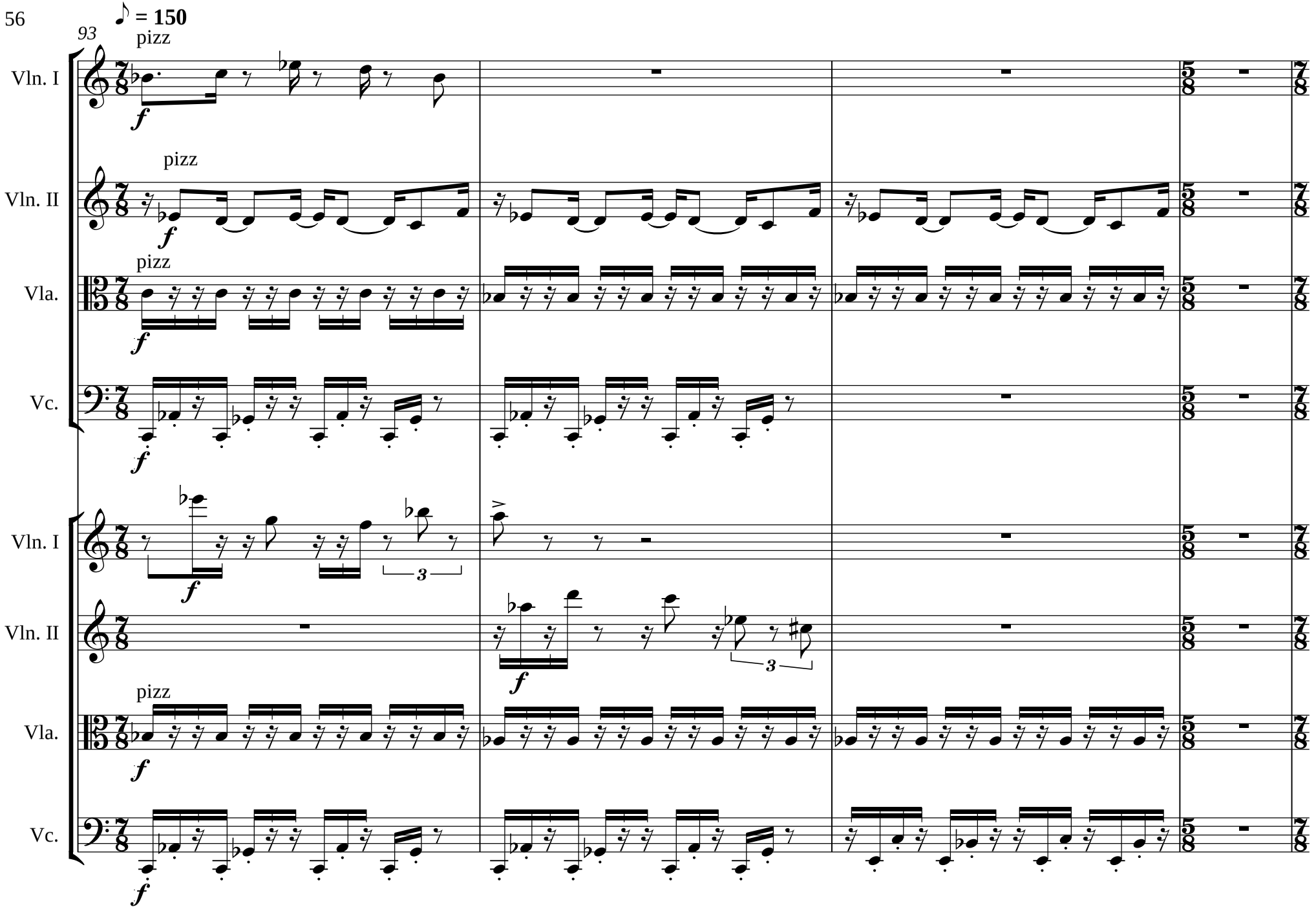

71
Vln. I
Vln. II
Vla.
Vc.
p
ff
gliss.
arco
mp
mf

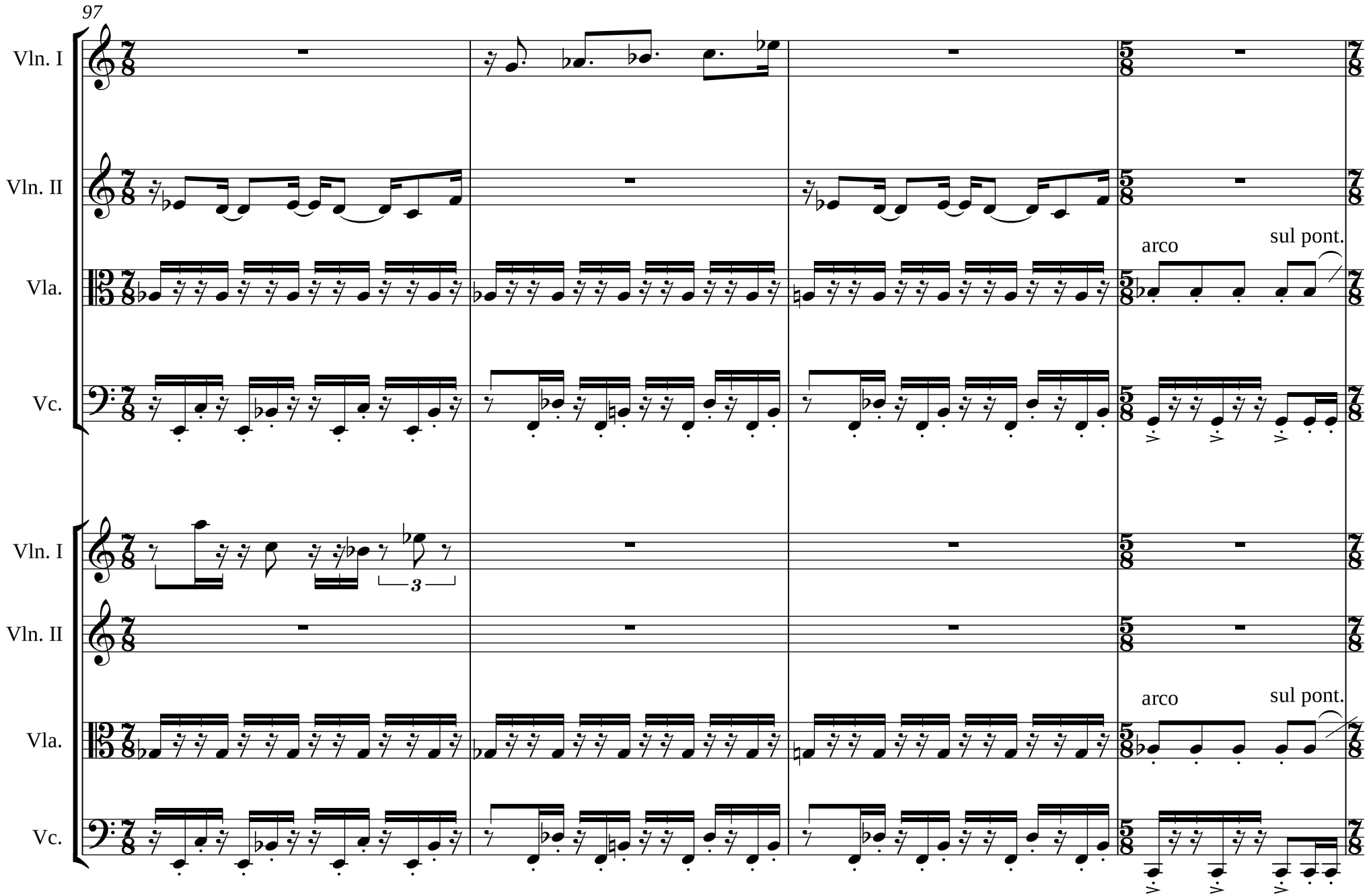

76
Vln. I
Vln. II
Vla.
Vc.
pizz
p
mf
gliss.
3

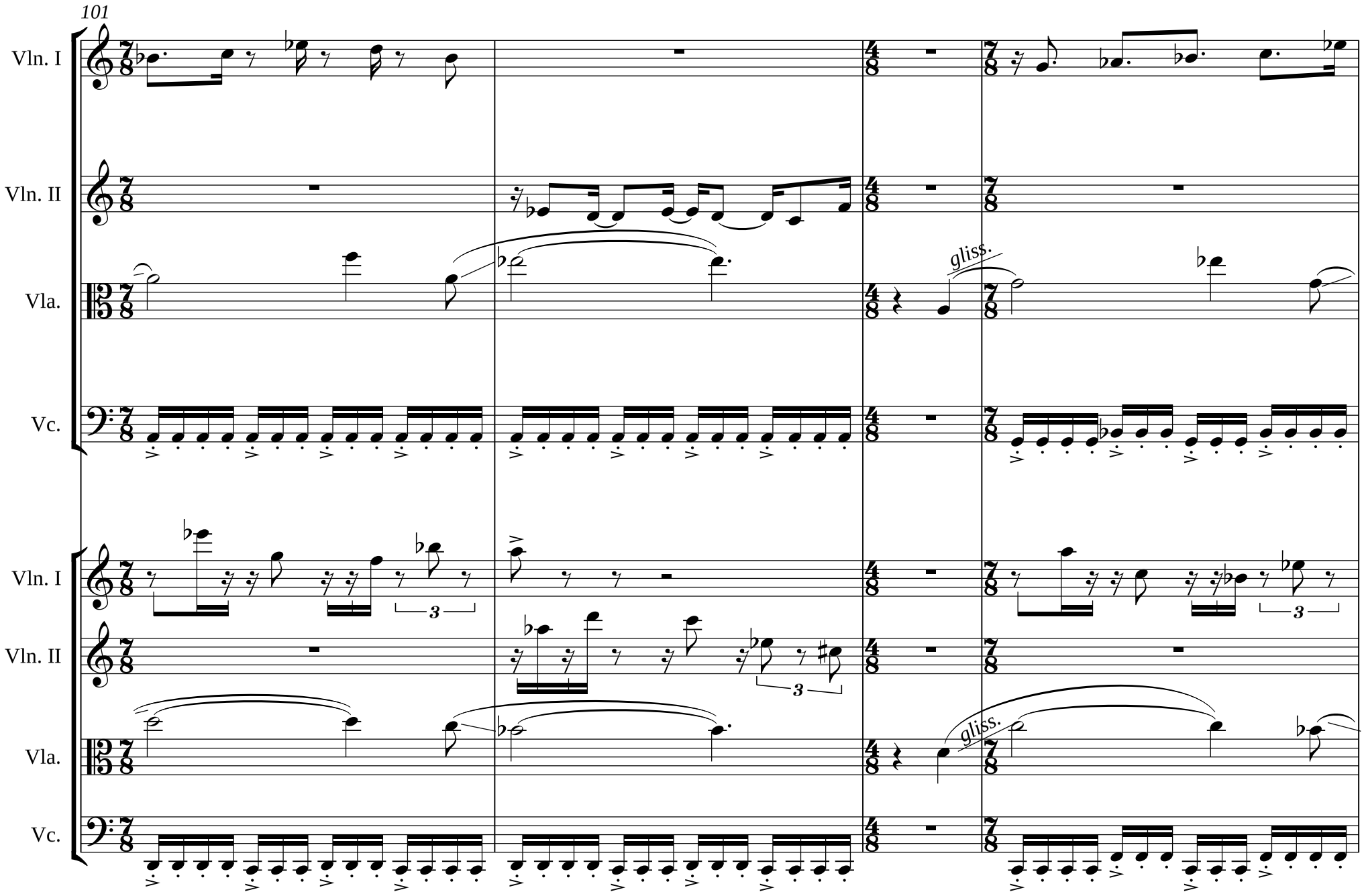

Vln. I
Vln. II
Vla.
Vc.
arco
arco
f
3
gliss.
arco
arco

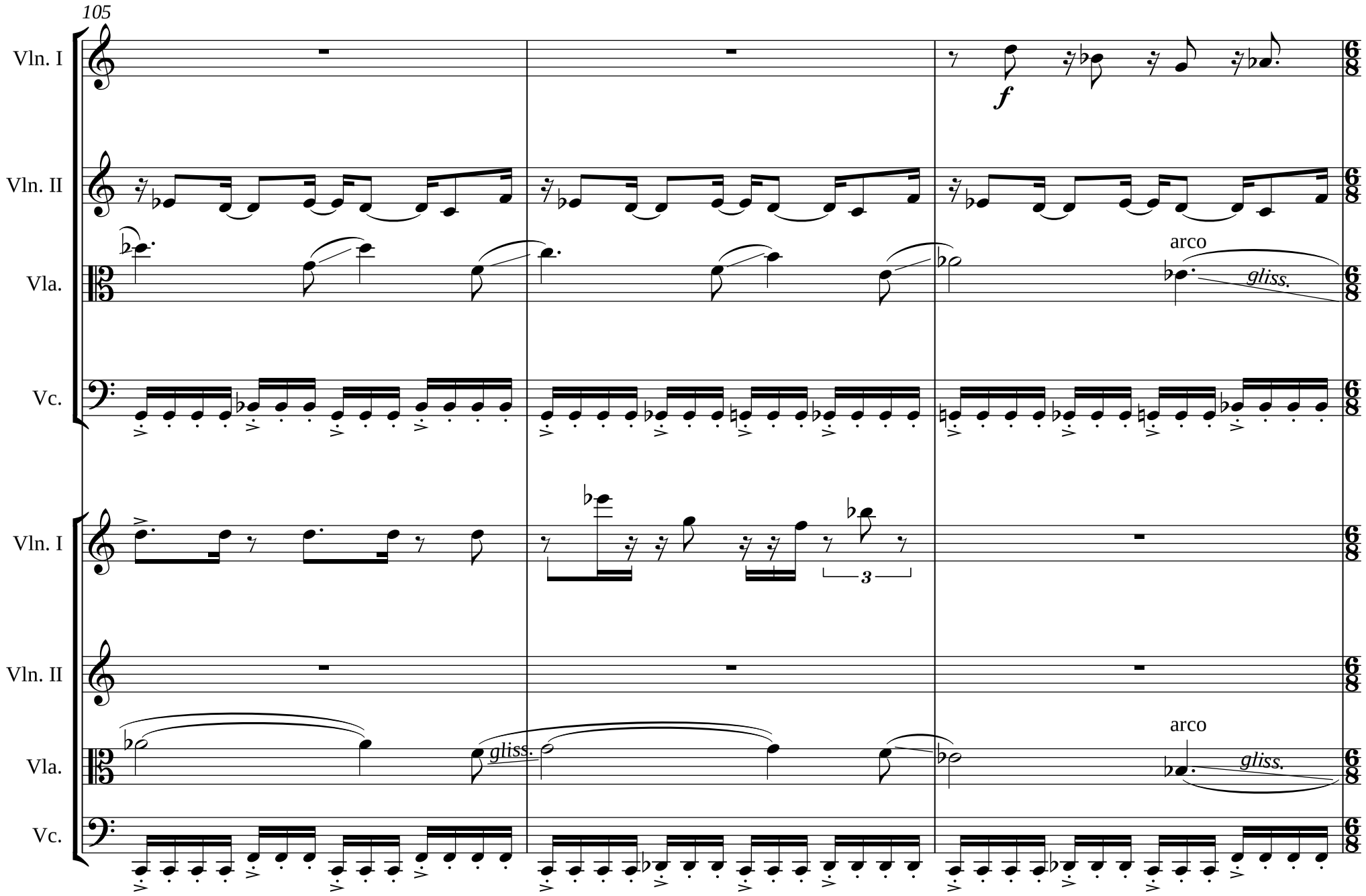

85
Vln. I
Vln. II
Vla.
Vc.
p
Vln. I
Vln. II
pizz
p
Vla.
pizz mf
Vc.
mf
3
3

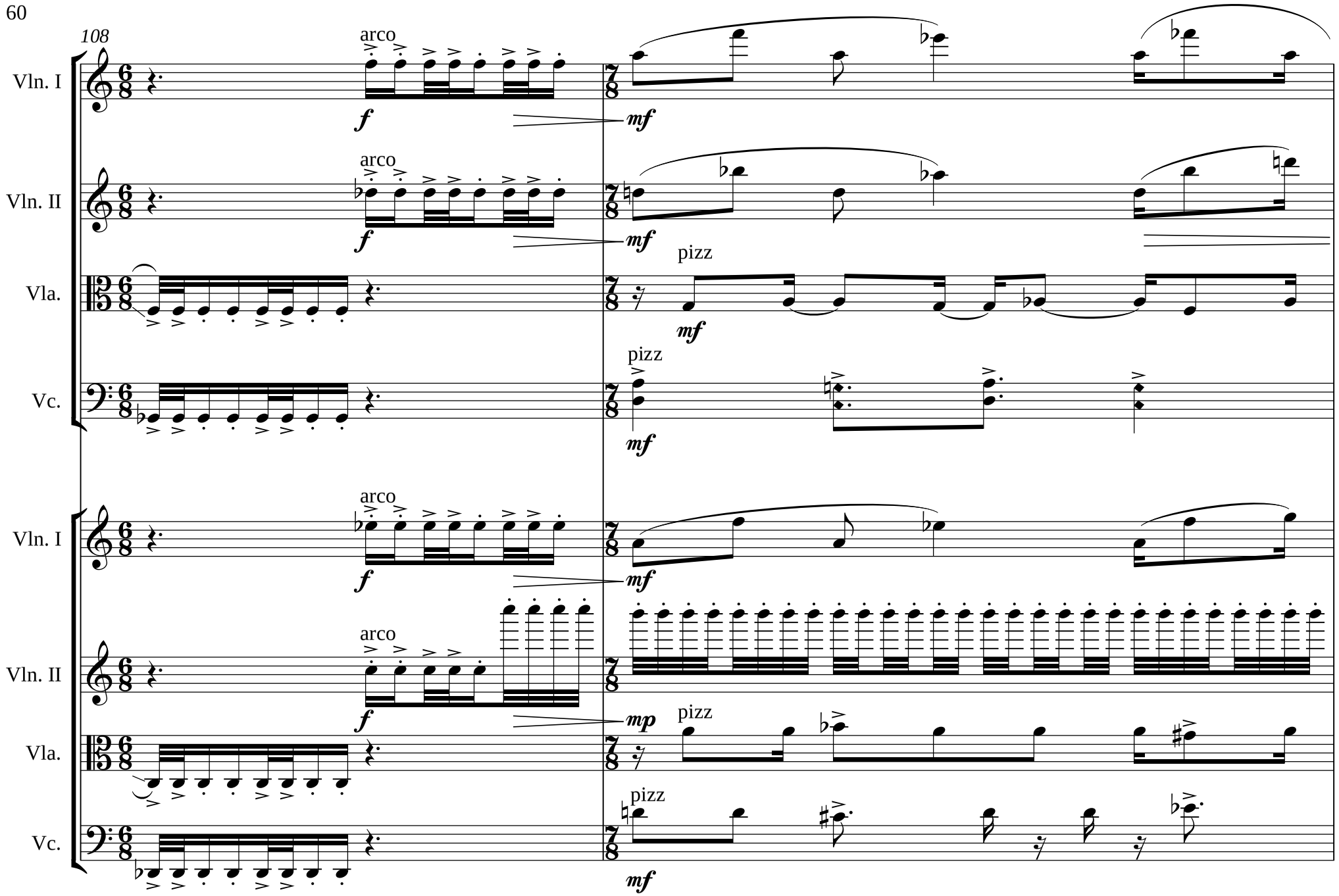

89
poco accel.
Vln. I
Vln. II
Vla.
Vc.
arco
ff
fp
3

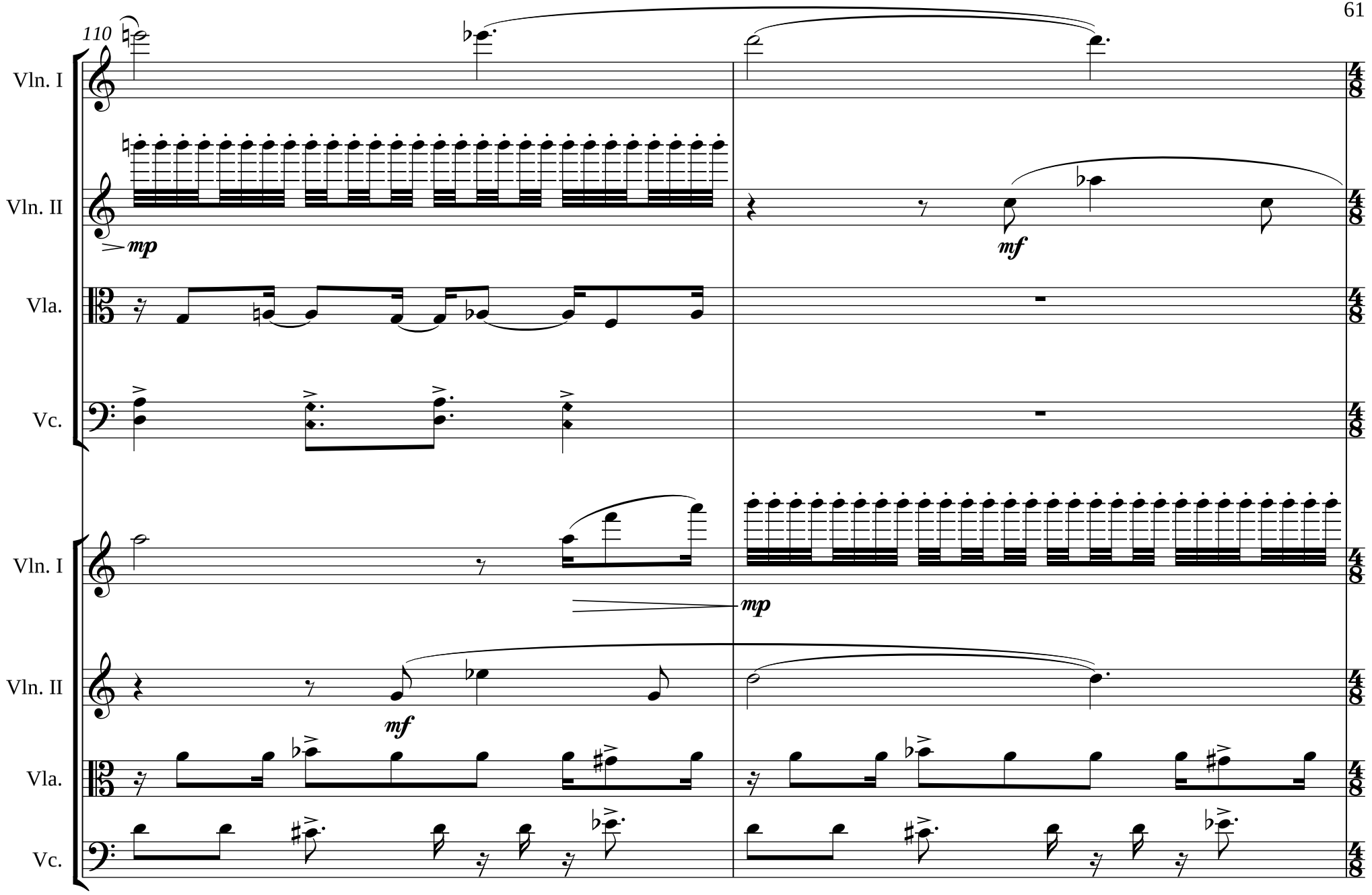

♪ = 150
93
pizz
Vln. I
Vln. II
Vla.
Vc.
3

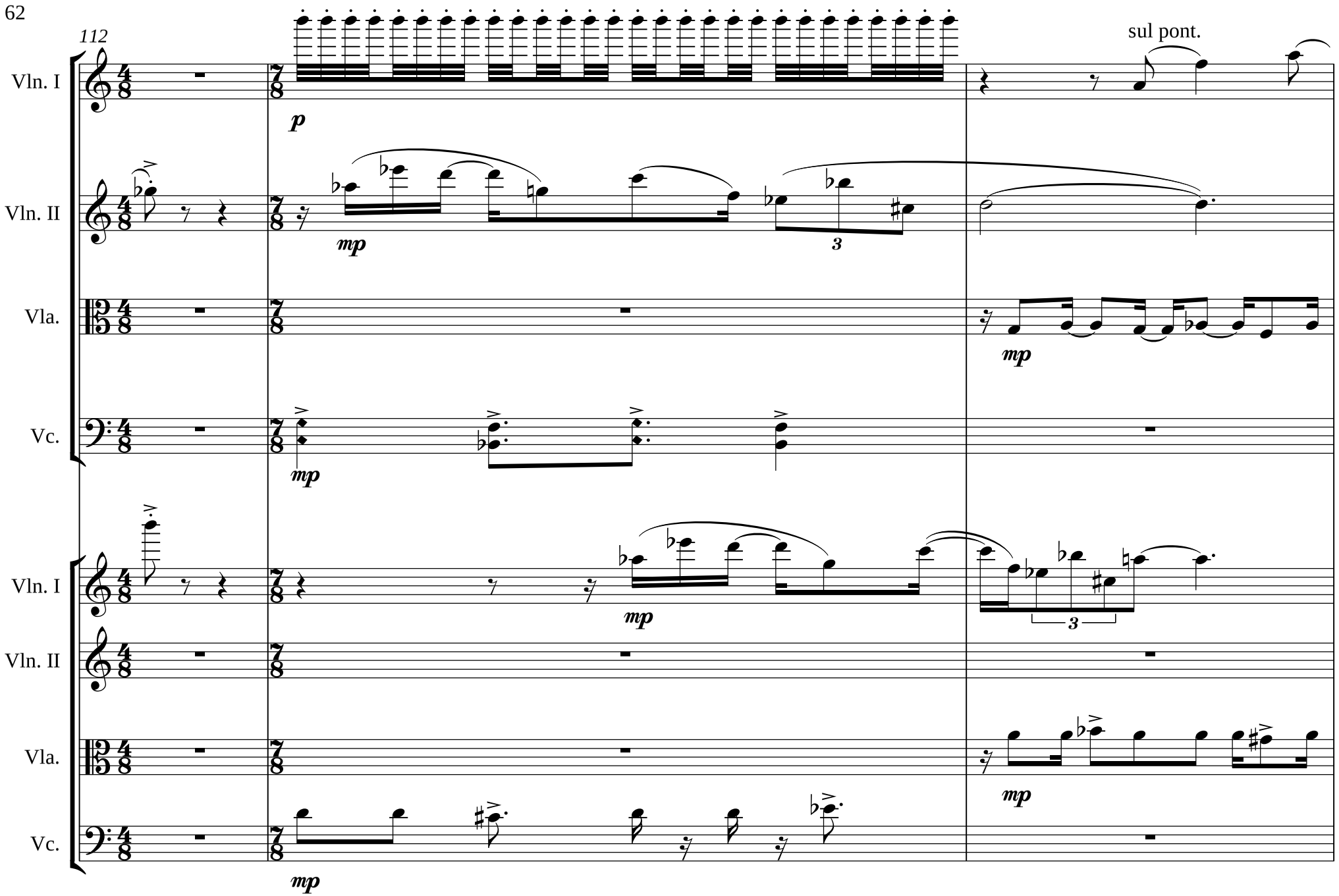

97
Vln. I
Vln. II
Vla.
Vc.
arco
sul pont.
3

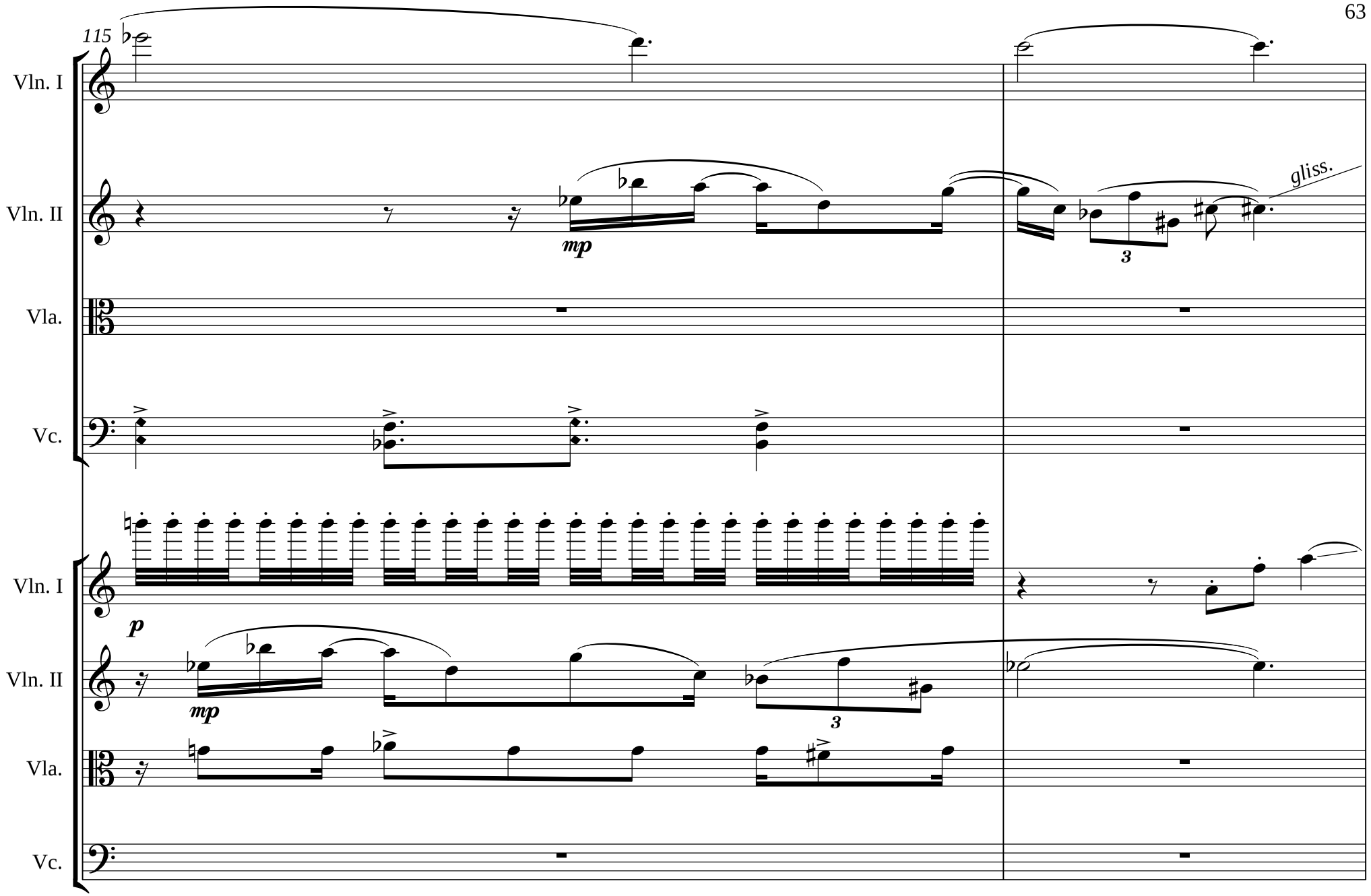

101
Vln. I
Vln. II
Vla.
Vc.
gliss.
3
Vln. I
Vln. II
Vla.
Vc.
gliss.
3

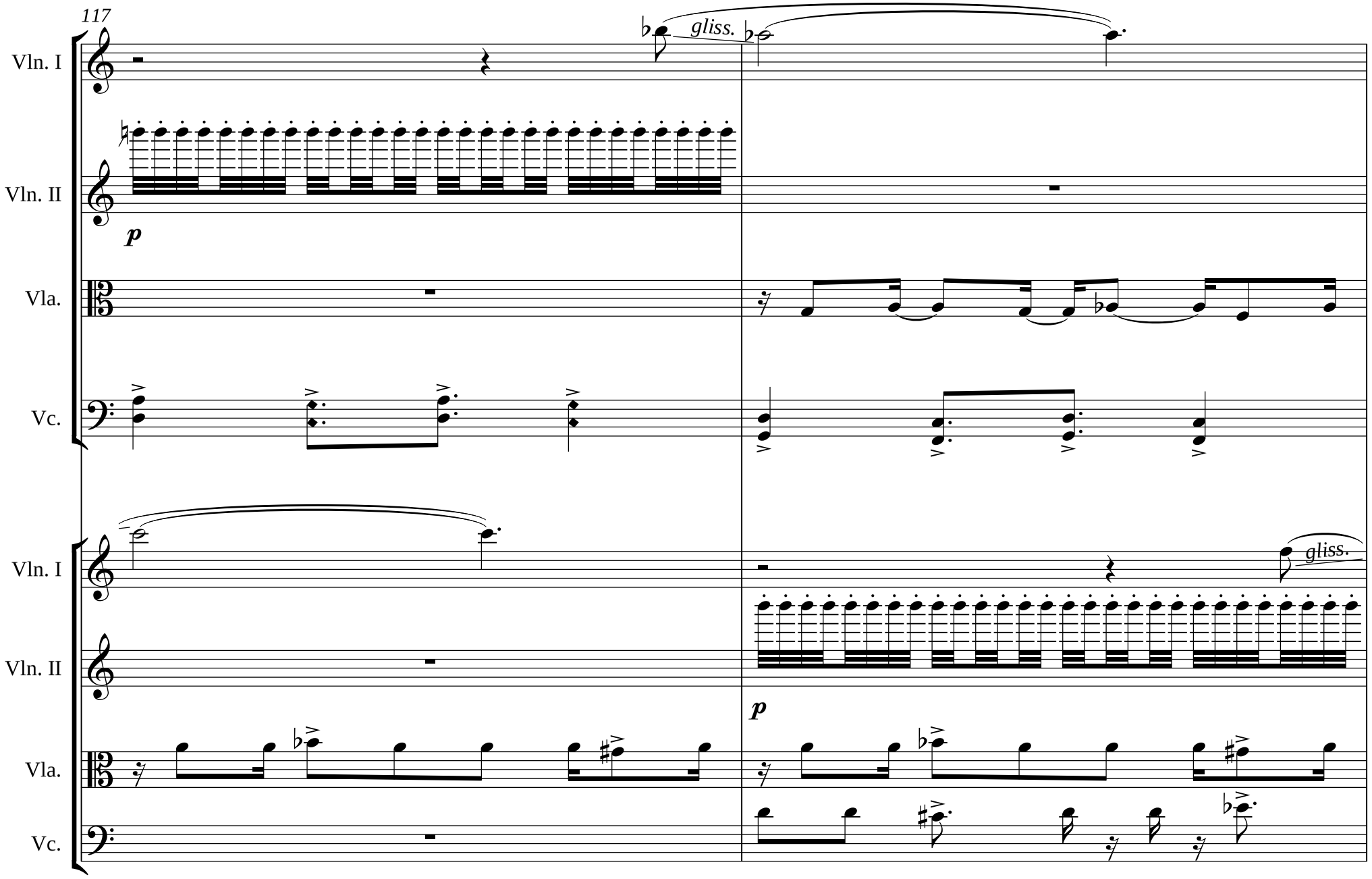

105
Vln. I
Vln. II
Vla.
Vc.
f
arco
gliss.
3
gliss.
arco
gliss.

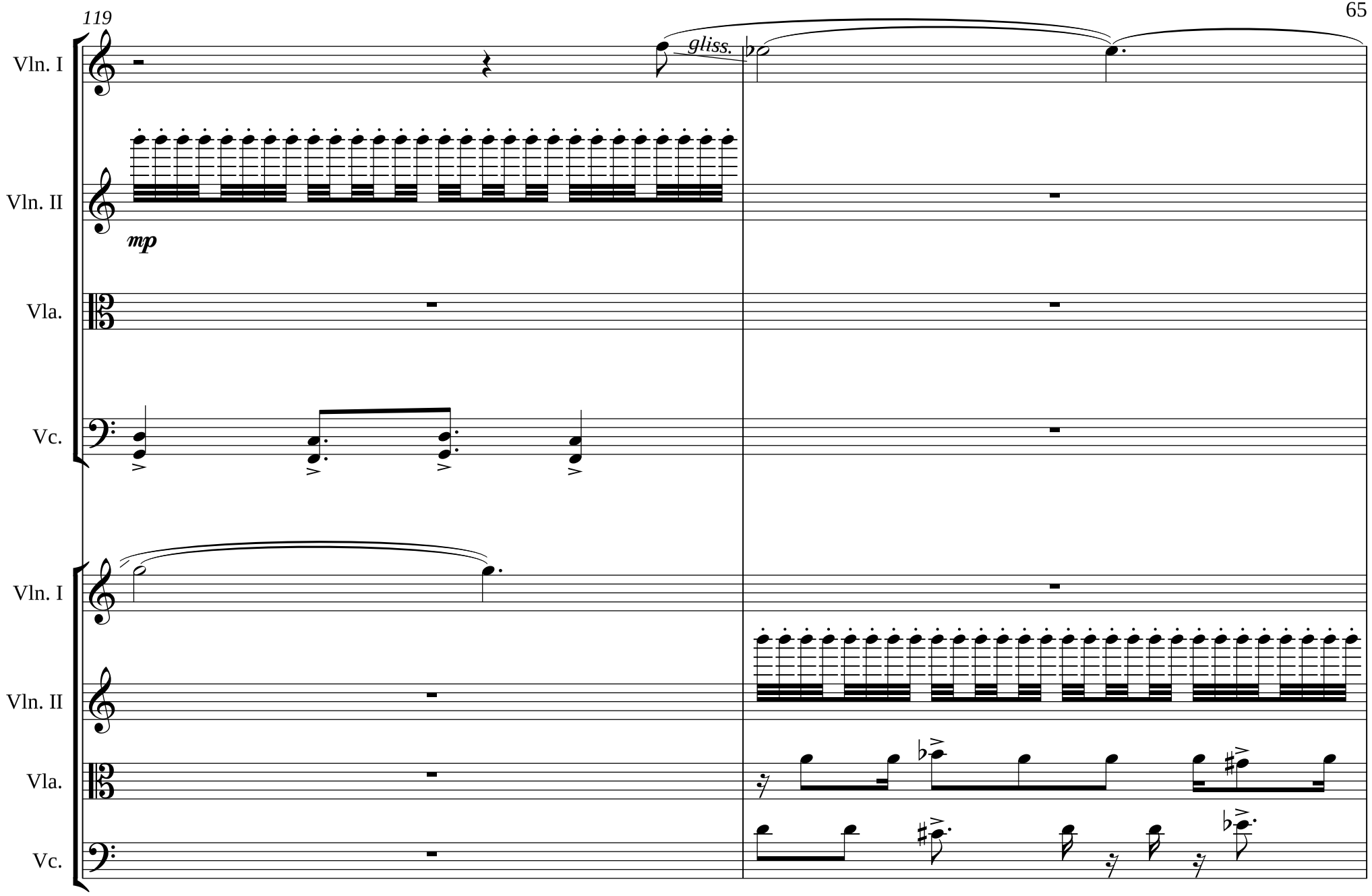

108
Vln. I
arco
f
mf
Vln. II
arco
f
mf
Vla.
pizz
mf
Vc.
pizz
mf
Vln. I
arco
f
mf
Vln. II
arco
f
mp
Vla.
pizz
Vc.
pizz
mf

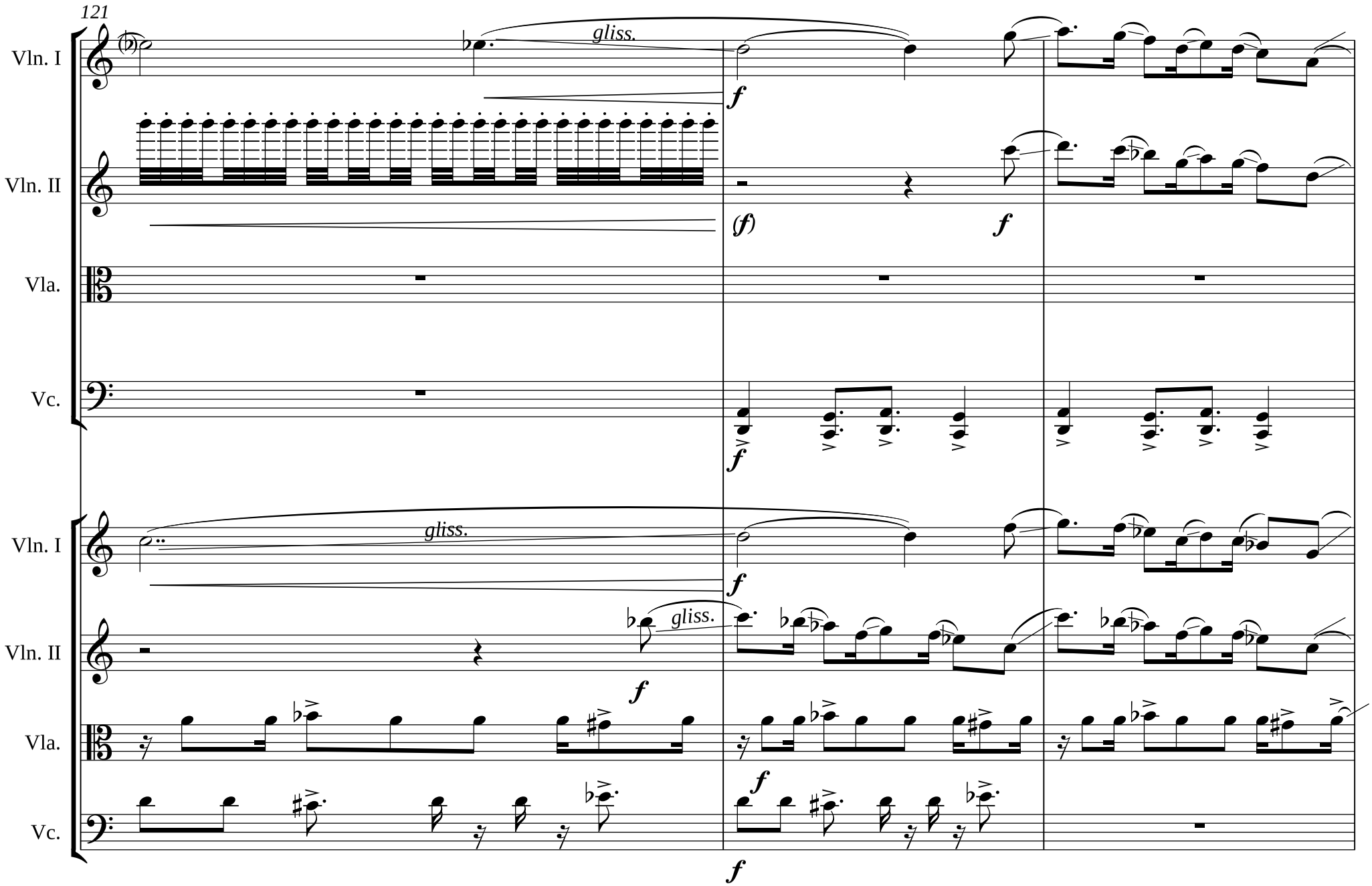

110
Vln. I
Vln. II
Vla.
Vc.
mp
mf
Vln. I
Vln. II
Vla.
Vc.
mf
mp

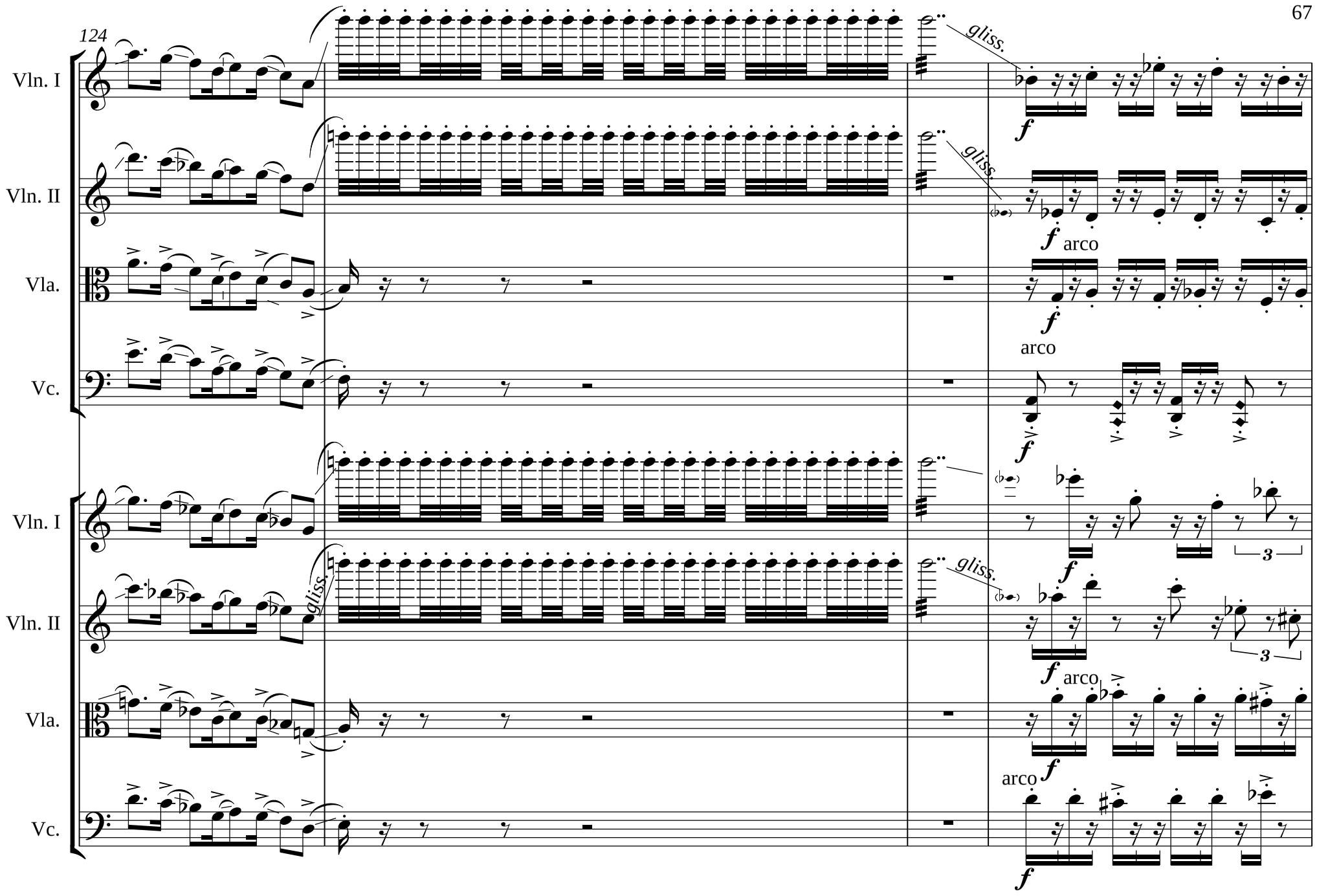

112
Vln. I
Vln. II
Vla.
Vc.
sul pont.
p
mp
3

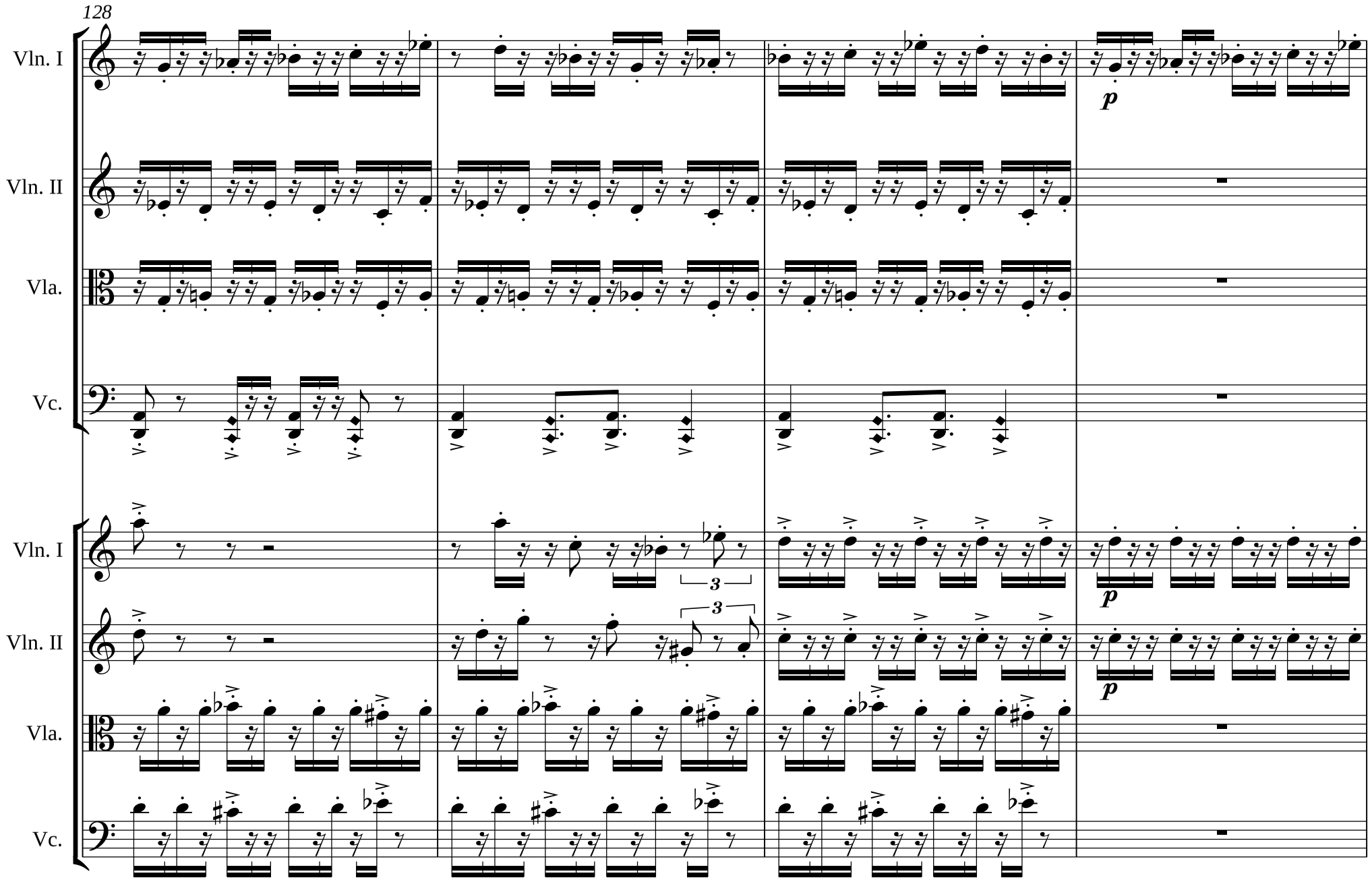

115
Vln. I
Vln. II
Vla.
Vc.
mp
gliss.
3
Vln. I
p
Vln. II
mp
3
Vla.
Vc.

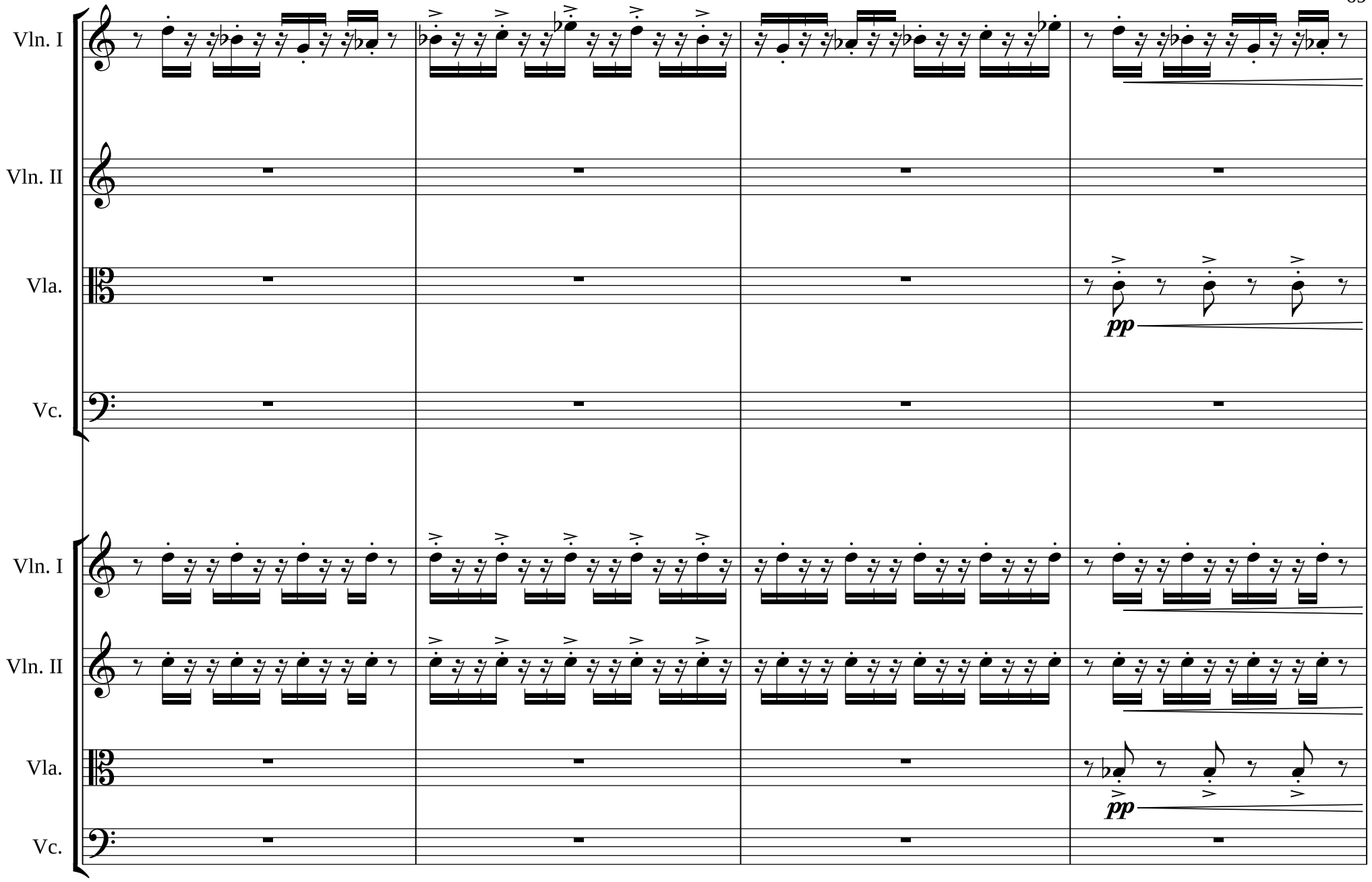

117
Vln. I
gliss.
Vln. II
p
Vla.
Vc.
Vln. I
gliss.
Vln. II
p
Vla.
Vc.

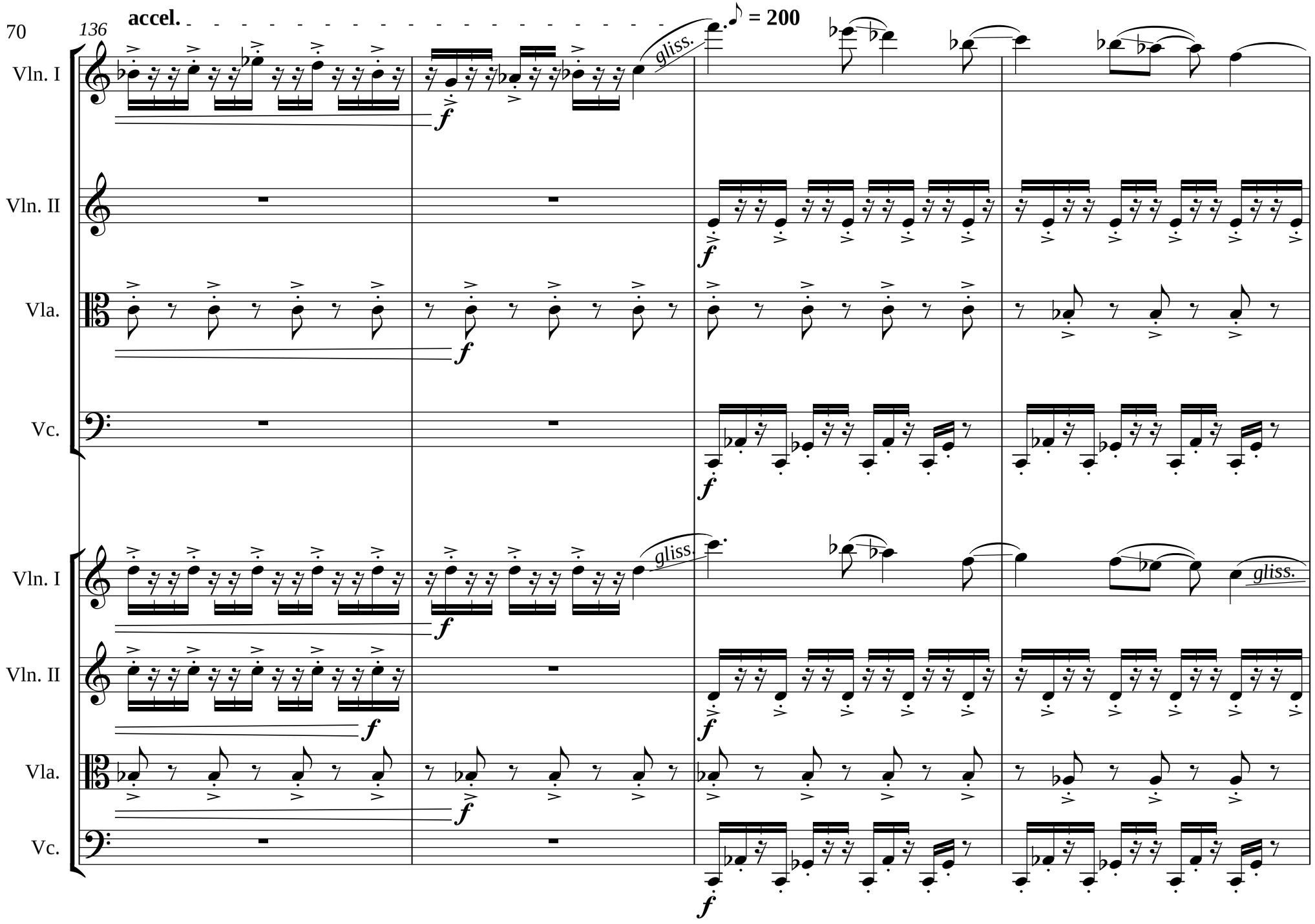

119
Vln. I
gliss.
Vln. II
mp
Vla.
Vc.
Vln. I
Vln. II
Vla.
Vc.

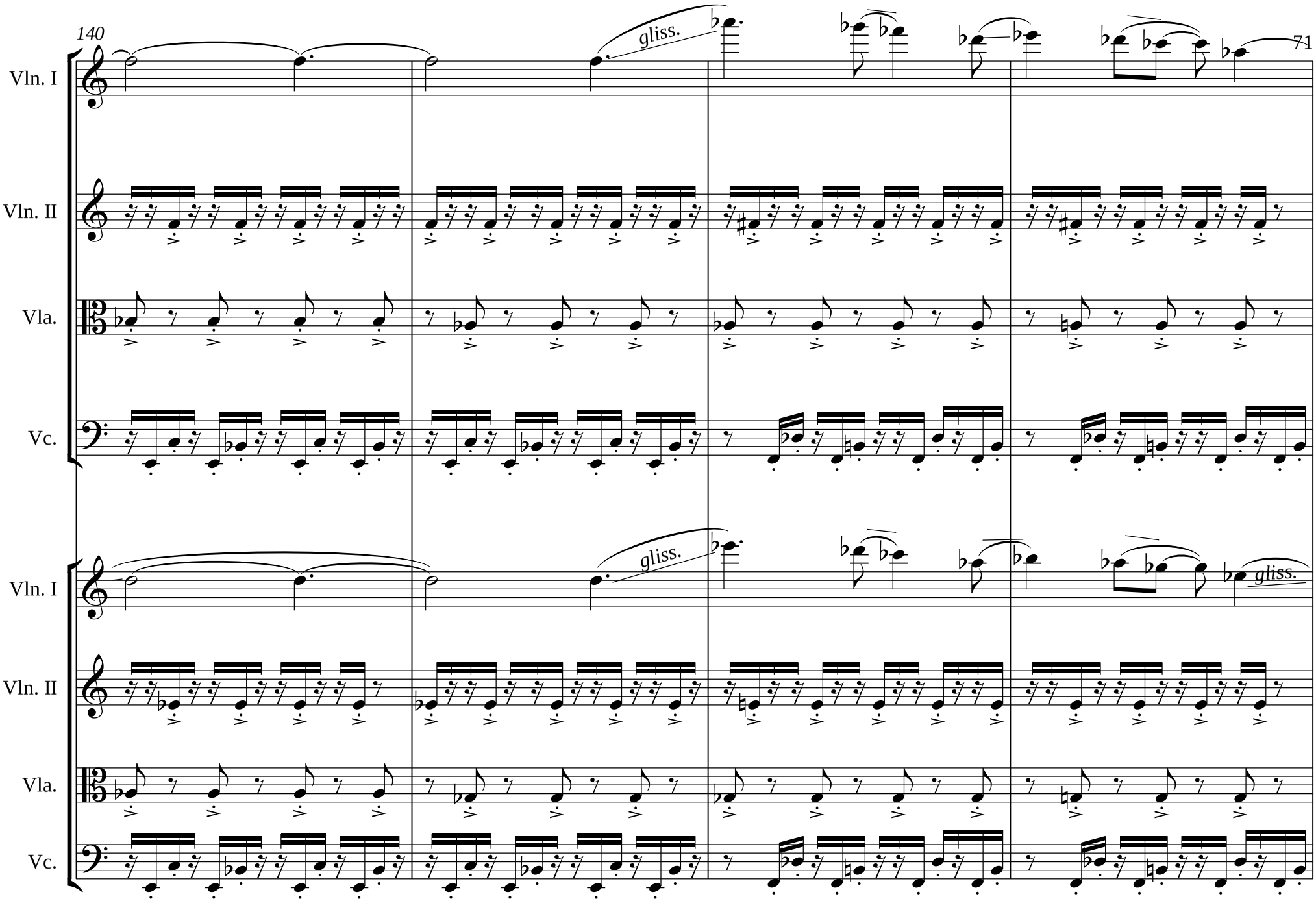

121
Vln. I
Vln. II
Vla.
Vc.
gliss.
f
(f)
Vln. I
Vln. II
Vla.
Vc.
gliss.
gliss.
f

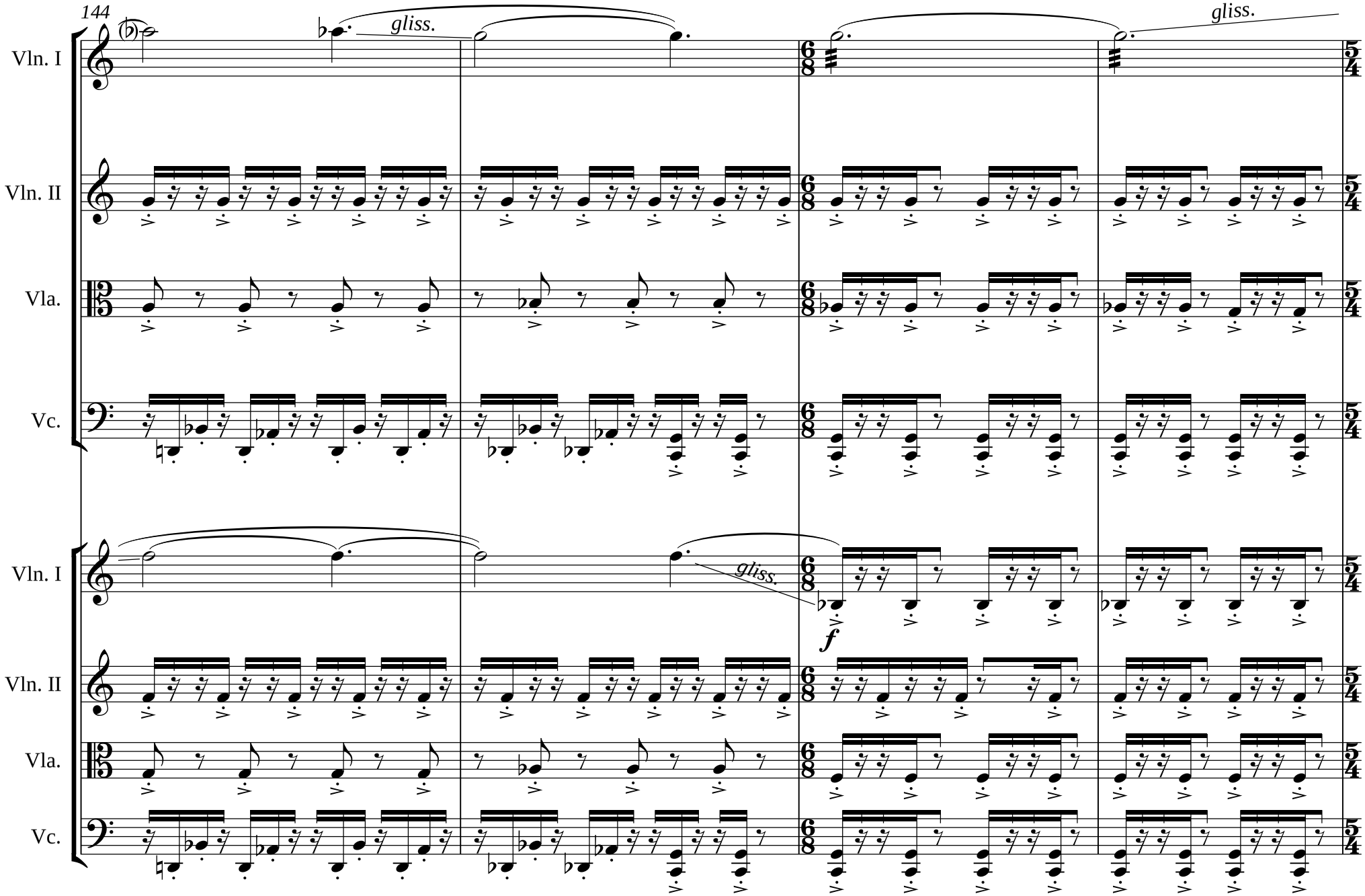

124
Vln. I
Vln. II
Vla.
Vc.
gliss.
f
arco
3

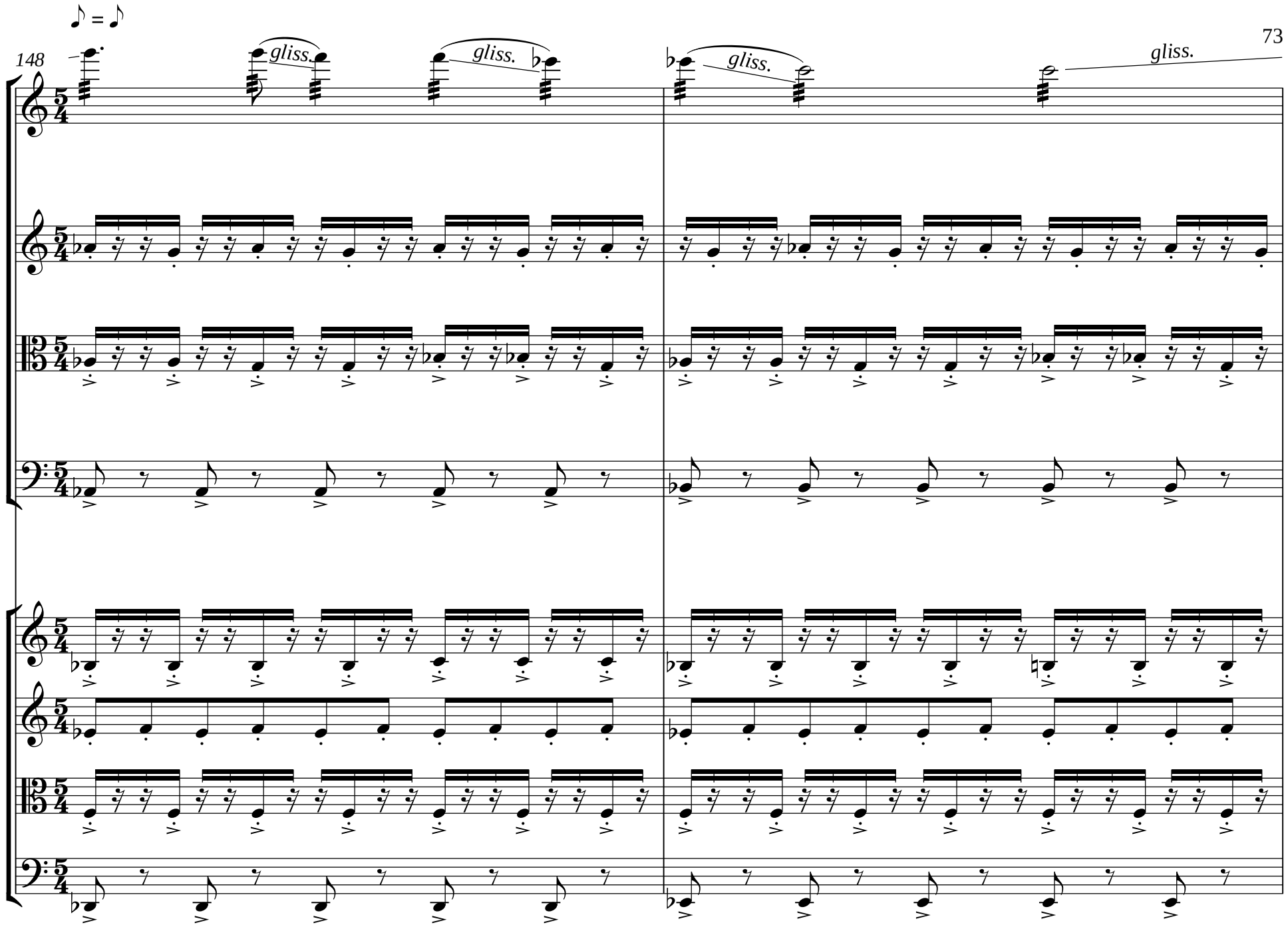

128
Vln. I
Vln. II
Vla.
Vc.
p
3

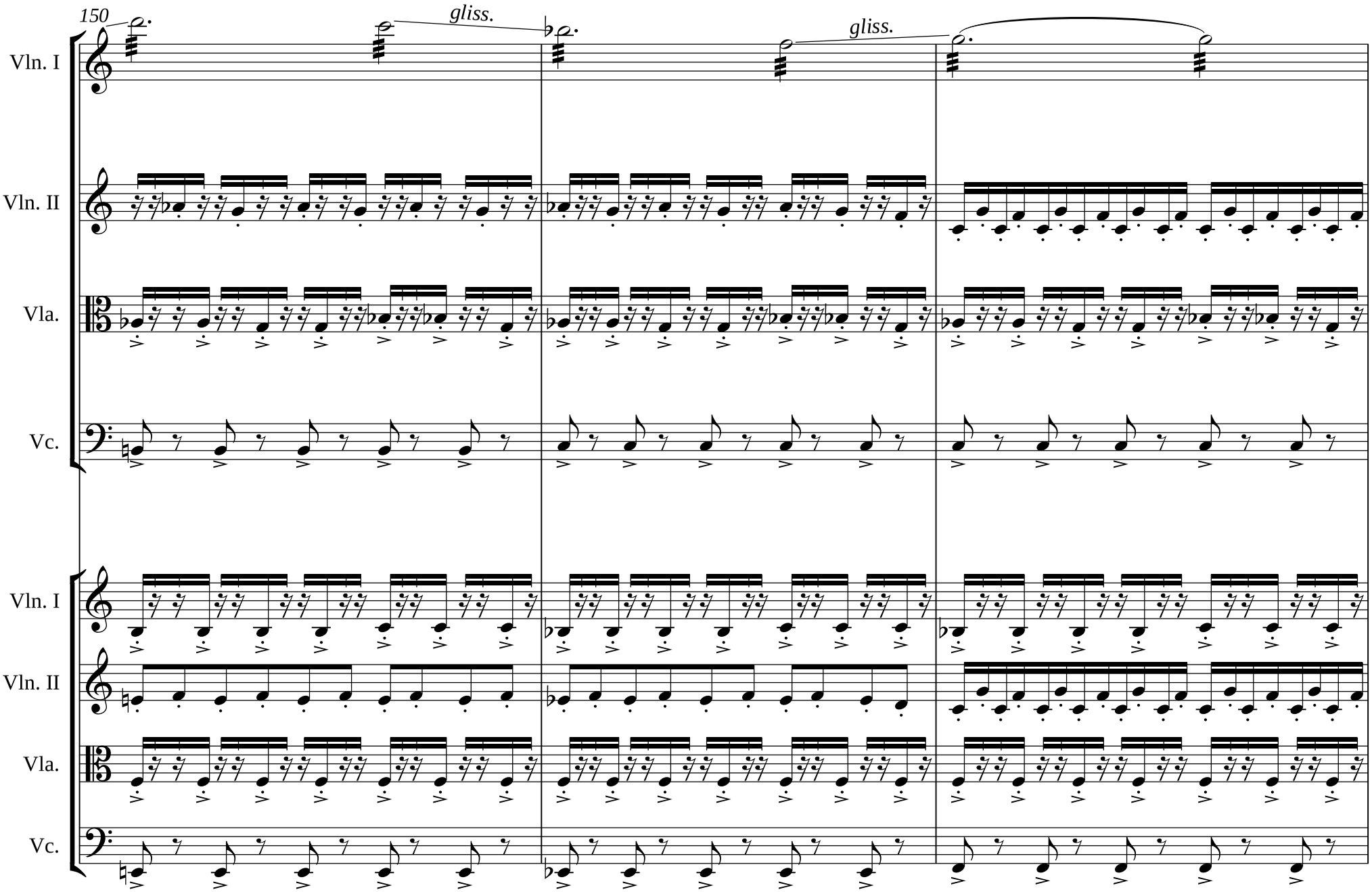

Vln. I
Vln. II
Vla.
Vc.
pp
Vln. I
Vln. II
Vla.
Vc.
pp

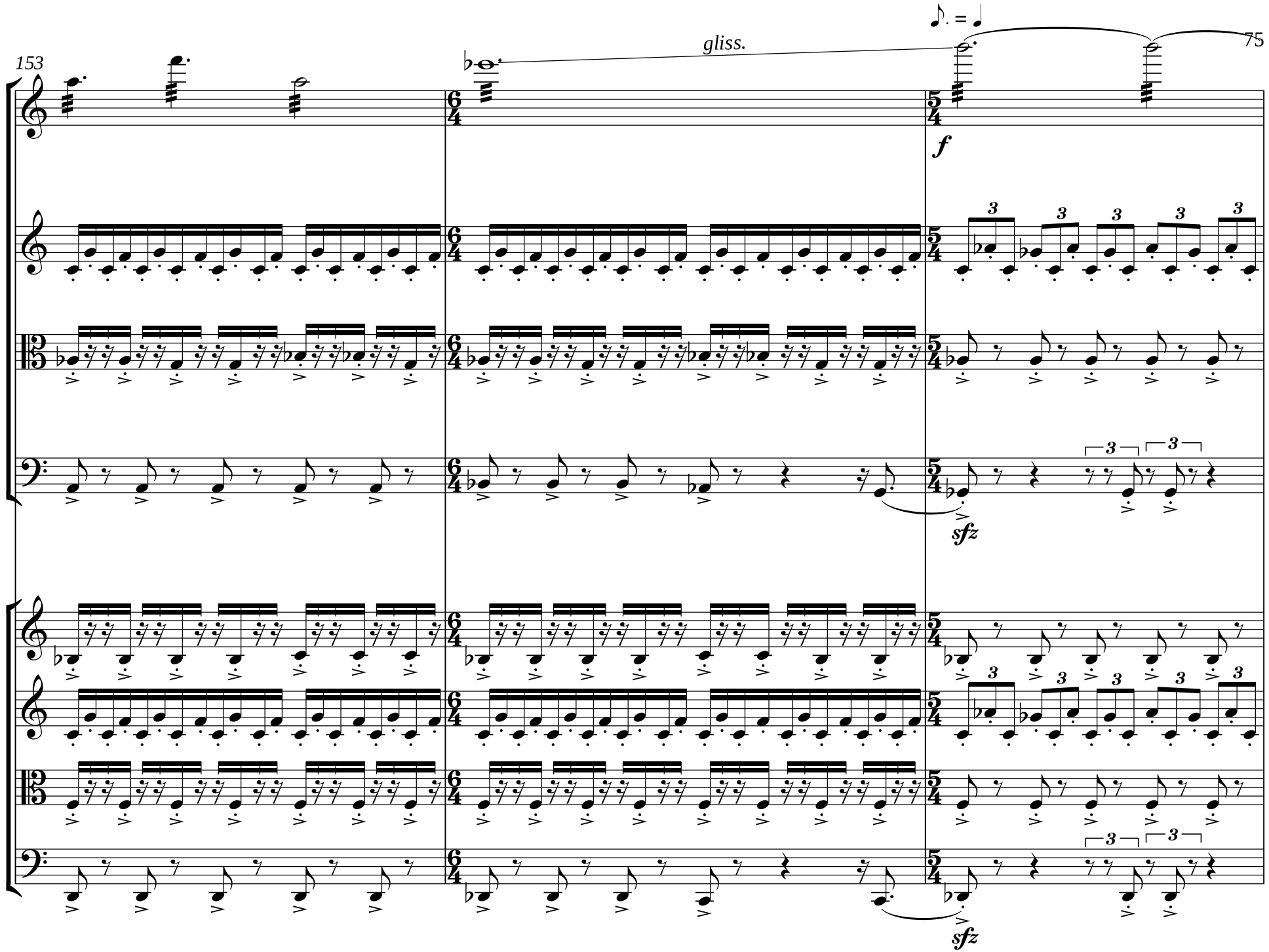

136
accel.
♪ = 200
Vln. I
Vln. II
Vla.
Vc.
gliss.
f

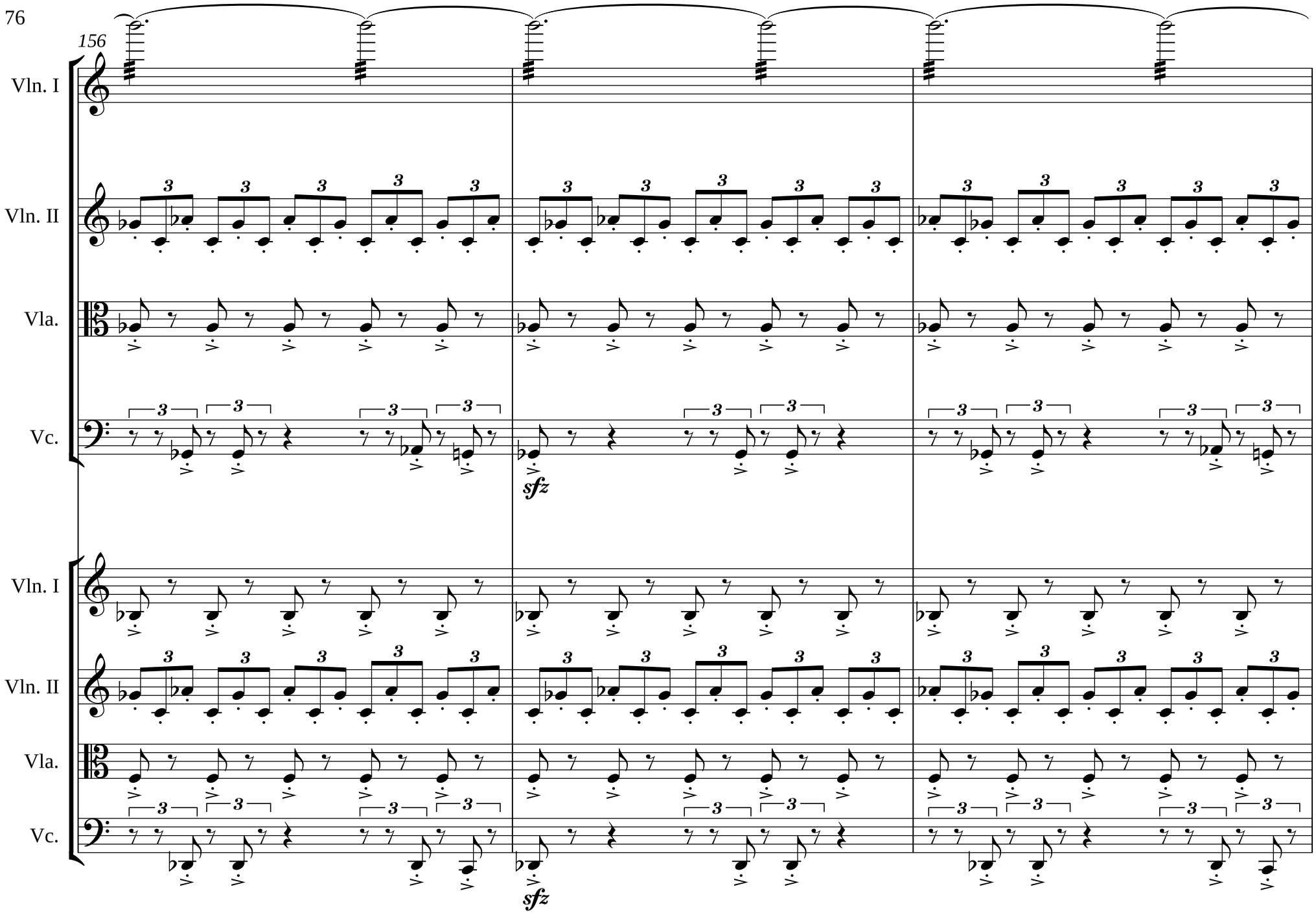

140
71
Vln. I
Vln. II
Vla.
Vc.
gliss.
gliss.
gliss.
Vln. I
Vln. II
Vla.
Vc.

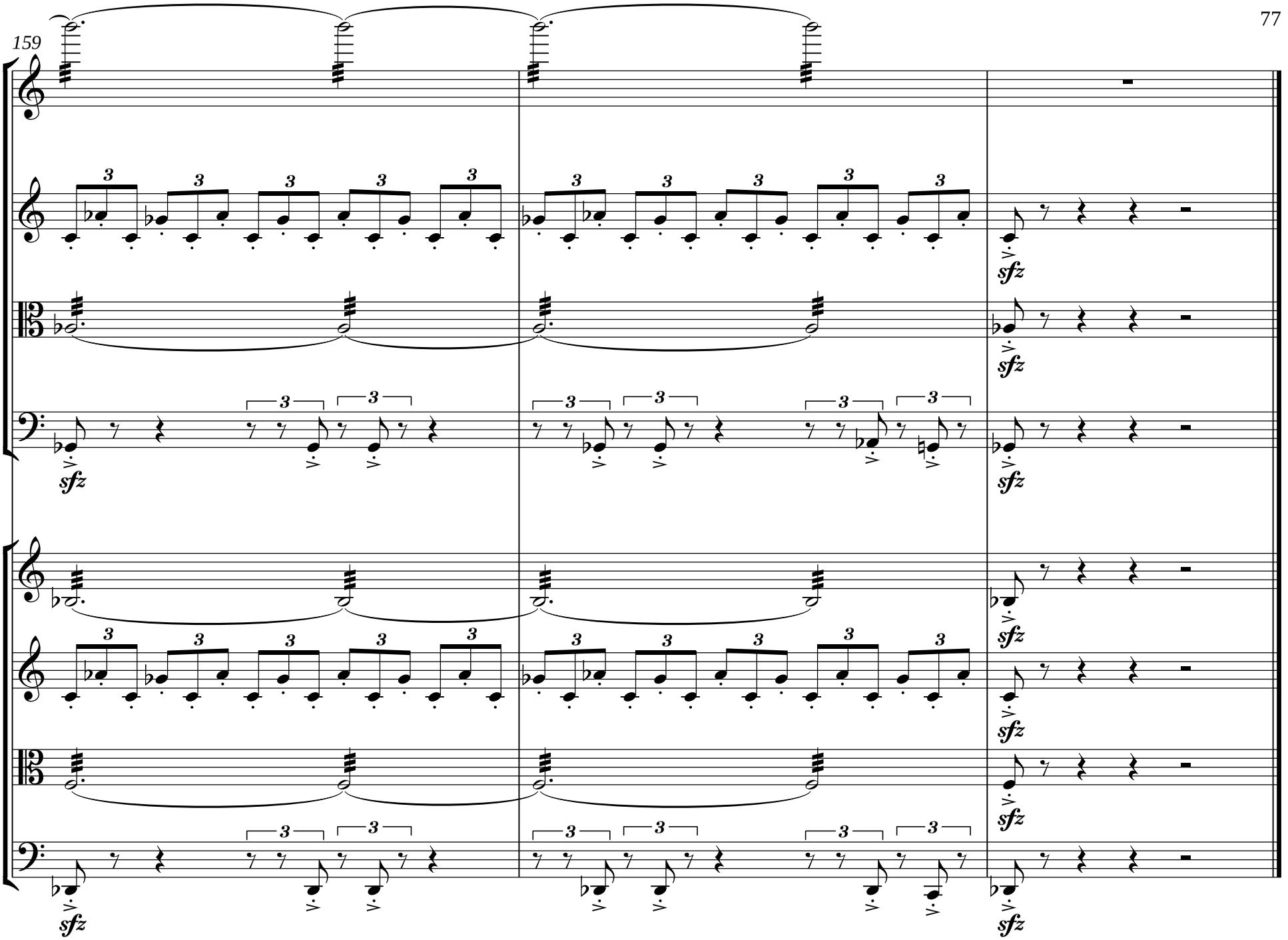

144
gliss.
gliss.
gliss.
f
Vln. I
Vln. II
Vla.
Vc.
Vln. I
Vln. II
Vla.
Vc.


♪ = ♪
148
gliss.
gliss.
gliss.
gliss.
Vln. I
Vln. II
Vla.
Vc.
Vln. I
Vln. II
Vla.
Vc.


150
gliss.
gliss.
Vln. I
Vln. II
Vla.
Vc.
Vln. I
Vln. II
Vla.
Vc.


153
gliss.
Vln. I
Vln. II
Vla.
Vc.
f
sfz


156
Vln. I
Vln. II
Vla.
Vc.
sfz
Vln. I
Vln. II
Vla.
Vc.
sfz


159
Vln. I
Vln. II
Vla.
Vc.
Vln. I
Vln. II
Vla.
Vc.
sfz

Intention

Fred Crase

Nomenclature:

Delay 1

Delay 2

Delay 3

Reverse Delay

Increase volume of delayed signal

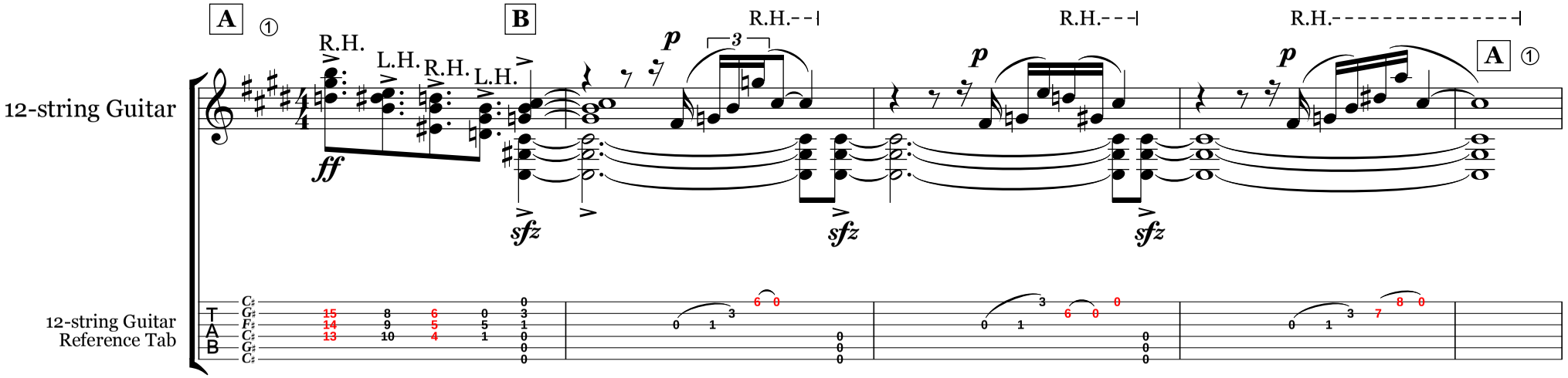
Decrease volume of delayed signal

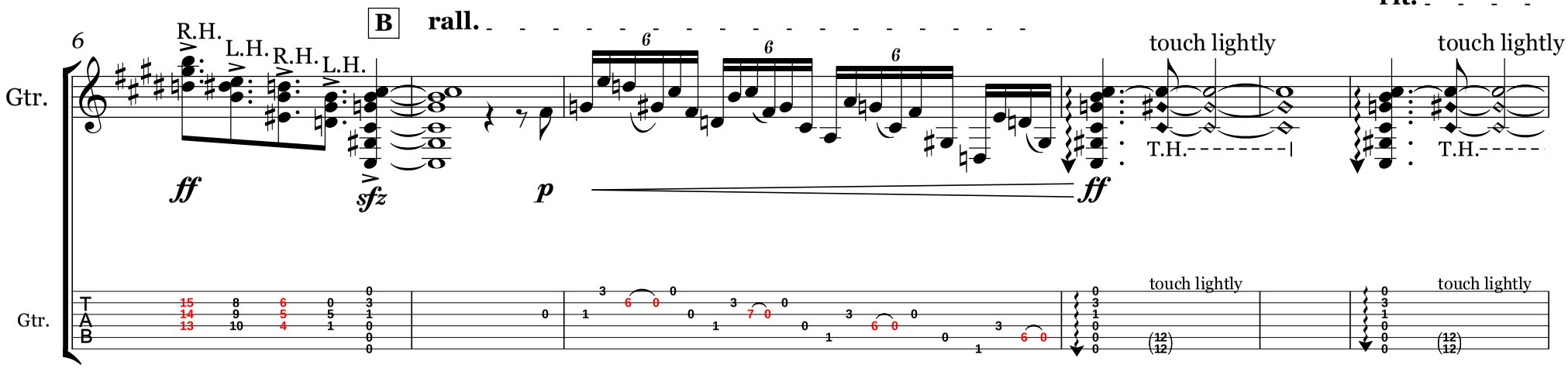
Scratch rapidly at fret with thumbnail

All notes in tablature that appear in red are to be played with the right hand.
Notes in parentheses indicate touch/tap harmonics.

Intention

The Road to Hell... ♩ = 95





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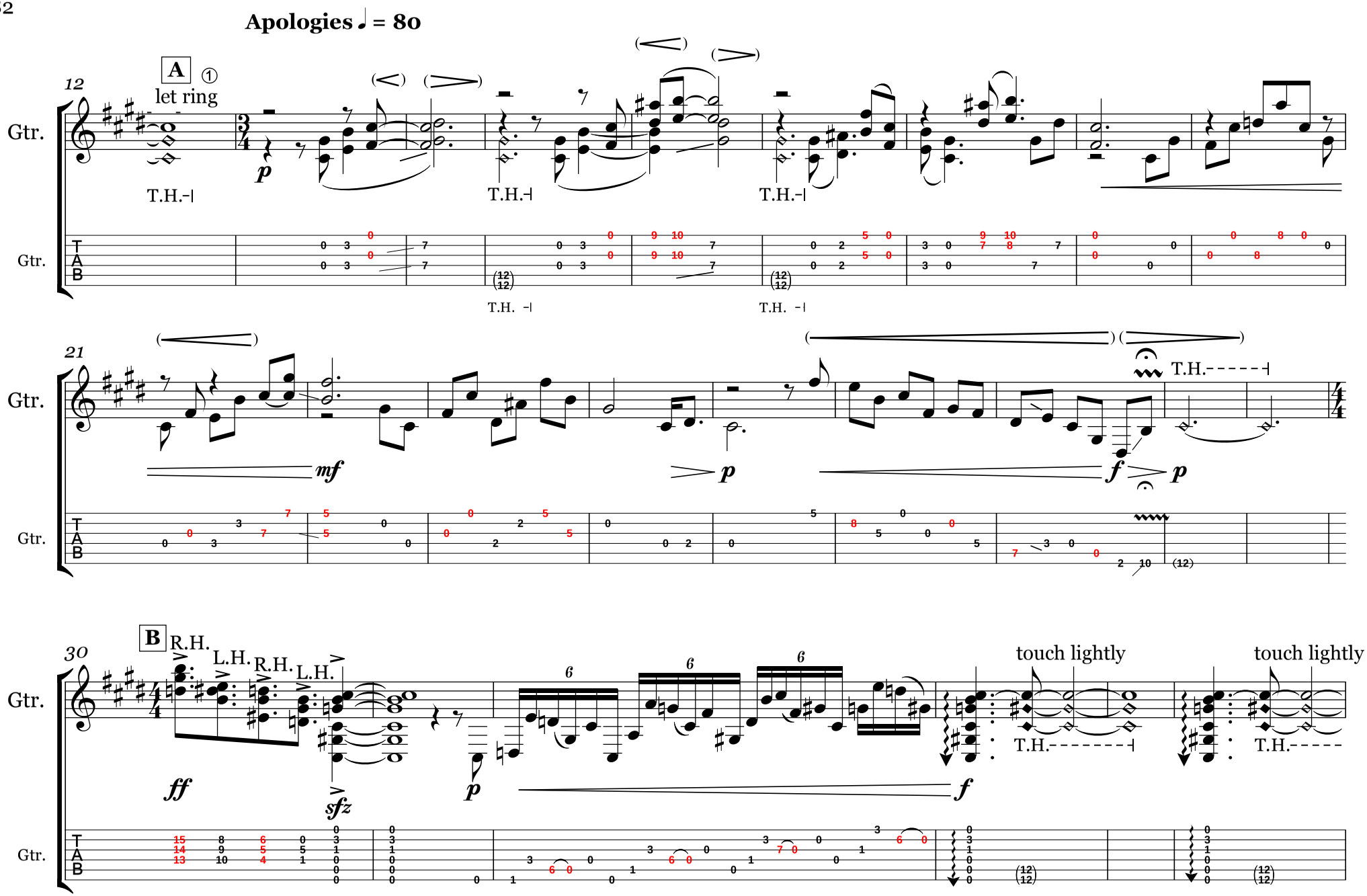
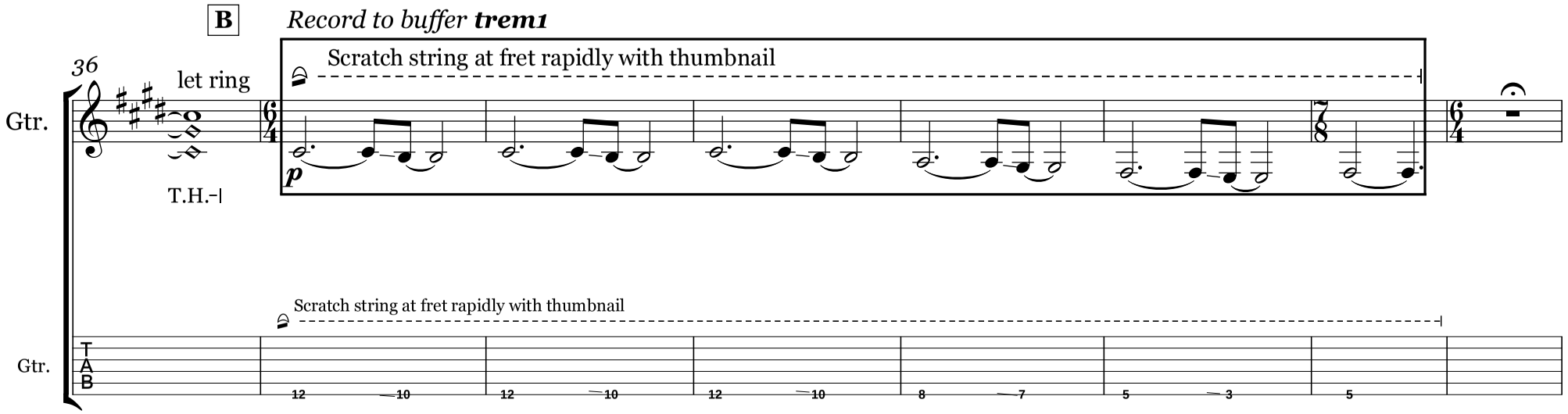
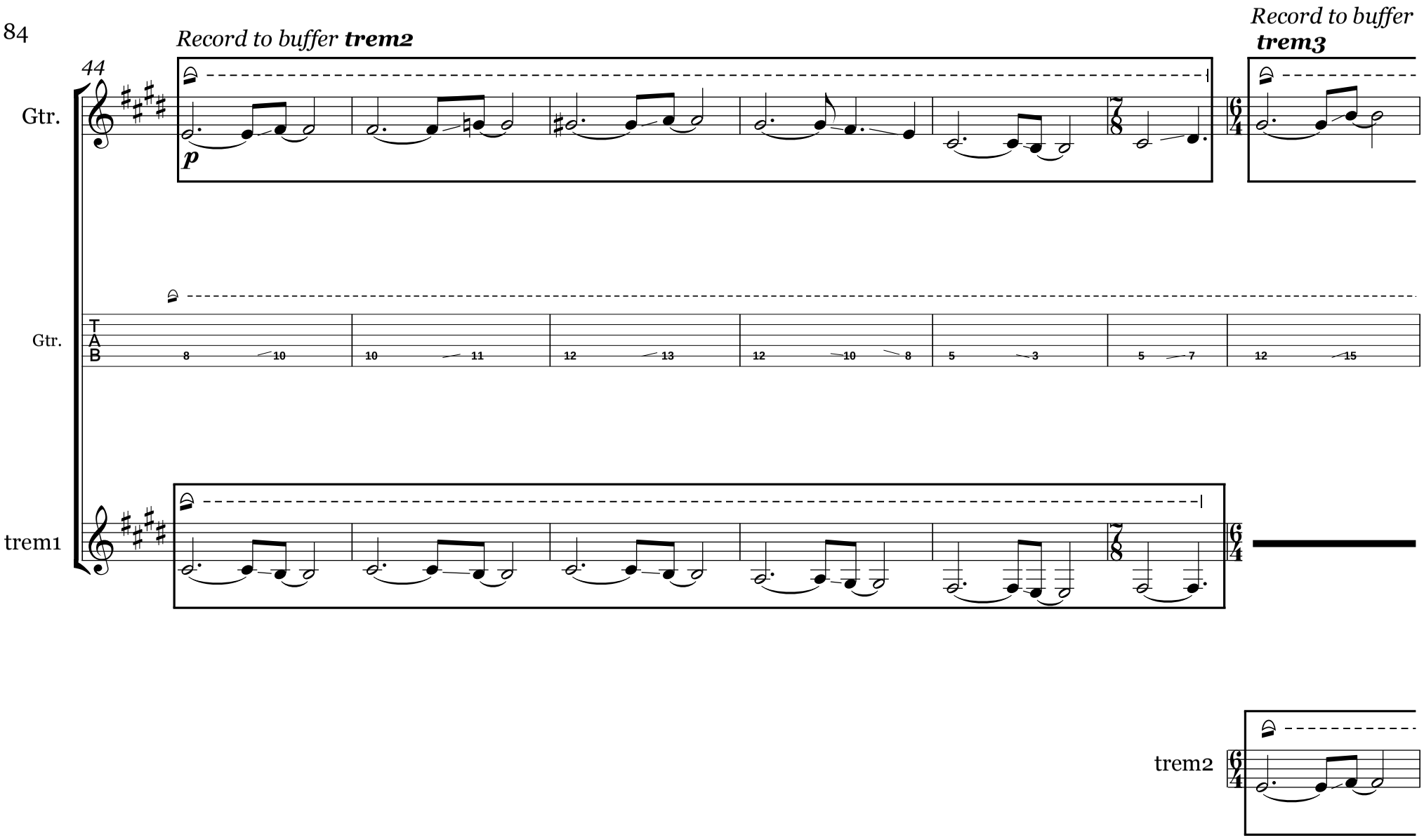
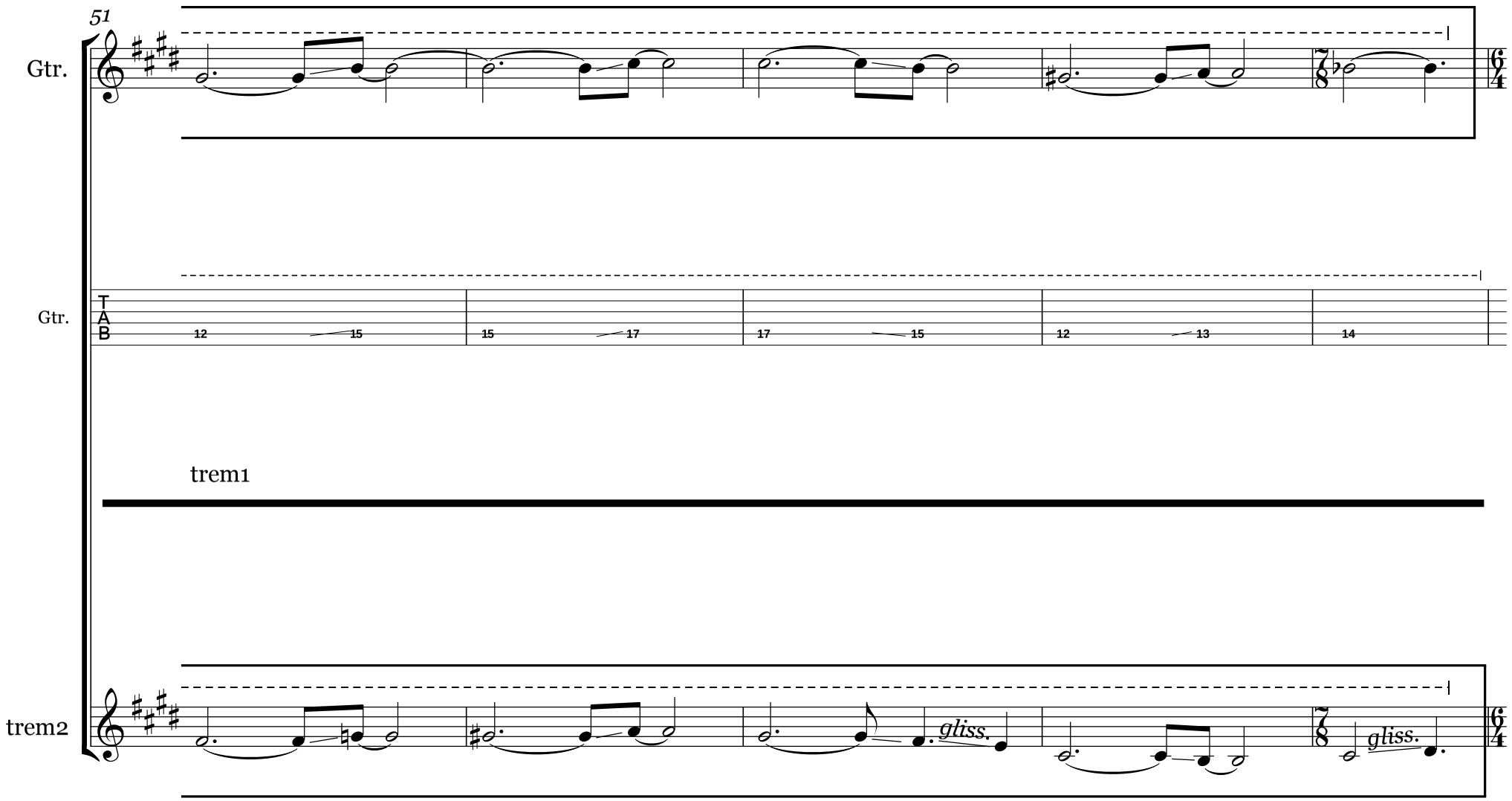
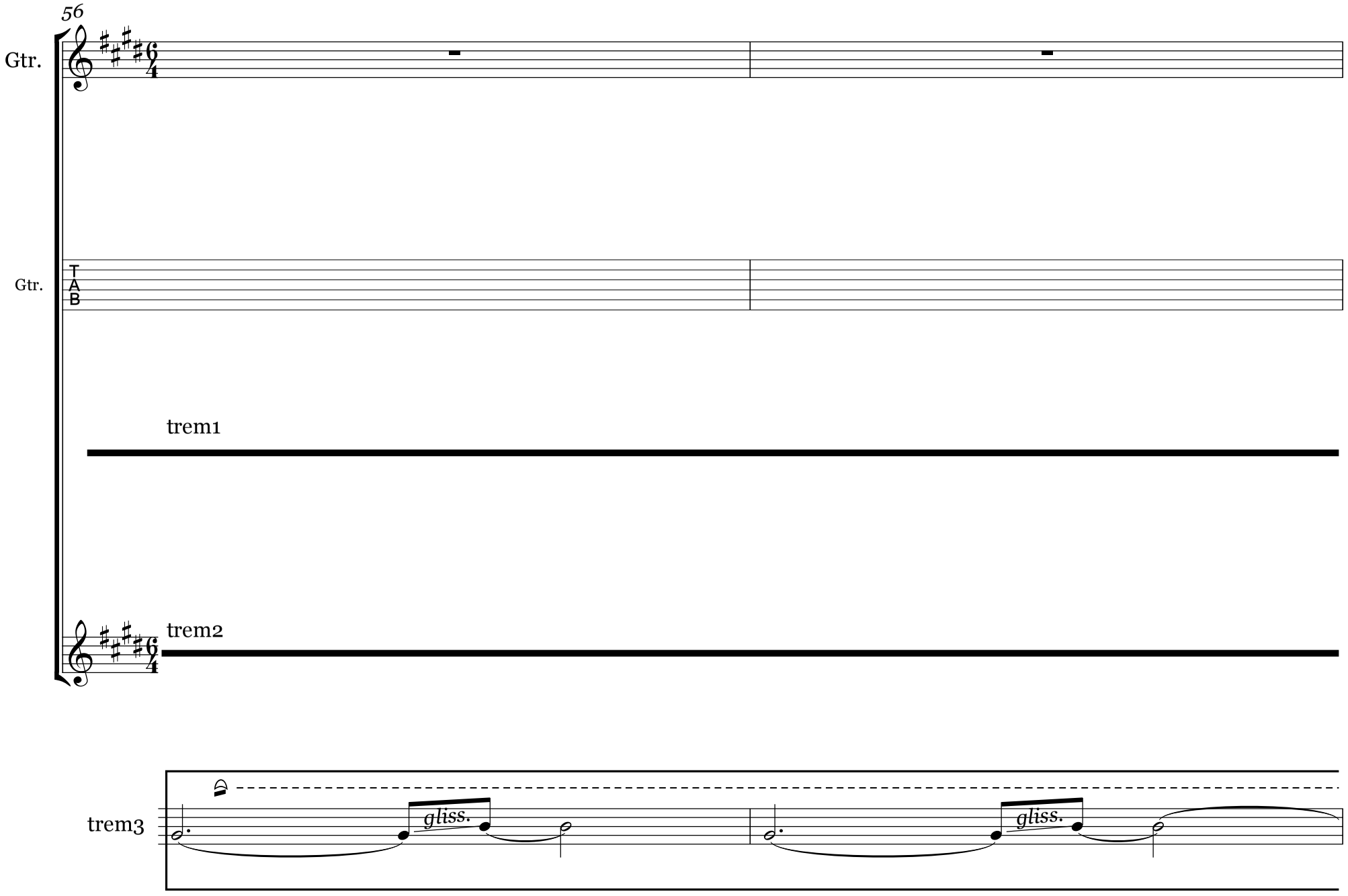

Apologies ♩ = 80
A
let ring
Gtr.
T.H.
B
R.H.
L.H.
touch lightly

From Within the Hive ♩ = 72

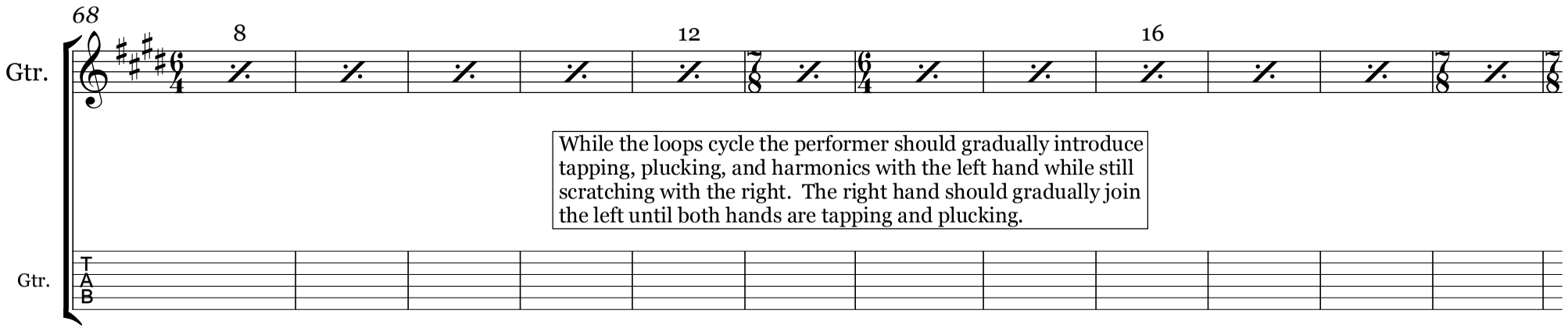



Record to buffer trem2
Record to buffer trem3
44
Gtr.
p
Gtr.
T
A
B
8 10 10 11 12 13 12 10 8 5 3 5 7 12 15
trem1
trem2


51
Gtr.
Gtr.
T
A
B
12
15
15
17
17
15
12
13
14
trem1
trem2
gliss.
gliss.


56
Gtr.
Gtr.
T
A
B
trem1
trem2
trem3
gliss.
gliss.

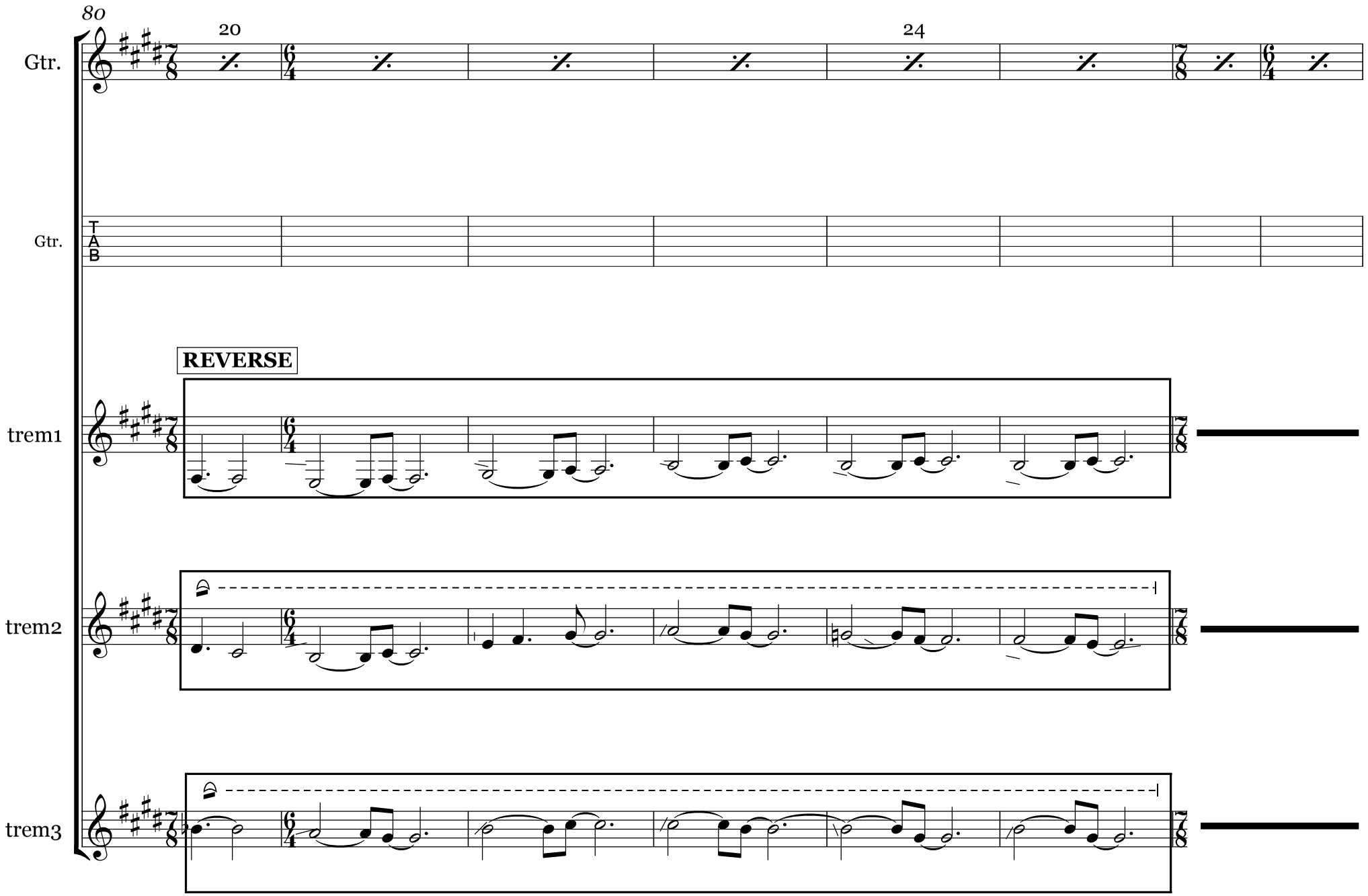
58
A
4
Gtr.
Bars 62- 107 are to be improvised by the performer. It is to begin the same thumbnail scratching technique as was used in recording the loops and should be used with both hands during improvisation.
Gtr.
T
A
B
trem1
trem2
Gtr.


68
8
12
16
Gtr.
While the loops cycle the performer should gradually introduce tapping, plucking, and harmonics with the left hand while still scratching with the right. The right hand should gradually join the left until both hands are tapping and plucking.
Gtr.
T
A
B

trem1
trem1

trem2
trem2

trem3
trem3


80
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Gtr.
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B
REVERSE
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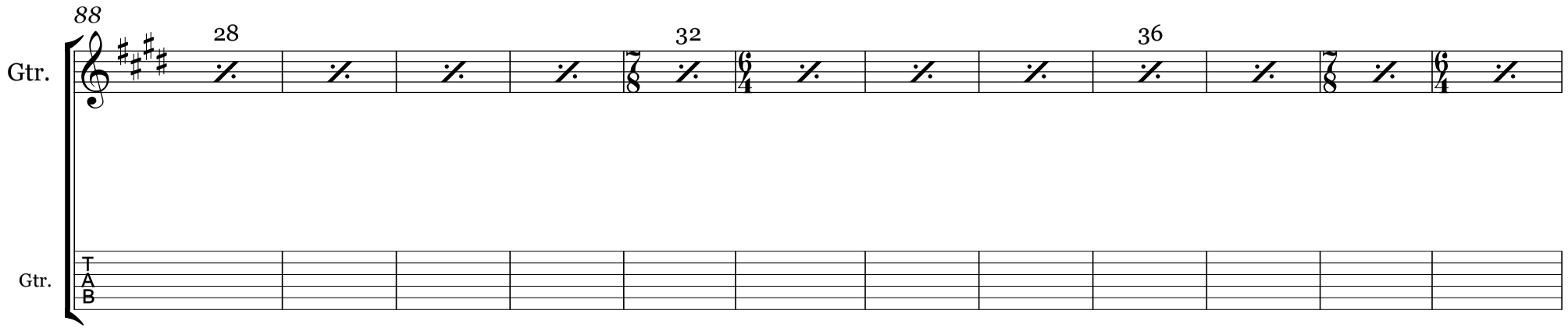
trem2
trem3



trem1

trem2

trem3

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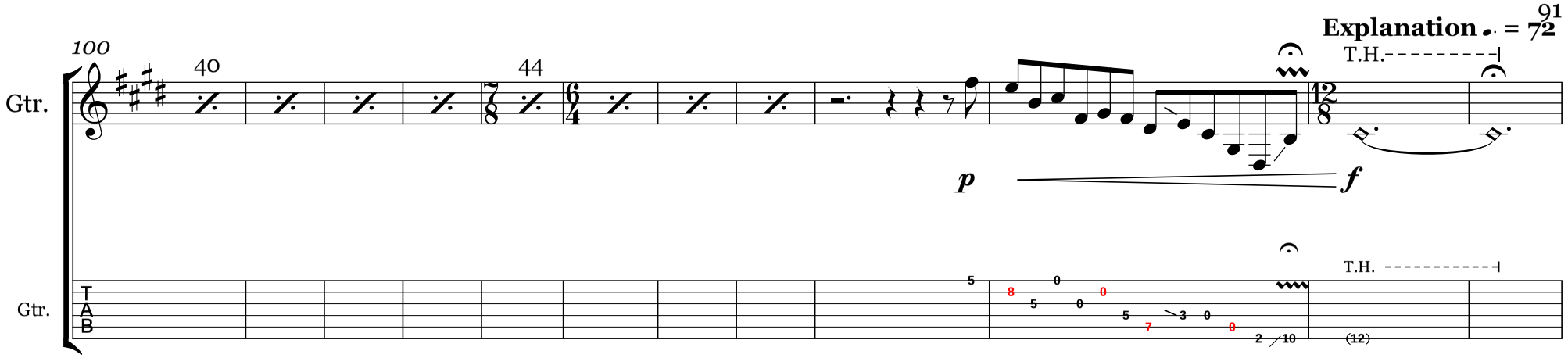
Explanation ♩. = 72
100
40
44
Gtr.
T.H.
p
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Gtr.
T A B
T.H.
(12)

trem1
trem1

trem2
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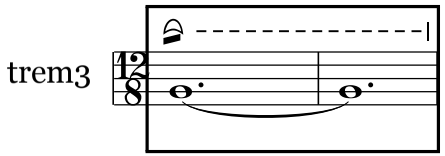
trem2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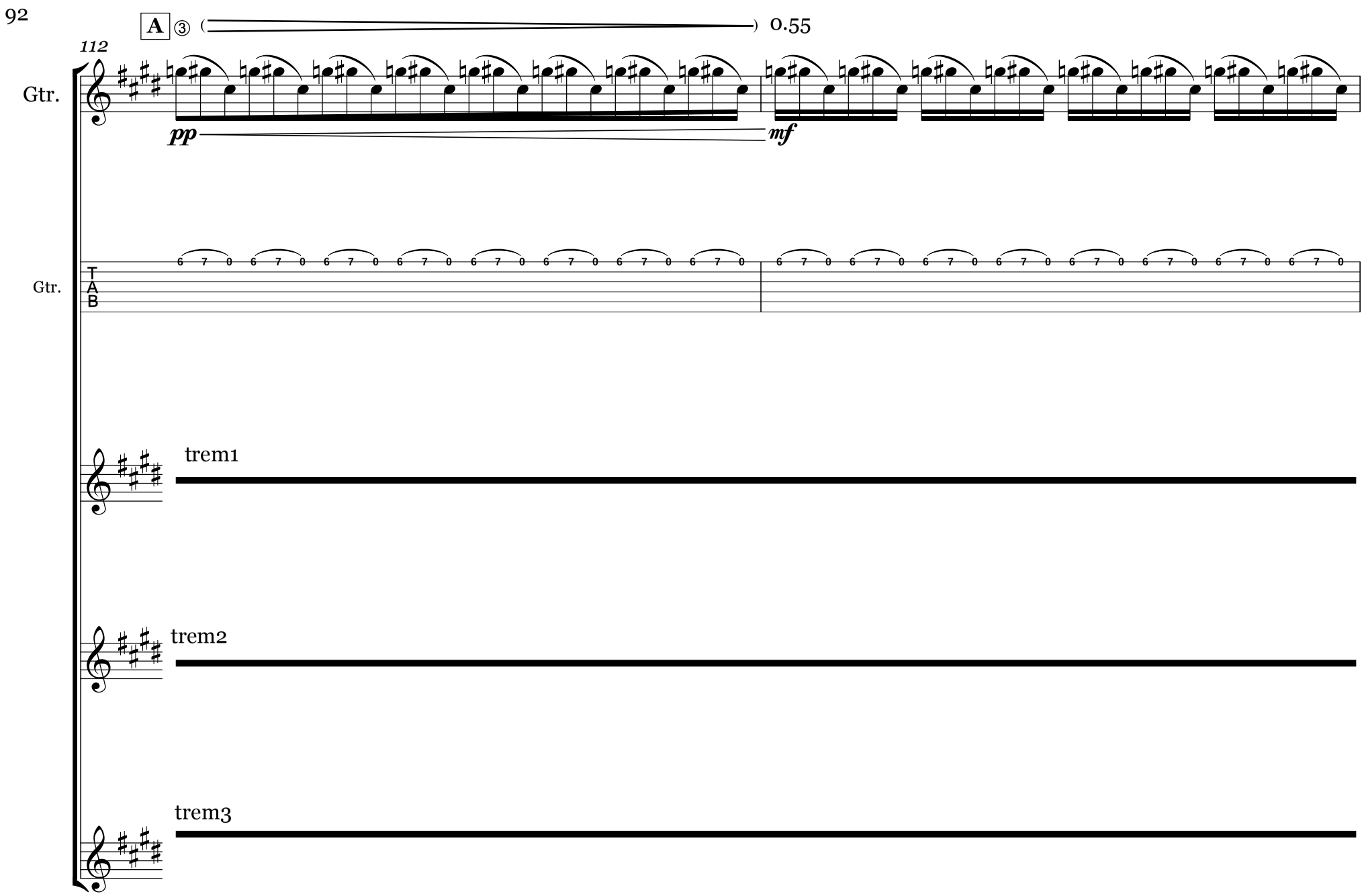
A
0.55
112
Gtr.
pp
mf
Gtr.
T
A
B
6 7 0 6 7 0 6 7 0 6 7 0 6 7 0 6 7 0 6 7 0 6 7 0
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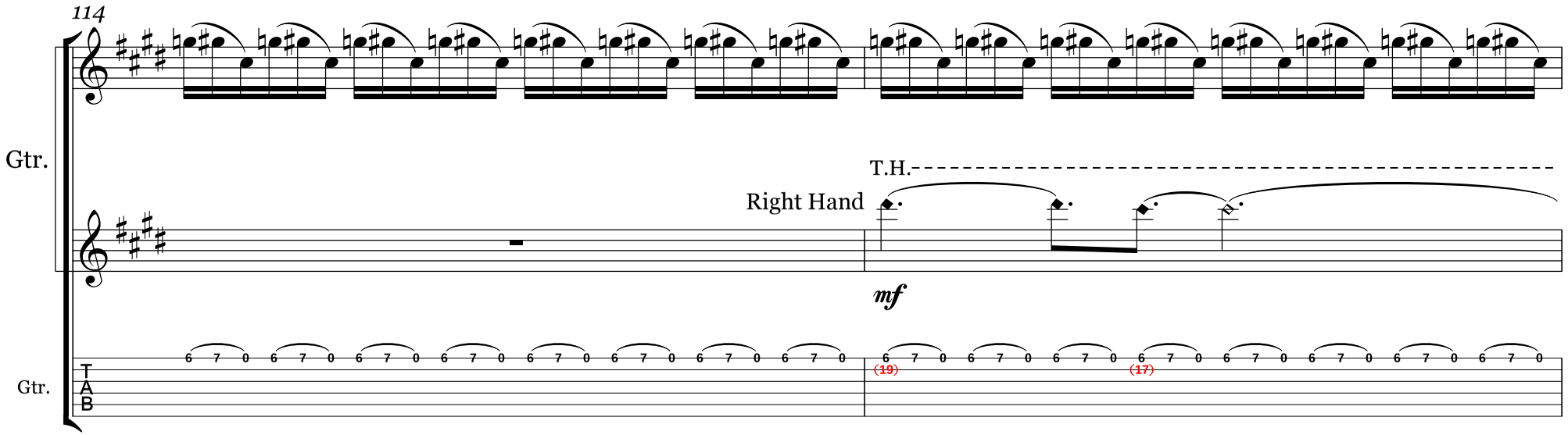
trem1
trem2
trem3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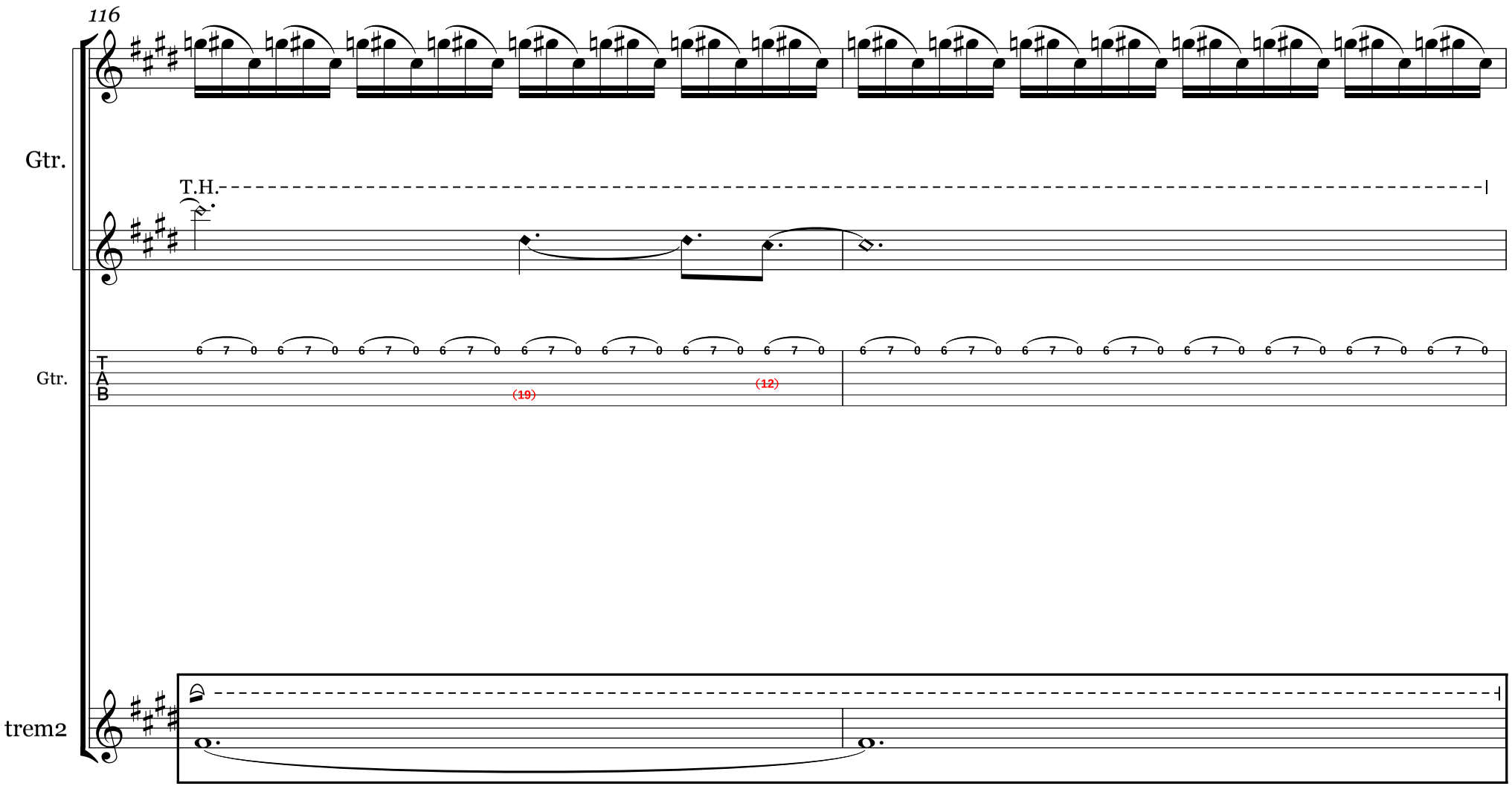
B
(19)
(17)

OFF

OFF

OFF


116
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(12)
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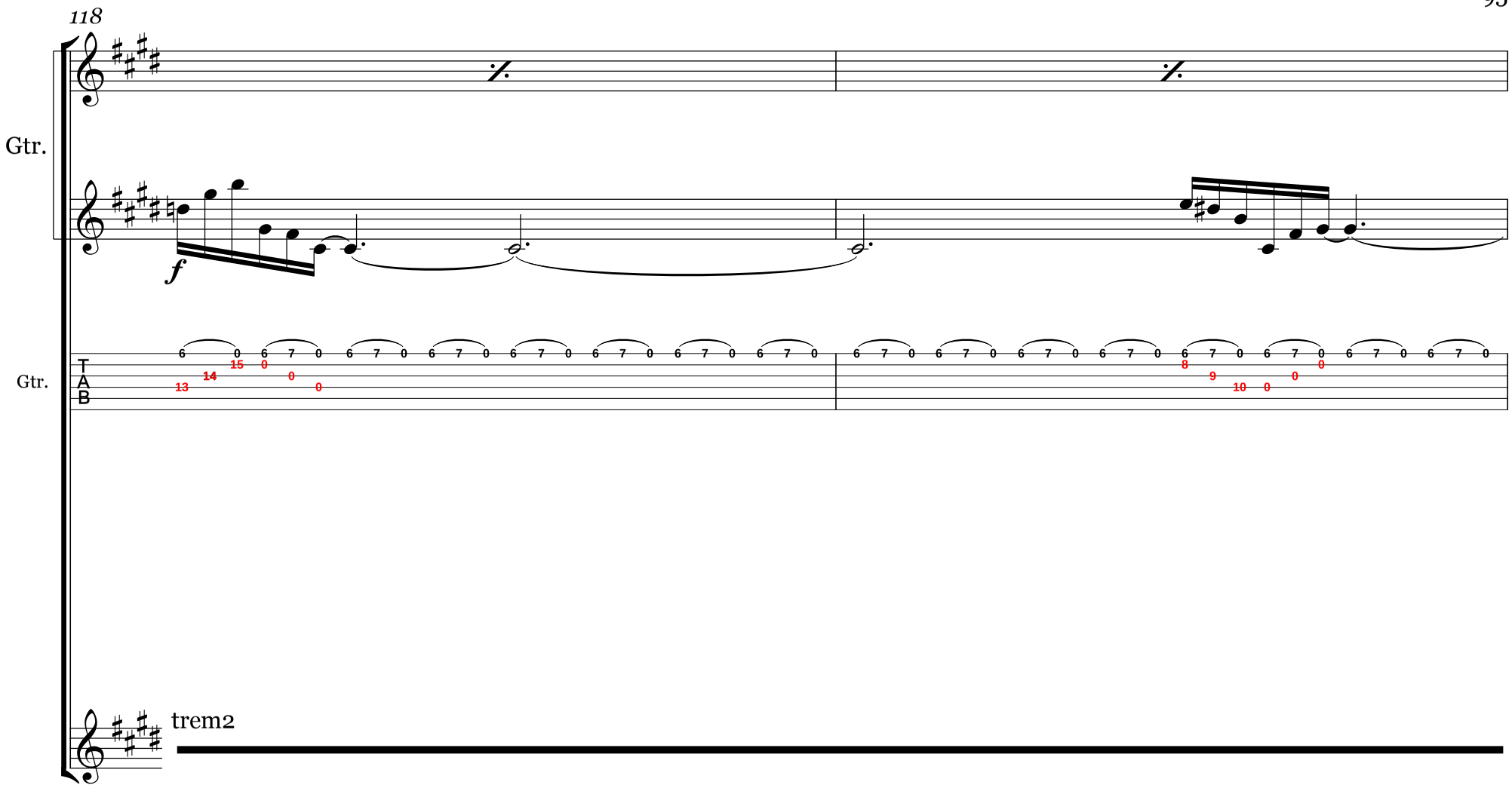
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f
Gtr.
T
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B
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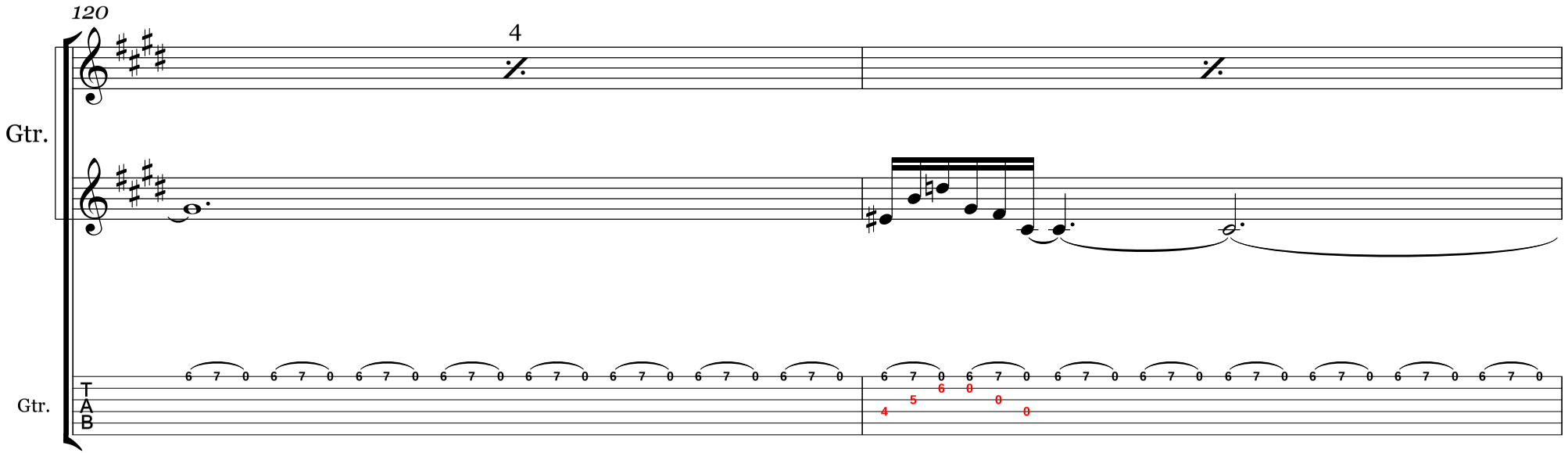

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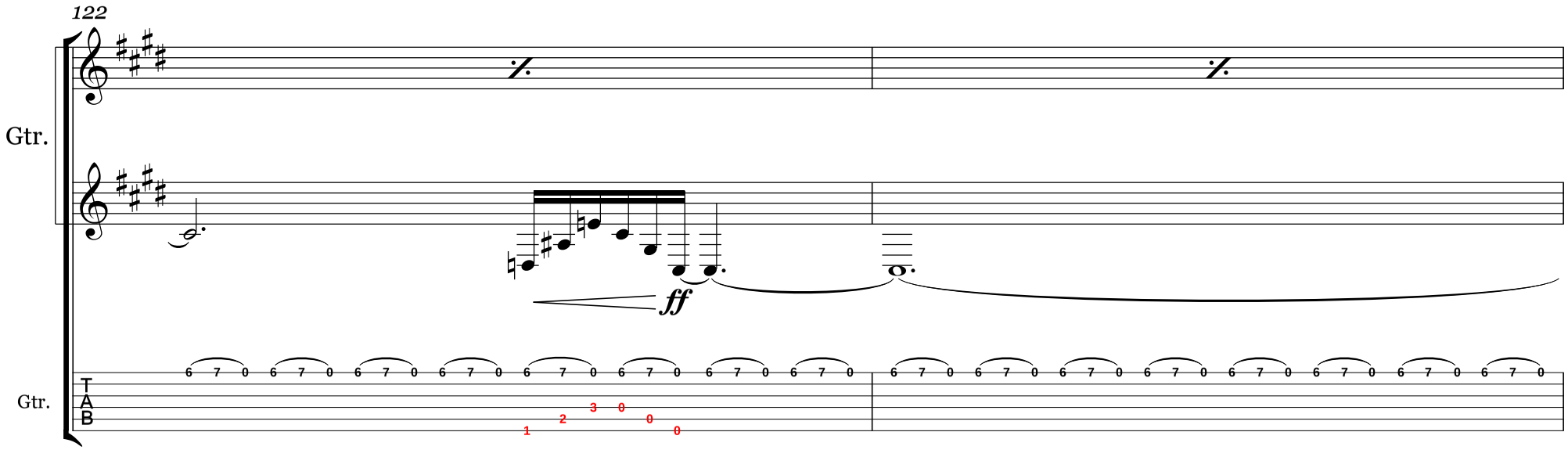

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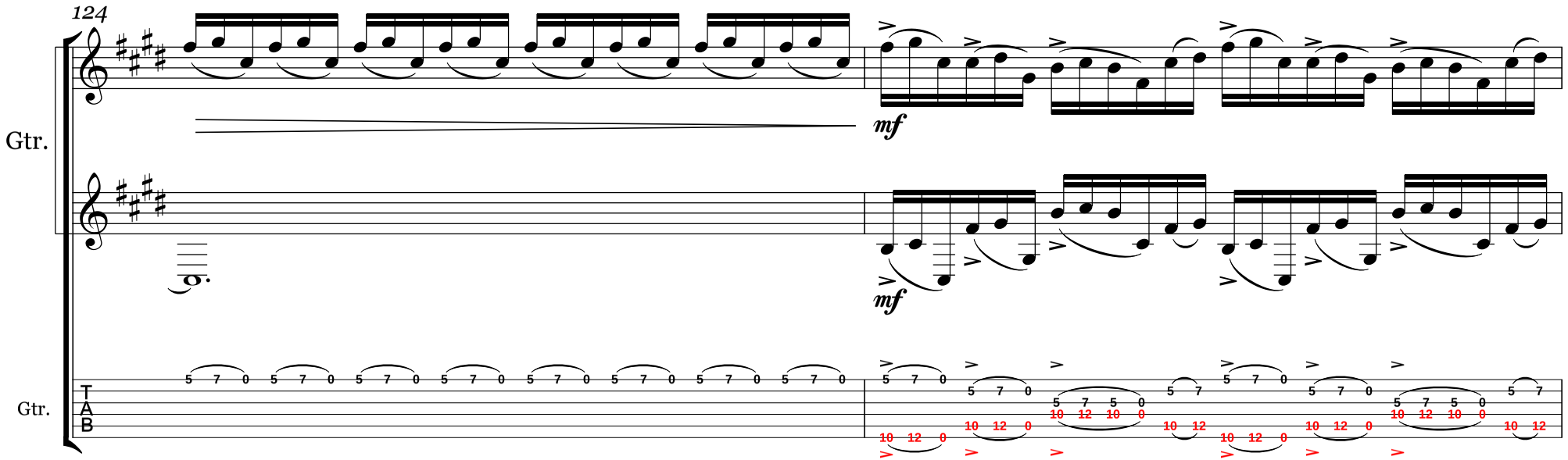

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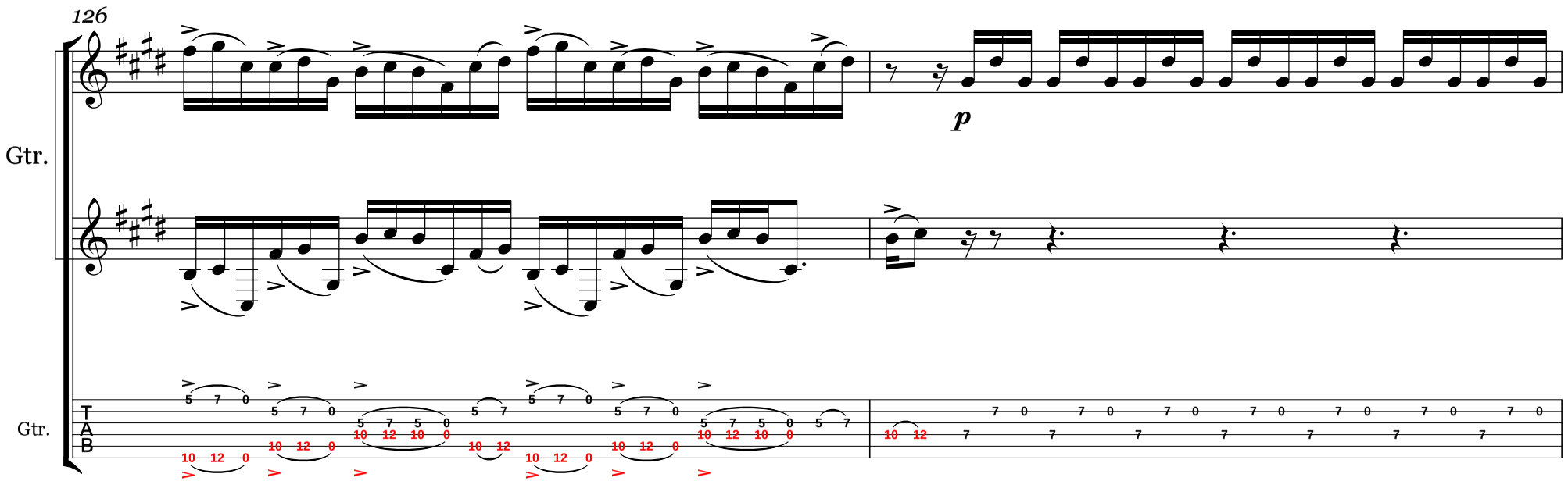
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B

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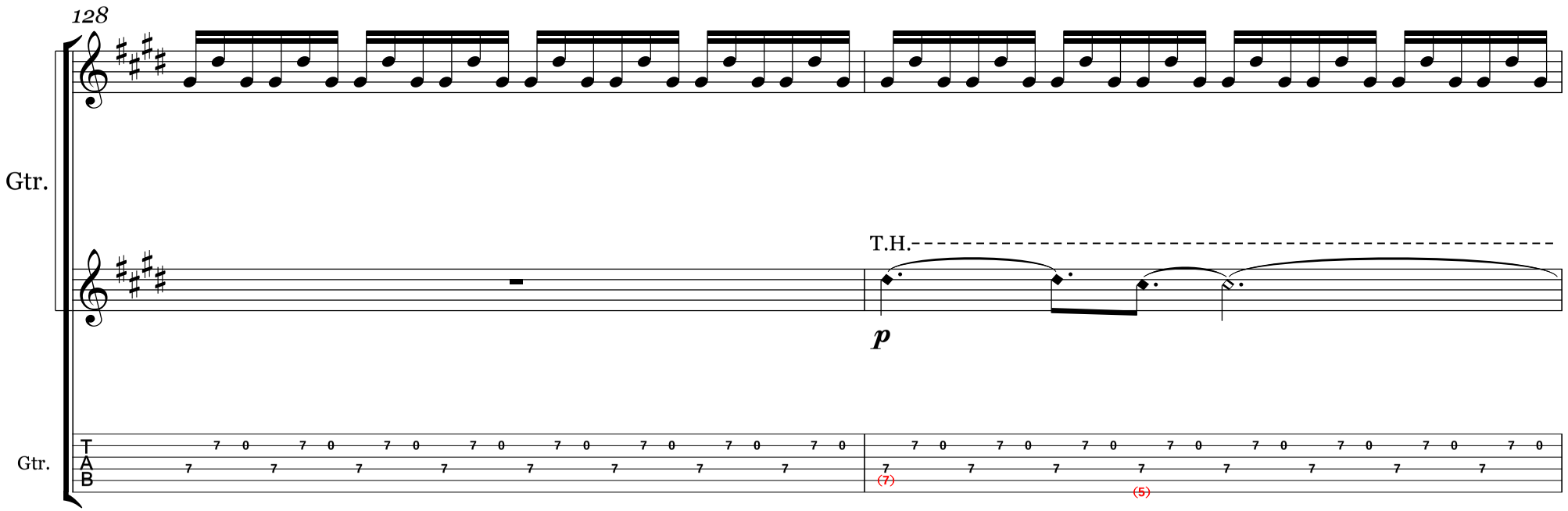
128
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T.H.
p
Gtr.
T
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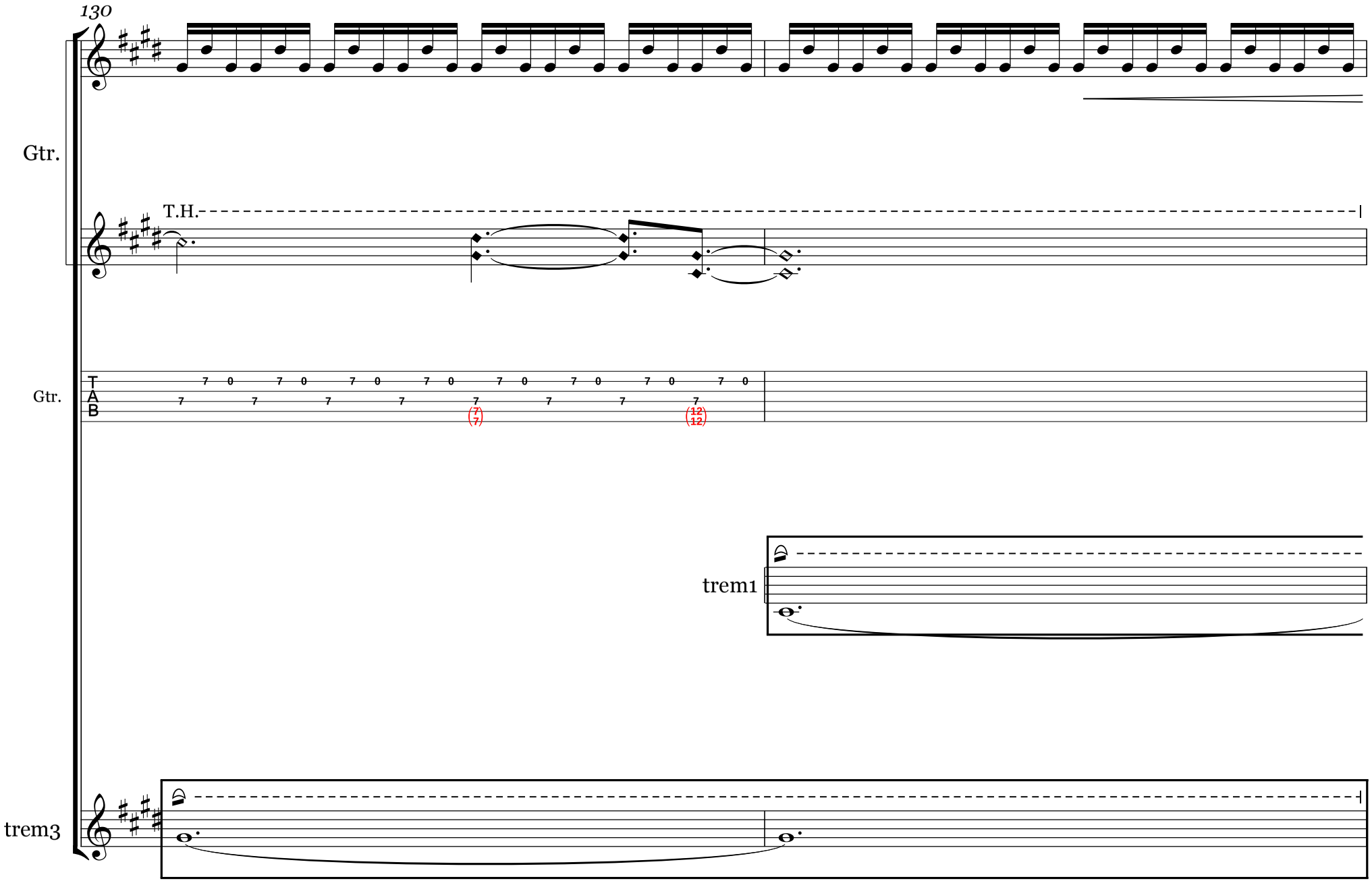
B
(7)
(5)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Gtr.
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B
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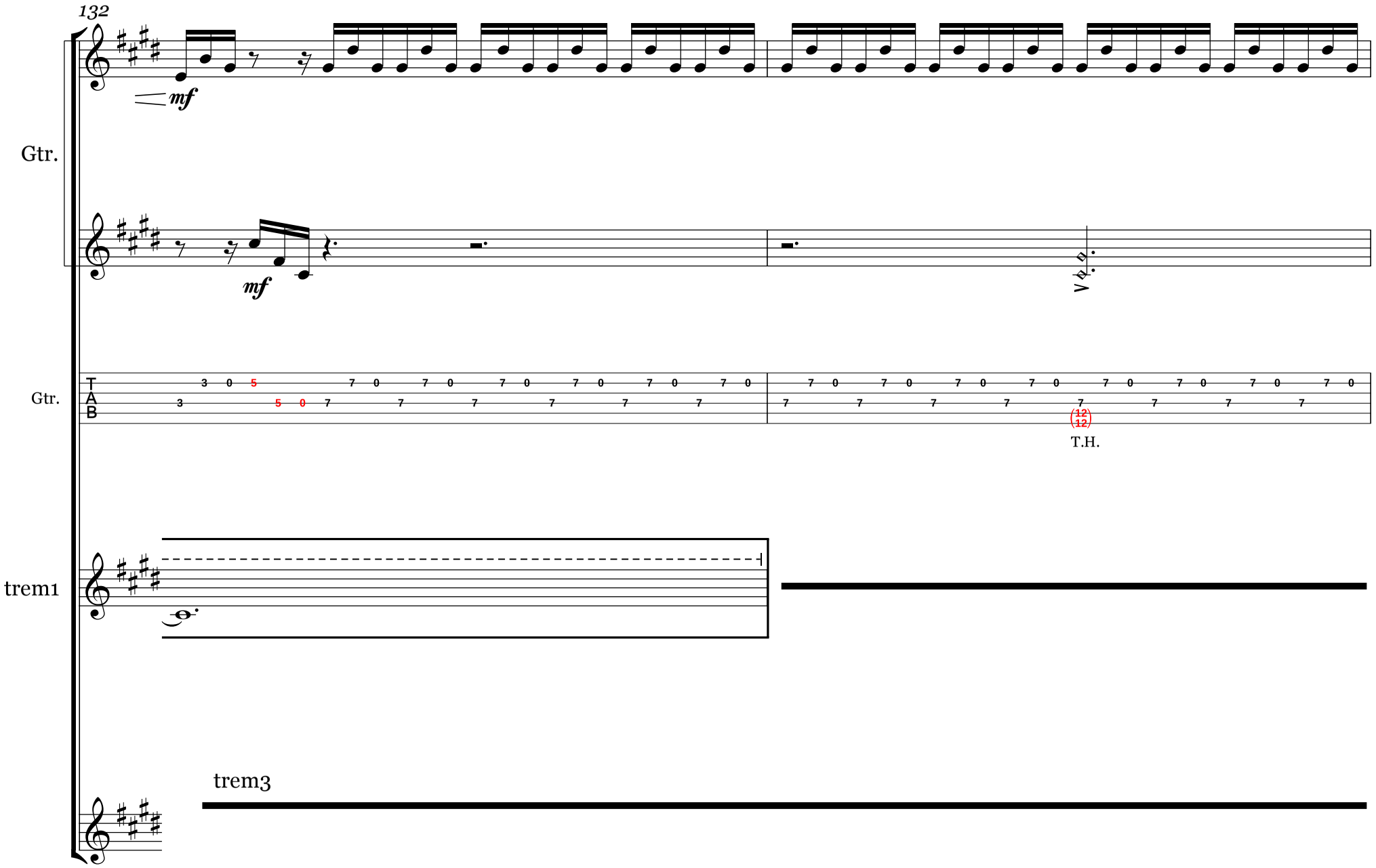
trem3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mf
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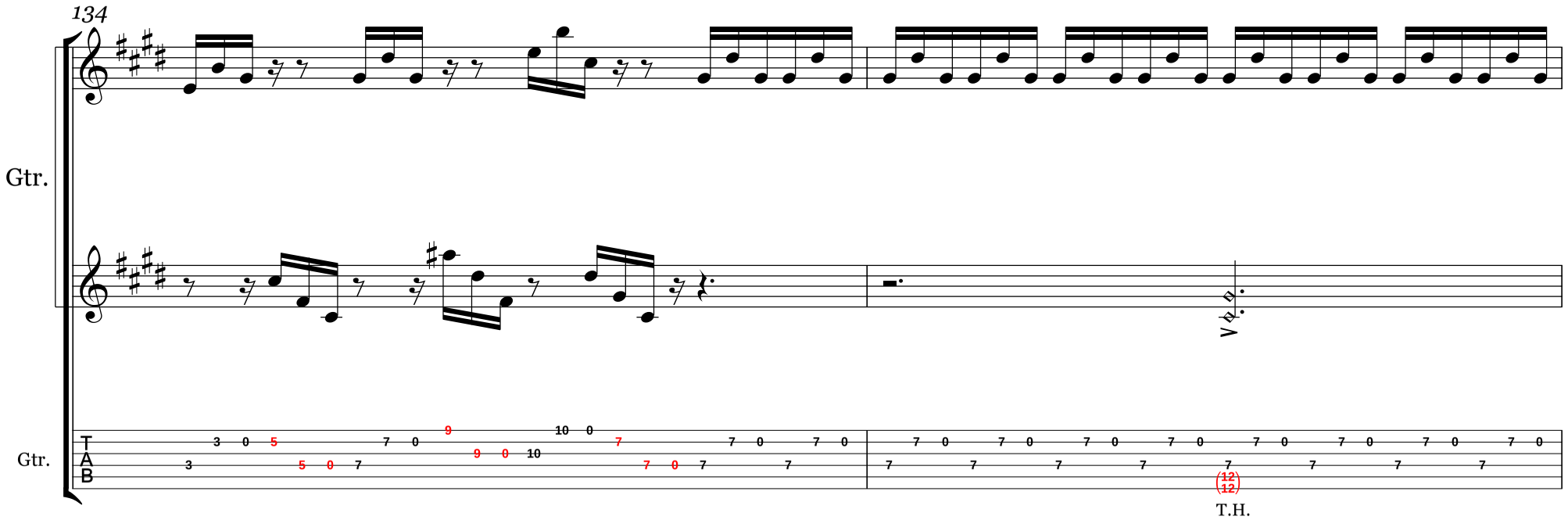

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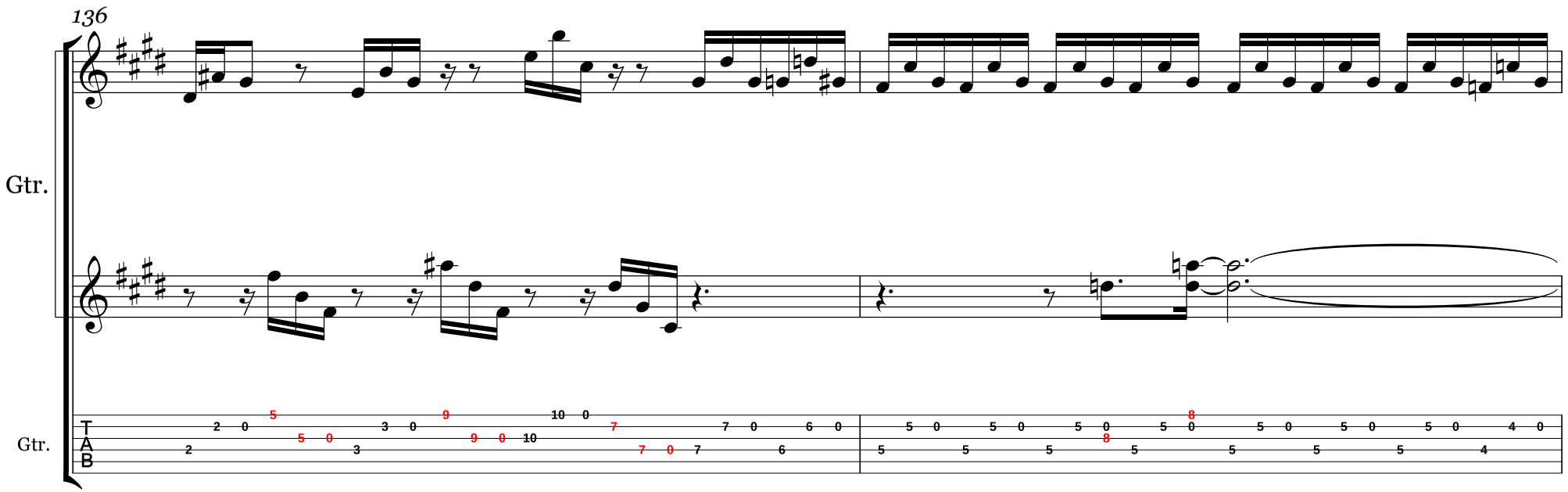

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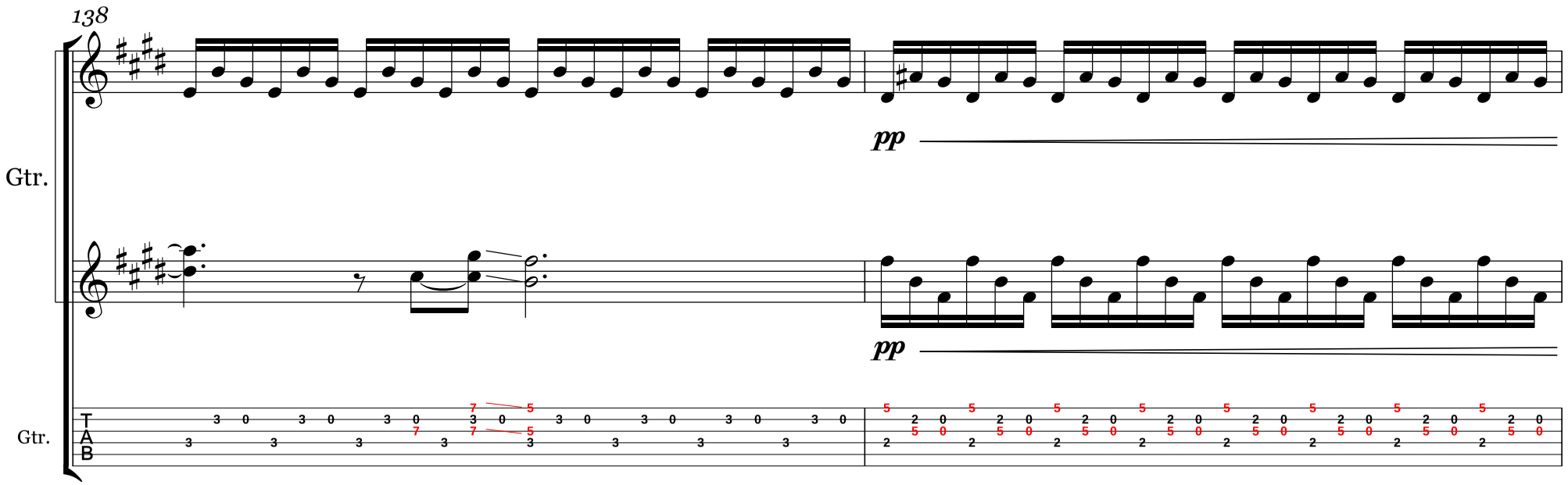

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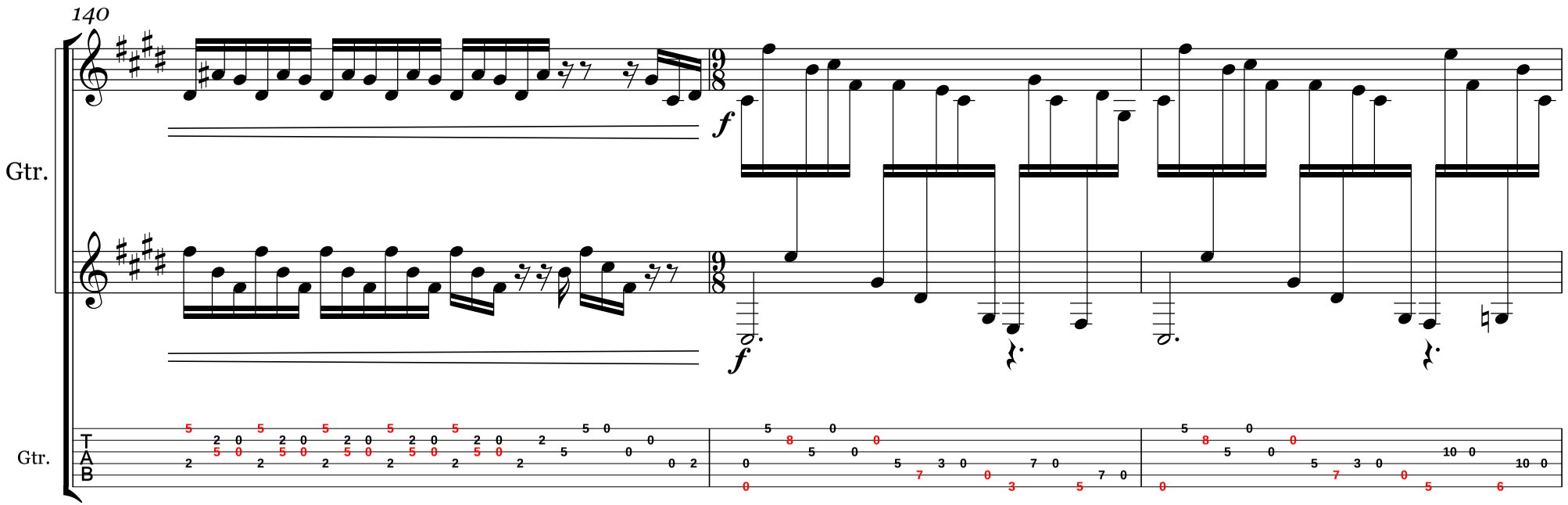

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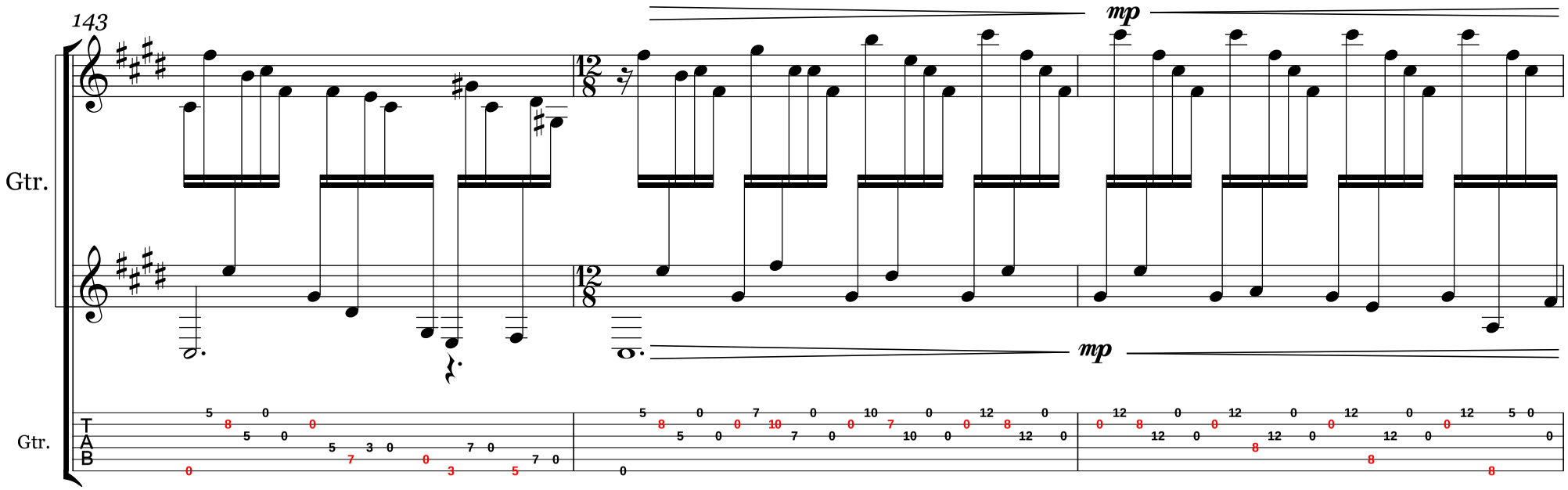

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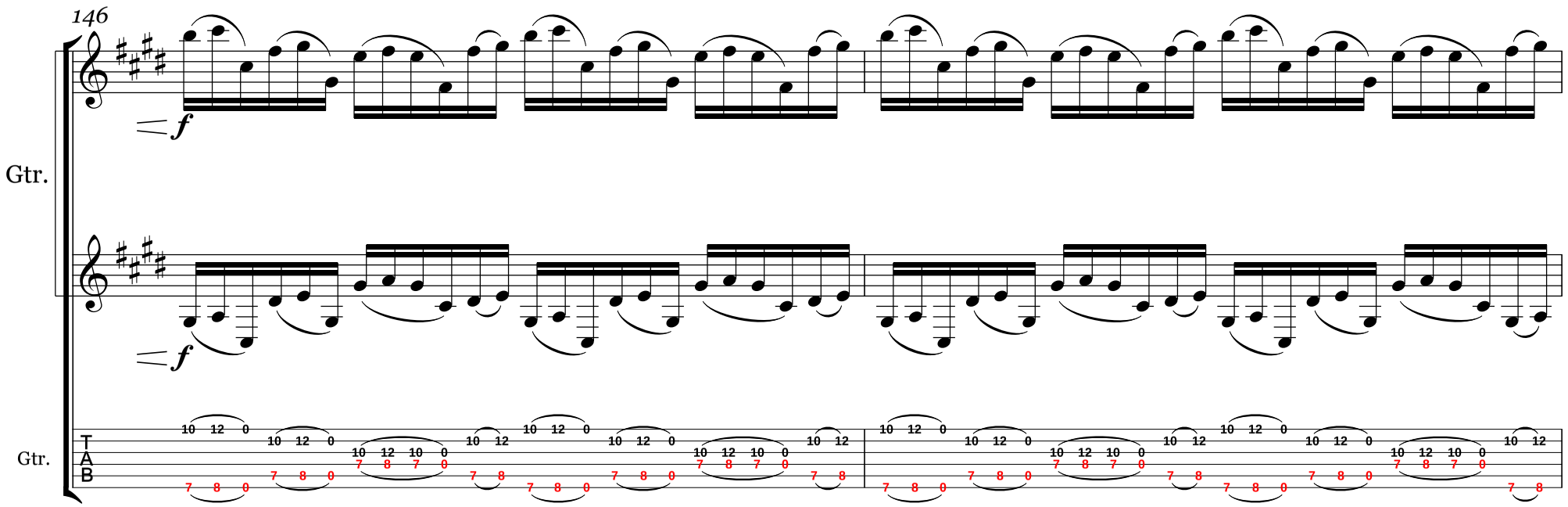

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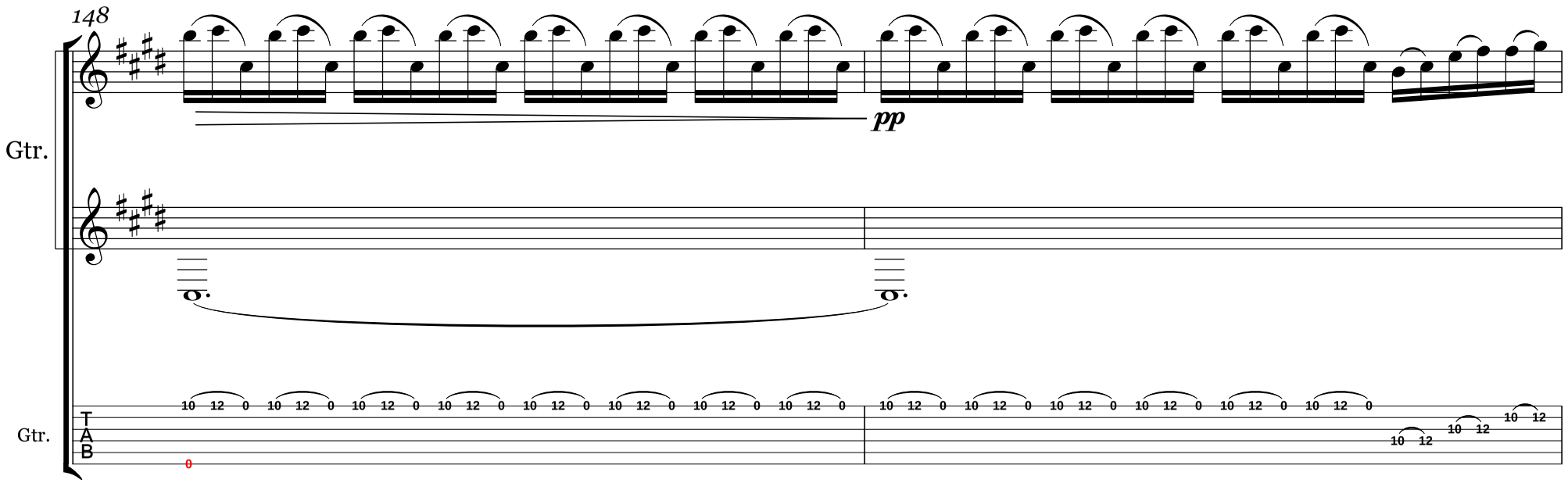

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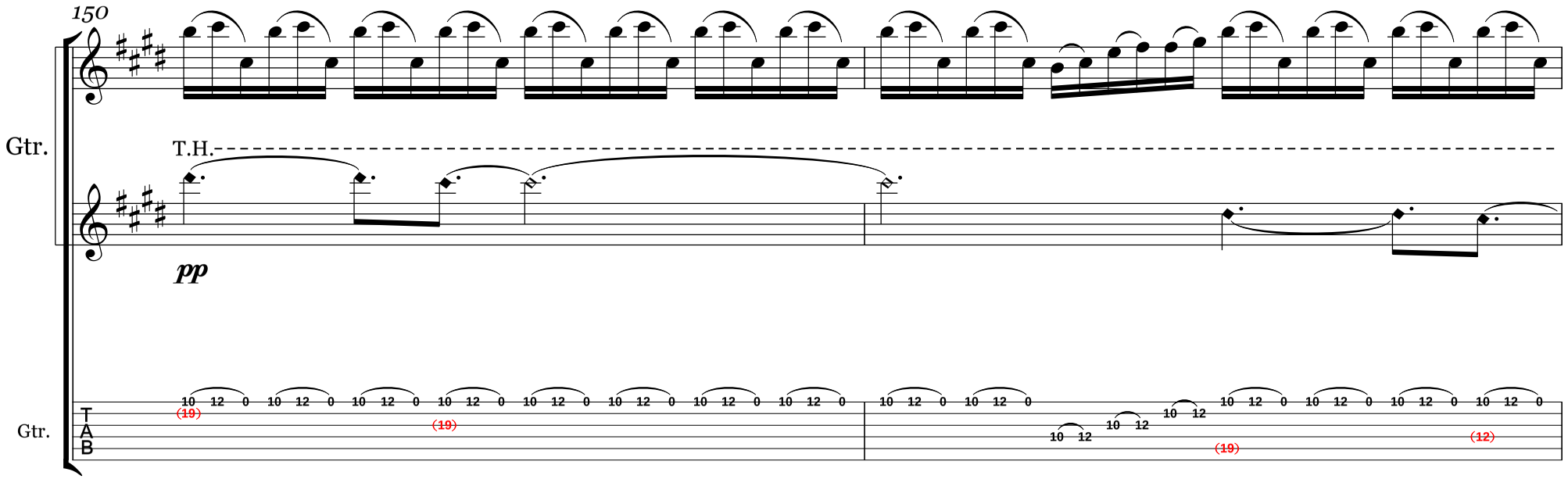
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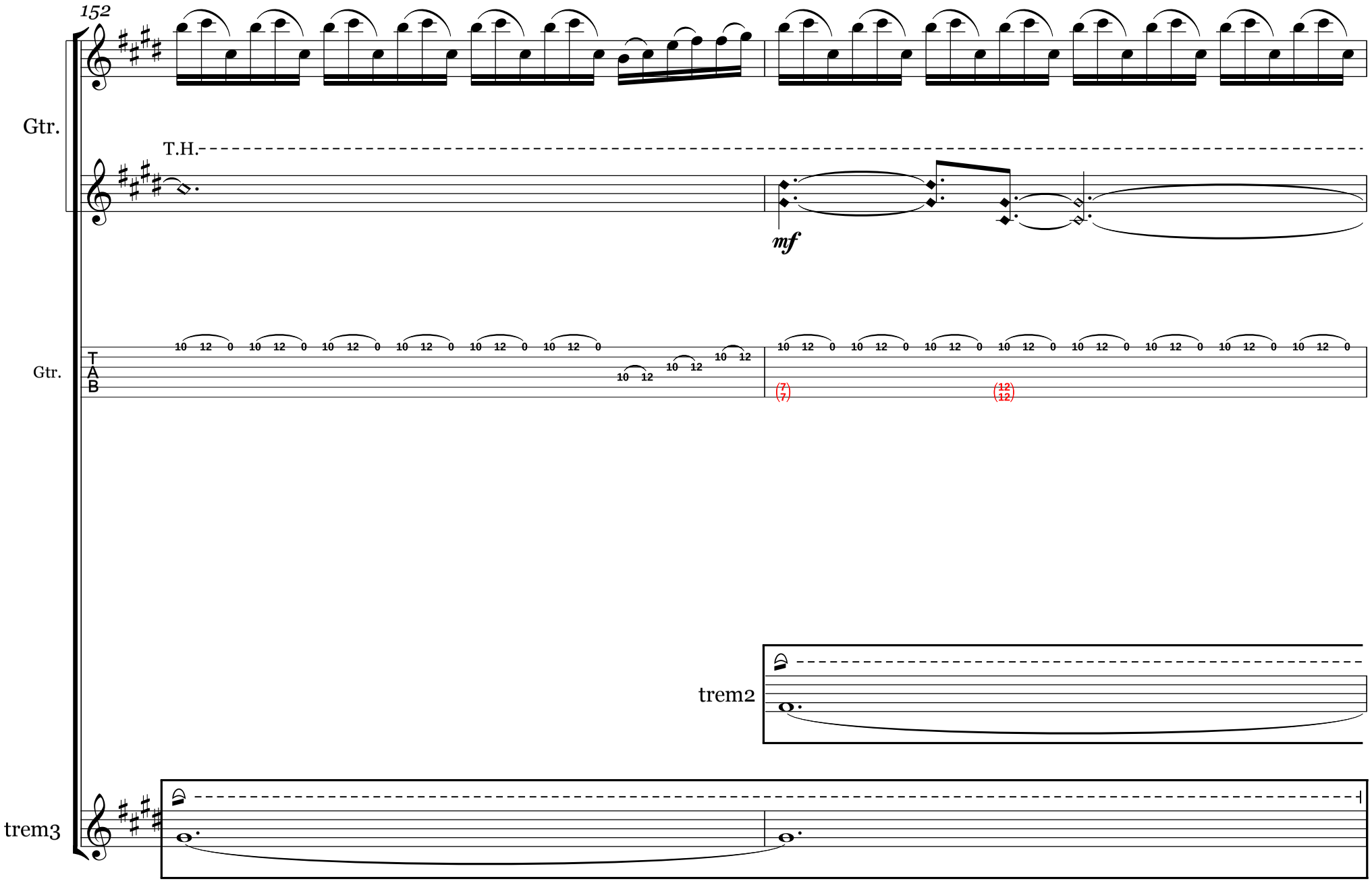
152
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Gtr.
T
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B
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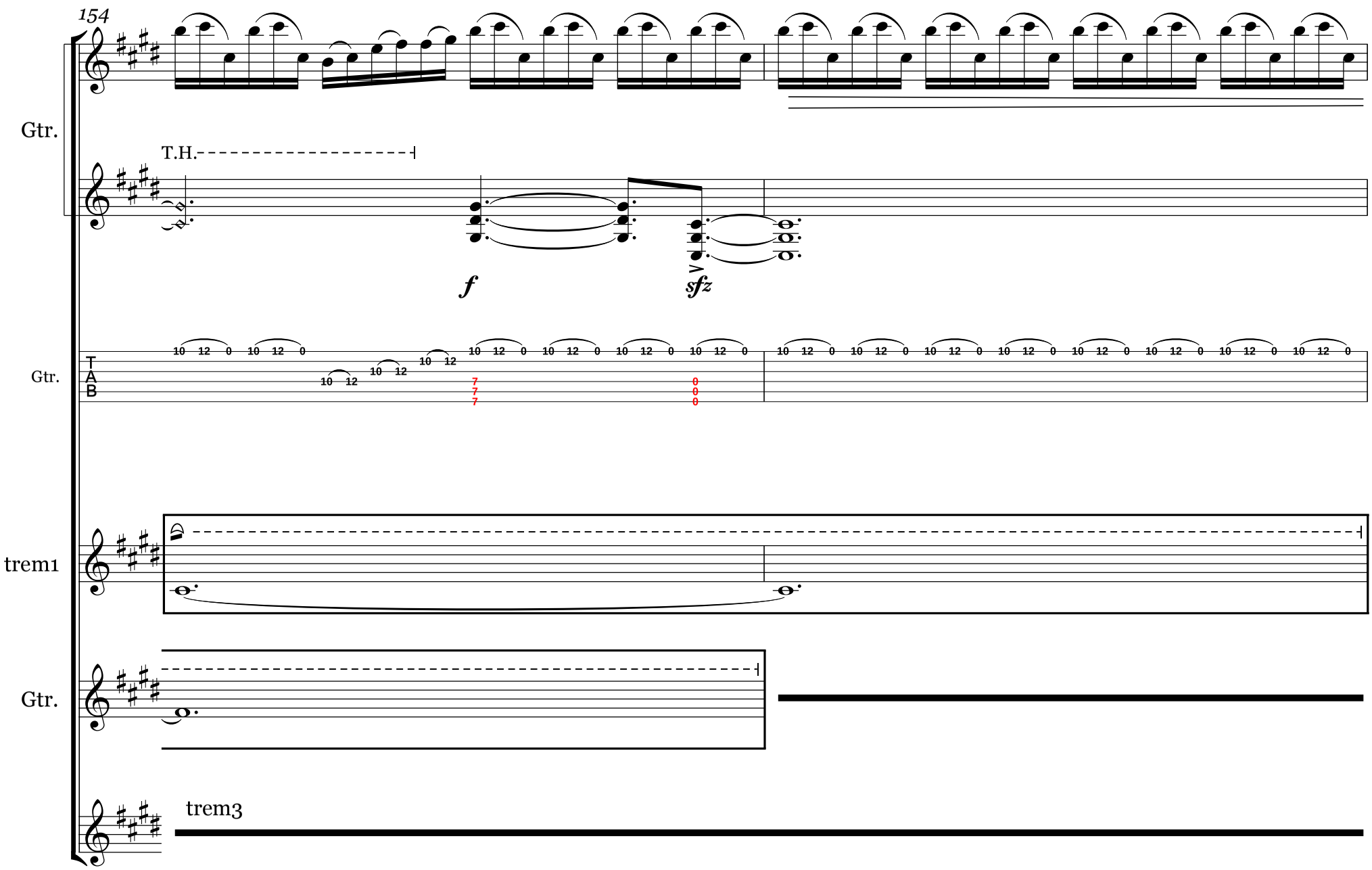
(7)
(12)
(12)
trem2
trem3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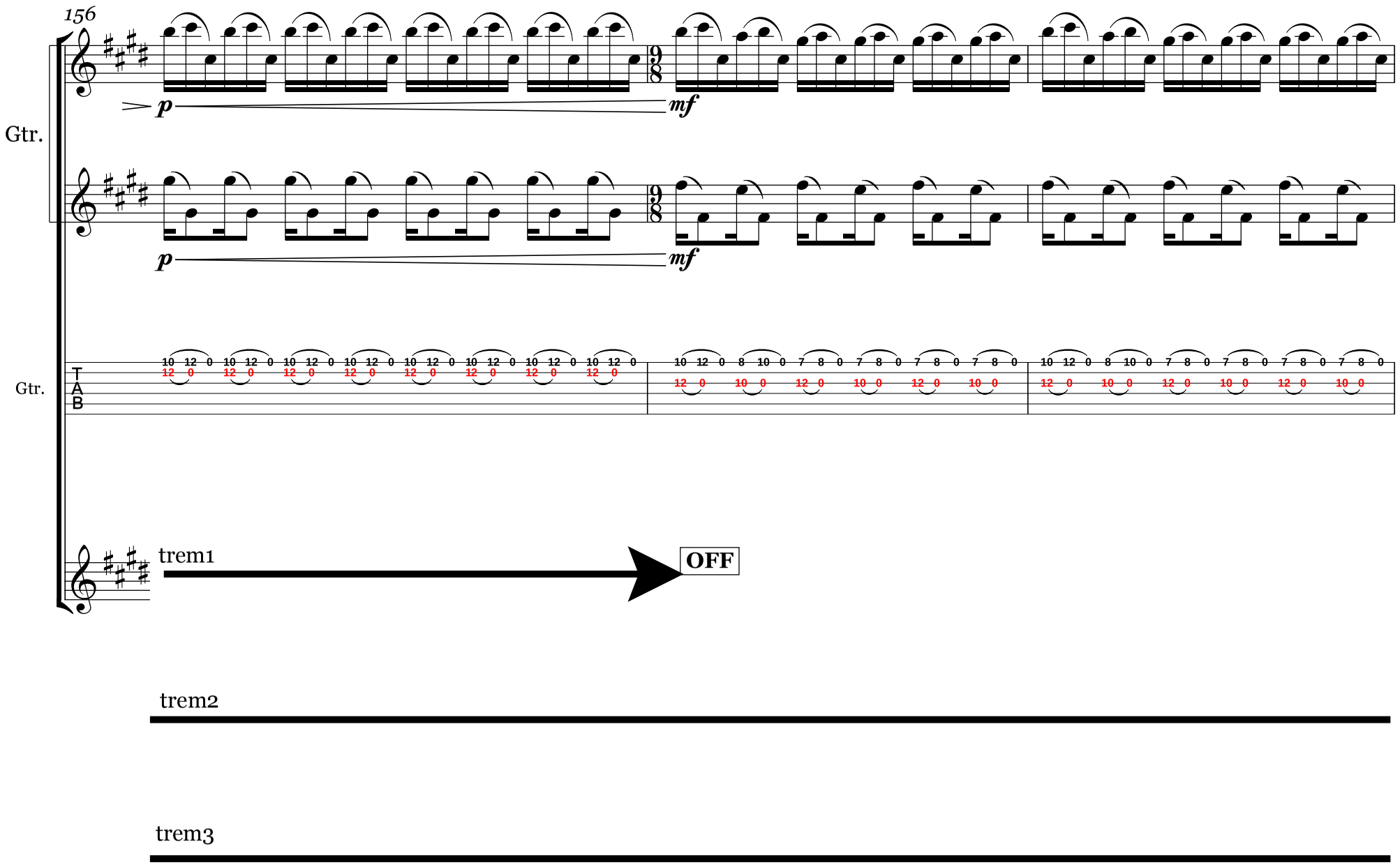
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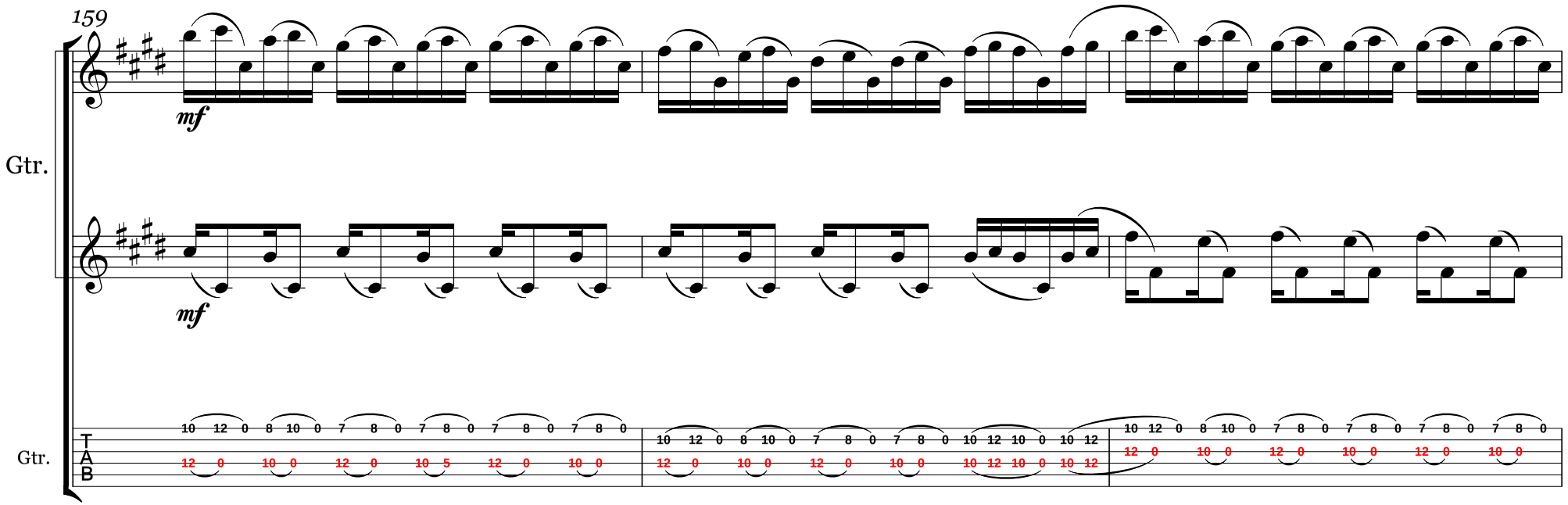

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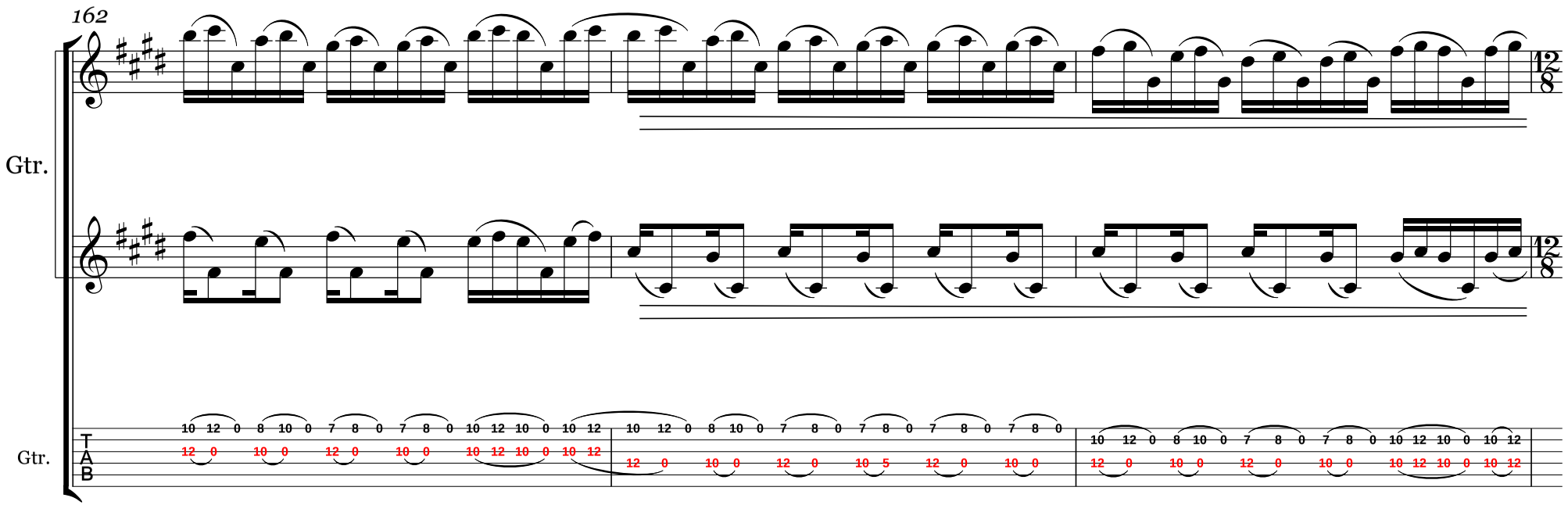

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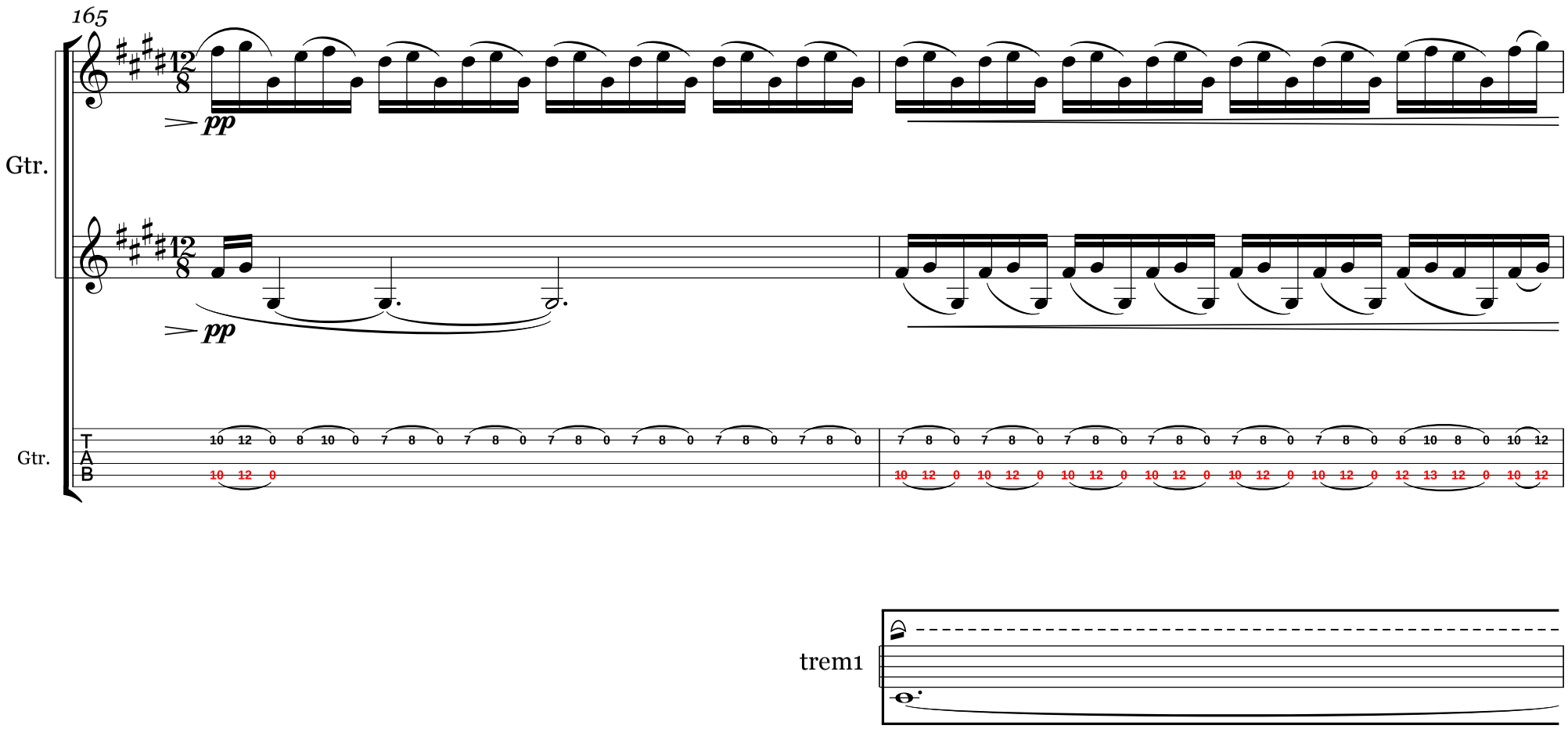
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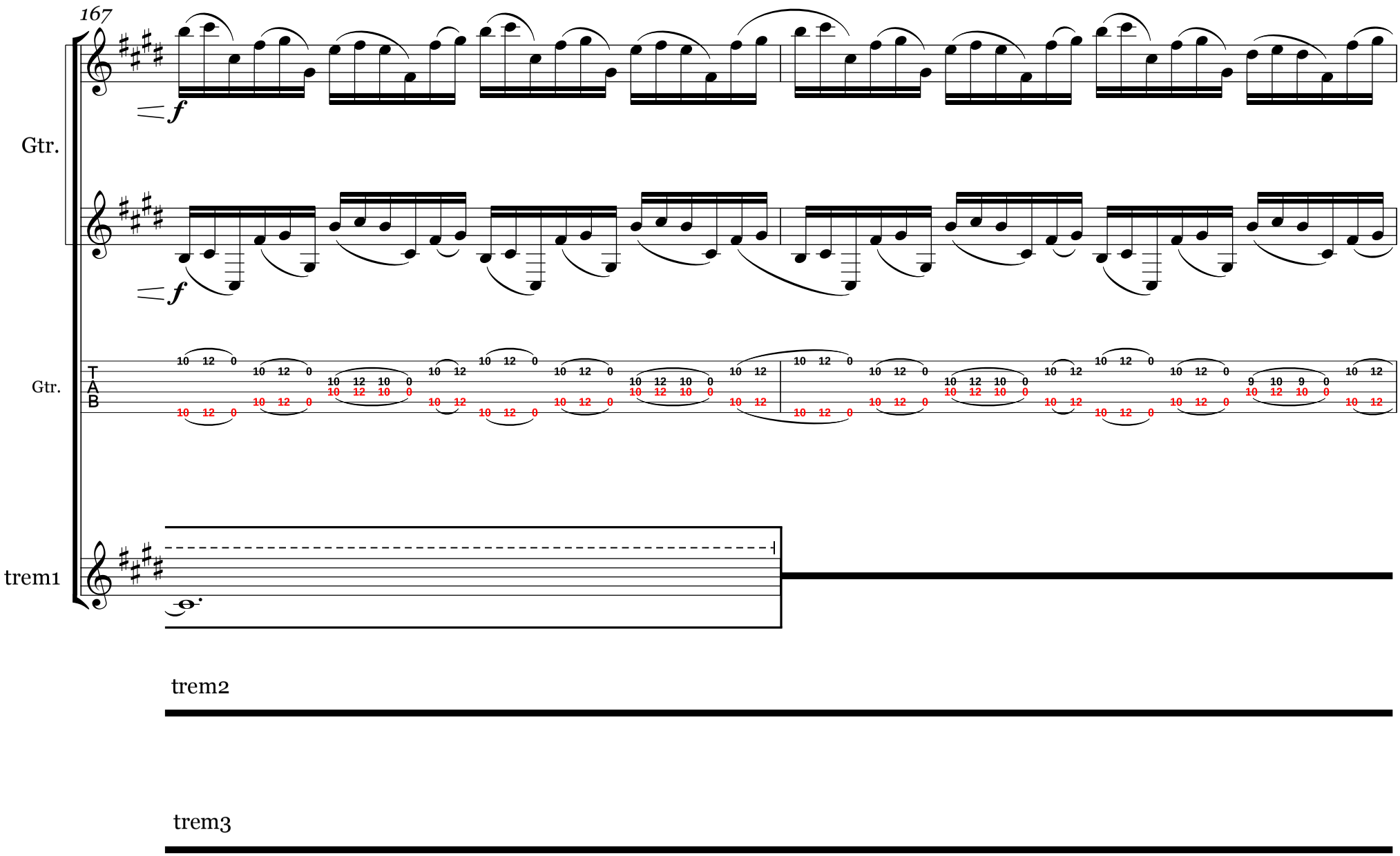
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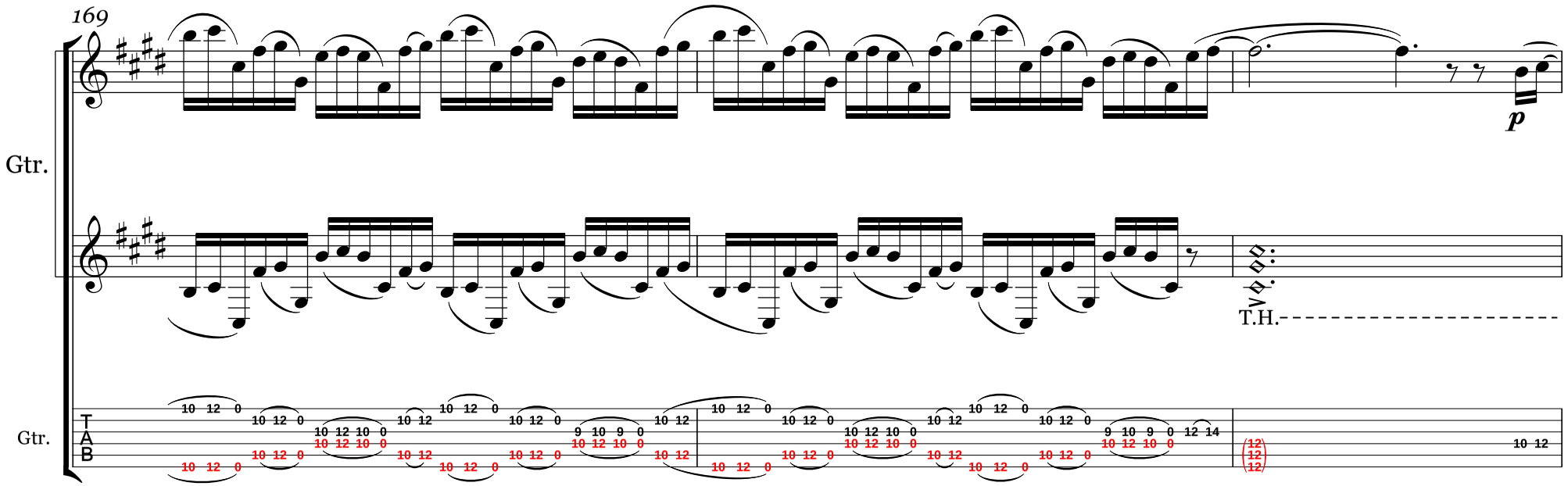
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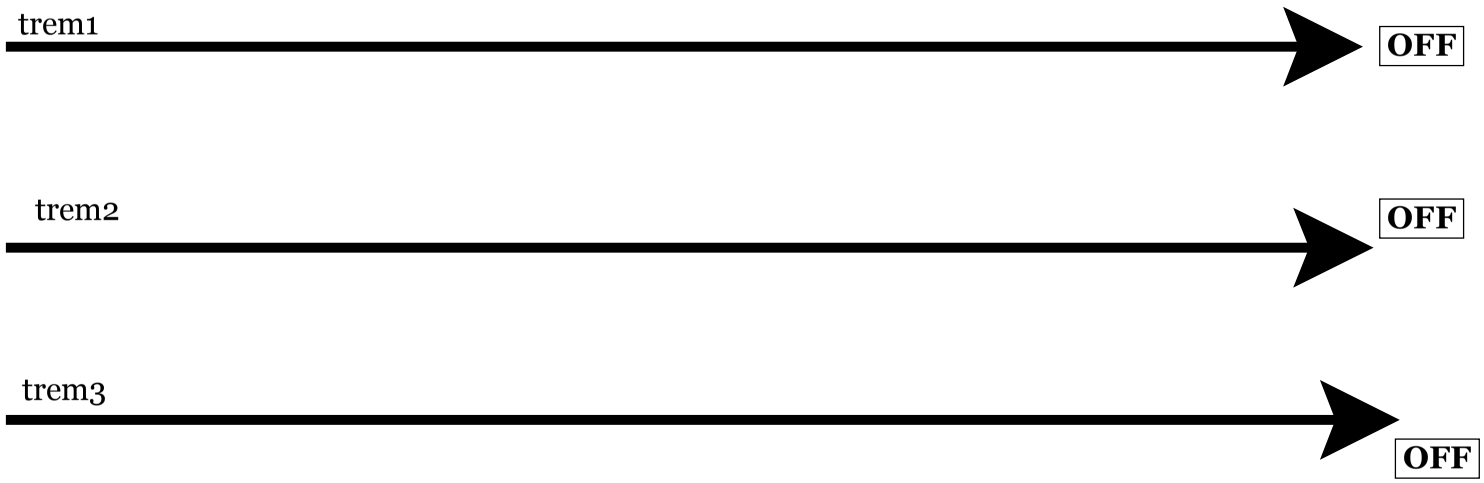
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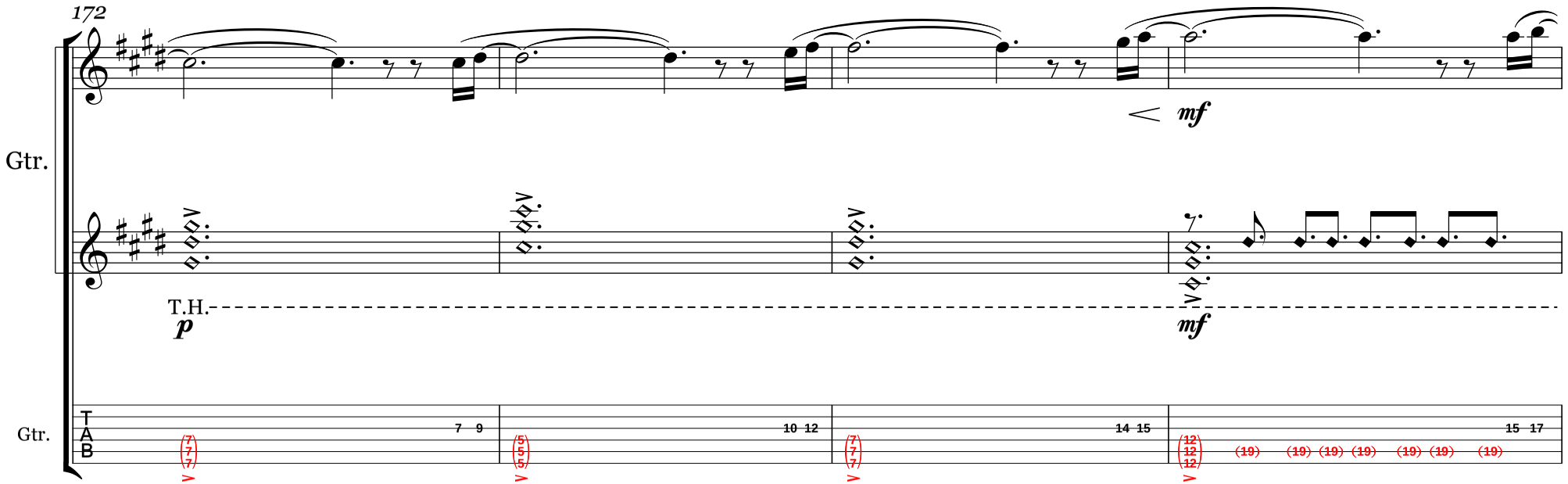
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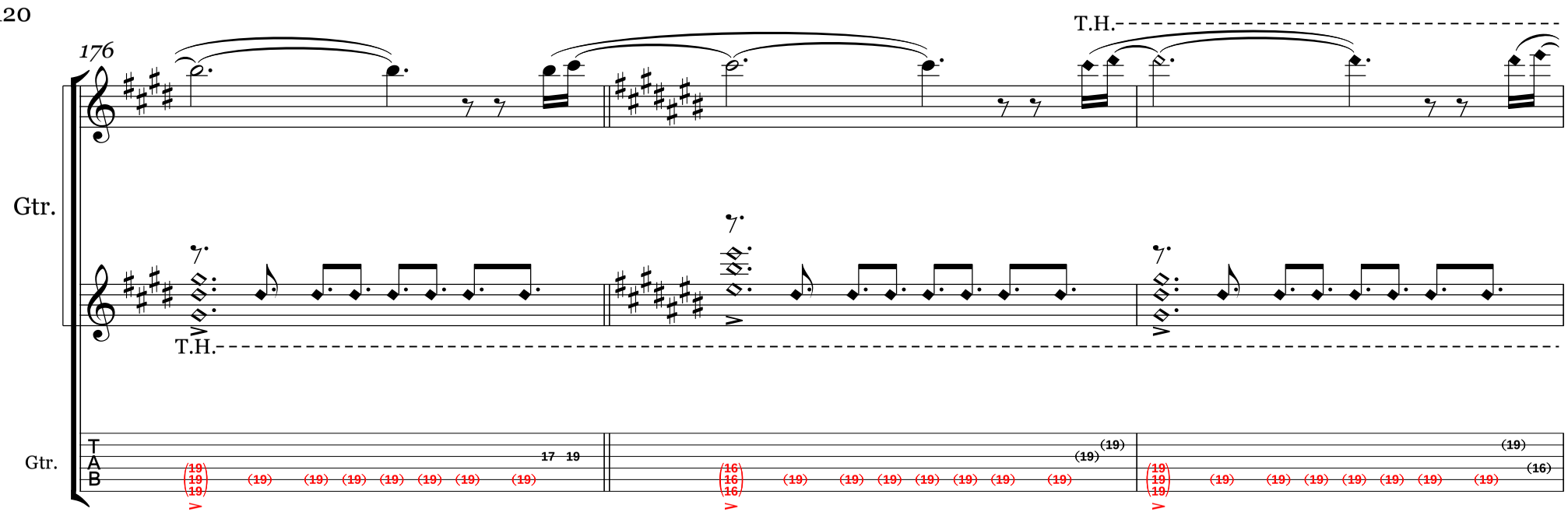
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T.H.
Gtr.
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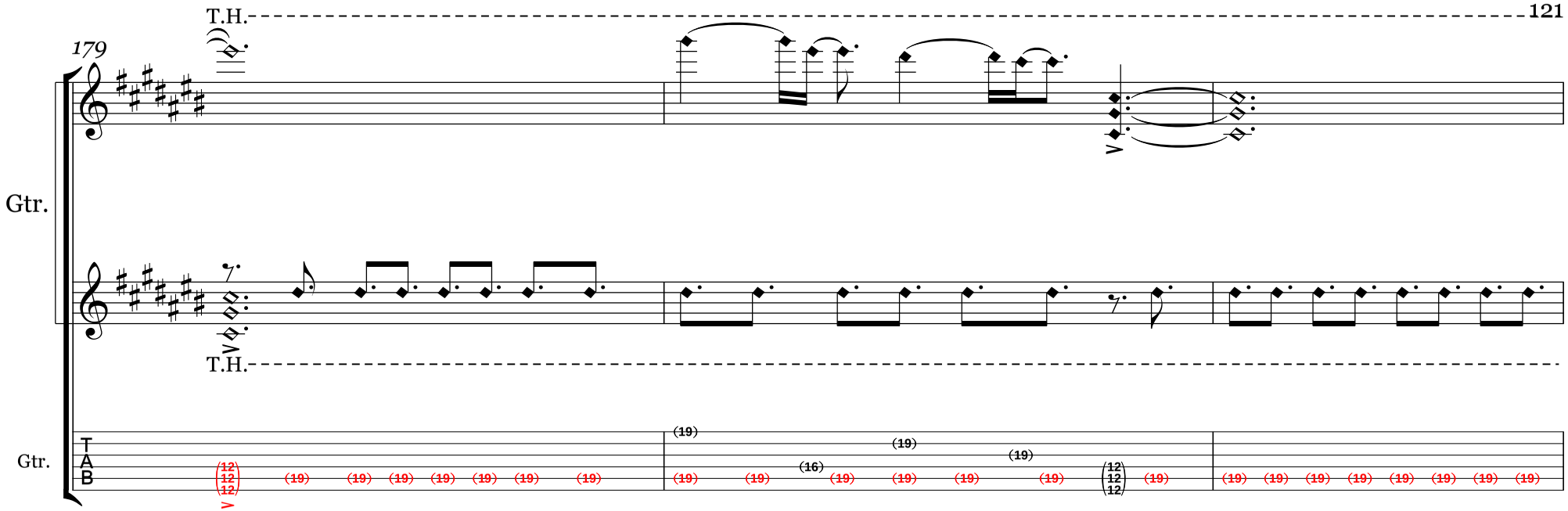
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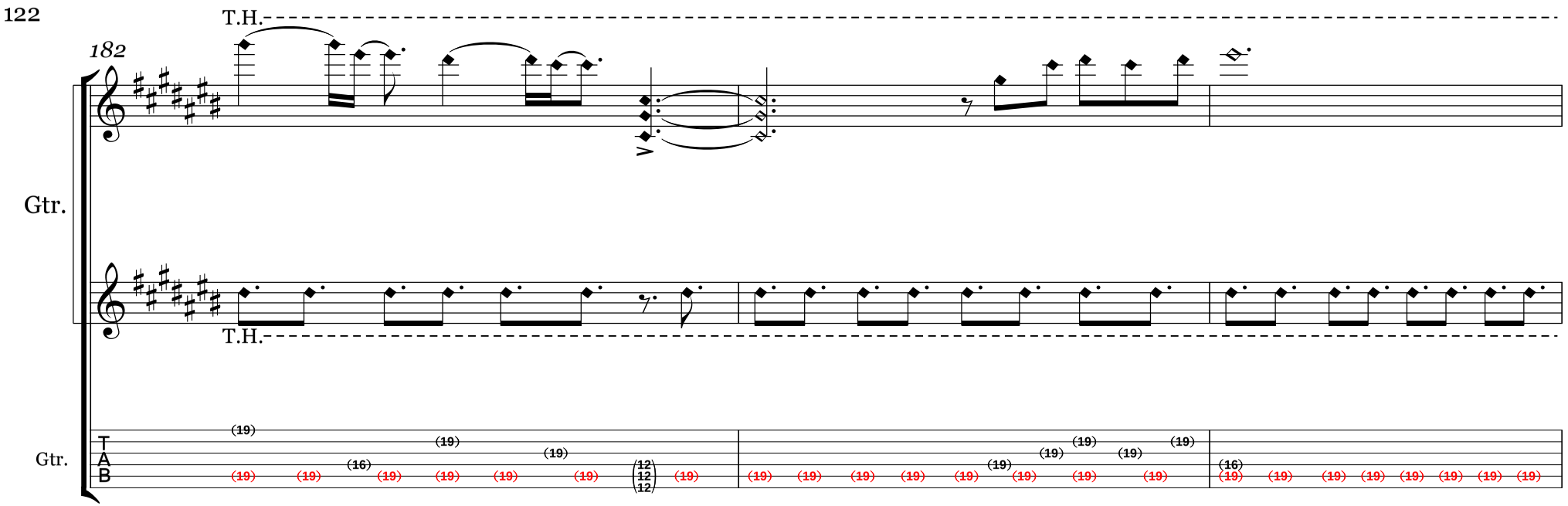
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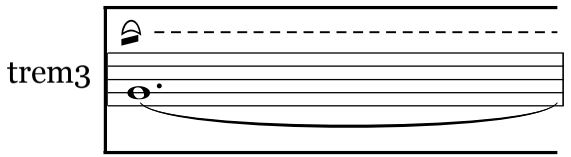
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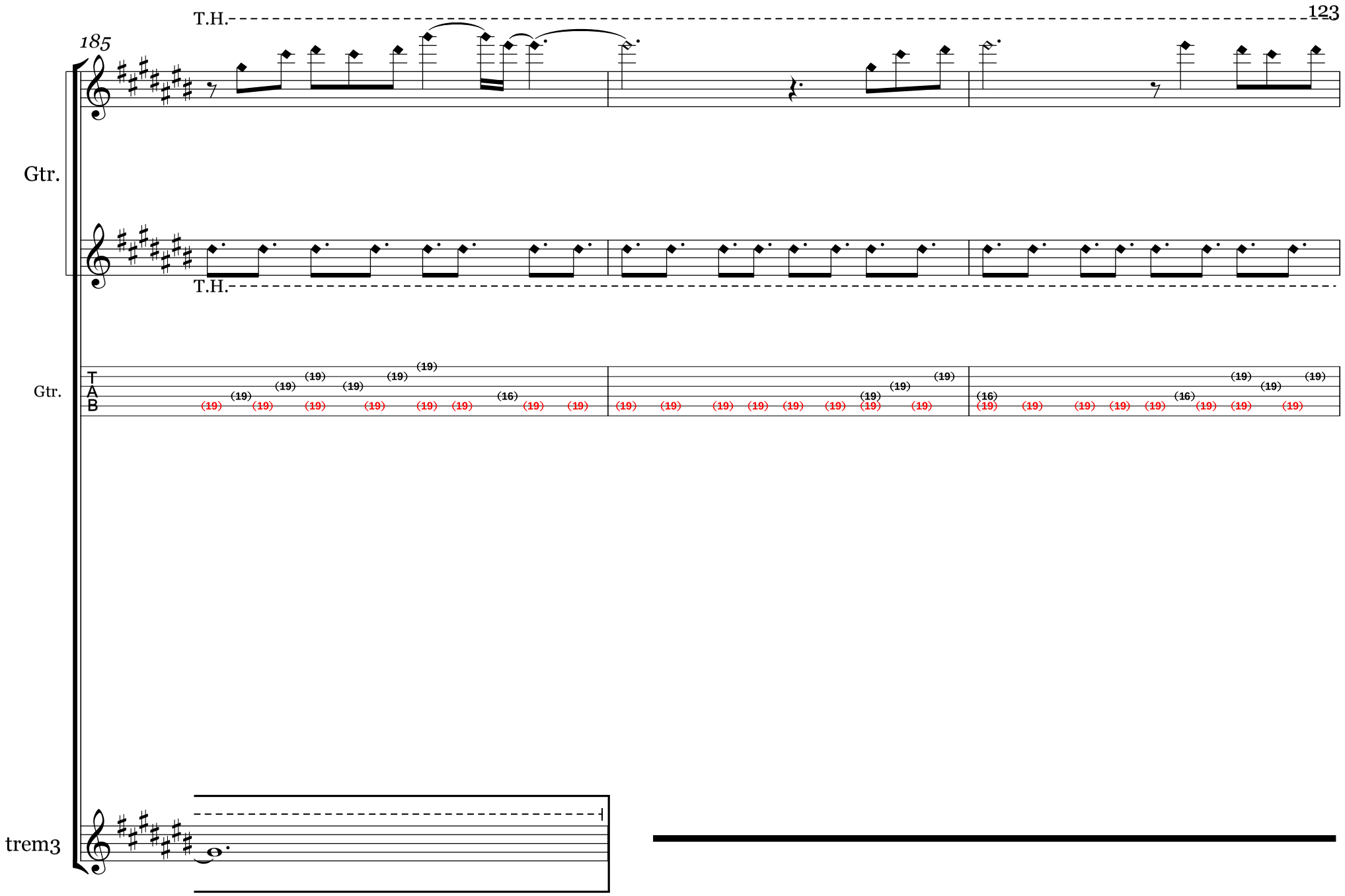
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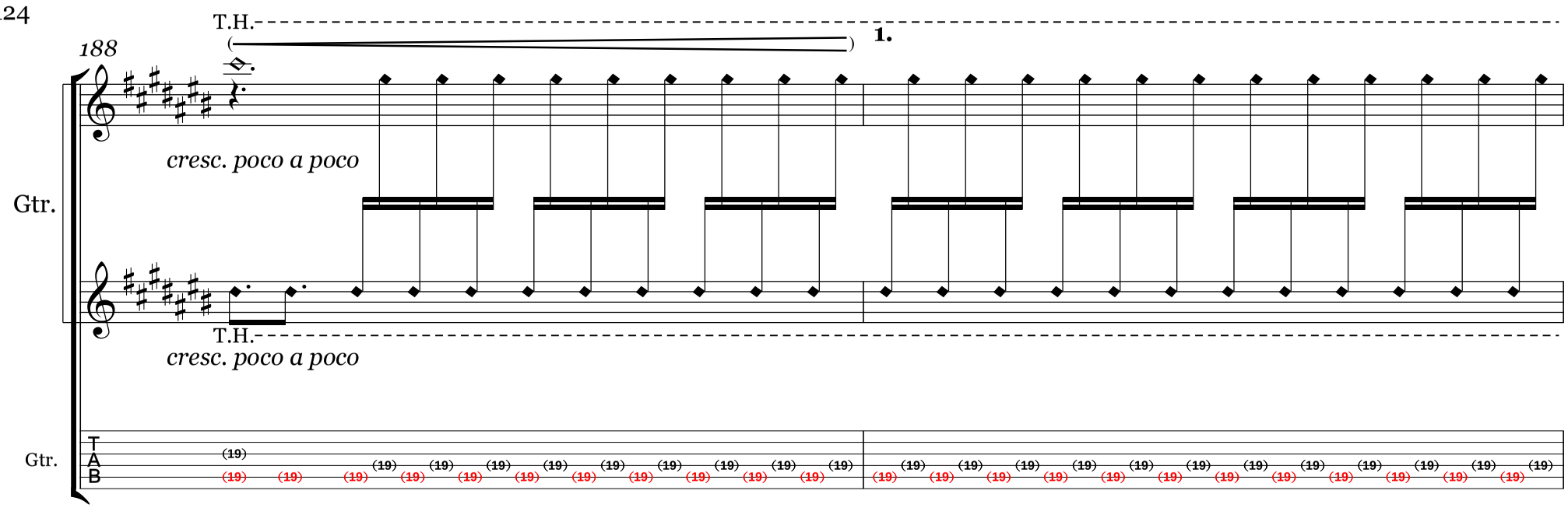

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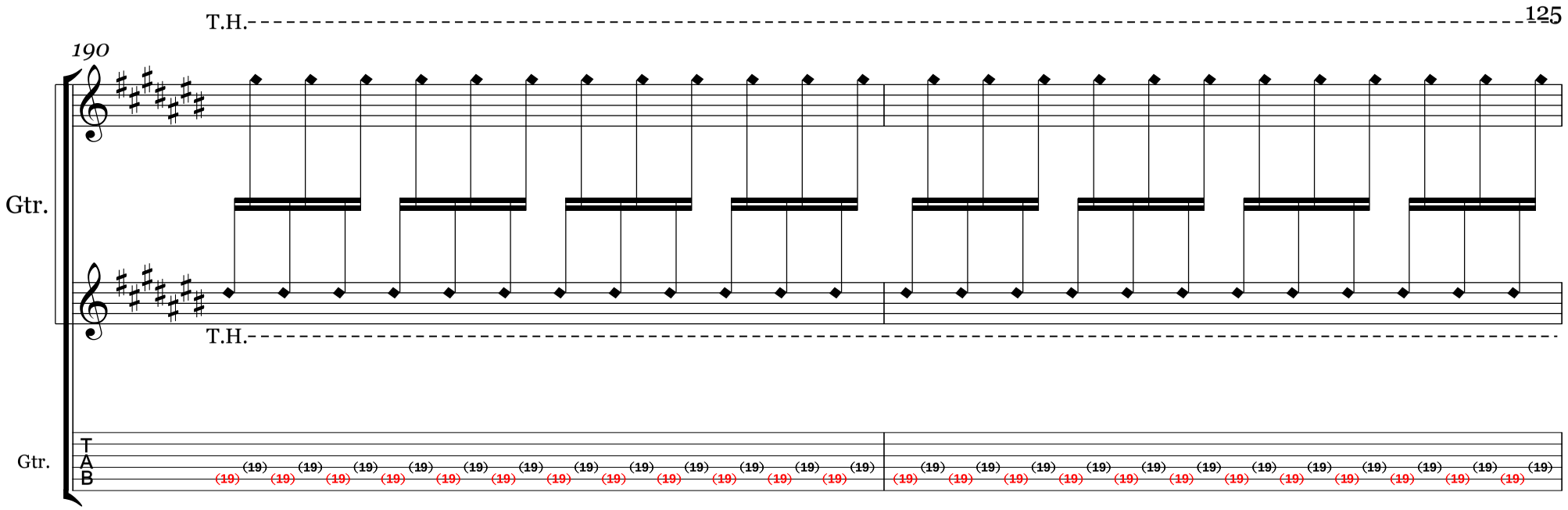

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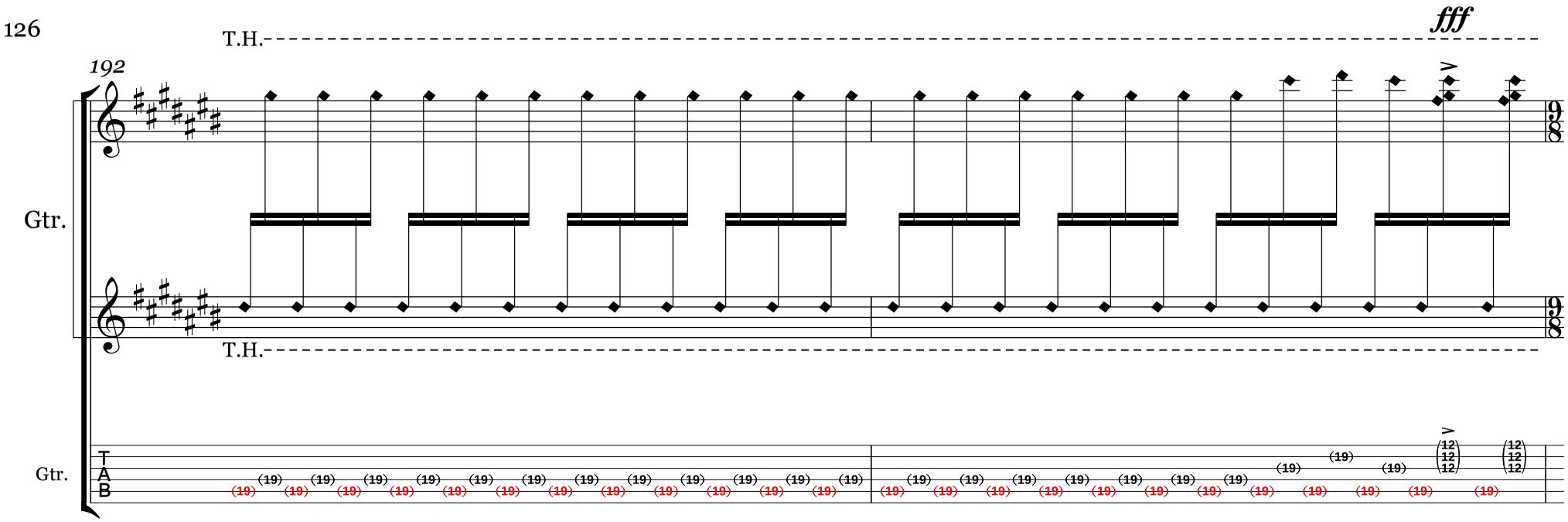
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192
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T.H.
Gtr.
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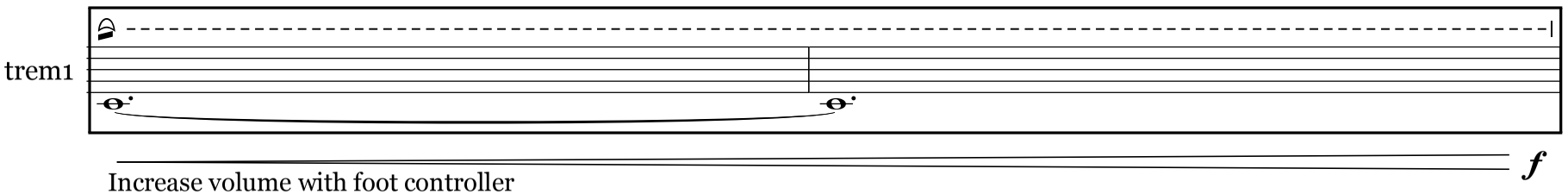
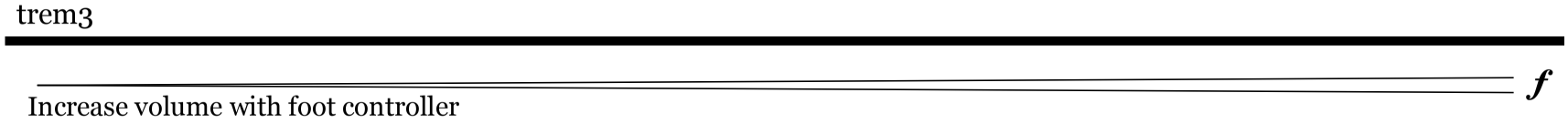
A
B


trem1
f
Increase volume with foot controller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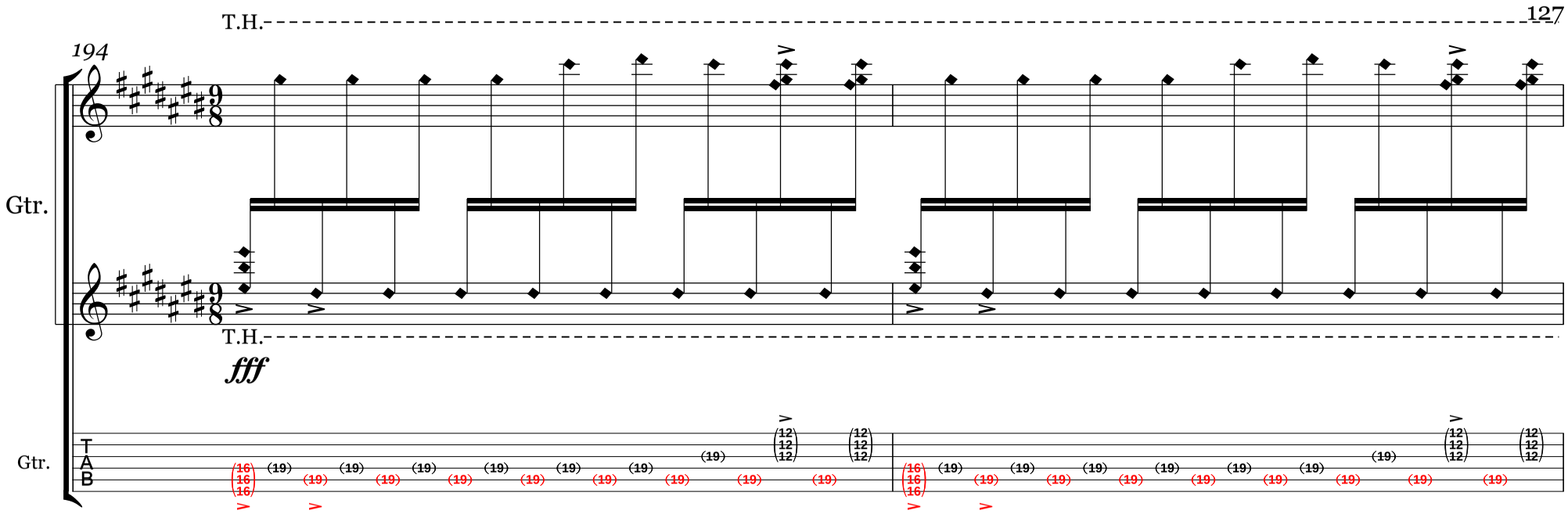
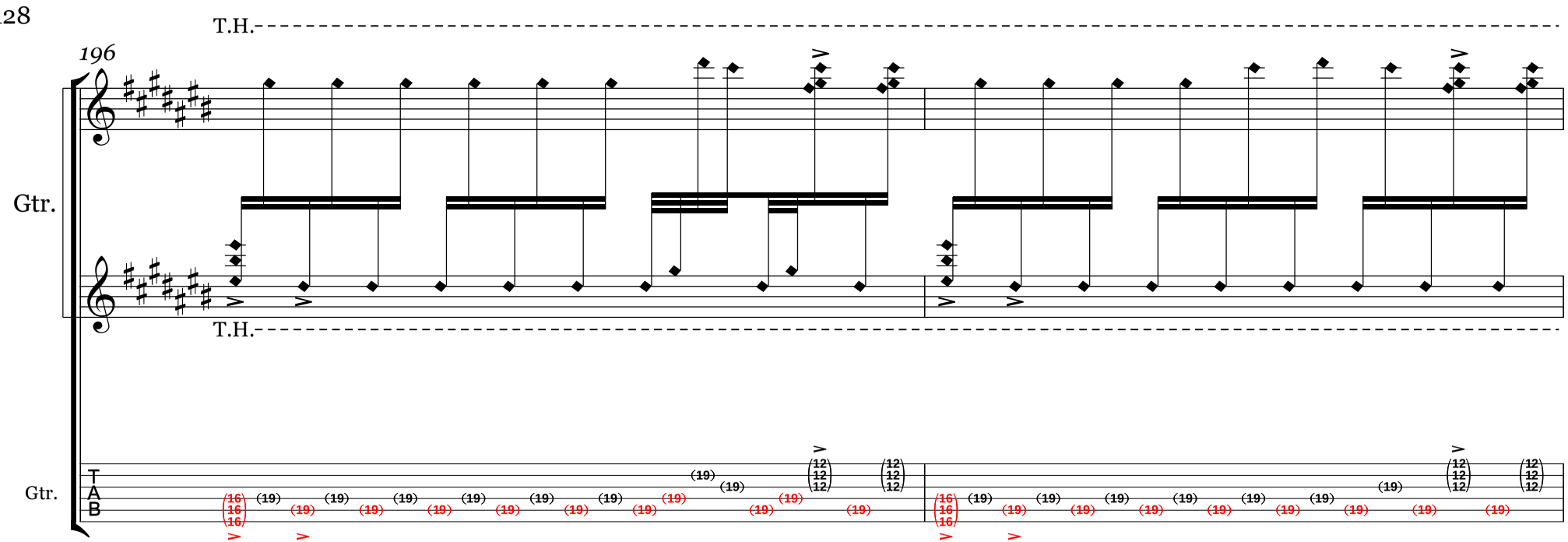
f
Increase volume with foot controller



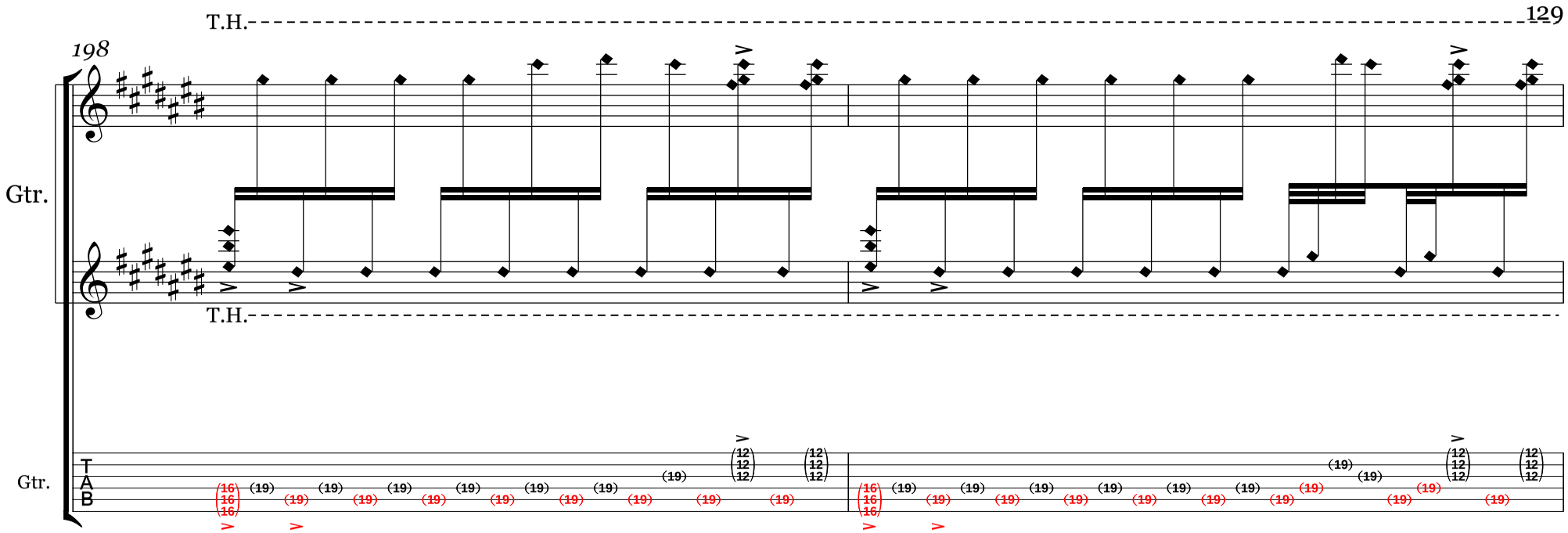
trem1

trem3



trem1

trem3



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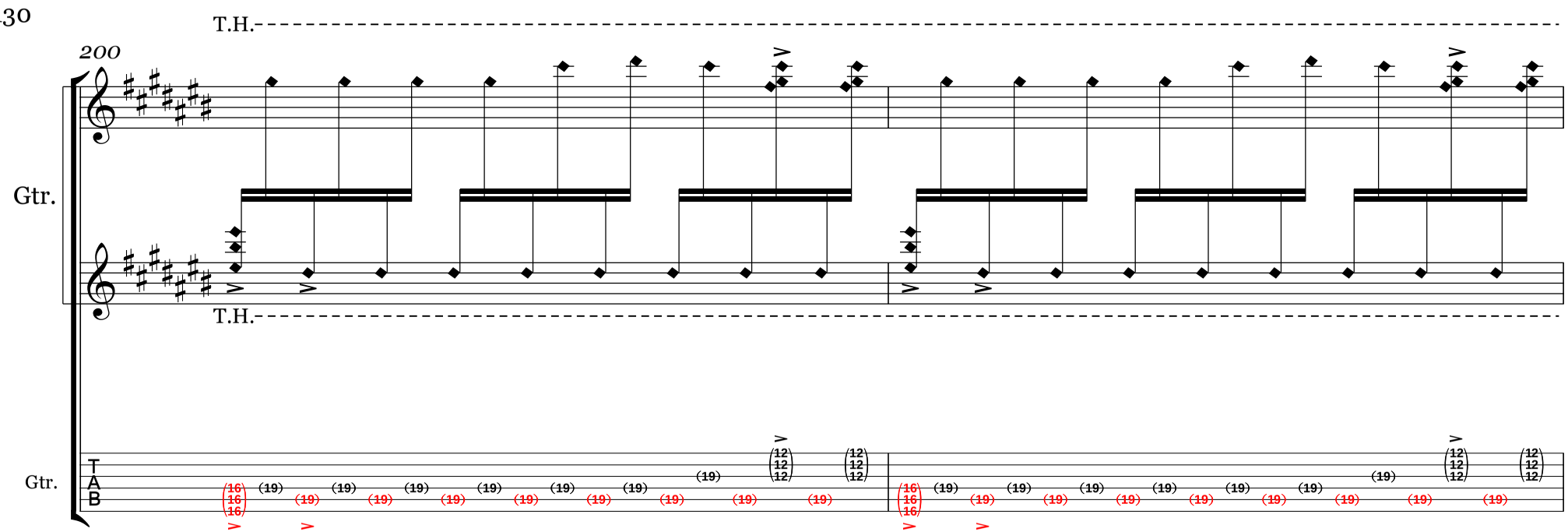
trem3

130



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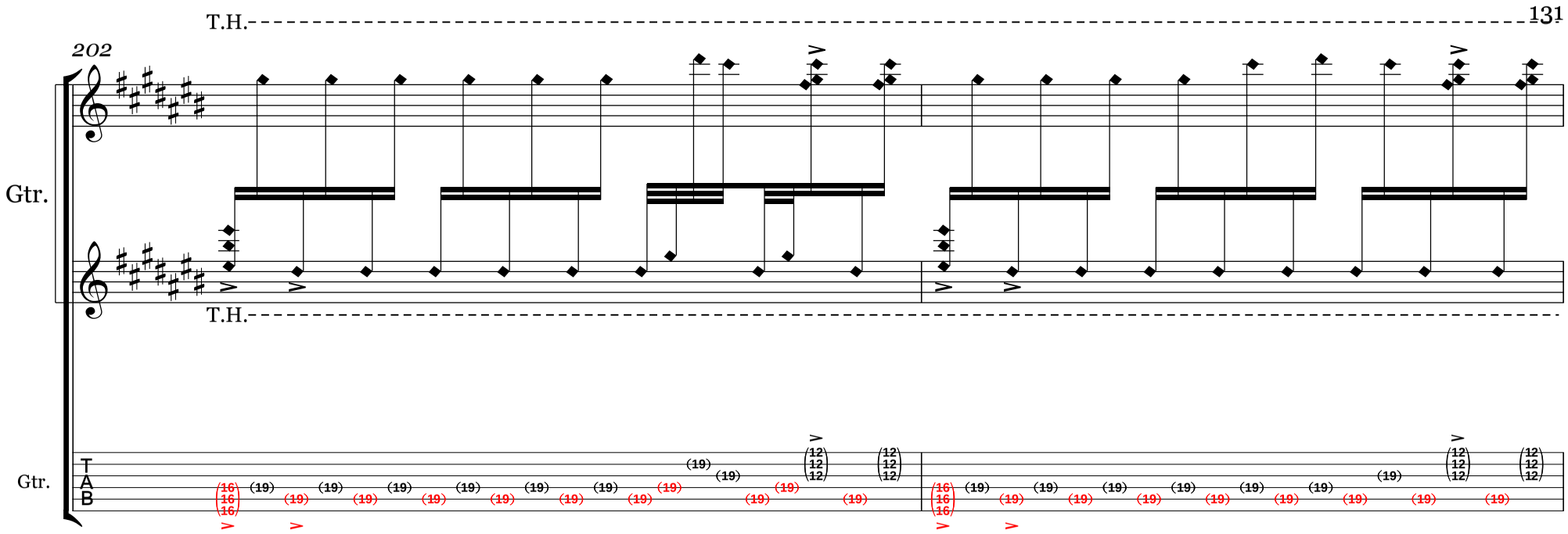
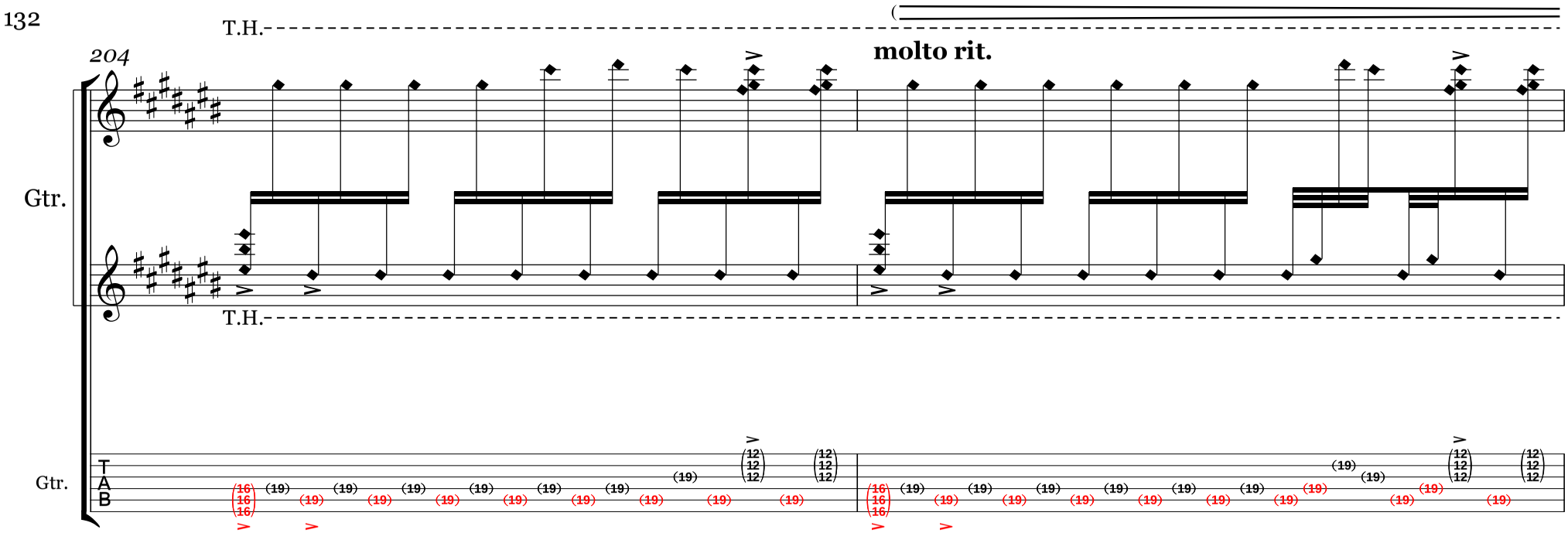
trem3



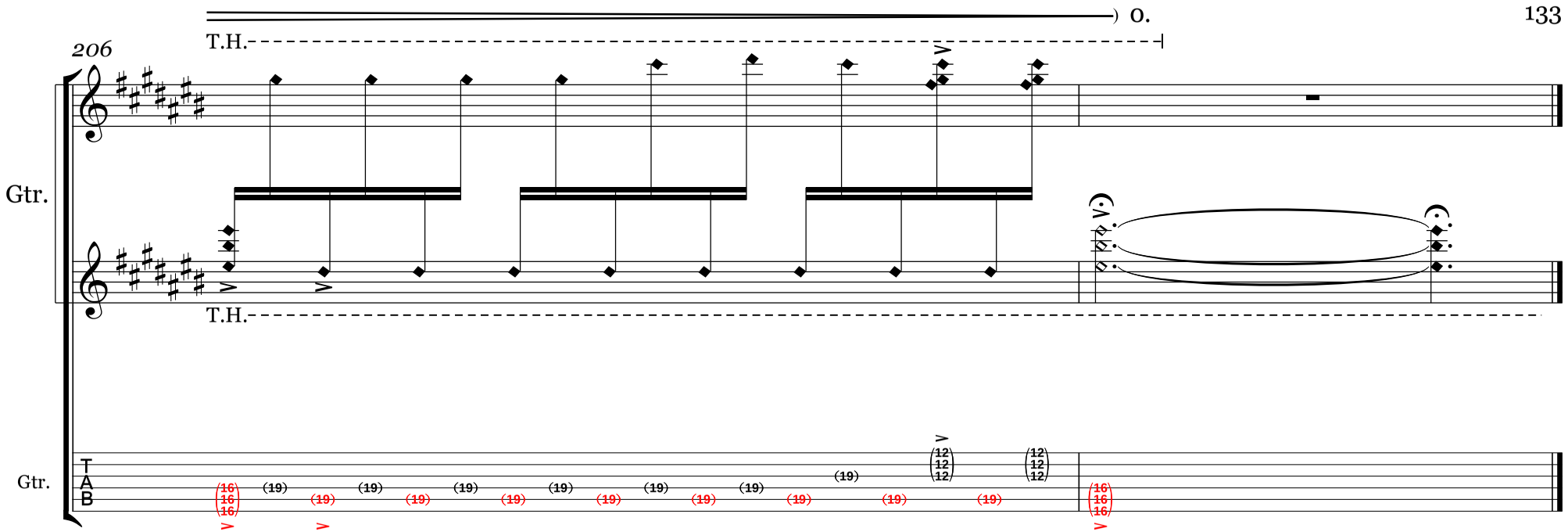
trem1

trem3



trem1

trem3



trem1 → OFF

trem3 → OFF

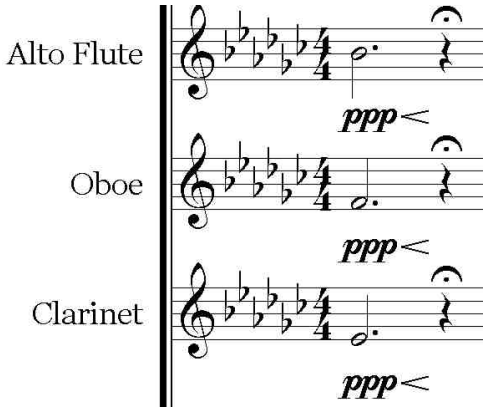
Prior to my arrival in Glasgow I composed and thought of my own compositions as something that must be organic, something that must flow forward often with the constant creation of new material. I had little patience for developing small amounts of material into larger pieces, and I shied away from being analytical and systematic in my compositions. These last several months at the University of Glasgow have changed my composing process entirely, I believe, for the better. This portfolio for the PgDip in Composition consists of the following three pieces.

***The Last Day* for modified wind quintet**

The Last Day began several years ago with hearing a train going through my hometown of Butte, Montana one morning. The blast of the train whistle had an interesting sound, and I quickly sat at my keyboard to try to decipher the pitches it contained. Once I had deciphered the chord I knew immediately that this was meant to be a piece for winds, specifically for a modified wind quintet. The notation of the train whistle became the opening chord which lead immediately to the composition of the first 26 measures. I was forced to put aside what I had written in favor of more lucrative pursuits. I of course had the intention of finishing later, and it was nearly forgotten entirely until I arrived in Glasgow.

The morning I heard this train whistle happened to be my last day before moving away from my hometown. It was one of the last sounds I heard before I left, thus the title of the piece. Regarding emotional and psychological purpose, it deals with leaving the familiar in favor of adventure, new life, and the unknown. One is excited to begin a new journey and a new chapter but is simultaneously nostalgic to have left behind comfort and fond memories.

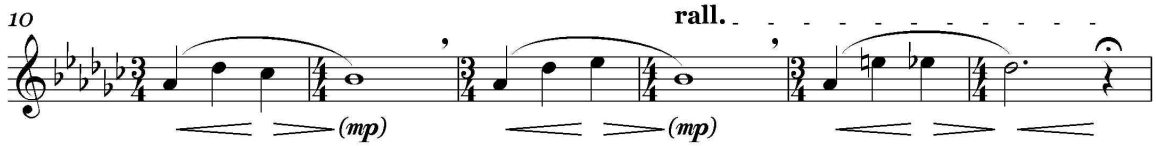
The Last Day has two primary motives from which most of the rest of the piece is derived. The first is the textural motive of the sound of a major 2nd interval. This makes its appearance immediately in the "train whistle" chord in the first bar of the score, specifically between the clarinet and oboe.



The Major 2nd interval is a pleasing dissonance. It is energetic and rather smooth and in a compositional context has the potential to lead anywhere harmonically or melodically. This interval was present in the deciphered pitches of the train whistle that inspired the piece and thus appears throughout.

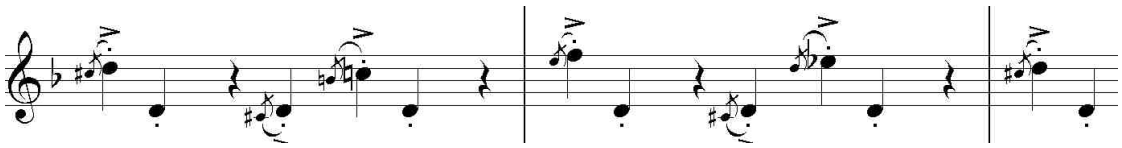
The second and more prominent motive is presented in the flute beginning in bar 10. Like the above it also appears throughout the piece, sometimes duplicated exactly and sometimes perverted almost beyond recognition.

m. 10

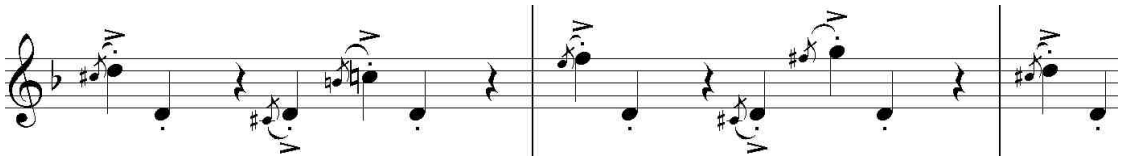


Through the course of the piece, this melody appears in every instrument, though not always as a prominent melody. For example in bars 81-82, 85-86, and 89-90 it appears in the alto flute fragmented into a rhythmic backdrop with the flute and oboe against the low sustained tones of the clarinet and bassoon.

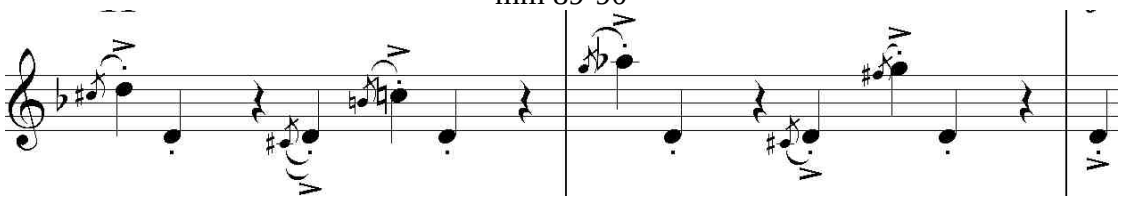
mm 81-82



mm 85-86



mm 89-90



The Last Day is composed in such a way as to flow organically while still retaining self-similarity and consistency of harmonic and melodic language. The organic yet sudden movement of the piece from section to section was meant to reflect the wandering of the mind when overwhelmed by the conflict between nostalgia and moving forward and also when more important tasks are completely overpowered by unrelated thought. In a purely musical sense, this piece is a

study of texture and rhythm and how each one can create the other. Writing solely with contrapuntal texture in mind can create many interesting rhythmic assortments, and inversely writing solely with rhythmic juxtaposition in mind can create interesting textures.

The structure of the piece, ABACDA, is very loosely based on Rondo form but without the recurrence of theme A between C and D. The shifting of key signatures is also not in accordance with traditional tonal structure of rondo form. Another nontraditional element of this quintet is the use of alto flute in place of the horn. My decision to replace the horn came from my love of the alto flute, particularly the breathy, sultry tones of its lower register which I had come to enjoy when composing a short suite of Satie/Impressionist inspired pieces for alto flute and piano for my undergraduate degree. I also enjoy the combination of the instruments in this modified quintet. There are two flute timbres, two double reed timbres in the oboe and bassoon, and the single reed timbre of the clarinet nicely compliments any and all combinations of the other instruments.

I was happy to rediscover *The Last Day* while in Glasgow, as this town shares many characteristics with my hometown of Butte, Montana. I believe it was a fitting place in which to finish the piece.

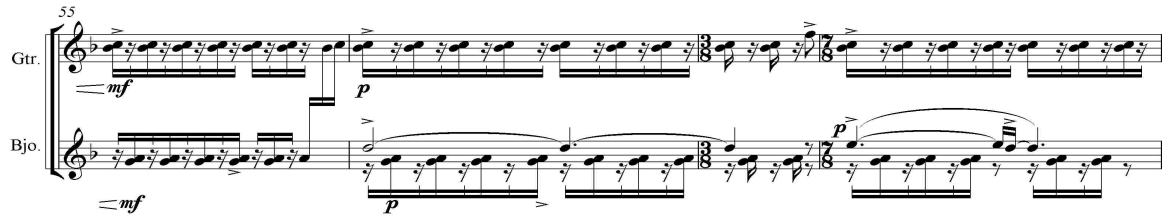
***Isolation Psychosis* for 12-string banjo and 12-string guitar**

As clichéd as this will sound, the idea for this piece was conceived in a dream, or rather the state of consciousness just before falling asleep when the mind runs wild with whimsy and fantastic thoughts. One thought in particular intrigued me enough to get up and write it down. The thought was of a single instrumentalist playing the 12-string banjo and the 12-string guitar simultaneously, one instrument in each hand. When I first had the idea I had not yet received these instruments from my home in the United States, but as soon as I did I began working on the piece.

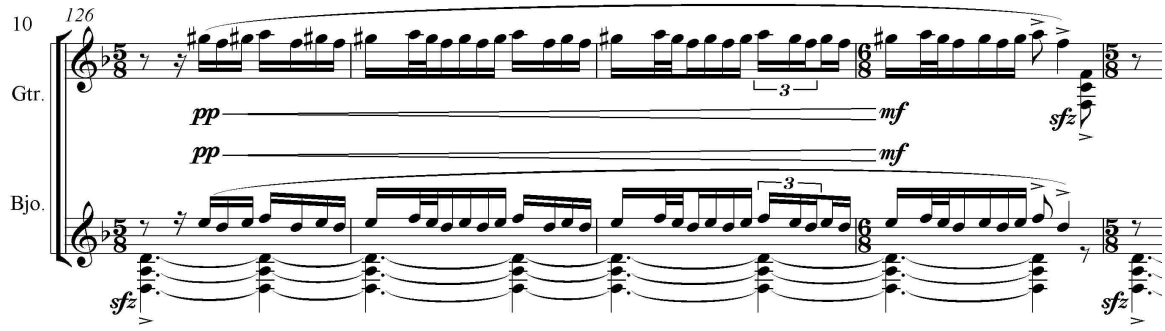
The title of the piece is derived from the neuroses and altered perceptions of reality that can emerge in extended periods of solitude which can act as something of an incubator for underlying psychological issues. Being somewhat asocial by nature, I was alone much of my first few months in Glasgow and did not venture out much. While I maintained my sanity, I did notice the development of odd tendencies and an increasing dependence on routine. Having always been interested in abnormal psychology I decided to bring these thoughts and observations into the piece as best I could. In addition to these ideas, I also was trying to capture the idea of the “one man band” tradition in which street and festival performers would build elaborate contraptions that allowed a single person to perform as an ensemble.

Isolation Psychosis was written almost entirely through improvisation. The playing technique was also developed through improvisation. Because this technique was so new to me,

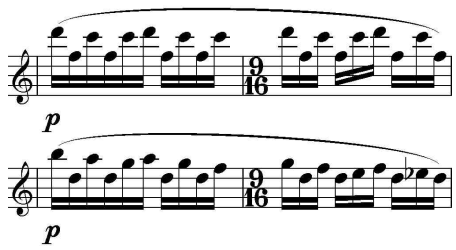
nearly everything that emerged from improvisation became valid material for inclusion in the piece, the first result of which was bars 57-58.



The sound of the major second interval, as it was in *The Last Day*, was also important to *Isolation Psychosis*, though in a different way. The thickness of the major 2nd combined with the rapid alternation between instruments provided an interesting canvas of rhythm and sound. The composition of this entire section (bars 50-125) was immediately followed by a very natural transition into the serpentine melody in bars 126 – 129...

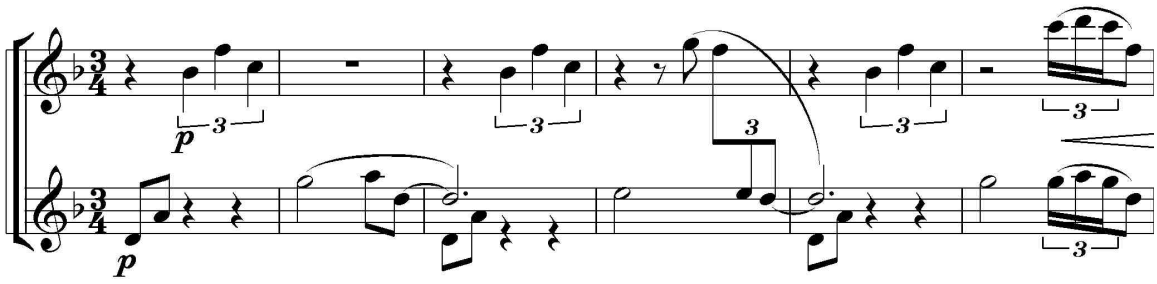


… which was then followed by a variation of the melody and rhythm in bars 138-139.

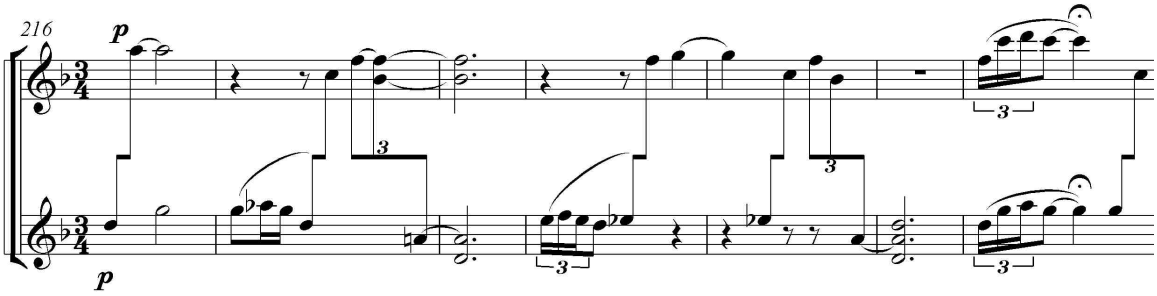


Through improvisation the other sections followed naturally as well. The first (bars 1-49) and last (bars 216-233) were the last things composed. Bars 216-222 are ordered retrograde statements of bars 1-6 with each separate 2 bar phrase being stated in retrograde as opposed to all 6 bars being stated in retrograde.

First Section



Last Section



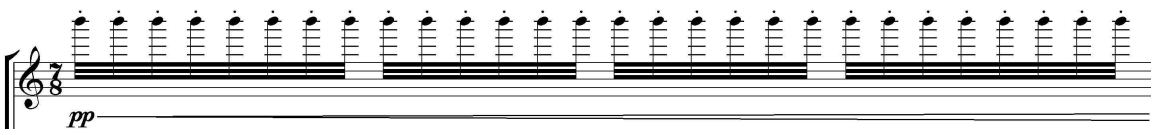
The structure of *Isolation Psychosis* is essentially a rough arch form (ABCBA) with a highly varied second B section and retrograde statements of the opening bars in the return of the A section. The piece progresses as a varying display of technique. The A section, bars 1-49, utilizes both instruments as one, a single line occasionally harmonized melody being played using the strings of both instruments. The B section, bars 50-125, is similar to the first in this regard, but with the addition of a rhythmic backdrop behind the melody shared between instruments. In the C section, bars 126-164, each instrument gains a bit of melodic independence. By the second B section, bars 165-215, the instruments have gained considerable melodic independence from each other before a kind of collapse into the restatement of A.

The labor of this composition and the development of the technique came to fruition in my performance of the piece at Sound Thought, in Glasgow, on March 3rd, 2012.

Routines for double string quartet

Routines originated as a short idea to be played at a workshop with the Viridian String Quartet in late November of 2011. My initial intention was to compose an almost exclusively pizzicato single string quartet, but my plans changed quickly when it was suggested I consider doing a double string quartet.

As I mentioned in describing *Isolation Psychosis*, I depend upon rituals and routines to get me through the day. The first piece of material composed for *Routines* was a notation of my morning alarm clock.



It begins very softly at a very high and rapid “B” pitched beep that grows louder to the point of being unbearable. There are times when I am not awakened by this alarm, and it instead feeds into whatever dream I happen to be having at the time. As dreams are so often fragmented and irregular, this is where I got the idea to add syncopated, fragmented pizzicato texture underneath the “alarm clock” in the first violin. Eventually the alarm is shut off and the dreams begin again (bar 11). The dream runs through its cycle and the second quartet enters with high sul ponticello sustained notes floating above the pizzicato. At bar 24 all instruments enter playing pizzicato, and bars 24-27 contain the material that shapes the entire piece.

After suggestion from Professor Bill Sweeney, I have toyed with the idea of a literal “cut and paste” approach to composition, i.e. actually cutting up a score with scissors and physically rearranging the bars. The cutting away of music lead me to thinking of the on/off idea which lead me to thinking of 1 and 0, which lead me directly to binary code. Binary code can represent, among other things, text and punctuation through 8-digit sequences containing only the numbers 0 and 1. With 0 representing a bar of rest and 1 representing a bar of music, I decided to take the material from bars 24-27 and arrange it according to a set binary sequence. I wrote a short poem of exactly 48 characters including spaces based on a line from William Carlos William's poem “Danse Russe.” The words of this poem are only known to me, but after translating into binary code I arranged the sequences in descending order as follows (lines of ~~~~~~~~ indicate material not determined by binary sequence):

```
/V1 | 01010011 01111010 ~~~~~~~~ ~~~~~~~~ 01001100 01101100 ~~~~~~~~ ~~~~~~~~ 01000010 01001001 ~~~~~~~~ ~~~~~~~~
|
|V2 | 01100011 01101111 ~~~~~~~~ ~~~~~~~~ 01101111 01111001 ~~~~~~~~ ~~~~~~~~ 01110101 00100111 ~~~~~~~~ ~~~~~~~~
|
|Vla| 01101000 01101001 ~~~~~~~~ ~~~~~~~~ ~~~~~~~~ ~~~~~~~~ 01101100 01101100 ~~~~~~~~ ~~~~~~~~ 01100010 00100000
|
\Vc | 01101001 01100100 ~~~~~~~~ ~~~~~~~~ ~~~~~~~~ ~~~~~~~~ 01101111 01111001 ~~~~~~~~ ~~~~~~~~ 01100101 01110011
|     7    4   6        5        4  6     3  5     2     4  2  4     3        4   5    5  4     6   4    7
|     x    x   x        x        x  x     x  x     x     x  x  x     x        x   x    x  x     x   x    x
/V1 | ~~~~~~~~ ~~~~~~~~ 00100111 01101001 ~~~~~~~~ ~~~~~~~~ 01101110 00101110 01110100 01101101 ~~~~~~~~ ~~~~~~~~
|
|V2 | ~~~~~~~~ ~~~~~~~~ 01110011 01100110 ~~~~~~~~ ~~~~~~~~ 01100101 00101110 00100000 00100000 ~~~~~~~~ ~~~~~~~~
|
|Vla| ~~~~~~~~ ~~~~~~~~ 00100000 01100101 01101110 00101100 ~~~~~~~~ ~~~~~~~~ ~~~~~~~~ ~~~~~~~~ 01110011 01101111
|
\Vc | ~~~~~~~~ ~~~~~~~~ 01101100 00101110 01100101 00100000 ~~~~~~~~ ~~~~~~~~ ~~~~~~~~ ~~~~~~~~ 01110100 00101110
```

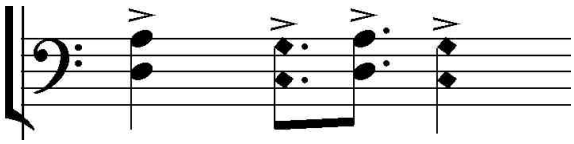
For normal text, numbers, and punctuation, every 8-digit sequence begins with 0, which as I stated above stands for a bar of rest. There are also instances in the arrangement of these sequences where other bars of rest occur. All in all there are 20 bars of rest. Immediately I decided that the bars of rest at the beginning of sequences should be filled by the non-binary instruments and that bars of rest elsewhere within the sequence should be kept as such. However, the length and regularity of that many bars of rest in a moderate 7/8 time was not acceptable. I devised separate systems to deal with each type of rest wherein those at the beginning of each sequence block begin at 7 beats, descending to 2; begin at 2, ascend to 7. The length of the other 8 bars of rest were to be dictated by the following binary sequence:

01101100 01101111 01101110 01100101 01101100 01111001 00101110 00101110

The sum total of each individual 8-digit string determined the length of the bar of rest, thus:

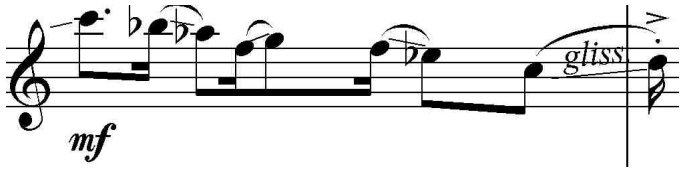
01101100	**01101111**	**01101110**	**01100101**	**01101100**	**01111001**	**00101110**	**00101110**
4/8	**6/8**	**5/8**	**4/8**	**4/8**	**5/8**	**4/8**	**4/8**

The entire binary-determined pizzicato section was soon finished and I set about composing contrasting material. With the exception of the bars of rest detailed above the entire binary section is in 7/8 time, and because of the almost constant presence of the rhythmic pizzicato motive presented by the cello (see below), everything, with a few exceptions, would be beamed 4+3+3+4 (16ths).

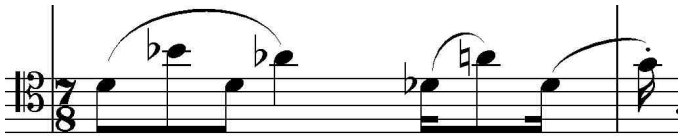


For the other non-binary instruments, I thought that more free and fluid material would serve as a nice contrast to the very deliberate, mechanical material. The contrast between the mechanical and the organic serves to depict the conflict between one's thought process and “going through the motions” of one's day. This is similar to the concept of *The Last Day.*

Regarding structure, *Routines* is essentially a theme and variations piece with three themes and a coda. Each of these themes makes an appearance in nearly every instrument. The first theme makes its appearance in bar 29. A single instrument statement of the theme is shown below.

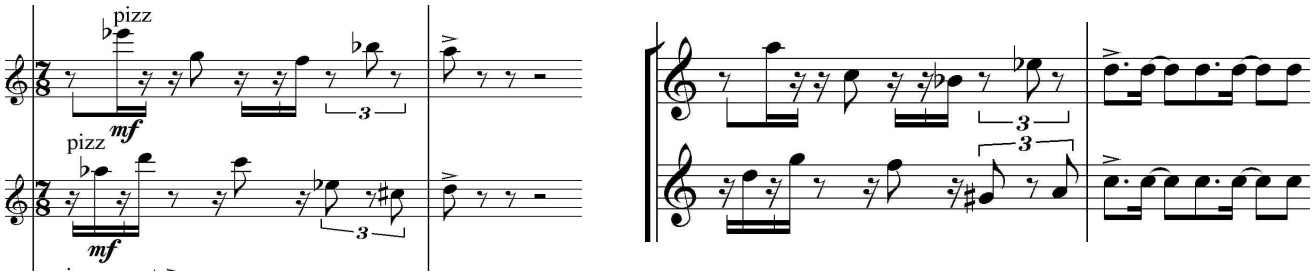


The theme is played with languid glissando to contrast the sharpness of the pizzicato. The second theme makes its appearance as a melody in bar 37 in the cello of quartet 2.

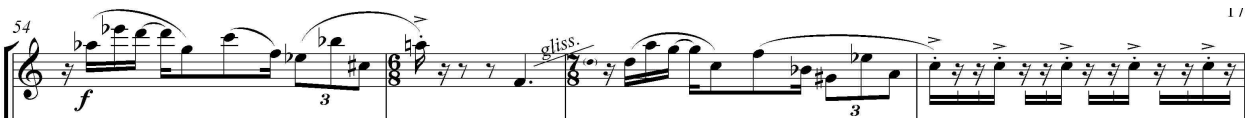


This theme becomes most prominent in both cellos in bars 138-145 of the coda. It is played with sharp staccato, as is most of the coda material, for a percussive effect and for the creation of a polyrhythmic texture similar to, but more intense, than the pizzicato textures prevalent throughout the rest of the piece.

The third theme is actually the first to make an appearance in the violins of quartet 2 in bars 24-27, though is less prominent than the other themes.



And in single-instrument form:



The piece was written to build to the coda, the material of which is alluded to throughout the piece. The climax of the coda arrives when the first violin of quartet 1 reaches the high B tremolo that opened the piece and sustains this over the churning, driving rhythms of bars 155-160 ending sharply on a dense second inversion G♭ chord with an added major 7th, 9th, and ♯11th dissonances.

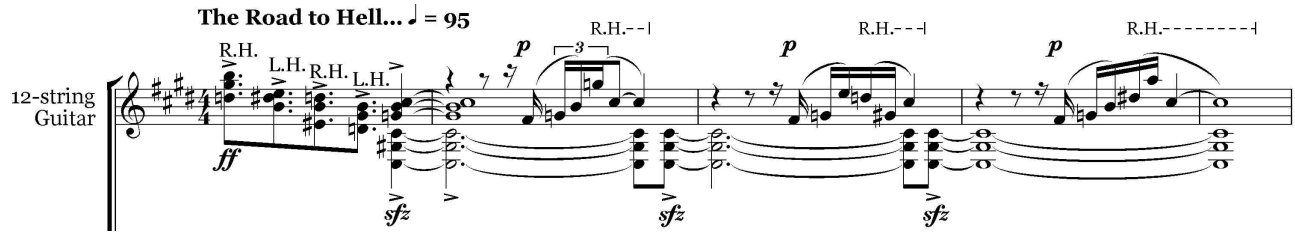
As stated in the introduction, my compositional process has gone through a massive change for

the better. The idea of determining the spacing of musical material and even deriving the material itself from a devised numerical system is something that I intend to explore much more deeply. In addition to this, the ambidextrous playing technique I developed in composing and performing *Isolation Psychosis* is also something that will be further explored. Perhaps even a combination of these two things. I feel I am renewed as a composer, and I am excited for the future of my music.

***Intention* for 12-string guitar and Max/MSP processing**

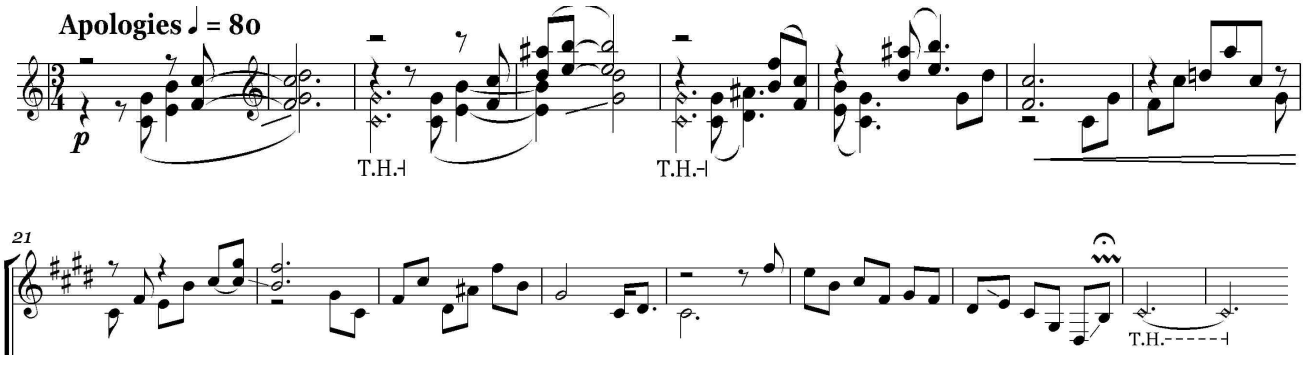
Intention did not exist even as a thought until mid-February of this year. Prior to that point I had been attempting to expand on what I had done with *Routines* for double string quartet in which I had used binary code sequences as a system of composition. I was attempting to write another piece for double string quartet but with the addition of a horn quartet. I was also attempting to further expand the use of binary code sequences in production and development of musical material. I began composing this piece in early December, and almost immediately I ran headlong into writer's block. I loved the idea of the piece, the further use of binary code, the warm and lush sound of strings and horns together, everything. I was stuck. Very little I composed was worth the time and effort to develop, and what little existed was not enough for a full piece.

My frustration continued through the beginning of February until I had an idea, not for strings, horns, and binary code, but for guitar. I had an image in my mind of playing a guitar that was positioned before me like a violoncello. Almost immediately I composed the following:

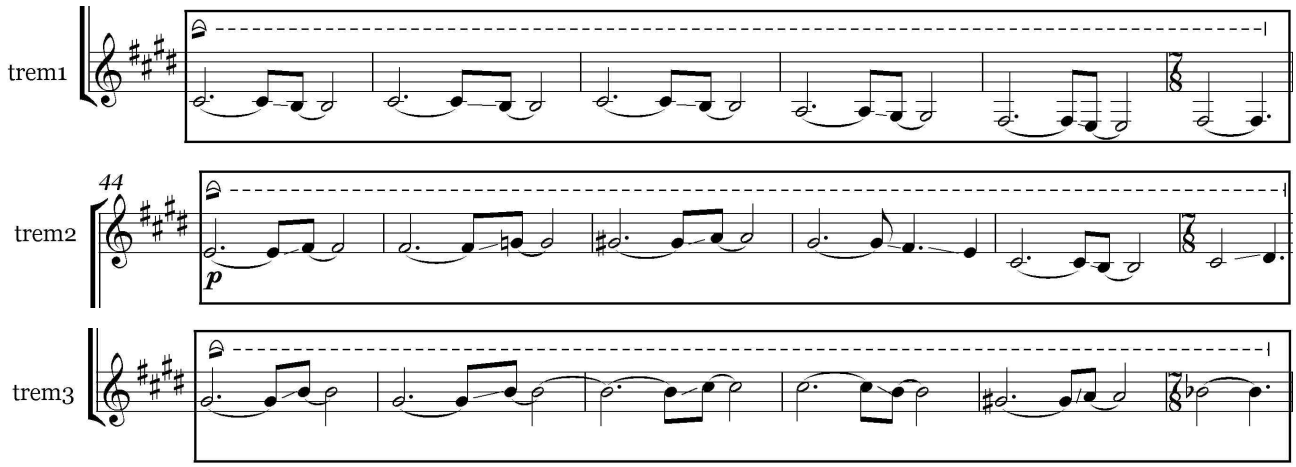


The piece flowed rather quickly from that point onward, and shortly thereafter I realized that in the previous piece for horns and double quartet I had been trying to do almost exactly what I had already done in *Routines*. It wasn't fresh or original in the context of my own work, so I filed it away to perhaps be dusted off for a second look sometime in the future. The struggle with the previous piece and the associated writer's block partially inspired the title of *Intention*. The primary inspiration, however, was the contrast of material from beginning to the end of the piece. It was begun as one motive but through the duration of the piece evolves into something completely different, though still retaining echoes of the original motive, the original intention. Also, the piece began as simply a piece for guitar, but with the inclusion of Max/MSP processing, as per the suggestion of Bill Sweeney, the piece as a whole became more than what was intended.

As I mentioned above, the composition of the piece flowed smoothly and organically. After the first theme (bars 1-5), pictured above, a contrasting theme (bars 13-29) came about at the same time, pictured below:



Most of the material throughout *Intention* is based upon these two themes, based either on the musical material, the playing technique, or both. The exception to this is the middle section, which is more about texture than melody. It is based upon a palindromic arrangement of loops recorded in Max/MSP. The loops are recorded using the technique of rapid scratching of the wound guitar strings with the thumbnail, which through processing takes on a sound akin to a combination of tremolo strings and an oud. The texture created by this technique combined with the reverse delay create a very interesting texture that is a 60/40 mixture of ethereal harmonies and the noise of fingernails scraping metal wherein one must listen closely to decipher the beautiful from the chaotic. There are three different loops – **trem1**, **trem2**, and **trem3**.



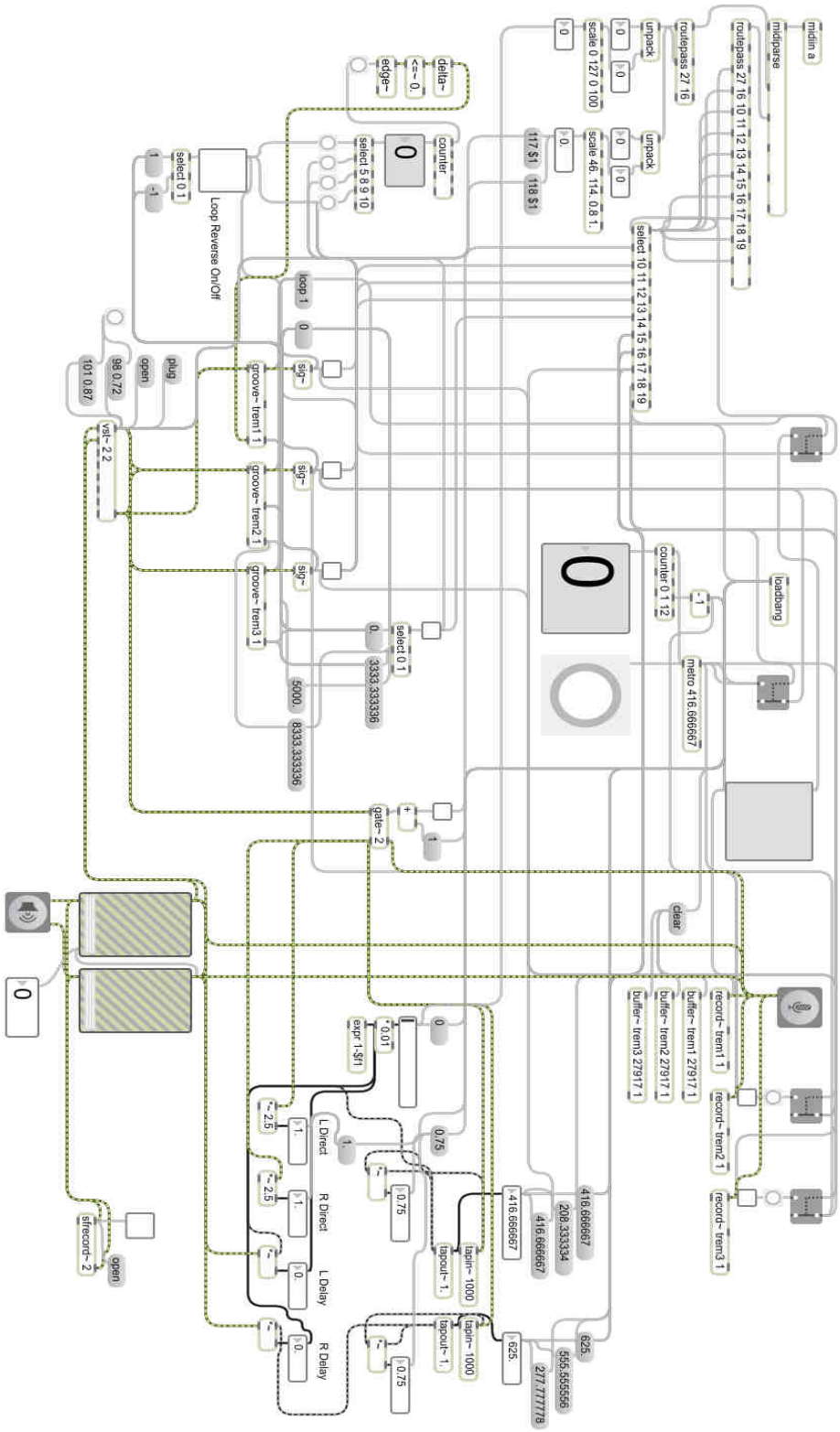
The loops are recorded one after another, and once completed all play through three times. The loops are then reversed, playing through twice before **trem3** is turned off. After the next cycle **trem2** is turned off, and after the final cycle of **trem1** all loops are truncated to sustaining only the first note. While these cycles of loops are played, melodic material is improvised over the top, giving the piece the potential to differ greatly in each individual performance. The improvisation does have a structural component. It is to begin with the same thumbnail scratching technique as was used in recording the loops. This technique should be used with both hands during improvisation. While the loops cycle the performer should gradually introduce tapping, plucking and harmonics with the left hand while still scratching with the right. The right hand should gradually join the left until both hands are tapping and plucking. The improvisation section concludes with a reiteration of the final bar of the second theme, the final note of which should fall just as the loops are truncated.

In a similar fashion to *Isolation Psychosis* for 12-string guitar and 12-string banjo, *Intention* was composed almost entirely through improvisation. Improvisation is an important element in my composition. I write quite a lot for instruments that I play myself, and a large portion of the material I develop for these instruments is conceived that way. I also like to include improvisational elements in my works. The very nature of it means that no performance of this piece and others like it will ever be

the same twice. Also similar to *Isolation Psychosis* it was based upon the idea of a different physical positioning of the instrument and an ambidextrous playing technique. I had an image in my mind for quite some time of playing a guitar positioned like a violoncello using both hands on the fretboard, as shown below.

As I stated before, *Intention* was originally a piece for acoustic 12-string guitar. As the piece developed, it was suggested by Bill Sweeney that I might add Max/MSP processing to the piece, as I had composed a piece for my undergraduate degree which used Max/MSP processing and 12-string guitar. I had not really used Max/MSP since that piece was composed, so I essentially had to relearn everything about the program. Through having to relearn the software, I was made to carefully consider what the program was capable of and what exactly it could bring to the piece. In other software I had experimented with switching between different delay times in different sound channels, and given the very rhythmic nature of the second half of the piece, it seemed natural to use this for enhanced rhythmic effect. It rapidly came back to me, and after often infuriating trial and error, the end result was this patch:

As complex as it appears, the patch is fairly simple in what it does. There are two different delay effects, the first being a stereo reverse delay and the second being a normal delay with different predetermined delay times which can be changed during the performance for different rhythmic and textural effects. This delay is also stereo, having different delay time ratios for each channel, which are (right/left) 3/2, 8/3, and 2/3. In addition to the delay, and as I mentioned previously, there are also three samplers with



forward/reverse/sectioned playback. The most complex part of the patch is the “counter” object on

the lower left side. Each sample bank sends out a signal when the loop has finished playing and has returned to the beginning. I have taken the signal from **trem1** and routed it through the "counter," and when certain numbers are reached other functions of the patch are automated. For example, when the first loop begins its 5th repetition the counter sends a signal to reverse all loops. And as the counter continues it turns off the other loops, and finally it truncates and activates all loops. This was done to circumvent the need for manual starting and stopping of each loop, thereby greatly diminishing the chance for catastrophic failure. I had used delays, counters, and loops to a lesser extent in undergraduate work, but for this particular patch I had to refine them into something more.

The structure of *Intention* is an ABA ternary form with a highly varied recapitulation of A as well as the addition of a coda. In a similar fashion to *Routines*, the coda is the climactic and focal point of the piece. The technique in the coda is quite percussive, and it is an effect I have used in previous guitar pieces. I have expanded on this technique, however, and have brought it into more ambidextrous territory. In other pieces I had only used the right and to strike the harmonics, but for this piece I use both. Until the coda the piece was predominantly minor tonality centered around C# with the use of elements of phrygian, lydian, and mixolydian modes. The use of harmonics, due to the overtone series of the strings, brought it into very celebratory Major territory. It is a fitting end to a piece called *Intention*, which began as rather dark and dissonant.

Intention, as has been stated, began as a solo acoustic guitar piece. It became much more through the use of Max/MSP programming and two-handed technique. It is a piece that celebrates more than just the guitar. It is a piece that celebrates the history of plucked string instruments. There are references to the oud in the thumbnail-scraped loops, to the African kora and other such harp-like instruments in the physical positioning of the instrument, and finally a bit of a reference to the hammered dulcimer in the hammered harmonics of the coda. This piece was a culmination of disciplines and techniques I learned and developed in my time here in Glasgow.

There have been many pieces written for electric/acoustic guitar and digital sound processing, but in its technique and with the choice of 12-string guitar over an electric guitar or a nylon-string classical guitar, *Intention* is a unique addition to the modern guitar repertoire. The use of a 12-string guitar combined with digital sound processing and the ambidextrous approach makes this piece at once multi-timbral and multicultural in the aforementioned technical references to the oud, kora, and hammered dulcimer. *Intention* is a very modern piece with diverse and ancient influences and is accessible to a lovers of popular music and academia alike.

Shortly after the completion of *Intention* I was asked to give a private showing of the piece to the composition faculty. Having previously only played the piece alone in my flat, it was a nerve-wracking yet enjoyable experience. It was suggested to me that I might expand the sound field of the piece, taking it out of simple stereo and into a quadraphonic sound field. I also was pleased at how

well received the thumbnail scratching technique was received. For the future development of *Intention* and other pieces, these are things of great potential. It was wonderful to receive feedback in such a setting, and as is usual for me, it felt equally wonderful to perform. The systems and techniques that have come about in my music have given me great confidence as a composer and performer and will all be further explored, from the binary-determined structure of *Routines* to the ambidextrous techniques of *Intention* and *Isolation Psychosis*. What I have learned and developed here at the University of Glasgow will be with me all my life.

Bibliography

Berio, Luciano. *Laborintus II.* 1965. Universal Edition, 1976.

Hale, Thomas A. *Griots and Griottes: Masters of Words and Music*. Bloomington, Indiana: Indiana University Press, 1998.

Janáček, Leoš. *Mládí.* 1924. Souborné kritické vydání děl Leoše Janáčka. Řada E ; sv. 6, 1978.

Osmond-Smith, David. "Voicing the Labyrinth: The Collaborations of Edoardo Sanguineti and Luciano Berio." *Twentieth-century Music* 2nd ser. 9.1 (2013): 63-78.

Stravinsky, Igor. *Three Pieces for String Quartet*. 1914. Boosey & Hawkes, 1947.