Mojave Dreaming

2014

For String Orchestra

Revised December 2014

Paul Frehner

Mojave Dreaming was commissioned with the generosity of Michael and Sonja Koerner through the Koerner Foundation

Instrumentation

Harpsichord/Optional Sampler (i.e. Computer and Midi Controller for sample playback)

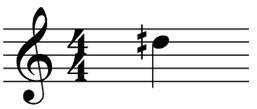
Strings: 6,5,4,3,2 minimum

Performance Notes

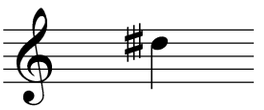
Duration: ca. 14’

This score is notated in C. The double-bass parts, however, are written in their usual octave transpositions. Accidentals function in the traditional manner. However, cautionary accidentals are frequently used. In addition, microtones are used extensively [see note below on notation of microtones].

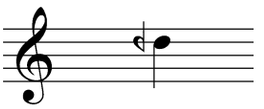
Notation of Microtones



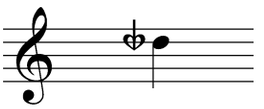
Quarter tone sharp



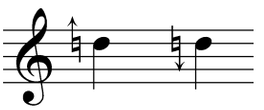
Three quarter tone sharp



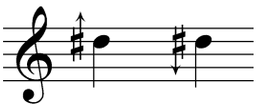
Quarter tone flat



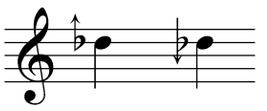
Three quarter tone flat



Slightly higher or lower [approx. 1/6 of tone] than the natural note



Slightly higher or lower [approx. 1/6 of tone] than the sharpened note



Slightly higher or lower [approx. 1/6 of tone] than the flattened note

Harpsichord (amplification suggested)

The harpsichord part requires an instrument with a five-octave range from F0-F5.

The player can freely adjust the register stops and coupler as necessary in order to balance with the string orchestra. Dynamics are given to provide a general context for the level of the harpsichord within the ensemble.

Since the harpsichord is paired with a string orchestra of modern instruments its sound should be reinforced lightly with amplification. A basic setup could include a pair of good quality microphones, a small mixing board and two powered speakers placed Left and Right at the back of the stage. The overall sound of the harpsichord should be well balanced within the orchestral ensemble.

Sampler Part (optional)

Please note that the sampler part as described below is optional. That is to say, the piece is playable as a purely acoustic work without the sampler part. In this case, omit the three measures where the sampler is played alone (mm. 1, 116, 260) and ignore all other indications for triggering samples. Of course, performing the piece with the samples is strongly encouraged!

Suggested Setup: Computer with sampler software installed, MIDI controller keyboard, audio interface with stereo outputs, cables as required (MIDI, USB, XLR or ¼" etc…), small mixing board, 2 powered speakers (The same mixing board and speakers used for the amplified harpsichord should be used for the sampler).

MIDI Controller Keyboard: Seven stereo samples are to be played back with a MIDI controller keyboard at specific times as indicated in the score. The MIDI controller keyboard should have a keyboard range of at least 4 octaves as well as faders and/or knobs that can be assigned via MIDI CC to control various parameters as described below.

Samples: The seven samples should first be loaded into a computer with a software sampler program such as Kontakt or Structure. A Max patch could also be designed to trigger and play back the samples. Within the software sampler program or Max patch the samples must be keymapped so that they can be triggered by designated keys on the MIDI keyboard. For keymapping instructions please see the figure on the next page.

Master Volume Controller: Control of the Master Volume Level of all 7 samples should be mapped via MIDI CC onto a single fader or rotary knob so that the levels of all samples can be simultaneously faded in and out as indicated in the score. MIDI value 0 = 0%; MIDI value 127 = 100%.

Rate of Amplitude Modulation (or tremolo) Controller: Within the software sampler program an LFO should be set up. A Triangle waveform should be used as the Source for this LFO. The Destination of the LFO should be set to control the Amplitude Envelope of Samples 3-6 only.

Control of the Rate of Amplitude Modulation (i.e. the Rate of the LFO) should be mapped via MIDI CC onto a single fader or rotary knob on the MIDI controller keyboard.

The rate of the LFO should have a range of 0-20 Hz where on the assigned controller MIDI value 0 = 0 Hz;
MIDI value 127 = 20 Hz.

The Depth of Amplitude Modulation should be set to approximately 40%.

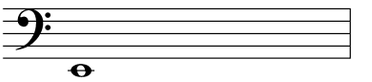
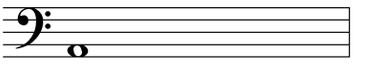
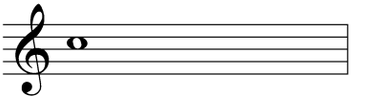
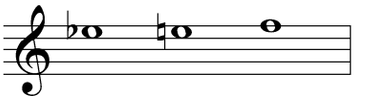
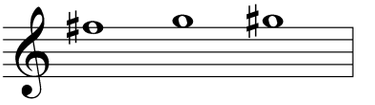
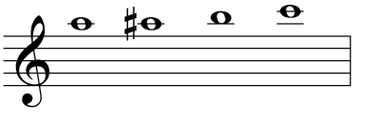
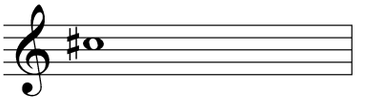
Variance of Rate of Amplitude Modulation is indicated in the score by "Amp. Mod." followed be MIDI values. Diagonal lines indicate whether to increase of lower the fader or rotary knob in order to arrive at the next MIDI value.

Output of the Sampler:
As indicated above, the samples outputted from the computer and MIDI controller rig should be routed to the same mixing board and speakers as that of the amplified harpsichord. The samples should be well balanced in relation to the level of the harpsichord and the strings. The amplified sound should never overpower the acoustic element.

Acquiring the Samples:
The samples can be acquired by contacting: info@paulfrehner.com.

Sample Keymapping Instructions

The figure below has two columns. The left gives the sample number and a brief description of each sample. The right column gives the keymapping and root note designation information for each sample. The pitches on the staves specify where on the MIDI controller keyboard the samples should be mapped (Middle C = C3). The root note that must be specified for each sample within the sampler software application is specified below each stave. To clarify: in order for Sample 1 to be played back at the correct pitch level when E1 is pressed on the keyboard controller, E1 must be specified as the root note for Sample 1. Samples 4, 5, 6, which are mapped onto several adjacent keys, will be transposed up from their specified root notes by semitones as those keys are depressed.

Sample # and description	Keymapping of samples and root notes
Sample 1: High freq. noise, centered at 1980Hz, like rhythmic static	 Specify root note as E1
Sample 2: Random low freq. noise, rumbling in waves	 Specify root note as A1
Sample 3: C Fundamental tone and overtones, timbre like an overdriven guitar with a slowly evolving cutoff filter	 Specify root note as C4
Sample 4: Eb Fundamental tone and overtones, timbre like an overdriven guitar with a slowly evolving cutoff filter	 Specify Root as Eb4, map up to F4
Sample 5: F# Fundamental tone and overtones, timbre like an overdriven guitar with a slowly evolving cutoff filter	 Specify Root as F#4, map up to G#4
Sample 6: A Fundamental tone and overtones, timbre like an overdriven guitar with a slowly evolving cutoff filter	 Specify Root as A4, map up to C5
Sample 7: High freq. noise, centered at 2220Hz, like rhythmic static	 Specify Root as C#4

Strings

Divisi – Non Divisi: In several passages in the piece the strings perform dense clusters. Typically, the first violins play every semitone within a span of a perfect 5th, or 8 adjacent pitches. The second violins play all quarter tones in between the semitones of the first violin cluster, for a maximum of 7 pitches. For large string orchestras the clusters can be played entirely *divisi*. However, for orchestras with the minimum of 6 first violins and 5 second violins, the passages with clusters will have to be performed with a mixture of *divisi* and *non divisi*.

Double Basses

The range of the double bass parts require that the players use either 5 strings models or basses equipped with a low C extension and series of capo mechanisms for producing notes in the lowest chromatic tetrachord.

Program Note

From the Seasons to Mojave Dreaming

Soundstreams commissioned a string orchestra piece from me for their 2014-2015 season with a special request that I incorporate a seasonal theme into the work or that I relate the piece in some way to Vivaldi's *Four Seasons*.

Nature, weather, the seasons, atmospheric phenomena… all have long been sources of inspiration for artists and composers. I can count myself on that list. I remember being a student and telling my composition prof. at the time that I wanted to write a piece about a winter blizzard. He sort of looked at me as if I was either in over my head or a bit crazy and said "a blizzard? Have you ever been in a blizzard? They're unbelievable, they're absolutely mind boggling… the freezing cold, the blowing snow, whiteouts, trees falling down... You want to represent this, with musical notes?" One aspect of the message was "that is an awful lot of notes." The other part of the message was "good luck". Now years later, I find myself writing music as I'm thinking about a violinist caught in a gigantic summer haboob (aka dust storm) slowly moving across the Mojave Desert. Some themes seem to stick around.

When I started writing *Mojave Dreaming* I spent a fair amount of time trying to get an angle of approach for the piece. Representing all four seasons in a fifteen-minute composition seemed unrealistic, so I decided that I'd focus on the season of the moment, summer. My lingering question, though, was how to go about it.
I'd heard Vivaldi's Seasons on countless occasions but I'd never listened with the mindset that I'd be writing a work linked to it in some way. So, turning to Vivaldi for some inspiration I listened to his Seasons for the first time with a score in hand. I was immediately surprised to see that his score was annotated in such specific detail with fascinating visual descriptions of what the music was expressing in his mind. I thought this was quite inventive and seemed like a strategy that could bring an inspirational spark to my work. It would also be a link of sorts with the Vivaldi. Another link is the focus on the violin. While Vivaldi's Seasons are true concertos in a Baroque sense, in my piece there is a brief *concertante* aspect in the second movement in which the solo violin part hearkens back to an older style of playing.

Thinking of expressing summer musically in some way I decided to become somewhat specific in my intentions and locations. I asked myself, am I expressing a humid summer in London, Ontario, a rainy summer in the UK (stereotype alert!), a cool summer in Reykjavik, a summer roaming the canals of Venice (Vivaldi's stomping grounds), or, perhaps, a blistering hot summer in the heart of the hottest region in North America, the Mojave Desert? Never having traveled to the Mojave the composition became a daydream of what it would be like to see the tarantula-like limbs of Joshua trees or to experience phenomena such as heat haze rising from the asphalt of a deserted desert road, massive dust storms removing all visibility and filling every orifice, dust devils chasing invisible game over the scorched landscape and just the pure dry heat.

Mojave Dreaming was commissioned by Soundstreams Canada with funding from Michael and Sonja Koerner through the Koerner Foundation. The piece was premiered by Soundstreams on September 30, 2014 in Koerner Hall on a concert entitled "The Seasons". Joaquin Valdepeñas conducted the premiere performance.

Mojave Dreaming

for string orchestra

Dedicated to Michael and Sonja Koerner

Paul Frehner, 2014
Revised Dec. 2014

I. Heat Haze

Distant sounds and sights emerge unfocused

ca. 20"

Sampler

mp Volume fader: 100%

Sample 1:high freq. noise, centered at 1980 Hz, like rhythmic static

Sample 2: Random low frequency noise (almost rhythmic)

Sample 1 will fade out on its own

ca. 20"

Violin I

Violin II

Viola

Cellos

Double Basses

2

♩ = 72 *The heated air causes objects in the distance to shimmer and blur.*

Smplr.

(sample 2)
Low frequency noise continues

Sample 1

♩ = 72 *slow gliss.* Each successive stand performs the *gliss.* slightly slower than the previous.

senza vib. *simile* Div.

Vln. I

Vln. II

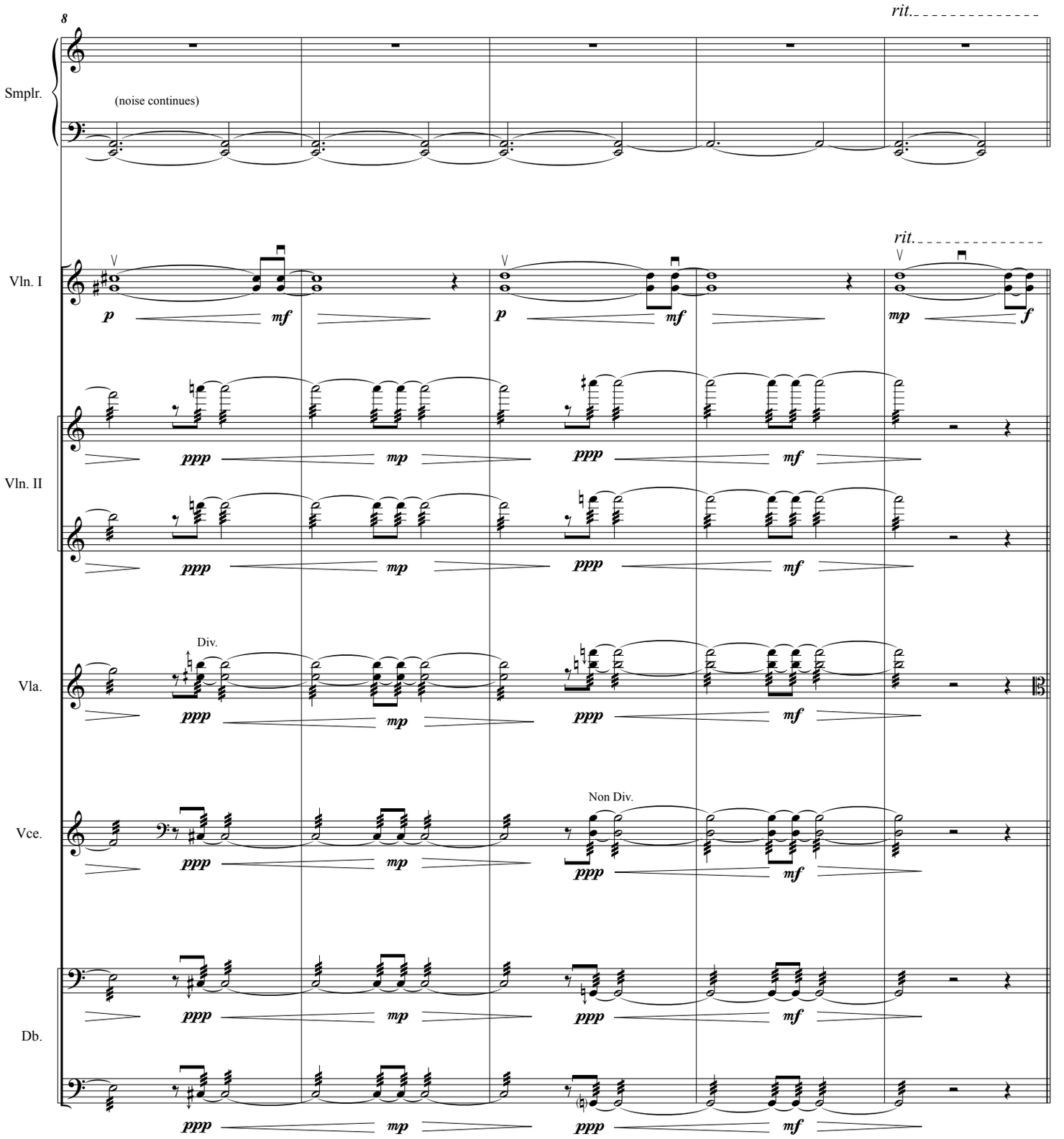
Vla.

Vce.

Db.

(normale)

ppp *p* *mf* *mp*


8
rit.
Smplr.
(noise continues)
rit.
Vln. I
p
mf
p
mf
mp
f
Vln. II
ppp
mp
ppp
mf
Vla.
Div.
ppp
mp
ppp
mf
Vce.
Non Div.
ppp
mp
ppp
mf
Db.
ppp
mp
ppp
mf

A

♩ = 48 *The sun gradually reaches its zenith, illuminating a parched landscape*

Amp. Mod. Controller (in MIDI values)
30 (raise level on controller) 45 (lower level on controller) 30

Sample 3: C fundamental
Sample 4: Eb fundamental
The sampler part here should always be beneath the level of the strings, just supporting the texture.

A

♩ = 48

Vln I, m. 13-30, 8-note clusters: These clusters can be played divisi if the section has a minimum of 8 players.
If the section has fewer players a mixture of divisi and non divisi (in 3rds as notated) is necessary to allocate all the notes between players.

Vln. I

(senza vib.) *gliss during entire duration*
p *sub.* ***mp*** ***p***

(senza vib.) *gliss during entire duration*
p *sub.* ***mp*** ***p***

(senza vib.) *gliss during entire duration*
p *sub.* ***mp*** ***p***

(senza vib.) *gliss during entire duration*
p *sub.* ***mp*** ***p***

Vln II, m. 13-30, 7-note microtonal clusters: These clusters can be played divisi if the section has a minimum of 7 players.
If the section has fewer players a mixture of divisi and non divisi is necessary to allocate all the notes between players.

Vln. II

senza vib. *gliss during entire duration*
p ***mp*** ***p***

senza vib. *gliss during entire duration*
p ***mp*** ***p***

senza vib. *gliss during entire duration*
p ***mp*** ***p***

senza vib.
p ***mp*** ***p***

Vla.

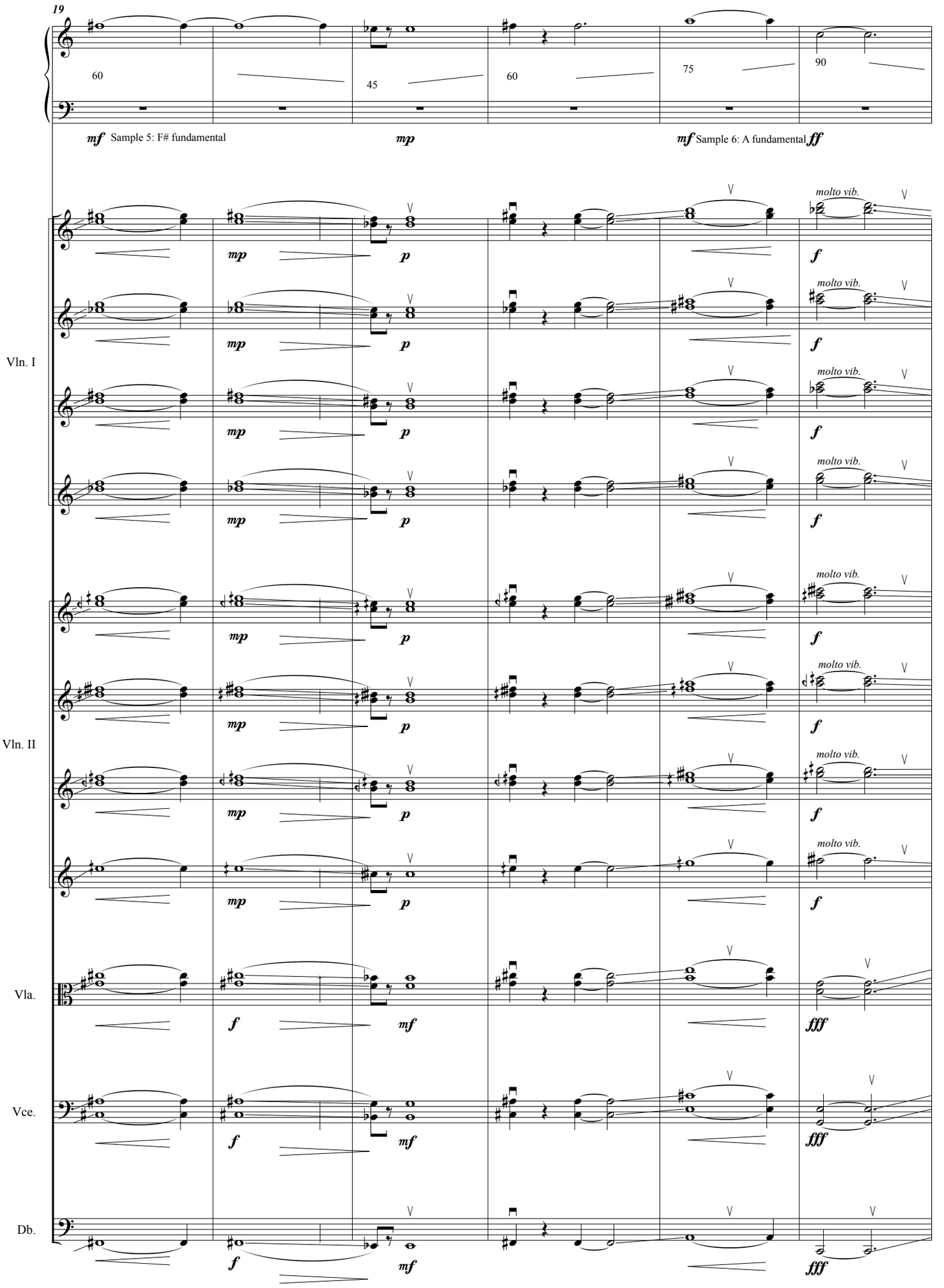
(normale) (Div.) *gliss during entire duration*
mf ***f*** ***mf***

Vce.

(normale) Div. *gliss during entire duration*
mf ***f*** ***mf***

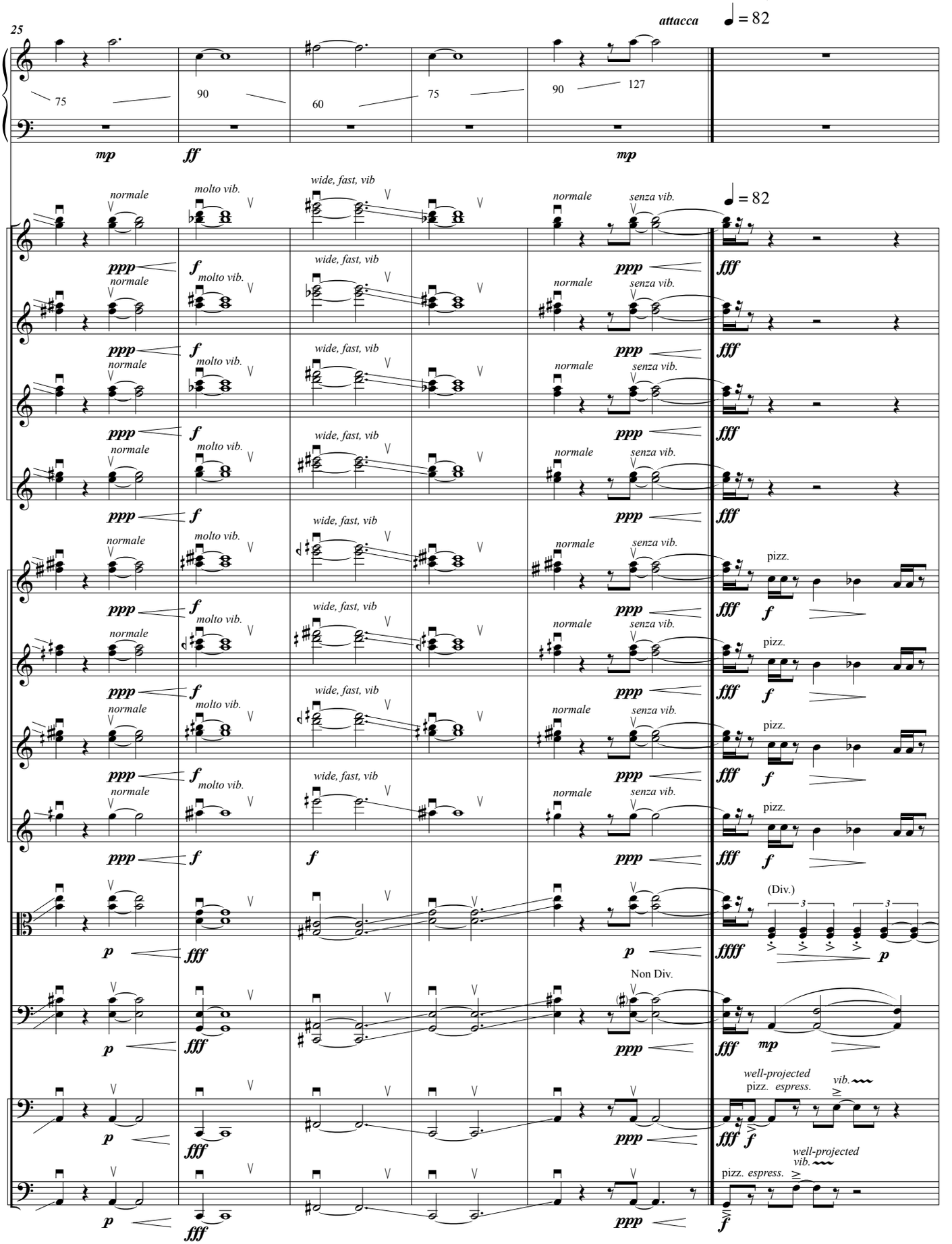
Db.

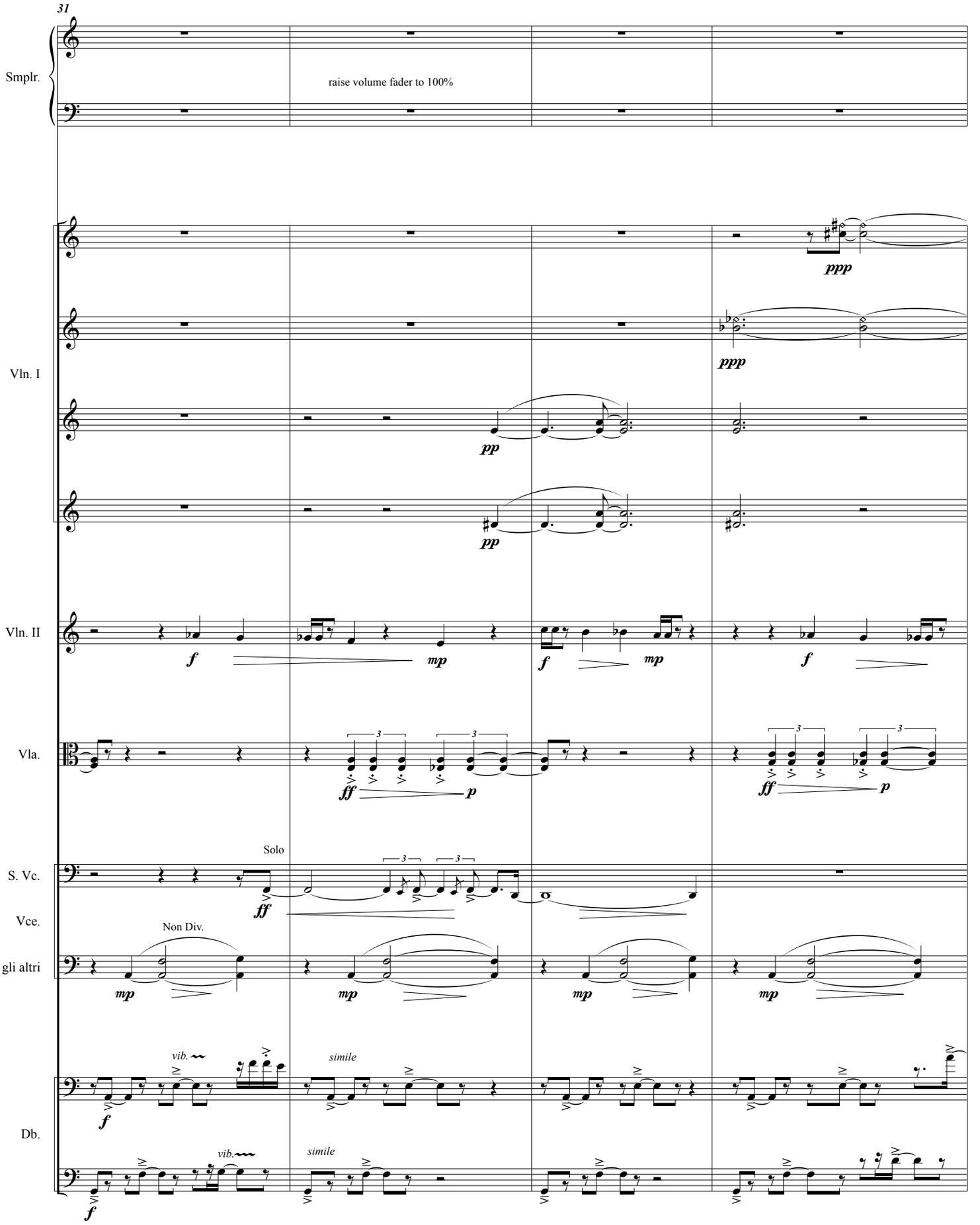
(normale) *gliss during entire duration*
mf ***f*** ***mf***

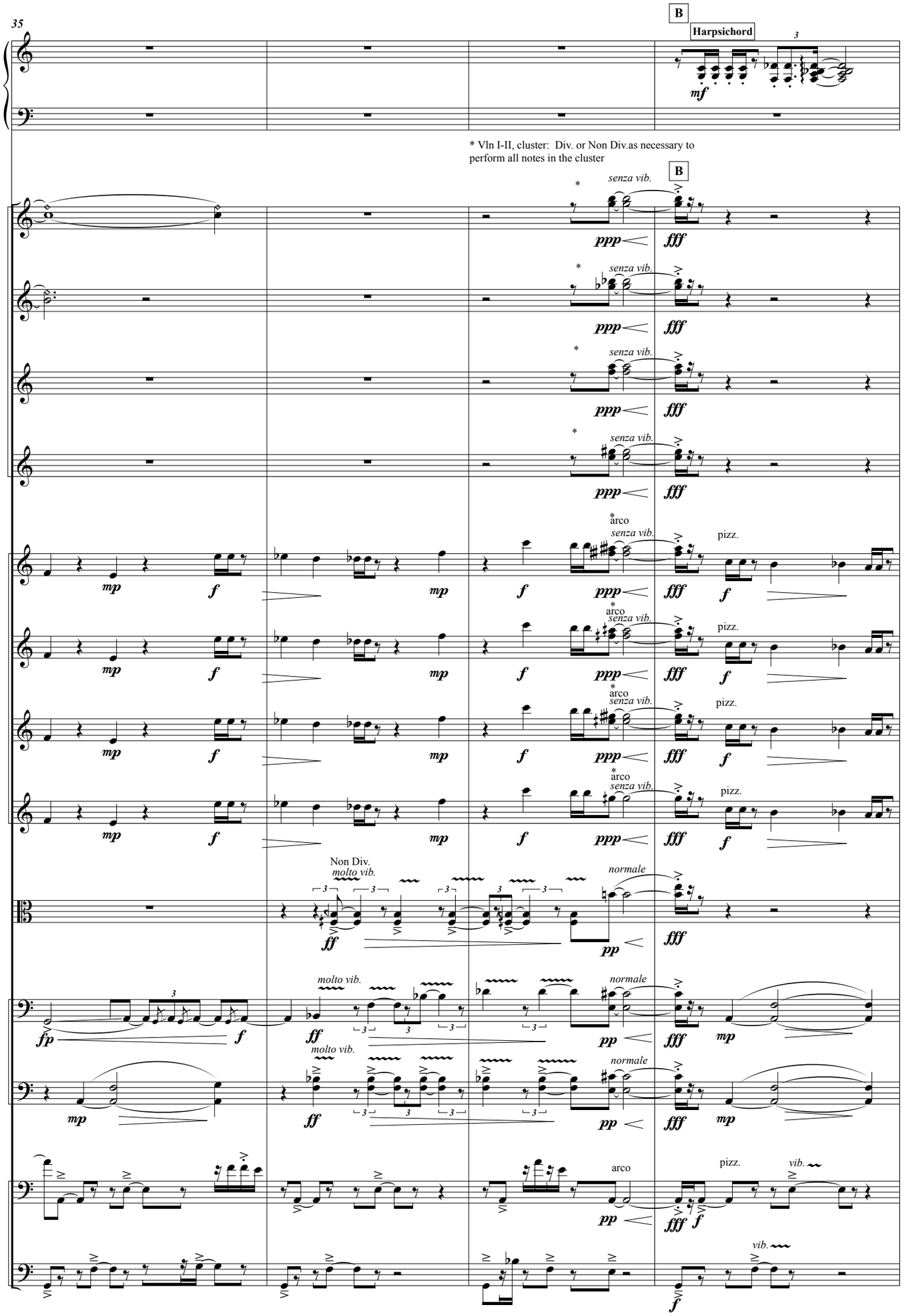

19
60
45
60
75
90
mf Sample 5: F# fundamental
mp
mf Sample 6: A fundamental
ff
molto vib.
Vln. I
Vln. II
Vla.
Vce.
Db.

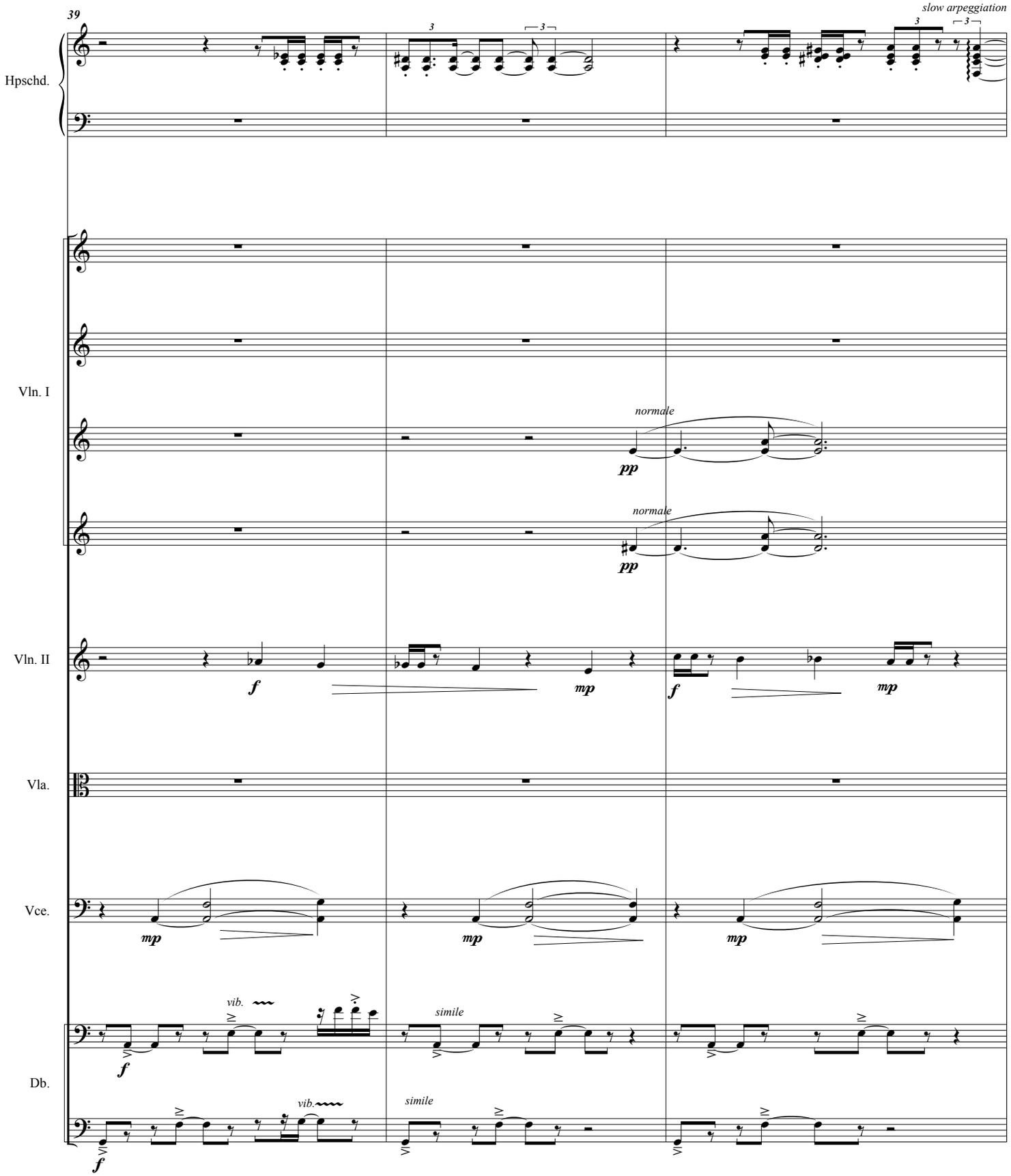
II. Haboob

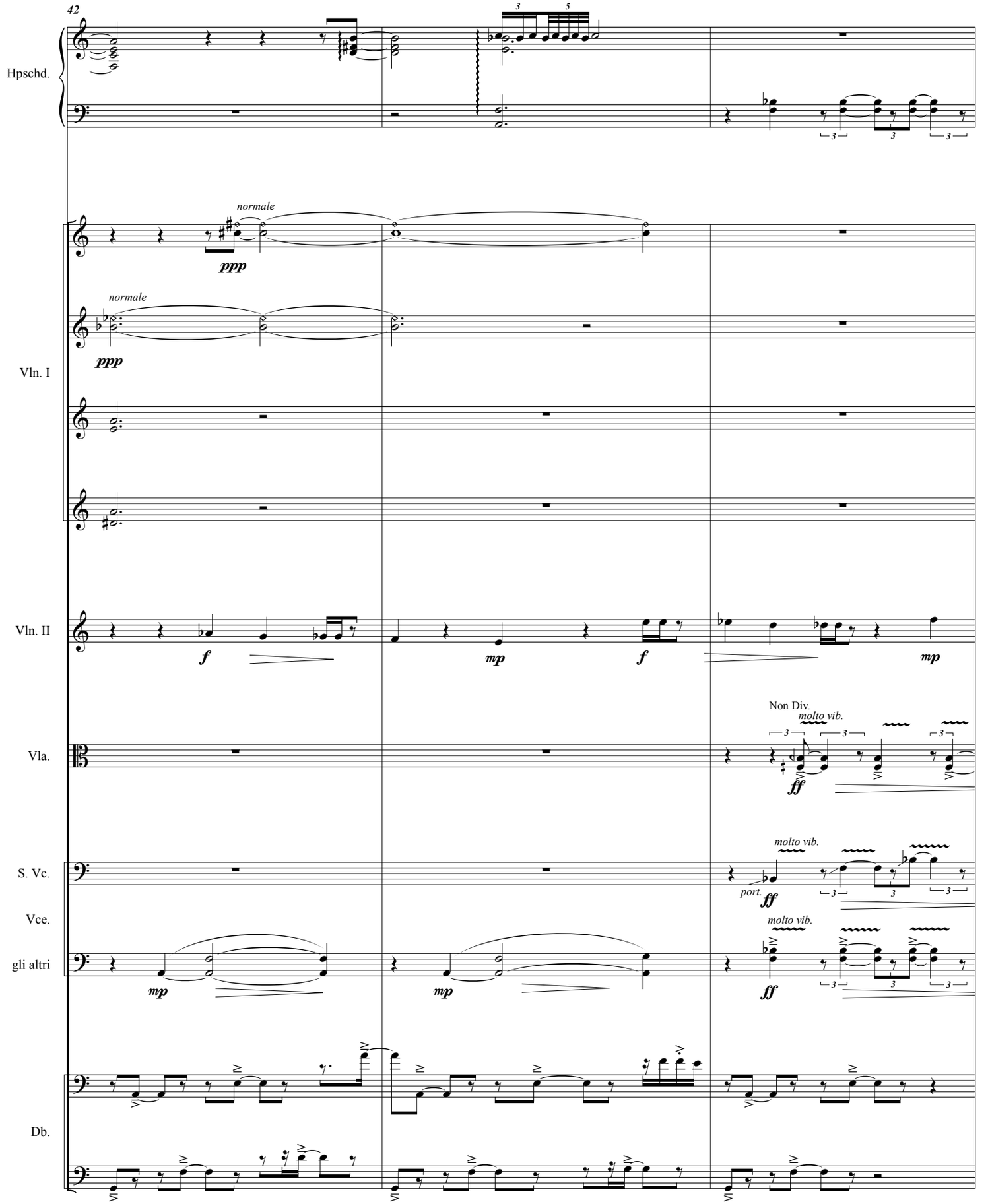
Serpents, lizards, critters bask in heat of the sun.

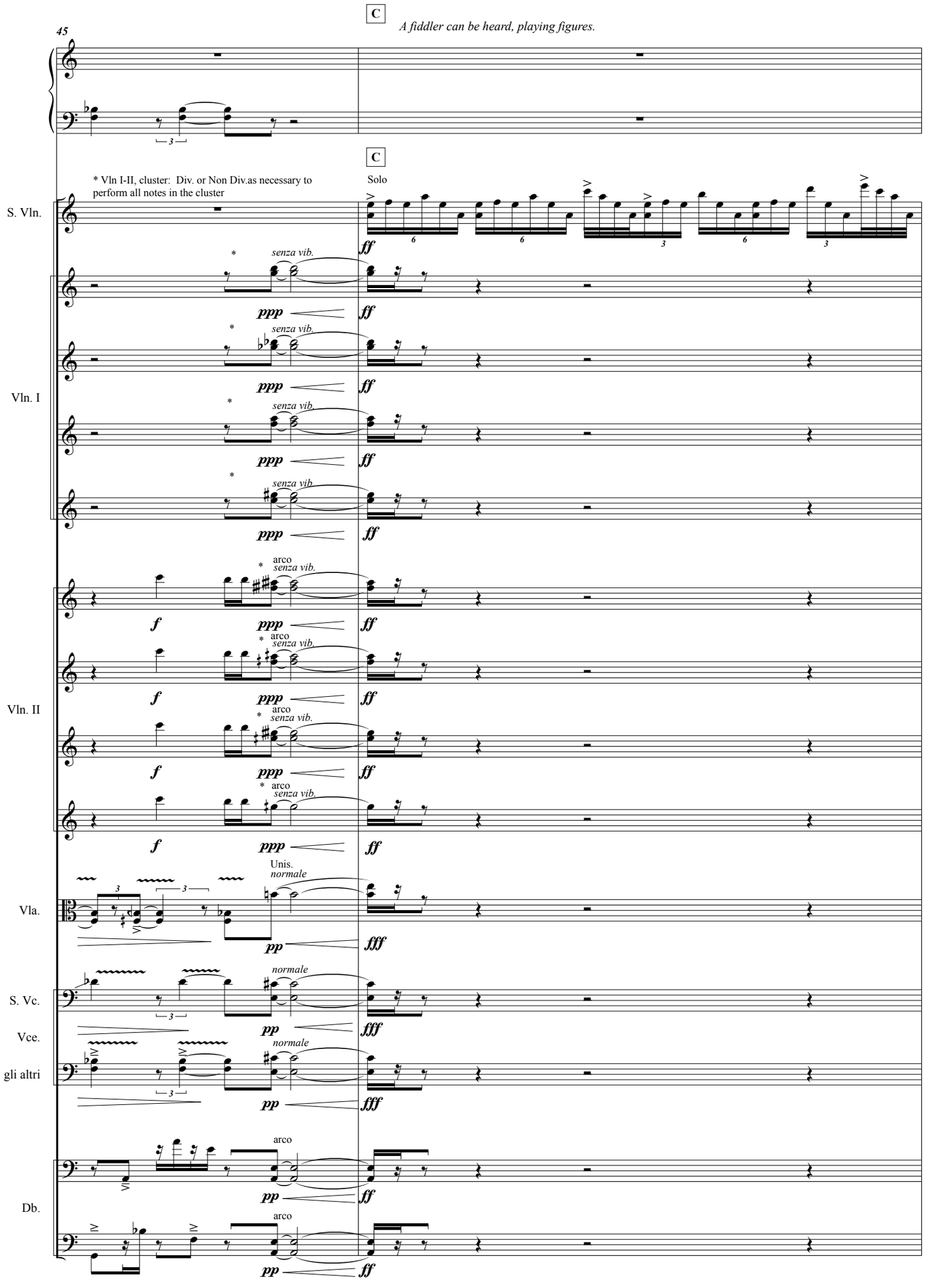


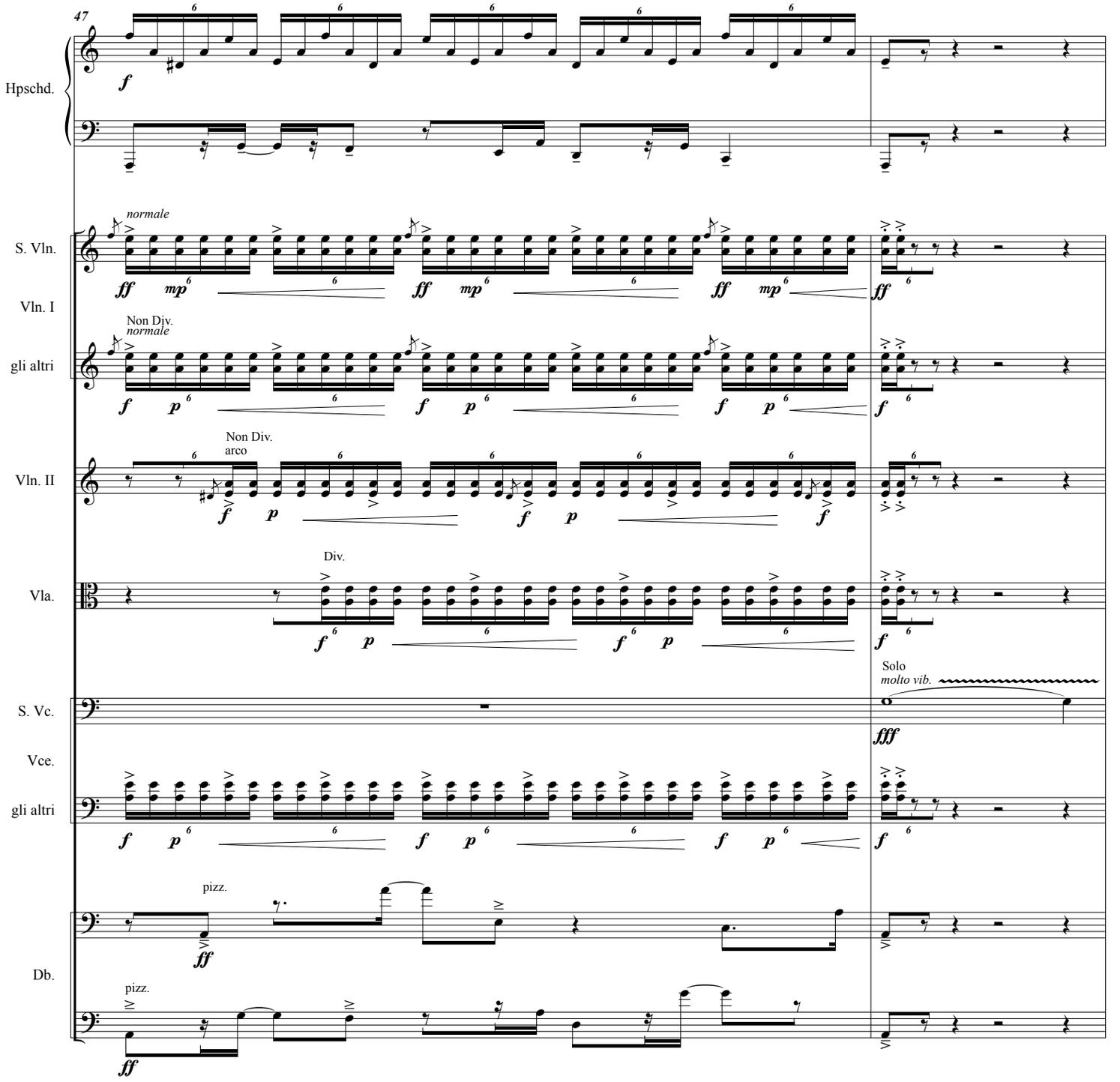

31
Smplr.
raise volume fader to 100%
Vln. I
Vln. II
Vla.
S. Vc.
Solo
Vce.
Non Div.
gli altri
Db.
vib.
simile
ppp
pp
f
mp
ff
p

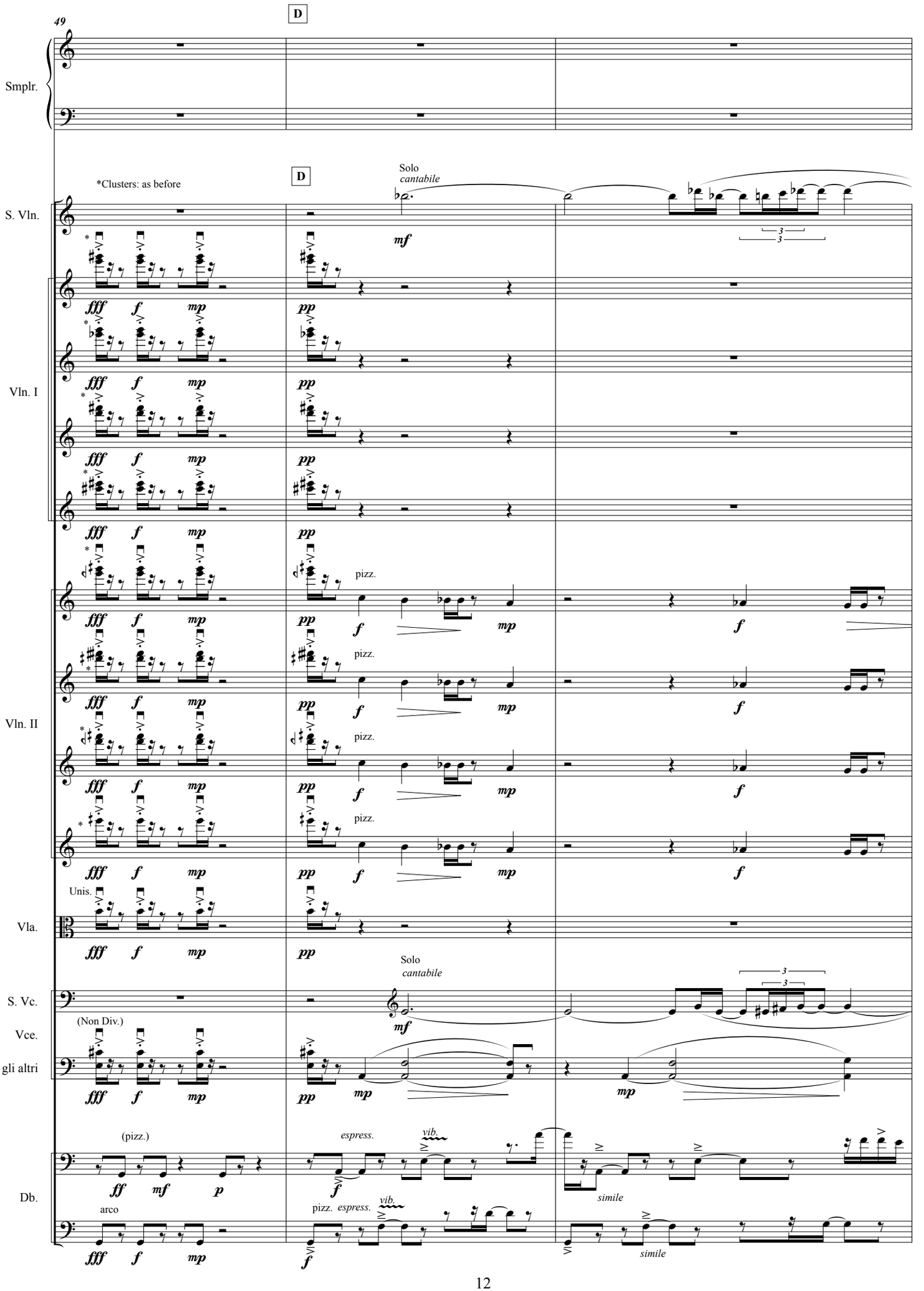

35
B
Harpsichord
Smplr.
* Vln I-II, cluster: Div. or Non Div.as necessary to perform all notes in the cluster
Vln. I
Vln. II
Vla.
S. Vc.
Vce.
gli altri
Db.
senza vib.
arco
pizz.
Non Div.
molto vib.
normale
vib.

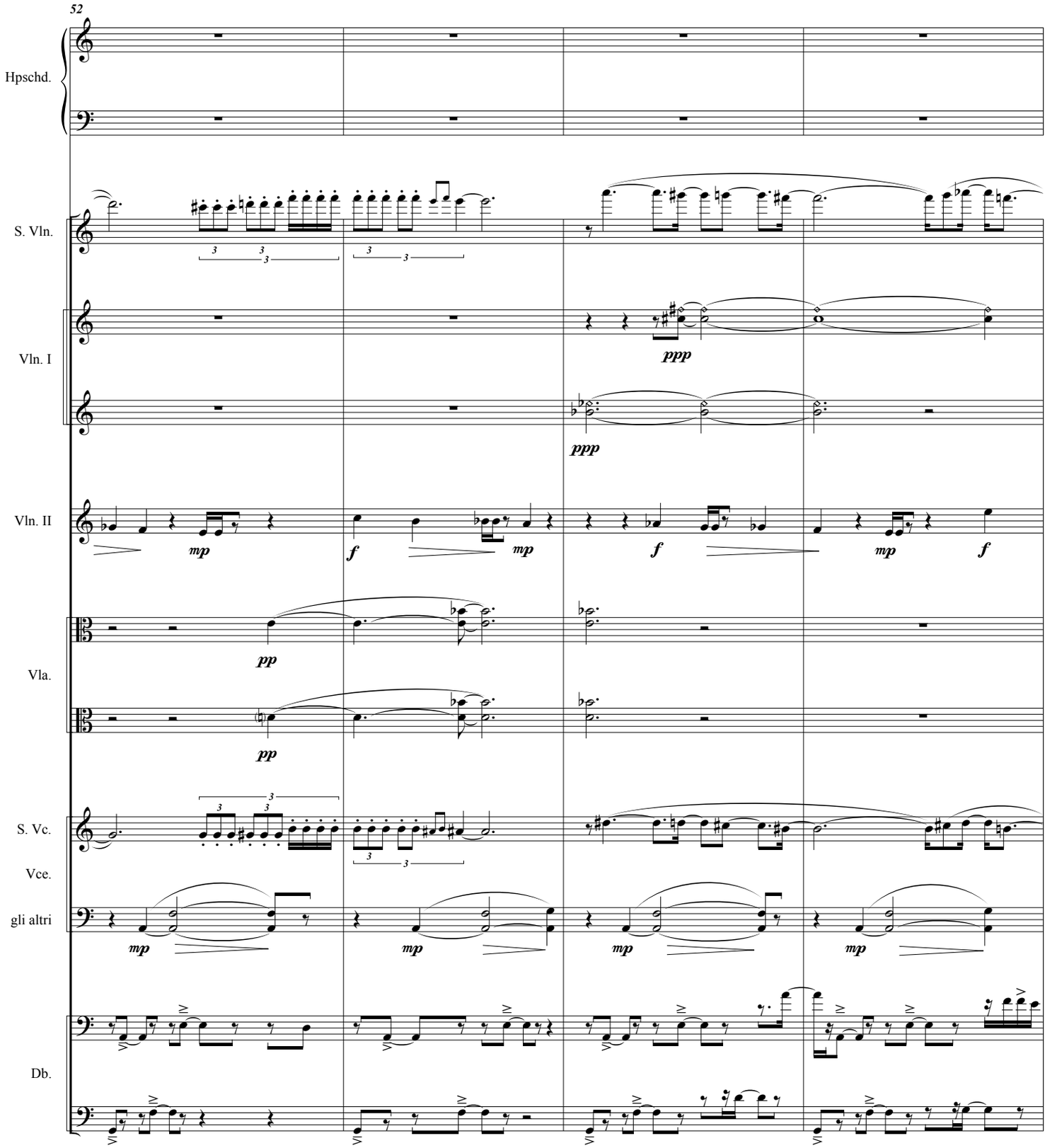

39
slow arpeggiation
Hpschd.
Vln. I
normale
pp
normale
pp
Vln. II
f
mp
f
mp
Vla.
Vce.
mp
mp
mp
vib.
f
simile
simile
Db.
vib.
f


42
Hpschd.
normale
ppp
normale
ppp
Vln. I
Vln. II
f
mp
f
mp
Vla.
Non Div.
molto vib.
ff
S. Vc.
molto vib.
port.
ff
Vce.
gli altri
molto vib.
mp
mp
ff
Db.


C
A fiddler can be heard, playing figures.
45
C
Solo
* Vln I-II, cluster: Div. or Non Div.as necessary to perform all notes in the cluster
S. Vln.
Vln. I
Vln. II
Vla.
S. Vc.
Vce.
gli altri
Db.
senza vib.
arco
Unis.
normale
ff
ppp
f
pp
fff


47
Hpschd.
S. Vln.
normale
Vln. I
Non Div.
normale
gli altri
Vln. II
Non Div.
arco
Vla.
Div.
S. Vc.
Solo
molto vib.
Vce.
gli altri
Db.
pizz.
pizz.


49
D
Smplr.
*Clusters: as before
D
Solo
cantabile
S. Vln.
Vln. I
Vln. II
pizz.
Vla.
Unis.
Solo
cantabile
S. Vc.
(Non Div.)
Vce.
gli altri
(pizz.)
arco
Db.
espress.
vib.
simile


52
Hpschd.
S. Vln.
Vln. I
Vln. II
Vla.
S. Vc.
Vce.
gli altri
Db.
ppp
mp
f
pp

56

Sampler

E

Hpschd.

Amp. Mod still at 127

rejoin section

E

S. Vln.

*Clusters: as before

*senza vib.

Vln. I

Vln. II

arco

Vla.

Non Div. *molto vib.*

Div. *senza vib.*

Div. à 3

à 2

rejoin section

S. Vc.

Vcc.

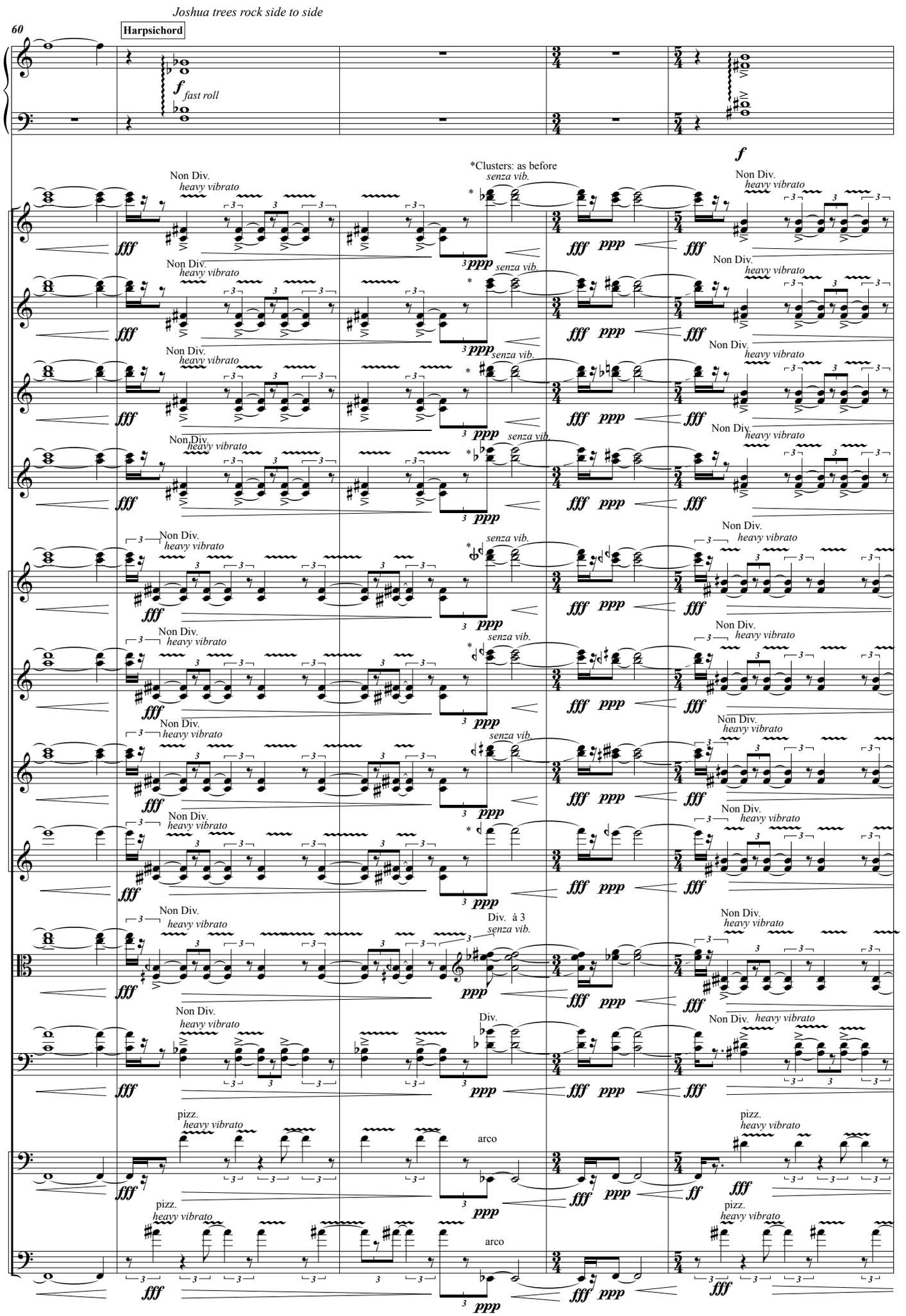
gli altri

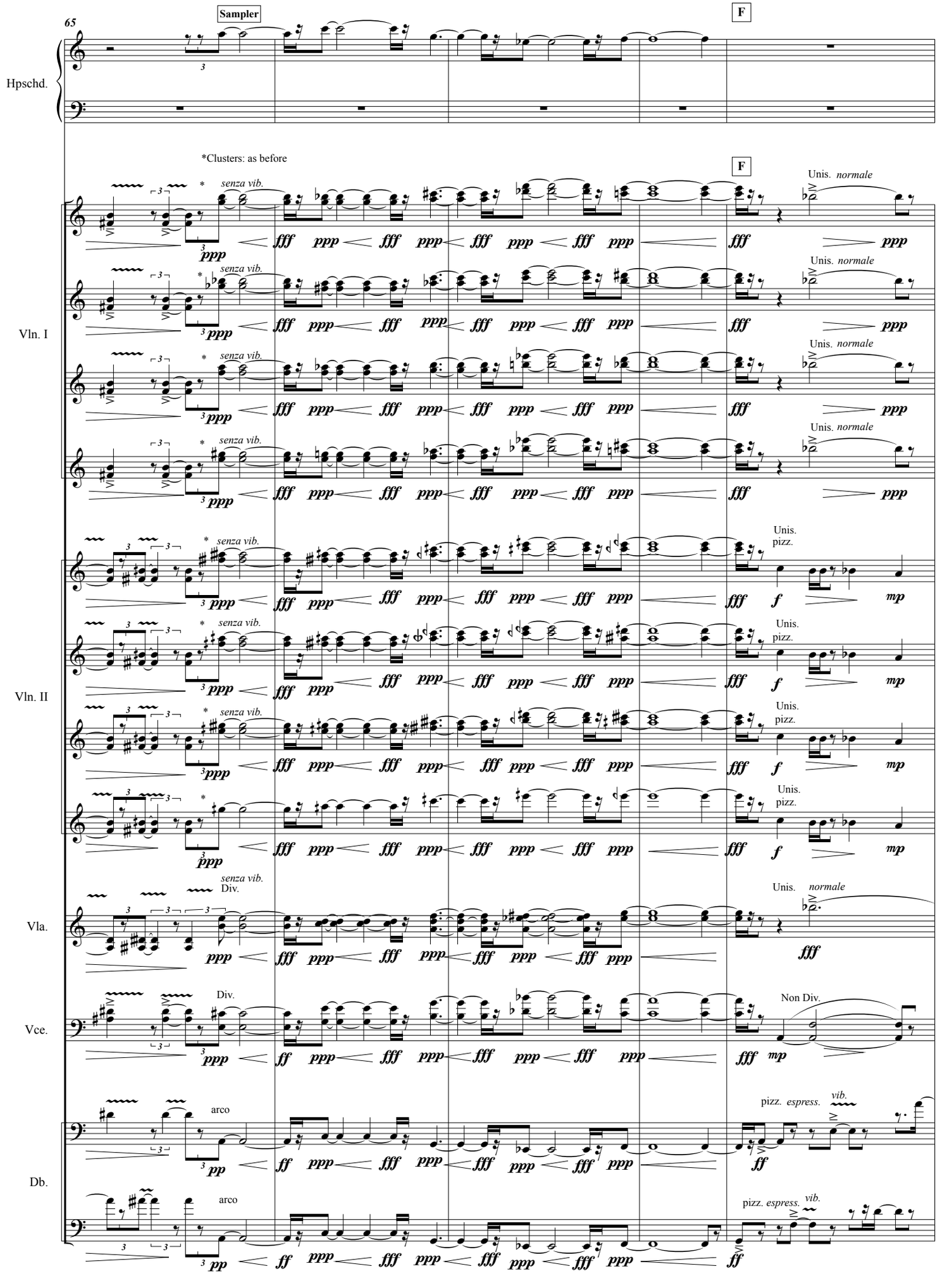
molto vib.

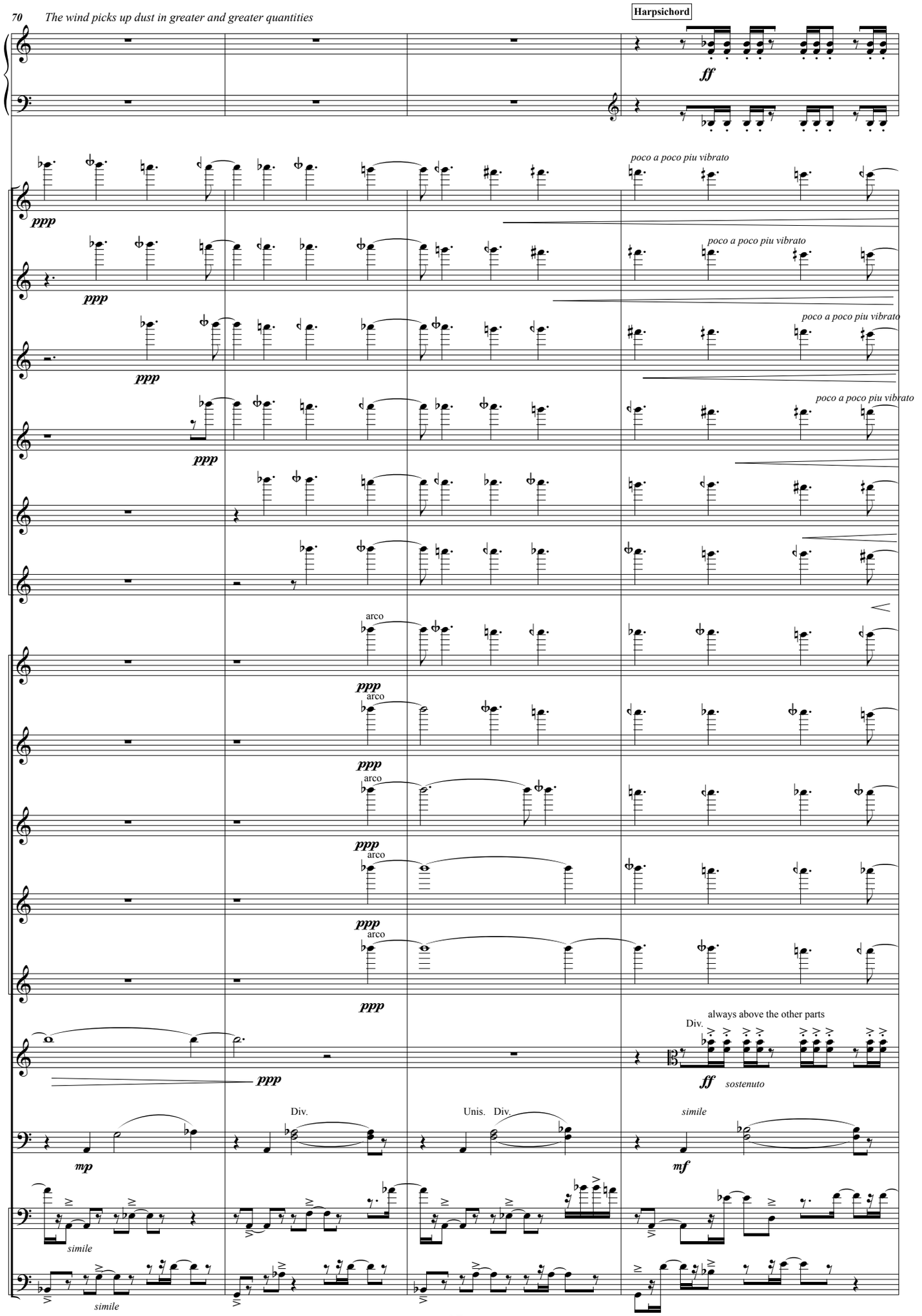
Div. *normale*

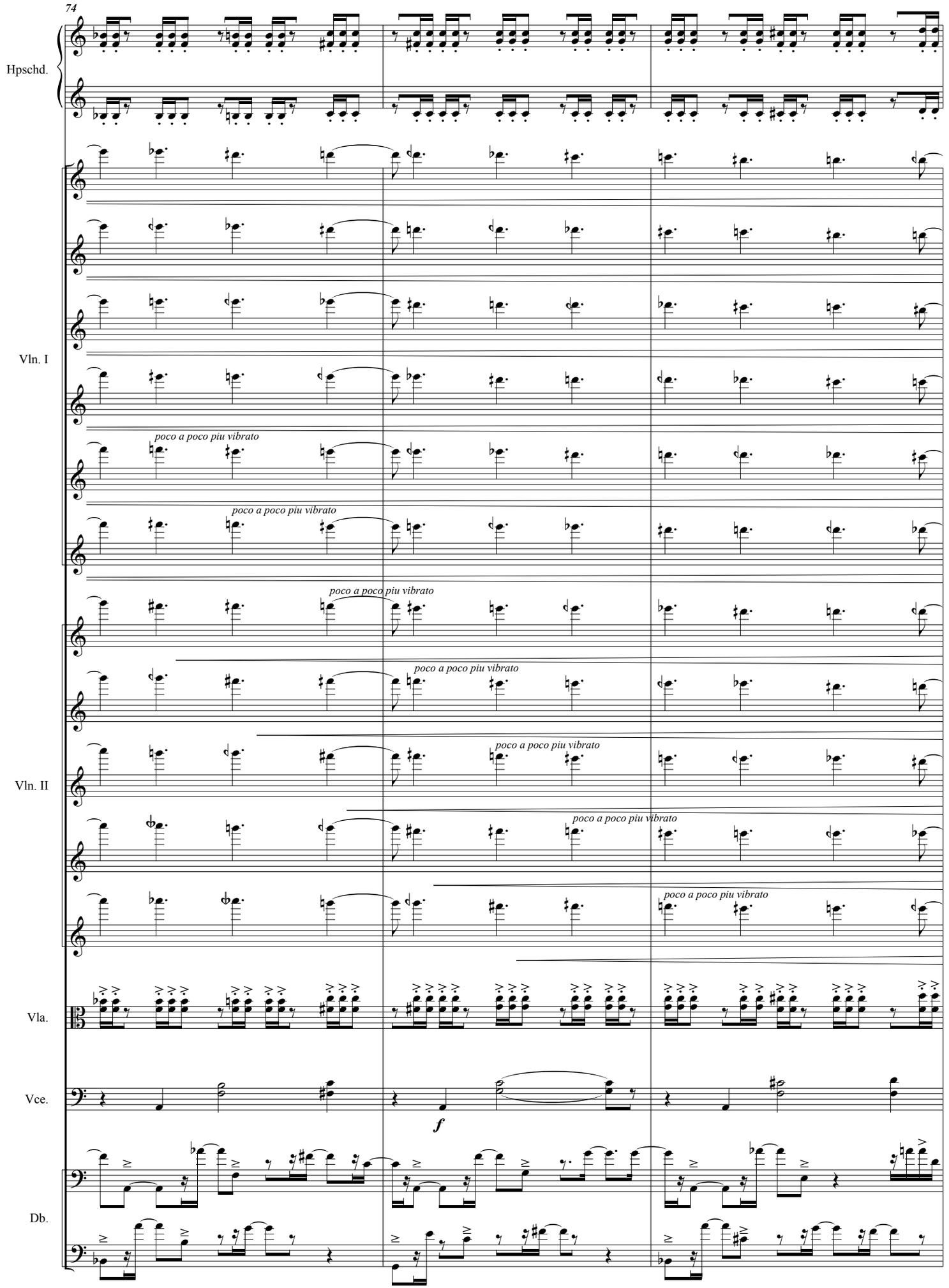
Db.

Non Div. arco


Joshua trees rock side to side
60
Harpsichord
Hpschd.
f
fast roll
Vln. I
Vln. II
Vla.
Vce.
Db.
*Clusters: as before
senza vib.
Non Div.
heavy vibrato
Div. à 3
Div.
pizz.
arco
fff
ppp
ff


65
Sampler
F
Hpschd.
*Clusters: as before
F
Unis. normale
senza vib.
Vln. I
Vln. II
Unis.
pizz.
Vla.
Div.
Vce.
Non Div.
arco
pizz. espress.
vib.
Db.


70
The wind picks up dust in greater and greater quantities
Harpsichord
Smplr.
ff
poco a poco piu vibrato
ppp
Vln. I
Vln. II
arco
Vla.
always above the other parts
Div.
sostenuto
Vce.
Unis.
simile
mp
mf
Db.


74
Hpschd.
Vln. I
poco a poco piu vibrato
poco a poco piu vibrato
poco a poco piu vibrato
poco a poco piu vibrato
Vln. II
poco a poco piu vibrato
poco a poco piu vibrato
poco a poco piu vibrato
Vla.
Vce.
f
Db.

77

Hpschd.

Vln. I

Vln. II

Vla.

Vce.

Db.

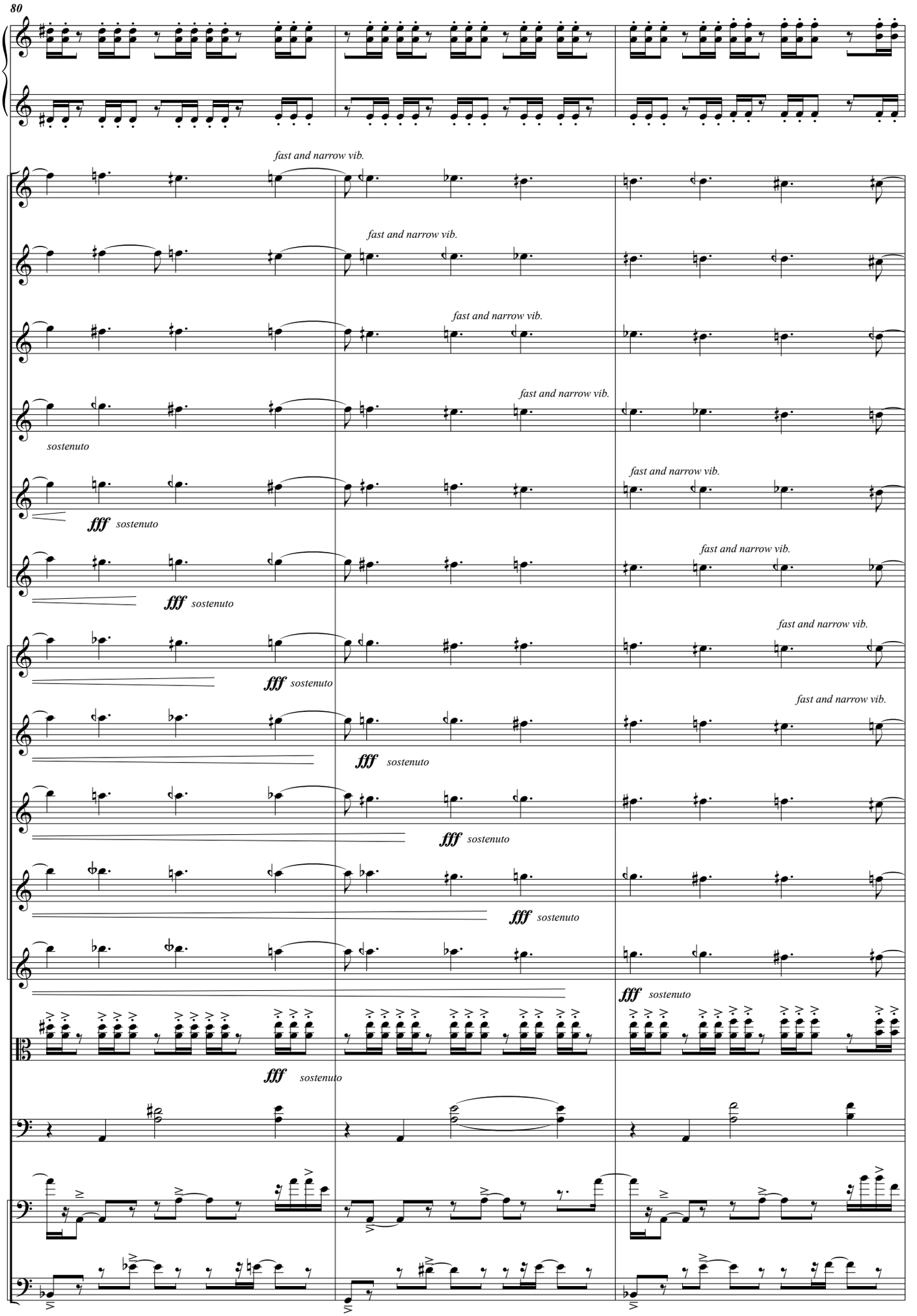
fff *sostenuto*

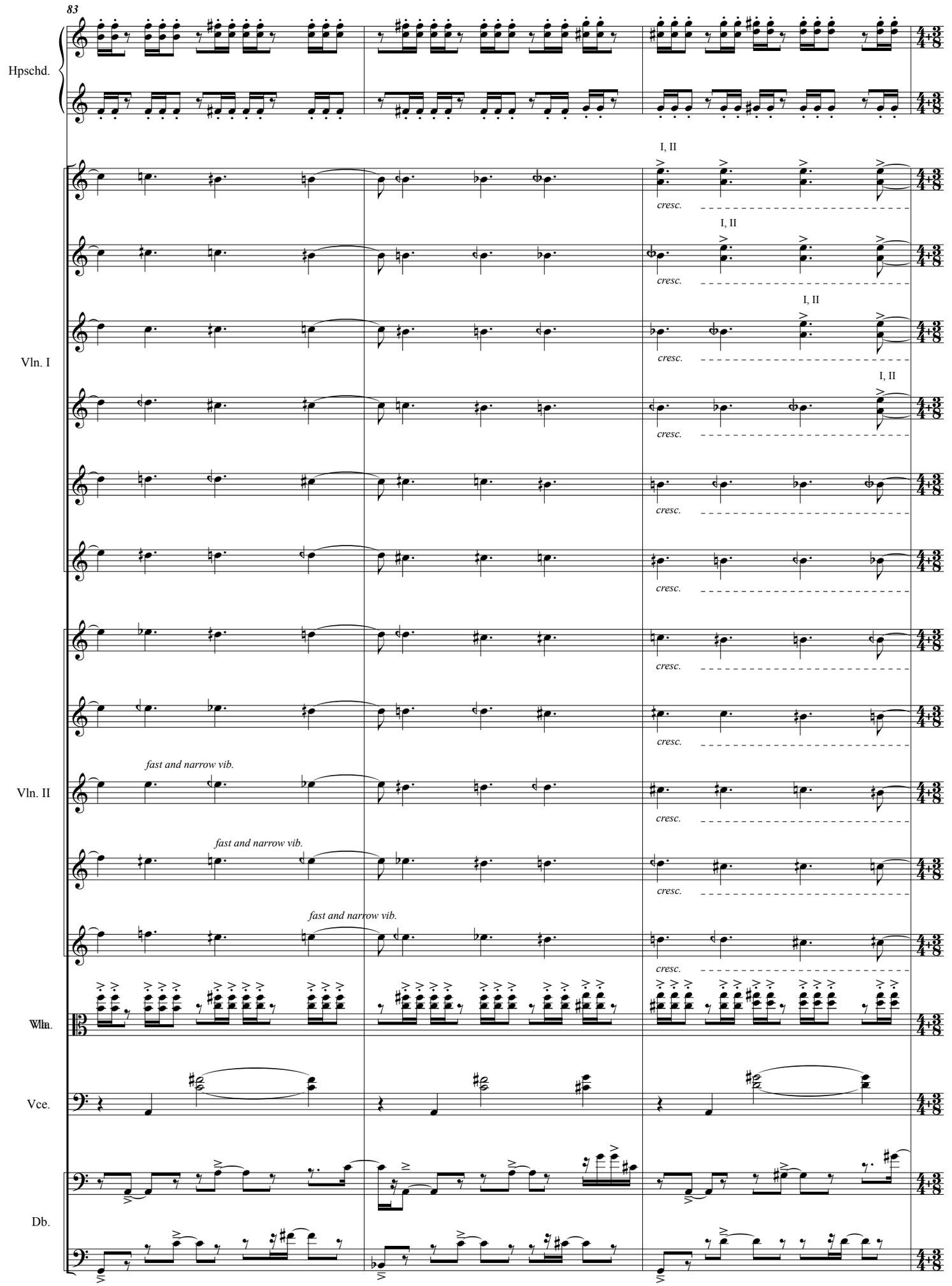
fff *sostenuto*

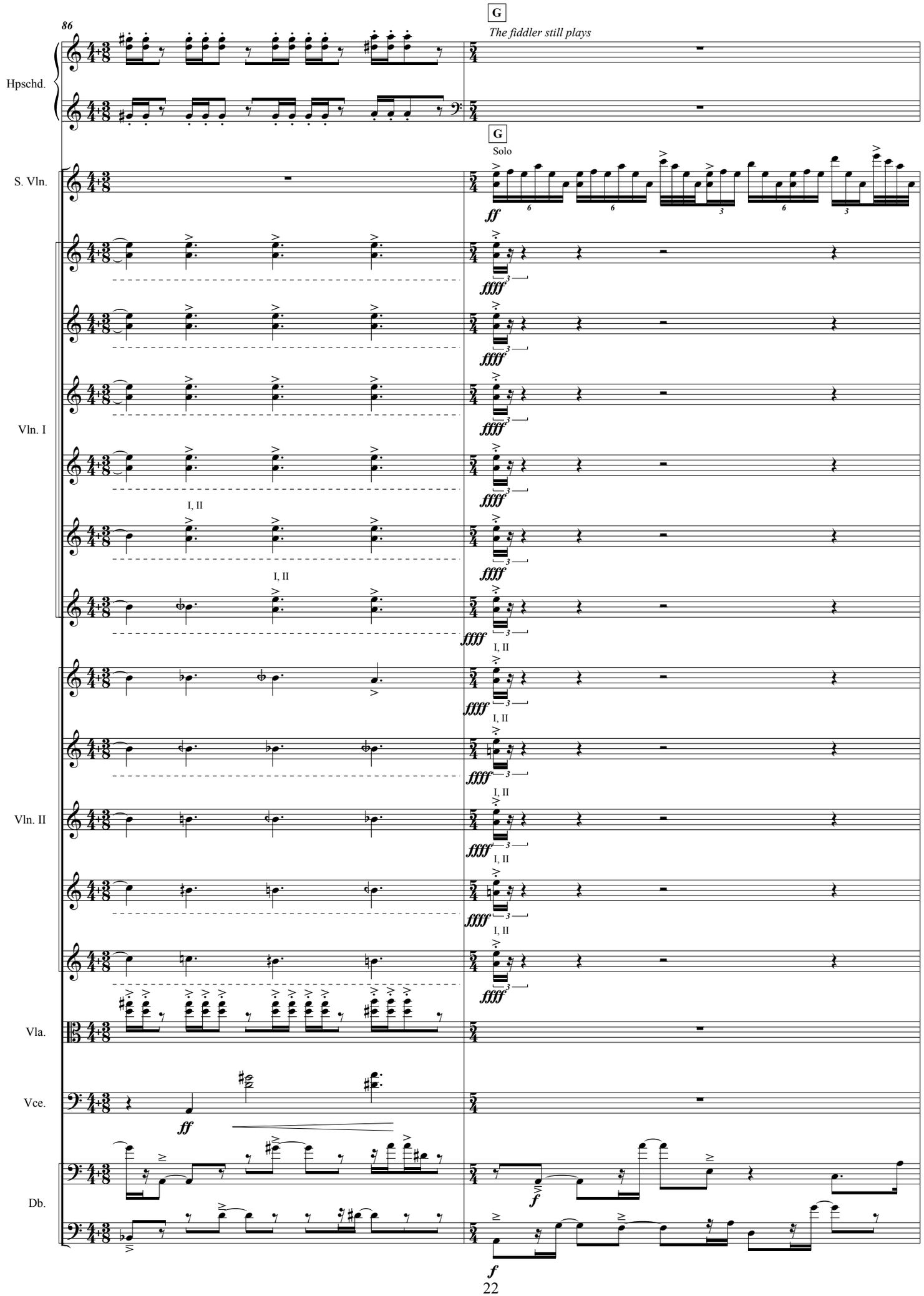
fff *sostenuto*

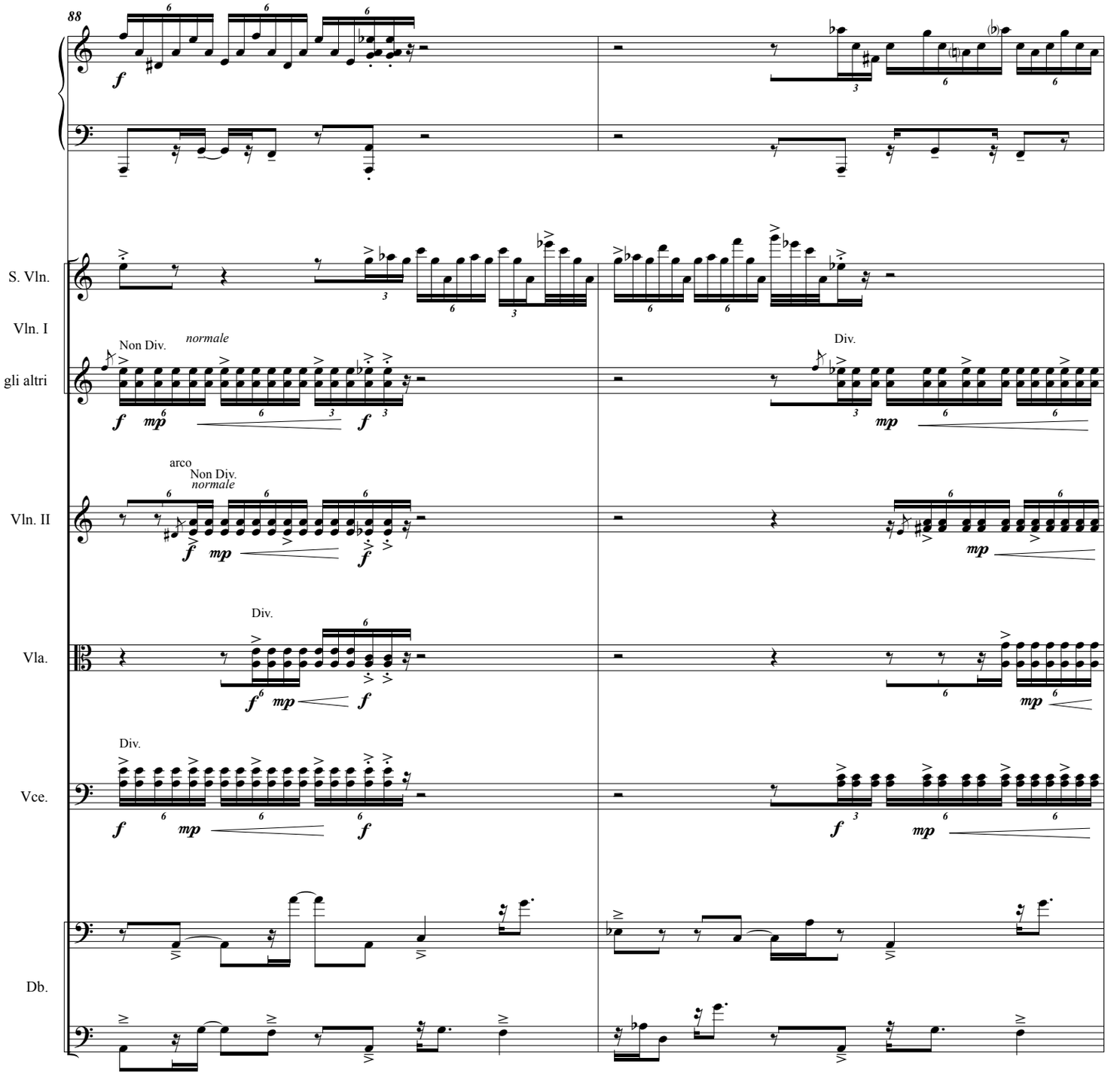
fff

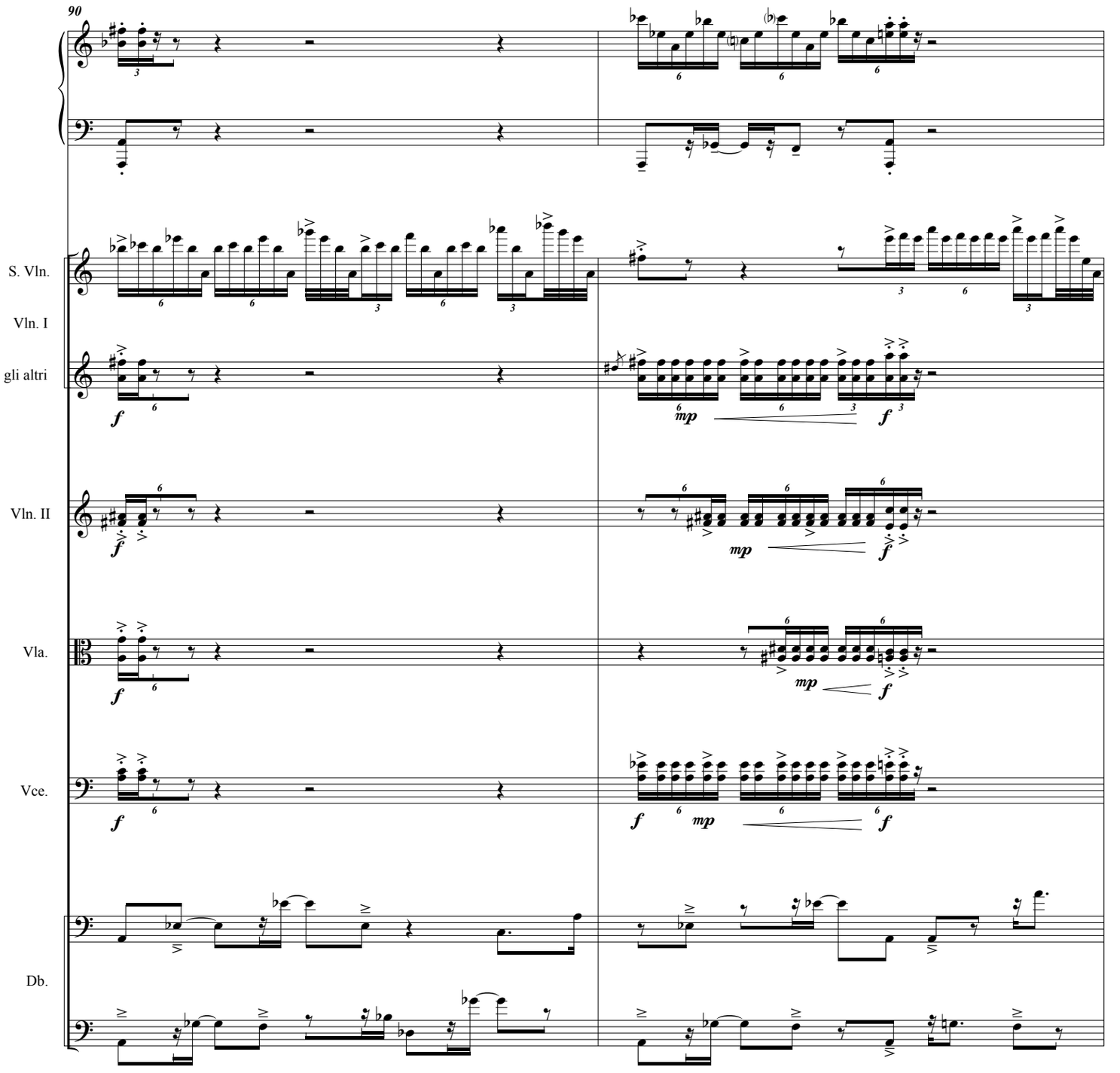
ff

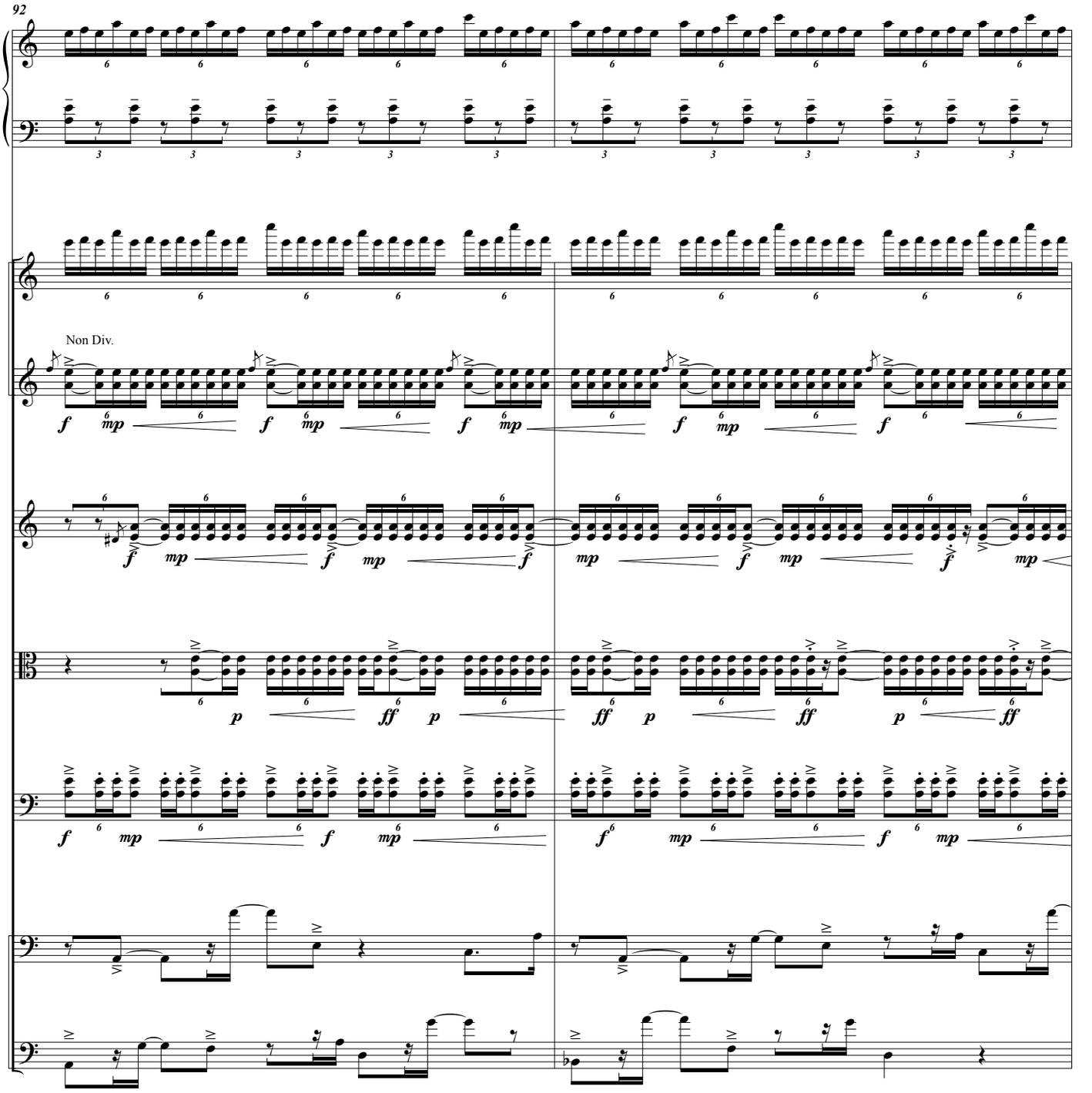

80
Hpschd.
fast and narrow vib.
fast and narrow vib.
Vln. I
fast and narrow vib.
fast and narrow vib.
sostenuto
fast and narrow vib.
fff sostenuto
fast and narrow vib.
fff sostenuto
fast and narrow vib.
fff sostenuto
fast and narrow vib.
Vln. II
fff sostenuto
fff sostenuto
Vla.
fff sostenuto
fff sostenuto
Vce.
Db.

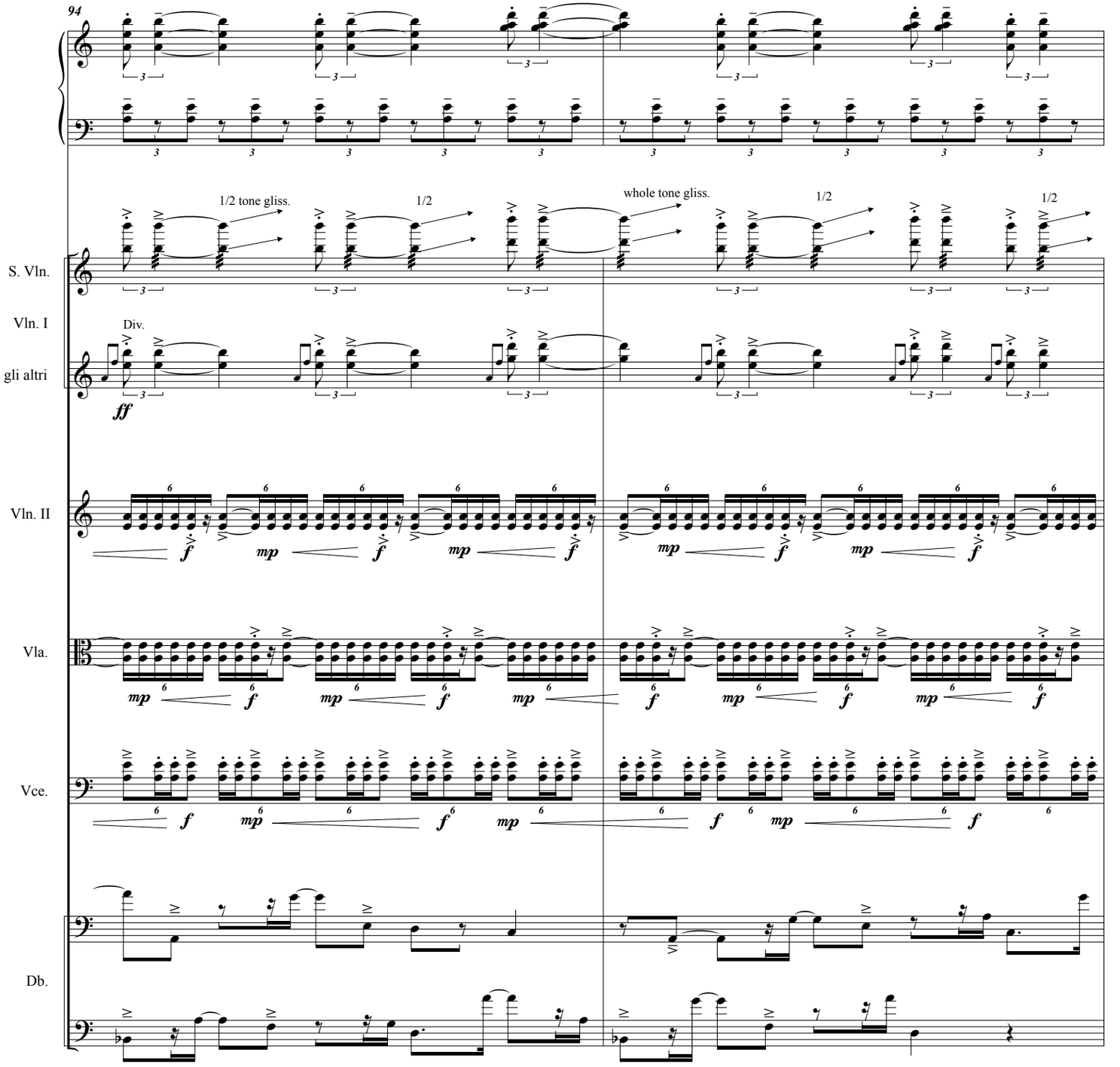

83
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
I, II
cresc.
fast and narrow vib.

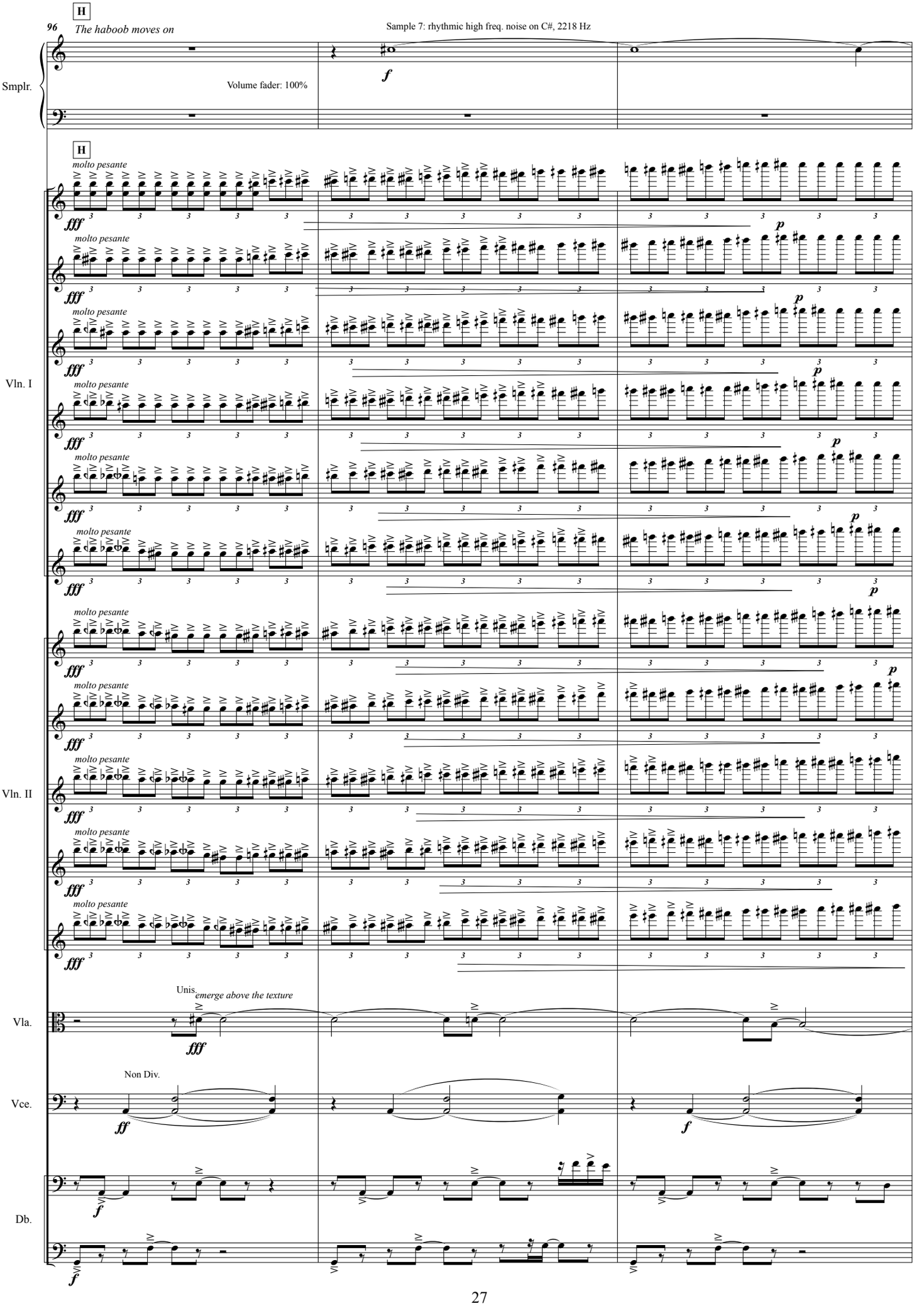

86
G
The fiddler still plays
Hpschd.
G
Solo
S. Vln.
Vln. I
I, II
Vln. II
Vla.
Vce.
Db.

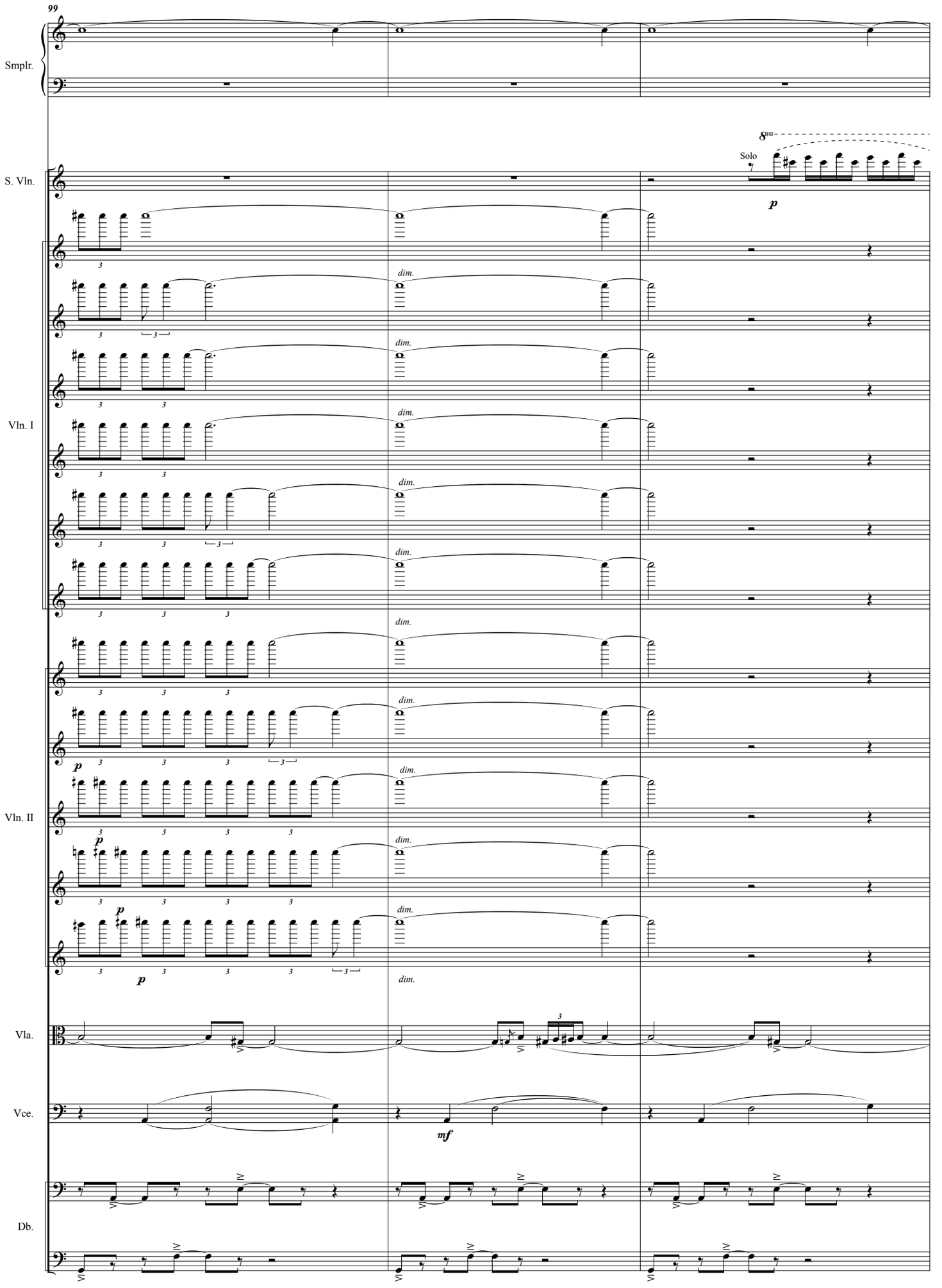

88
S. Vln.
Vln. I
gli altri
Non Div.
normale
Div.
Vln. II
arco
Non Div.
normale
Vla.
Div.
Vce.
Div.
Db.

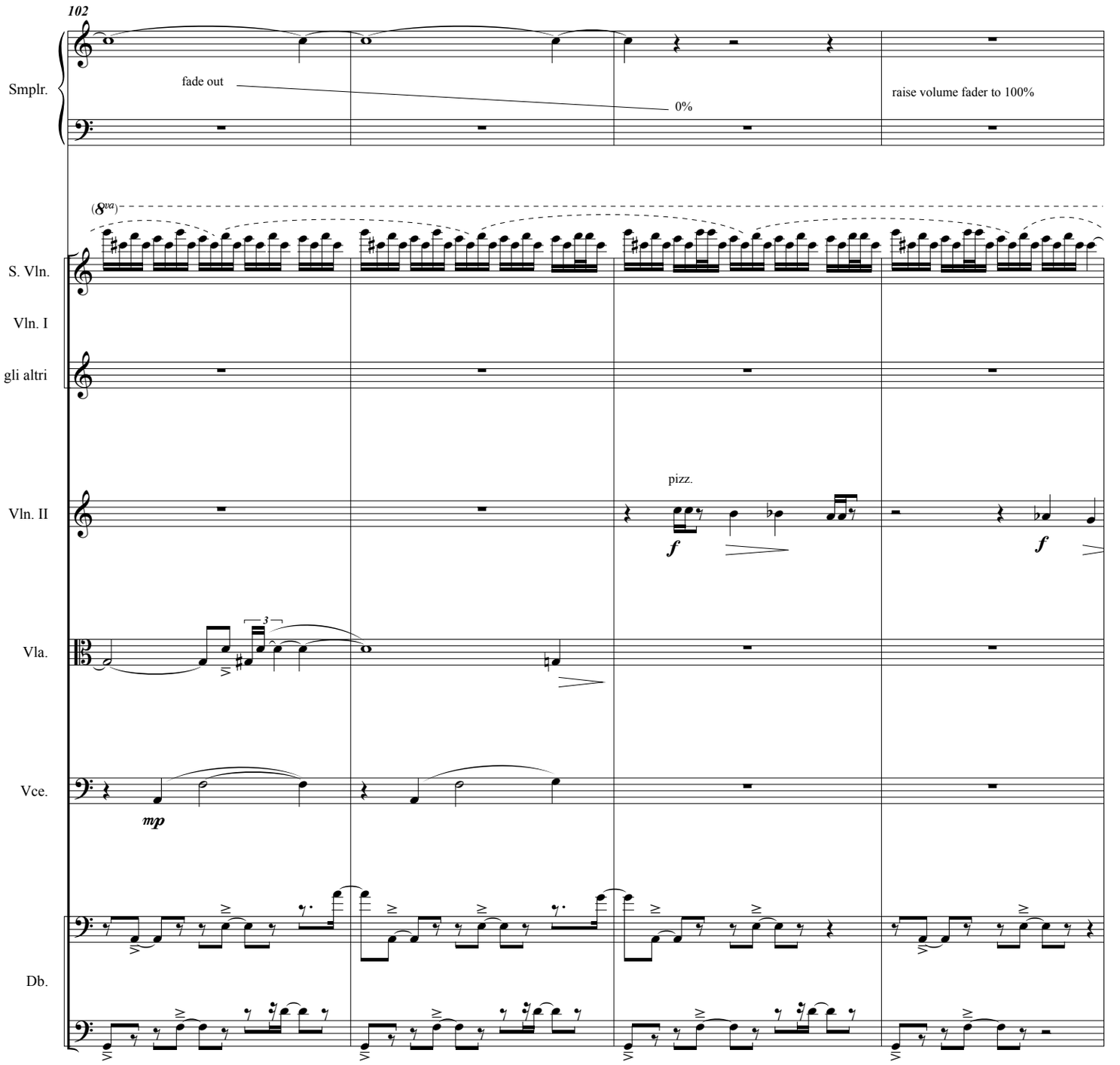

90
S. Vln.
Vln. I
gli altri
Vln. II
Vla.
Vce.
Db.
f
mp
f

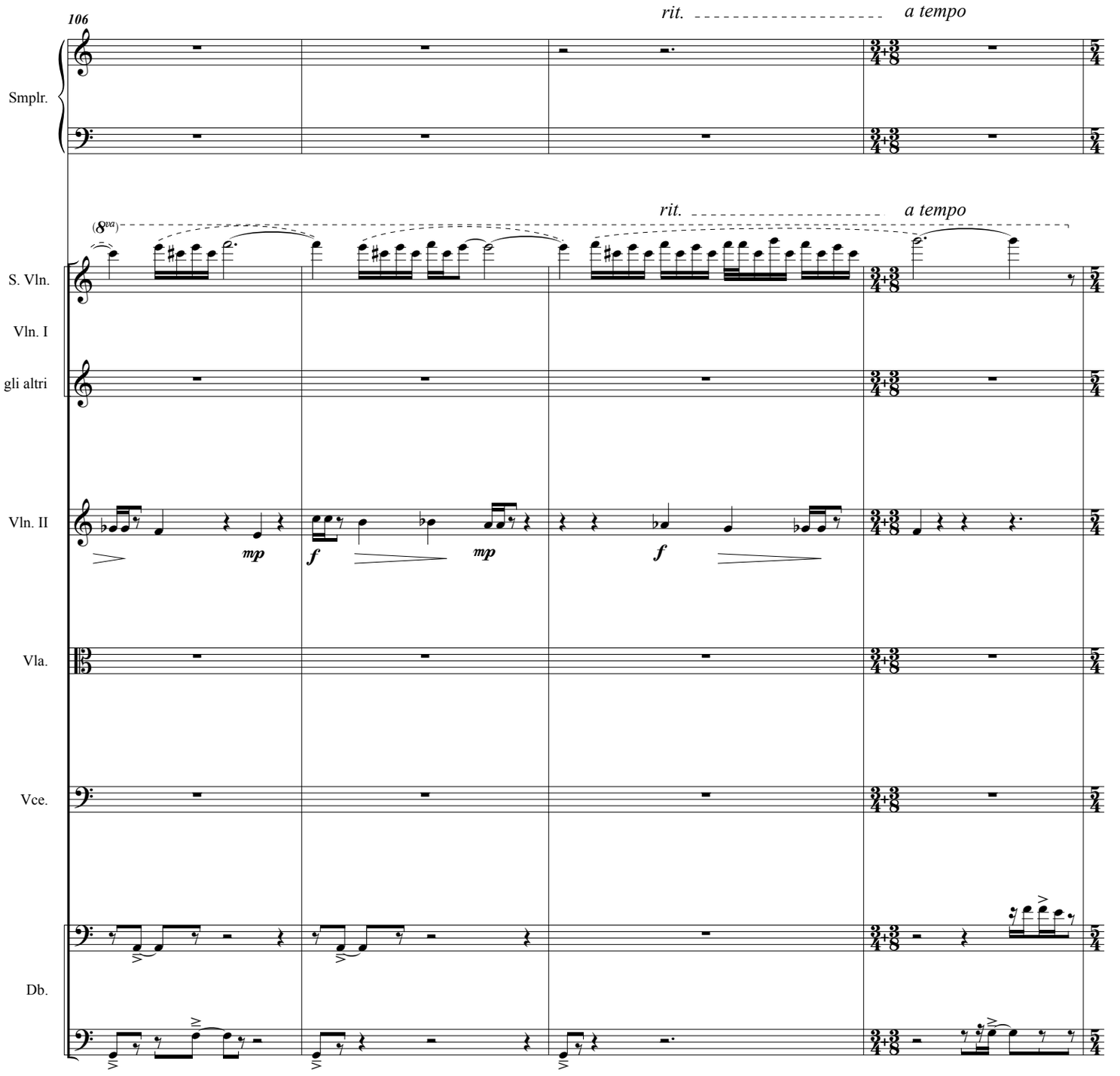

92
S. Vln.
Vln. I
Non Div.
gli altri
Vln. II
Vla.
Vce.
Db.

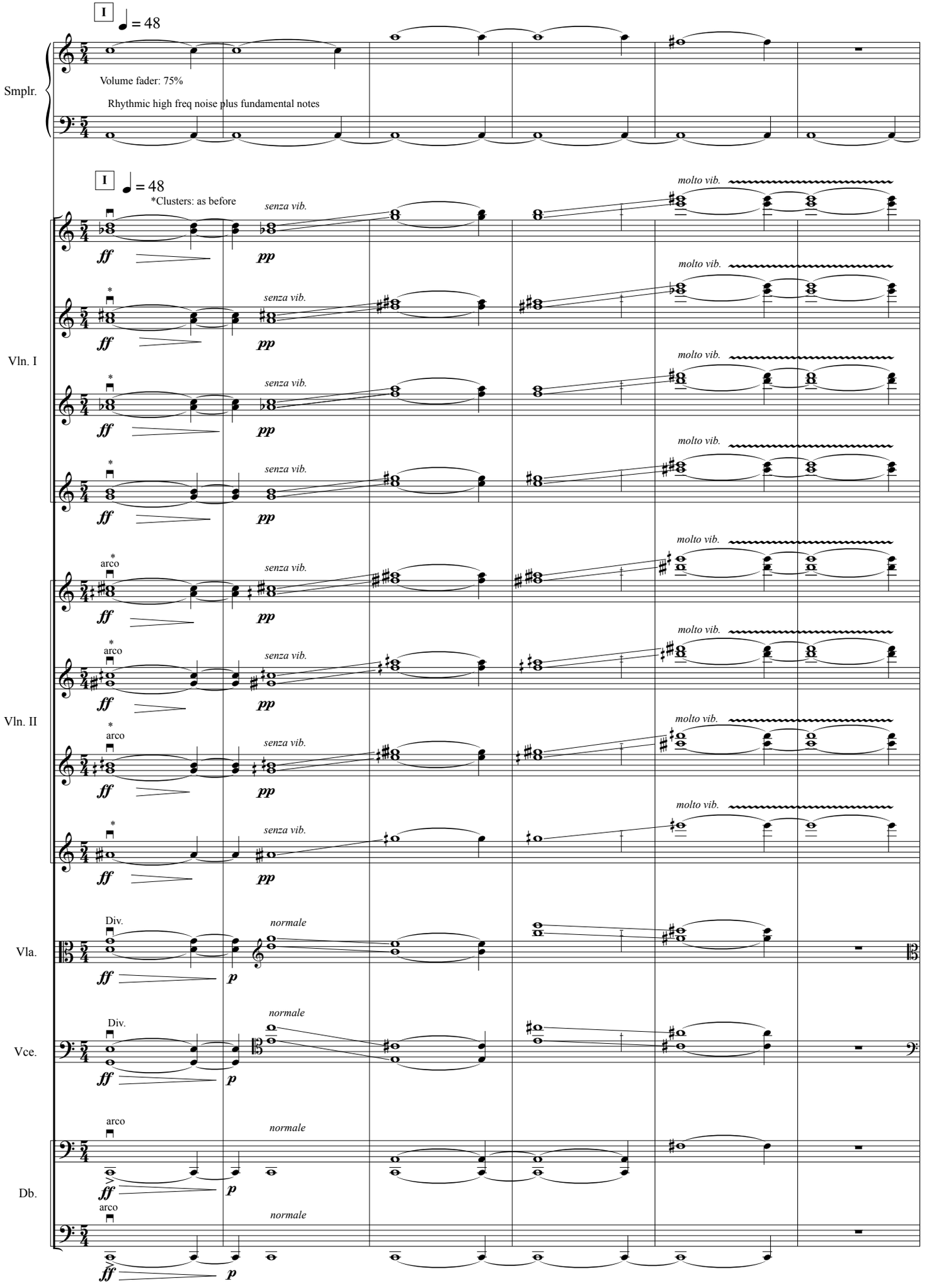

94
1/2 tone gliss.
1/2
whole tone gliss.
1/2
1/2
S. Vln.
Vln. I
Div.
gli altri
ff
Vln. II
Vla.
Vce.
Db.

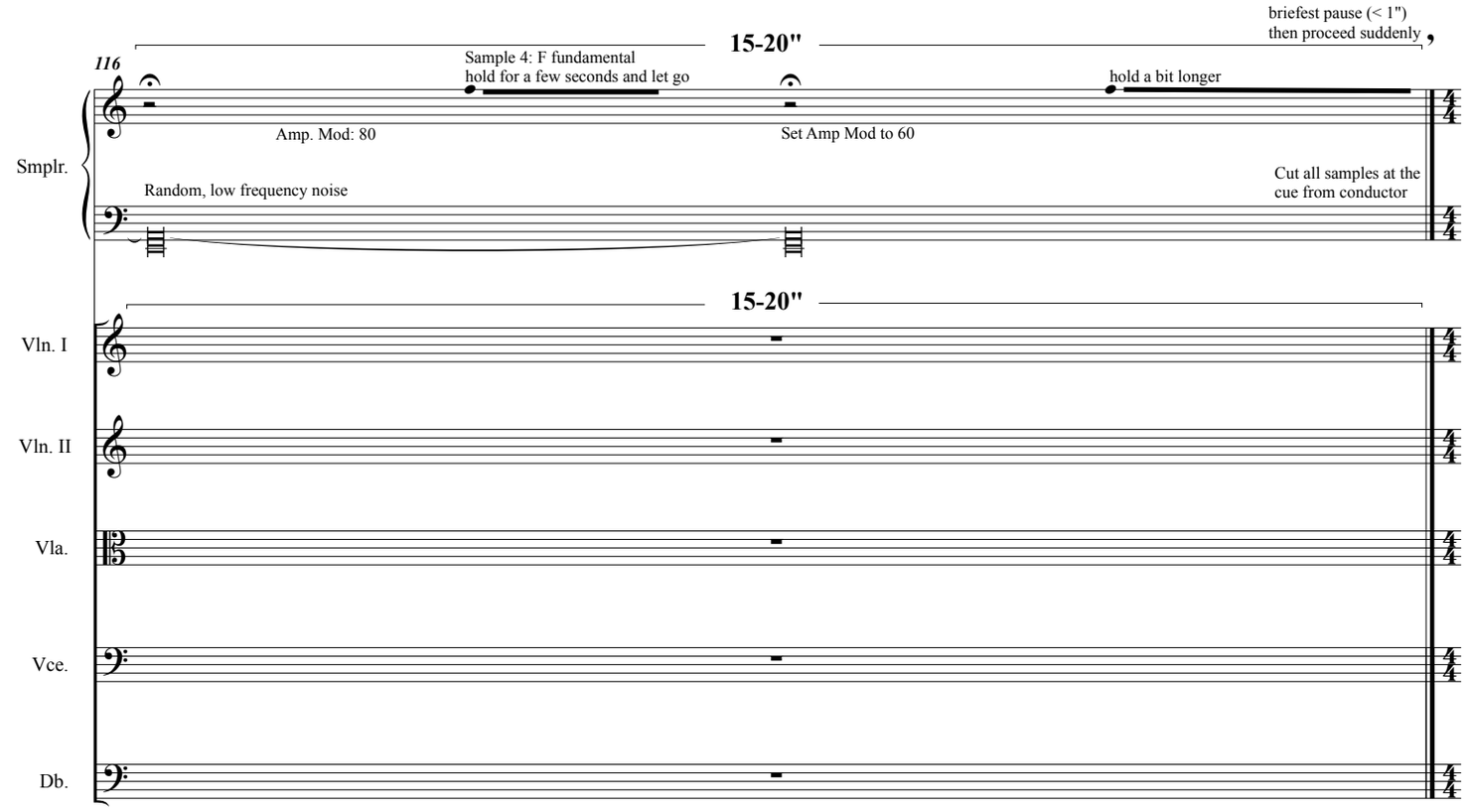

H
96
The haboob moves on
Sample 7: rhythmic high freq. noise on C#, 2218 Hz
Smplr.
Volume fader: 100%
f
H
molto pesante
fff
p
Vln. I
Vln. II
Unis.
emerge above the texture
Vla.
Non Div.
Vce.
ff
Db.


99
Smplr.
S. Vln.
Solo
8va
p
Vln. I
dim.
Vln. II
Vla.
Vce.
mf
Db.

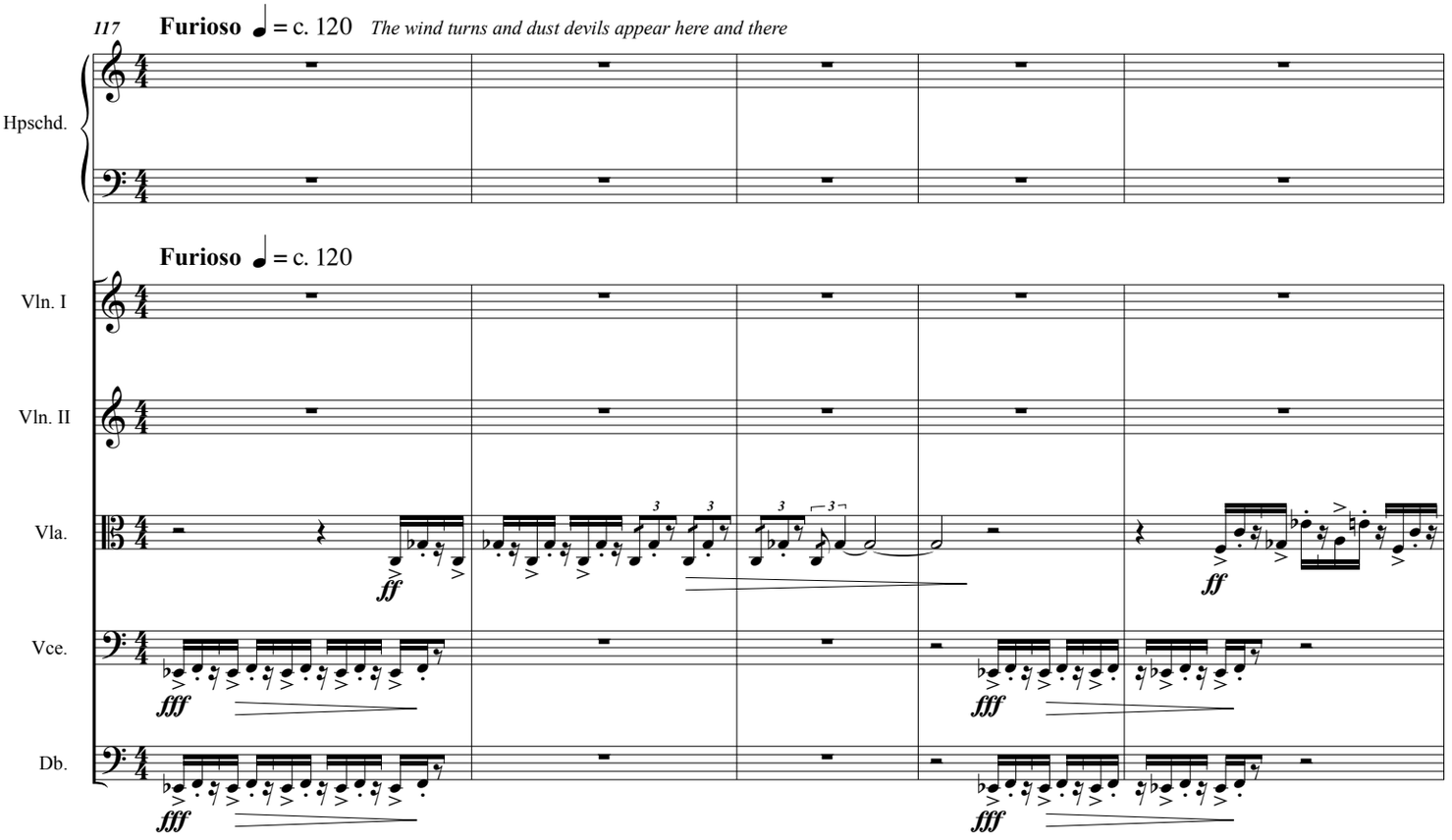

102
Smplr.
fade out
0%
raise volume fader to 100%
(8va)
S. Vln.
Vln. I
gli altri
Vln. II
pizz.
f
f
Vla.
3
Vce.
mp
Db.

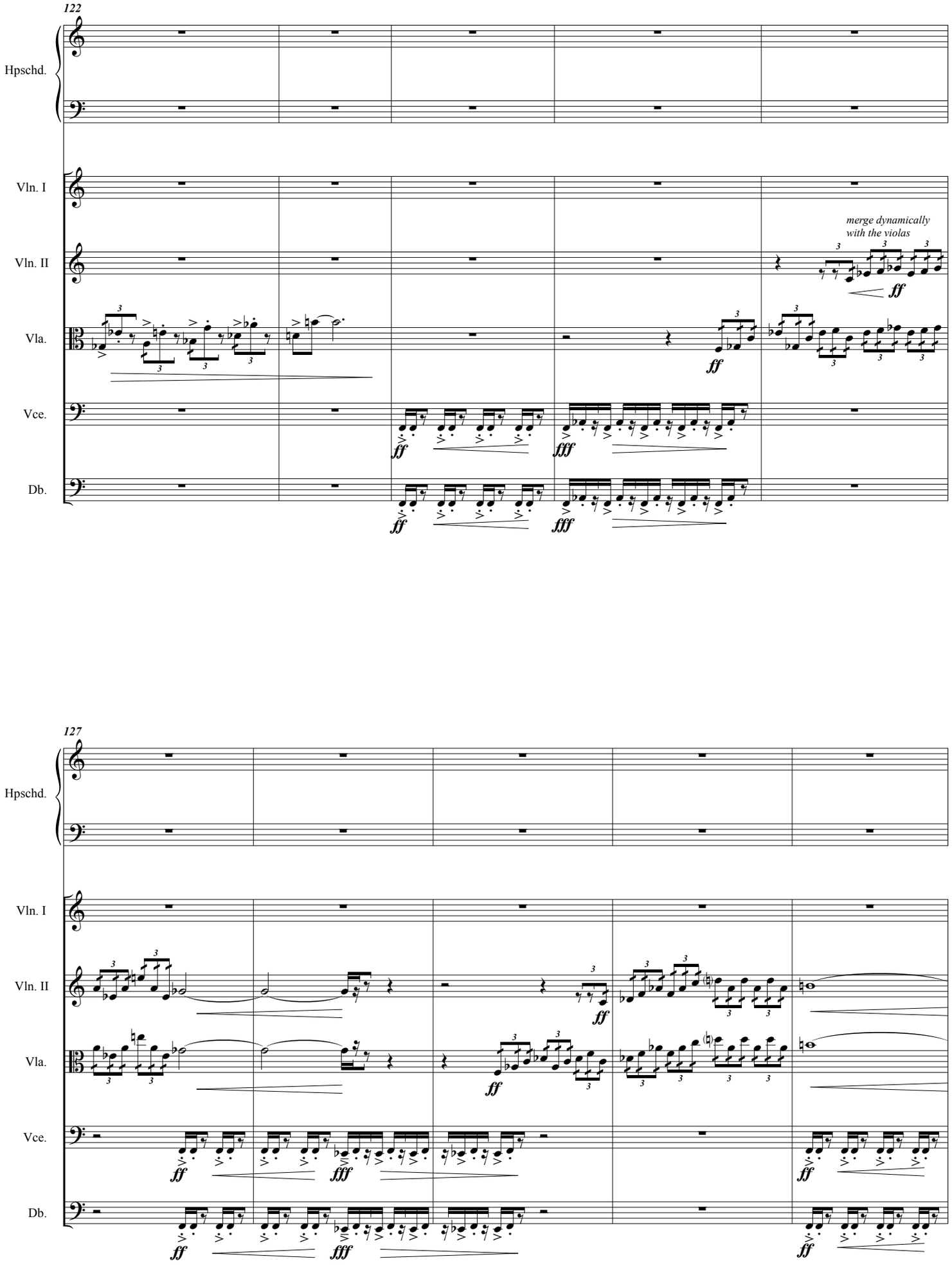

106
rit.
a tempo
Smplr.
rit.
a tempo
(8va)
S. Vln.
Vln. I
gli altri
Vln. II
mp
f
mp
f
Vla.
Vce.
Db.

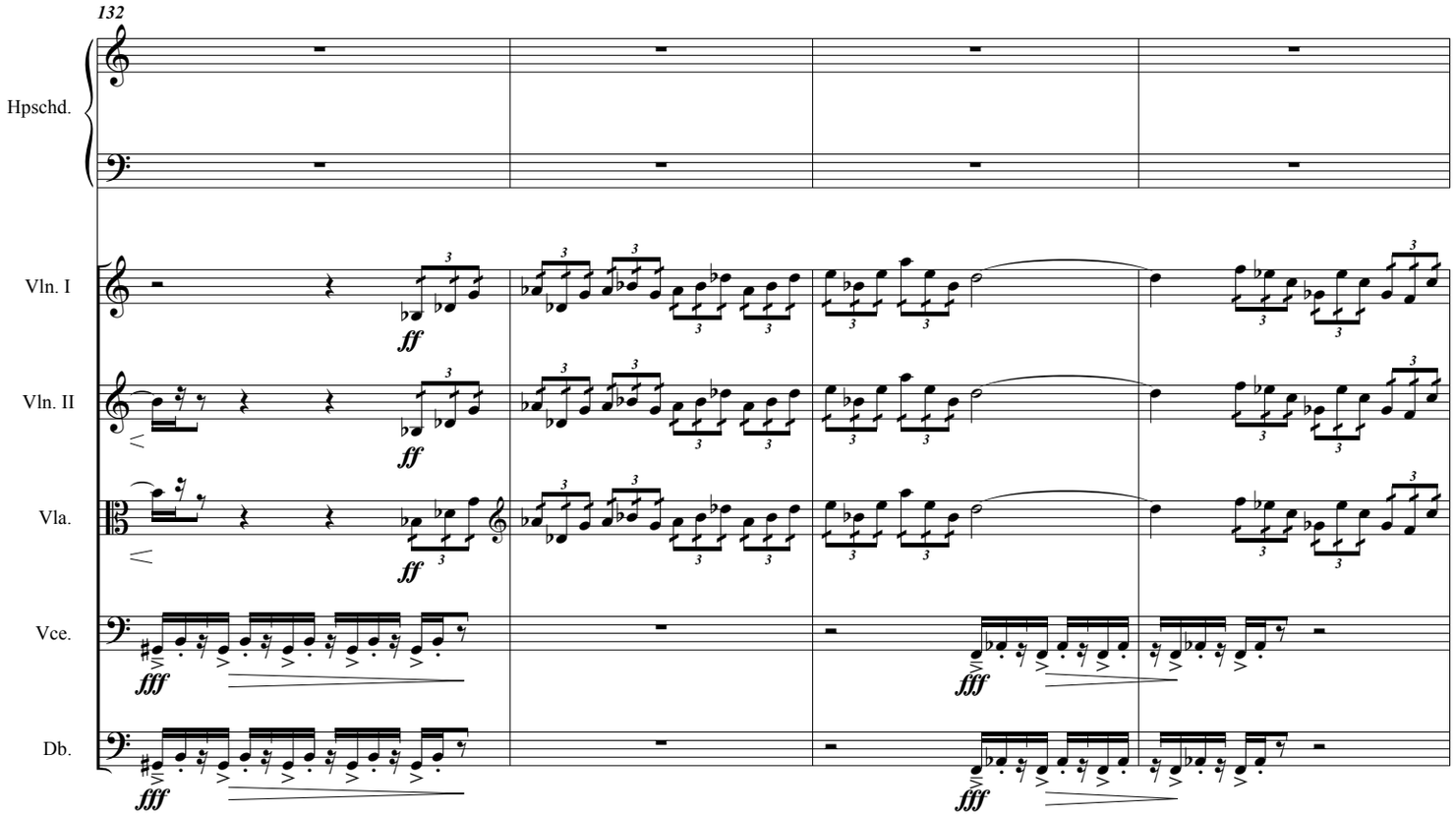

I
= 48
Smplr.
Volume fader: 75%
Rhythmic high freq noise plus fundamental notes
I
= 48
*Clusters: as before
Vln. I
Vln. II
Vla.
Vce.
Db.
arco
Div.
senza vib.
molto vib.
normale
ff
pp
p

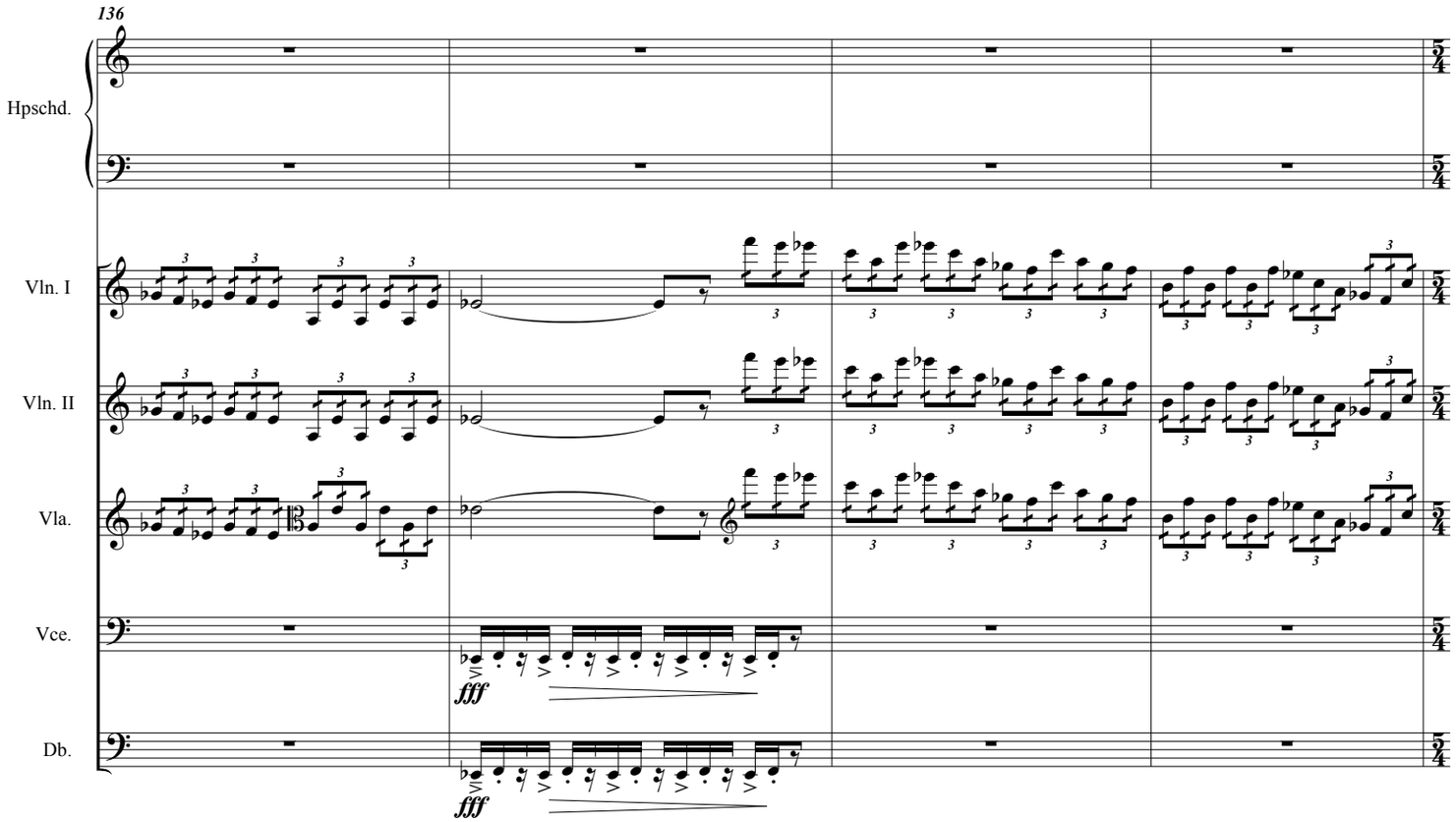


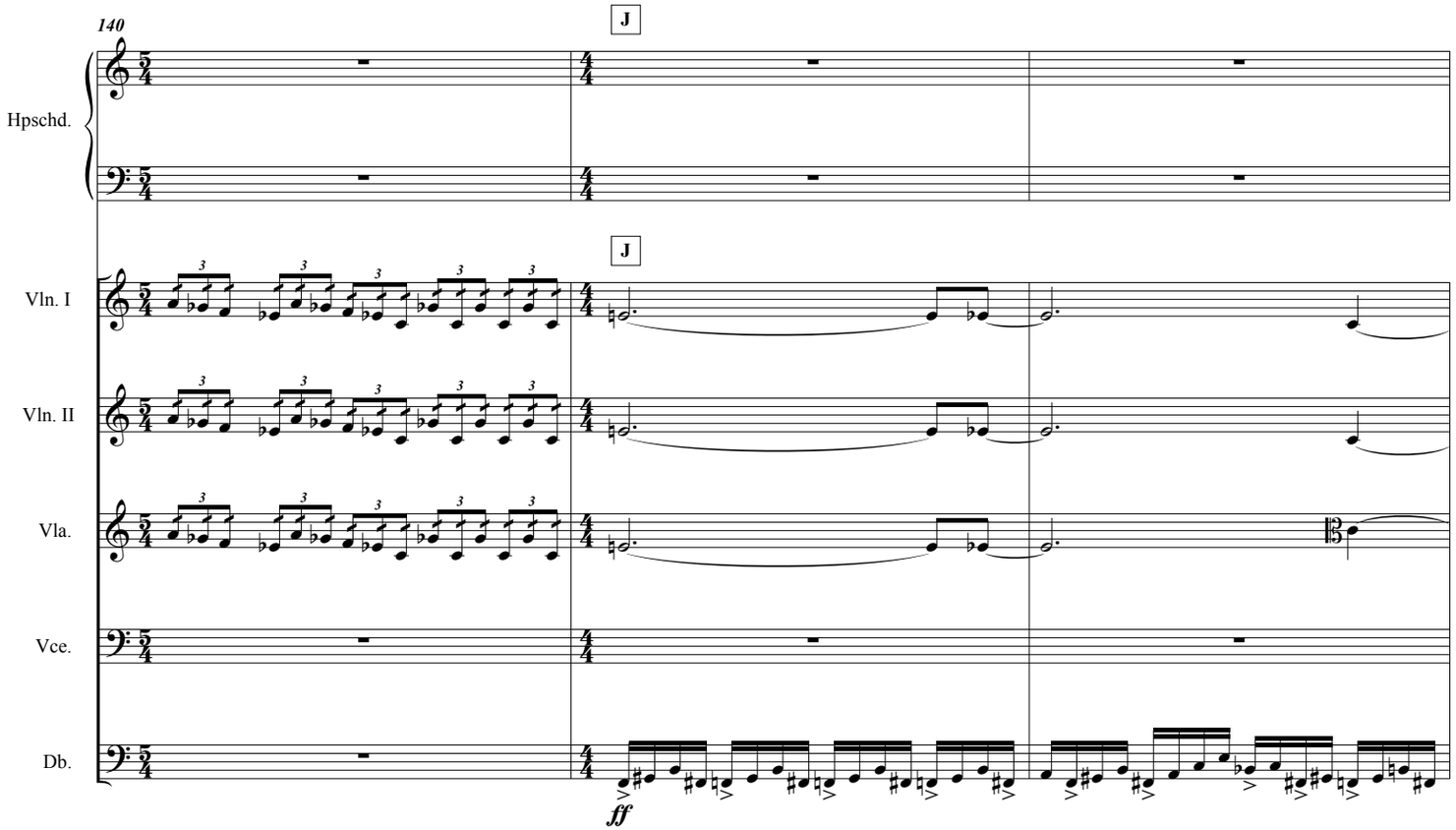
III. Dust Devils

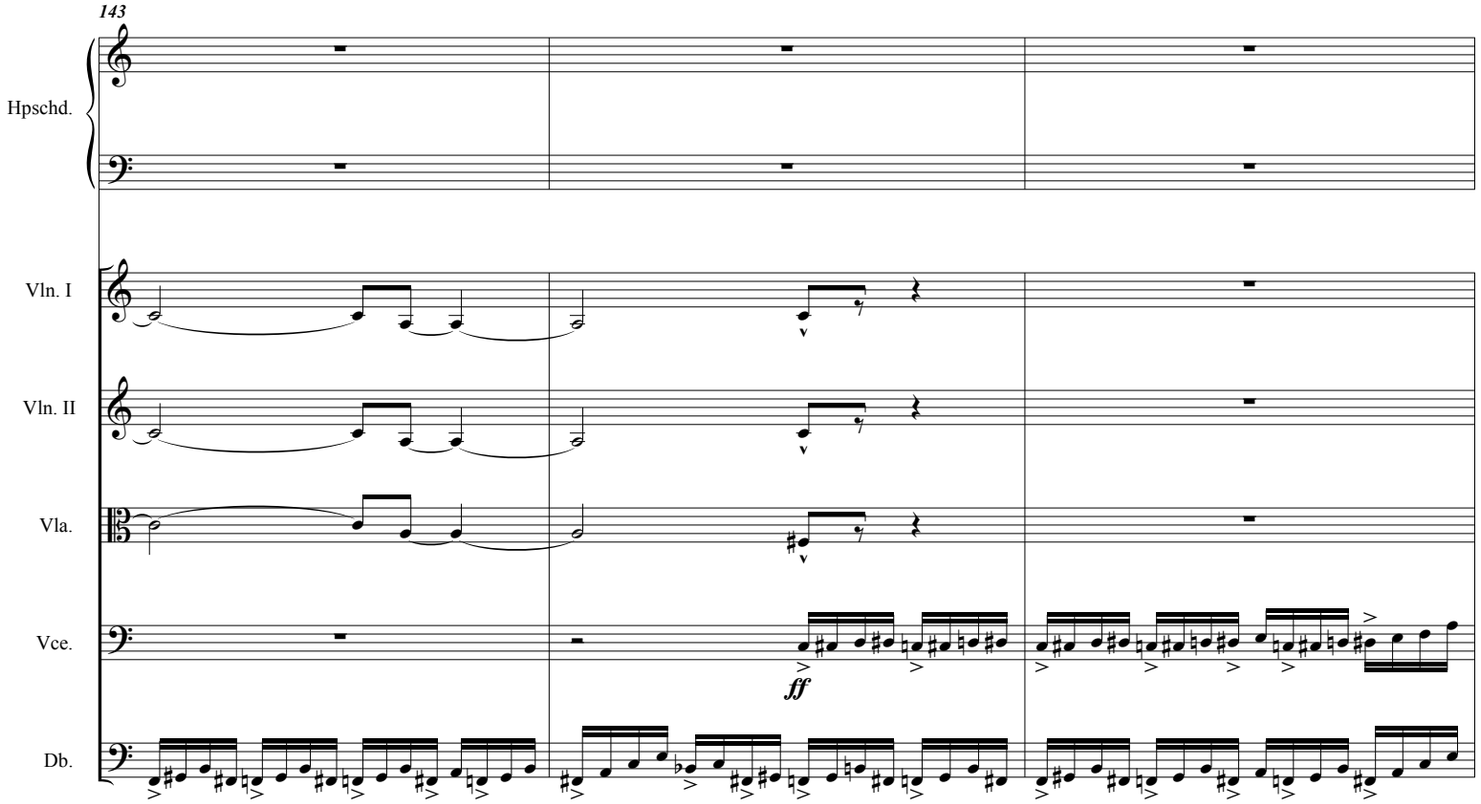


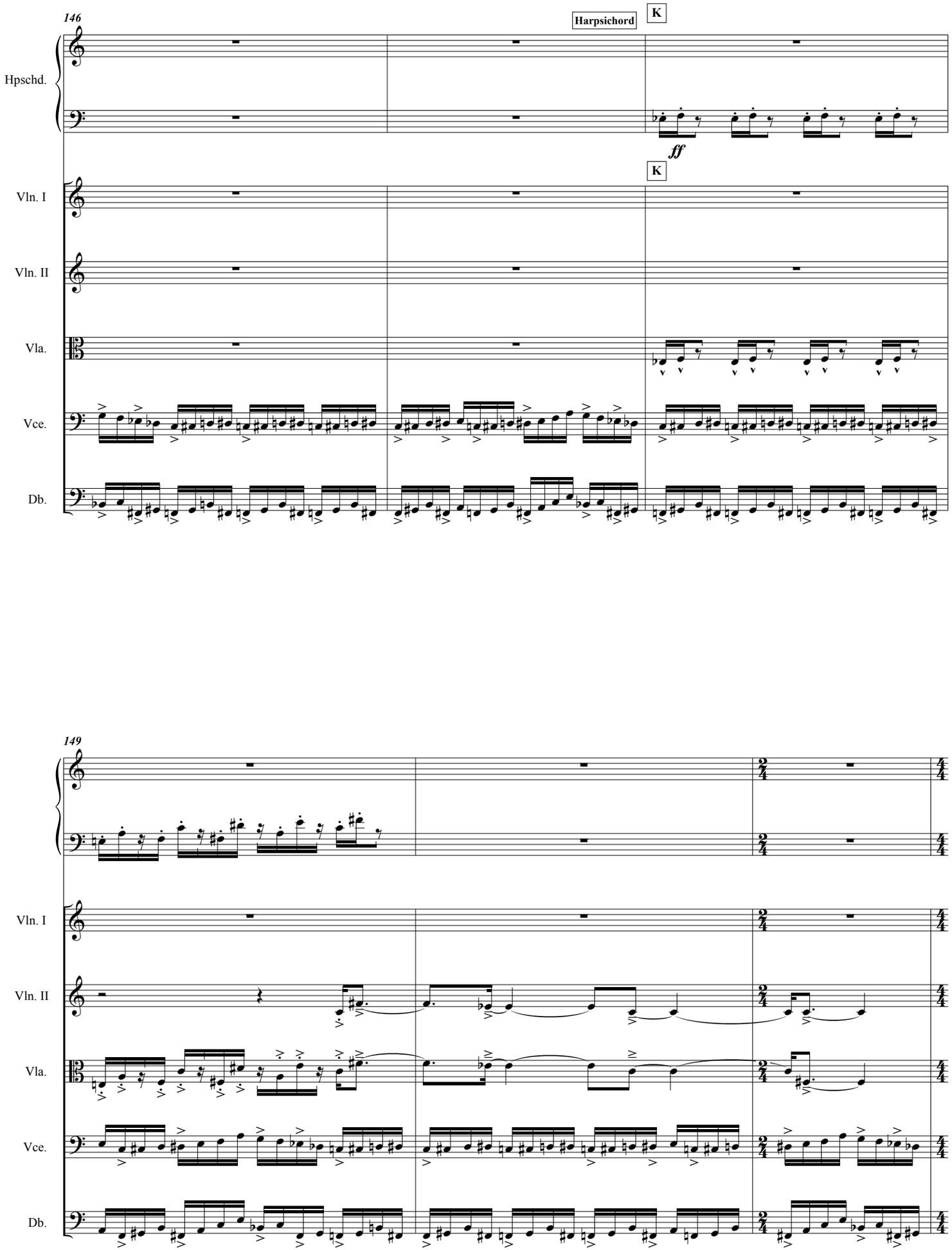

122
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
merge dynamically
with the violas
ff
fff
127
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
ff
fff

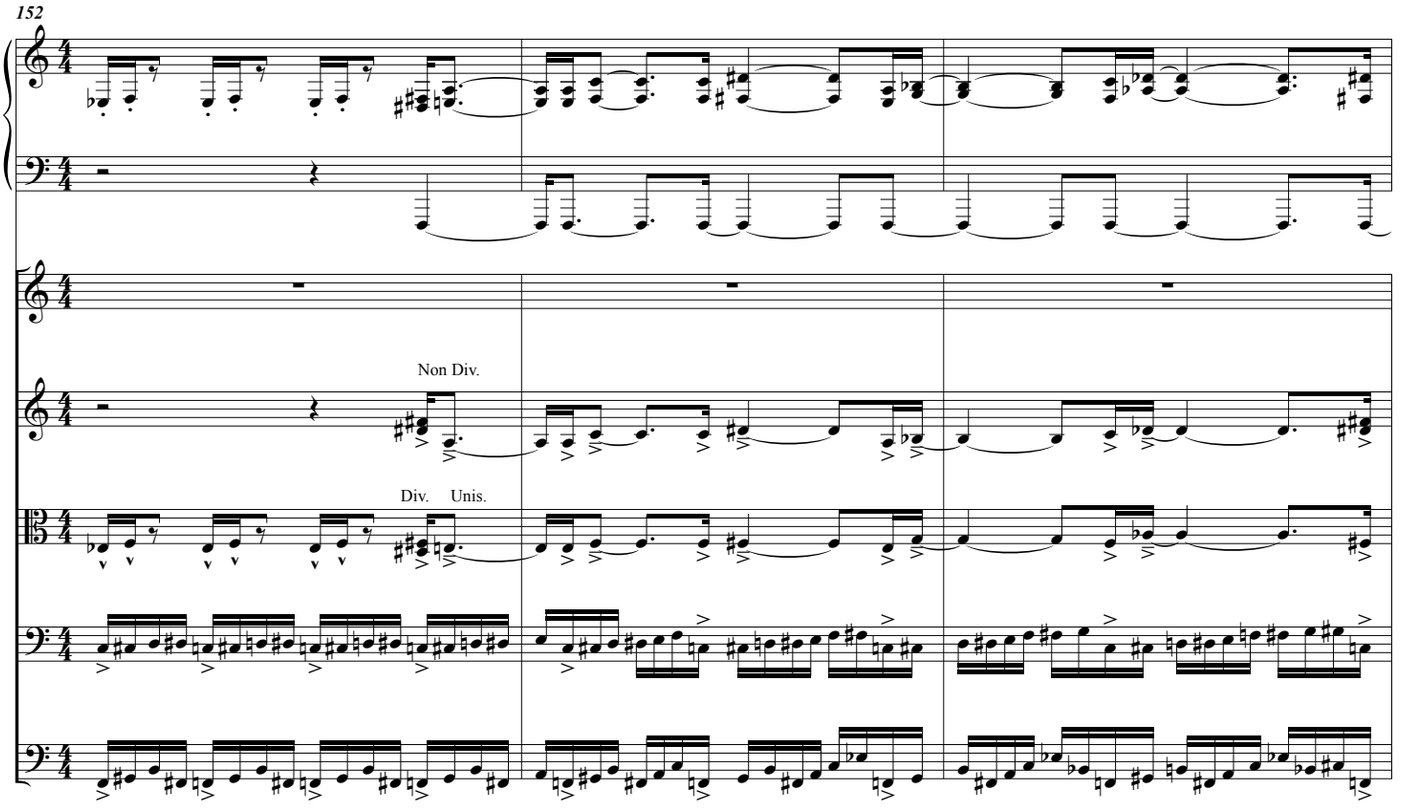

132
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
ff
fff

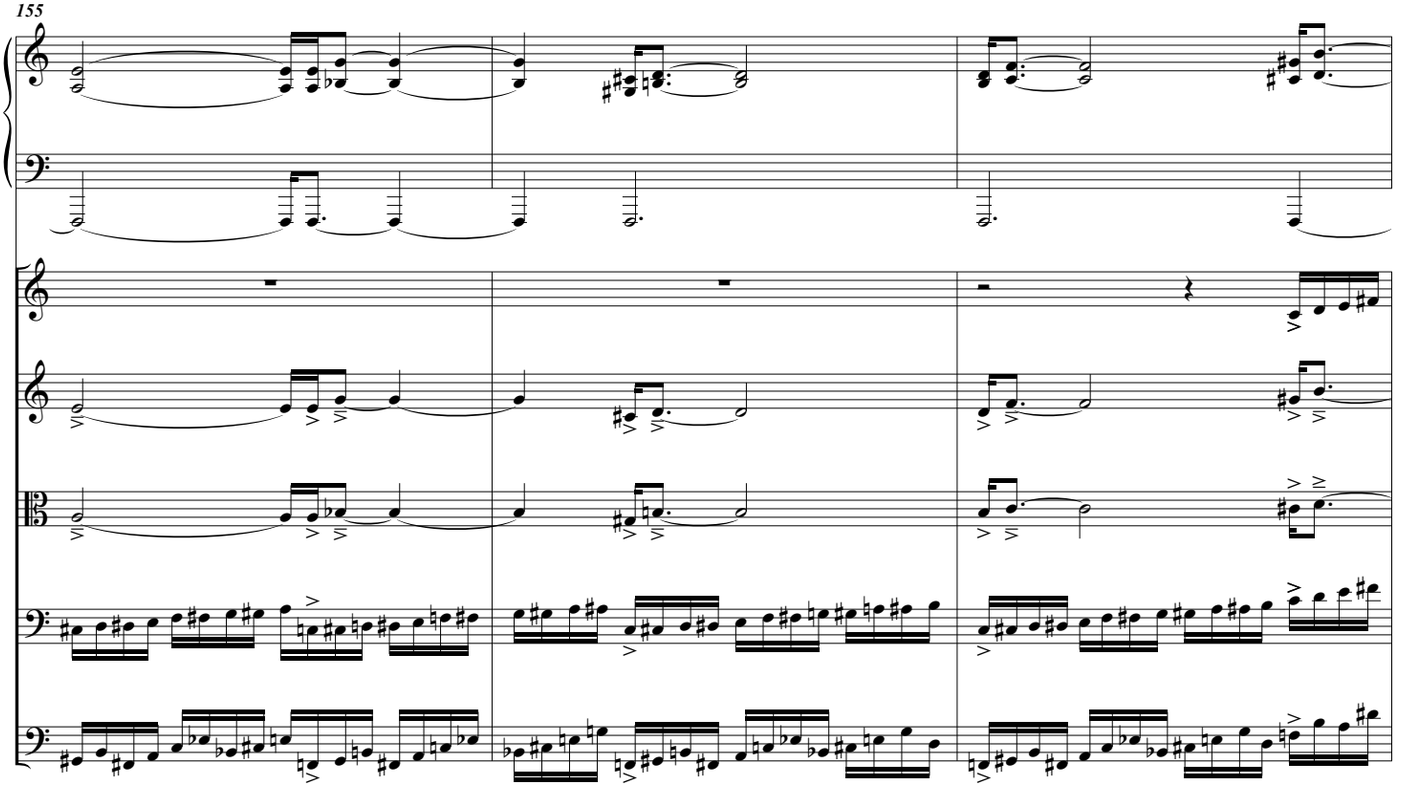

136
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
fff

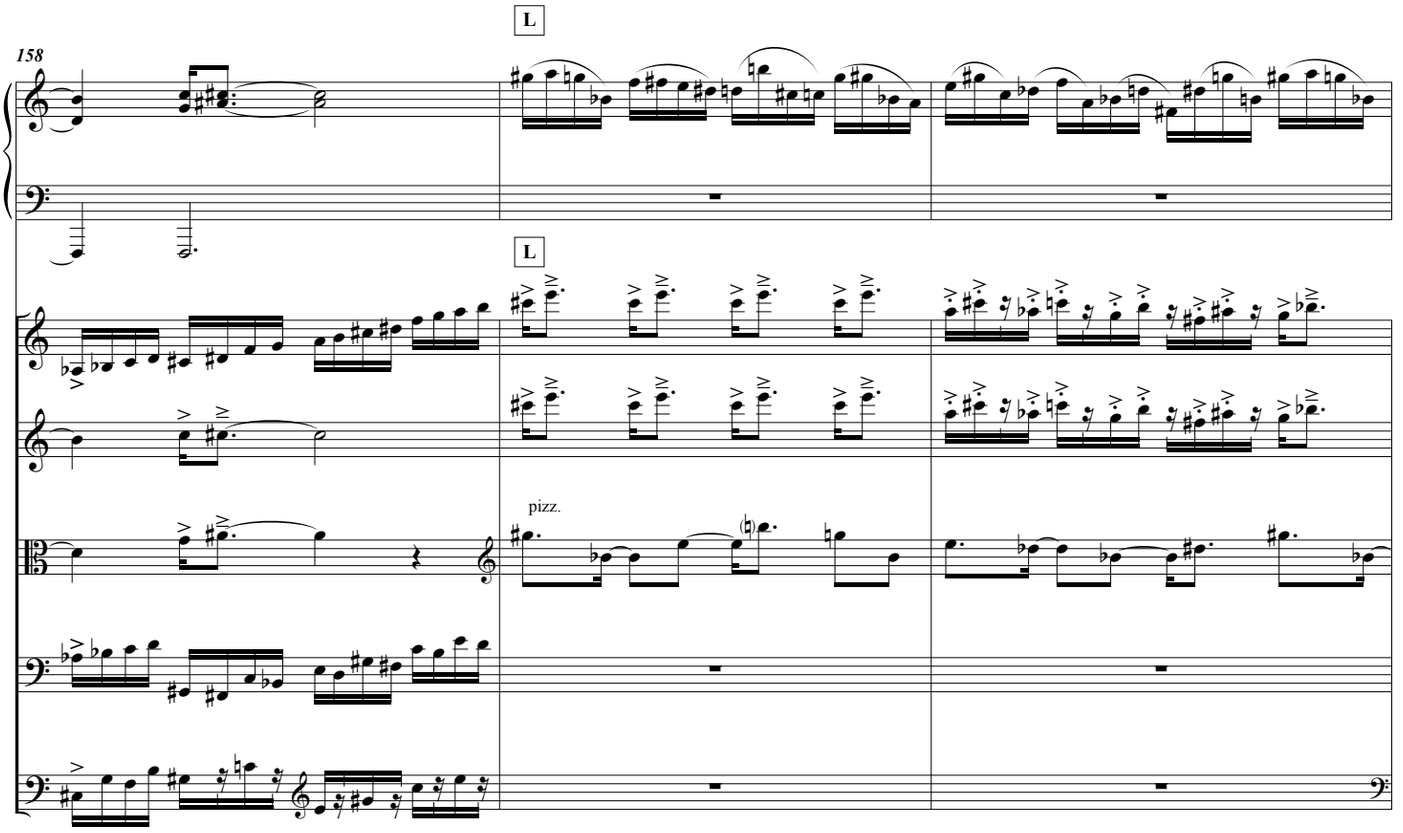

140
J
Hpschd.
J
Vln. I
Vln. II
Vla.
Vce.
Db.
ff

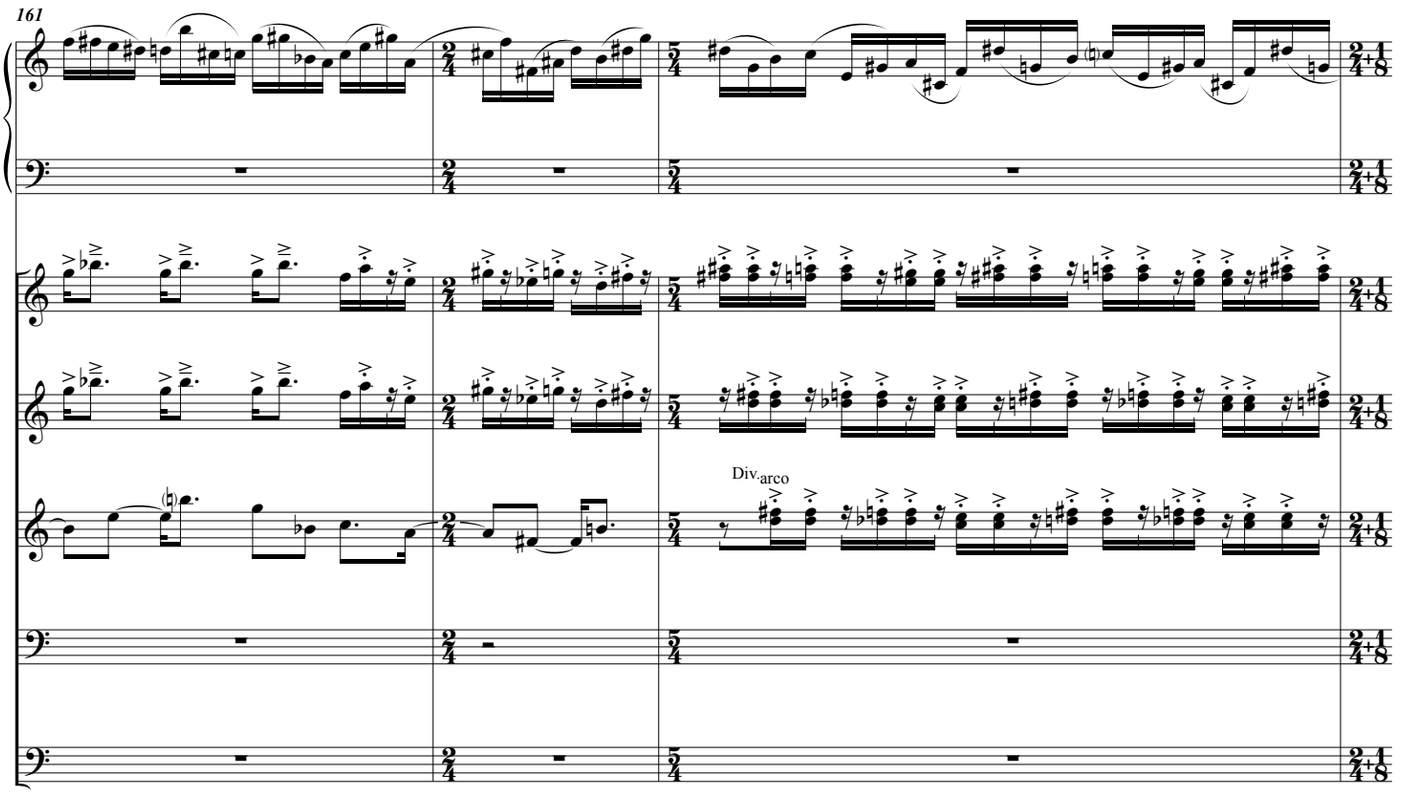

143
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
ff
Db.

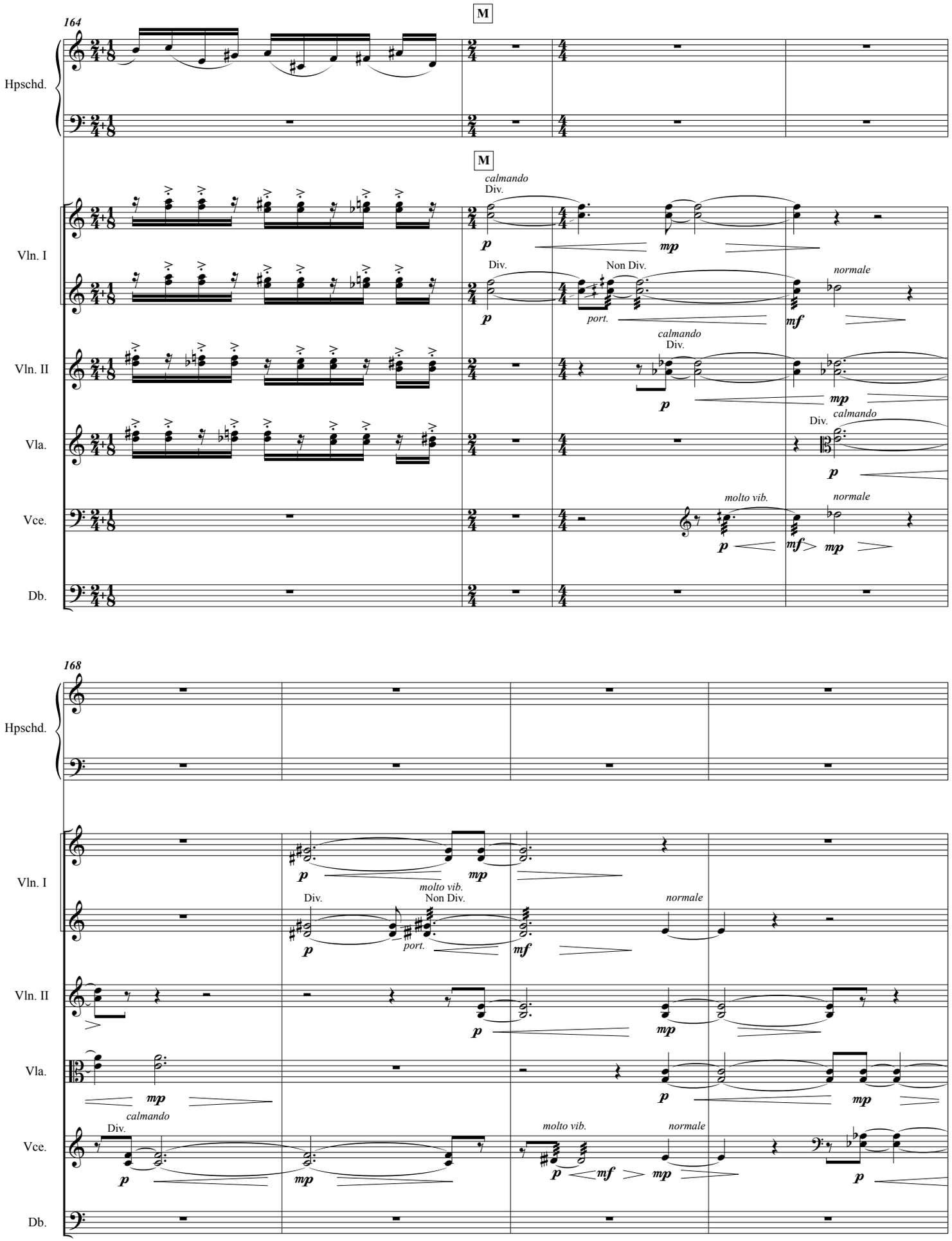

146
Harpsichord
K
Hpschd.
ff
K
Vln. I
Vln. II
Vla.
Vce.
Db.
149
Vln. I
Vln. II
Vla.
Vce.
Db.

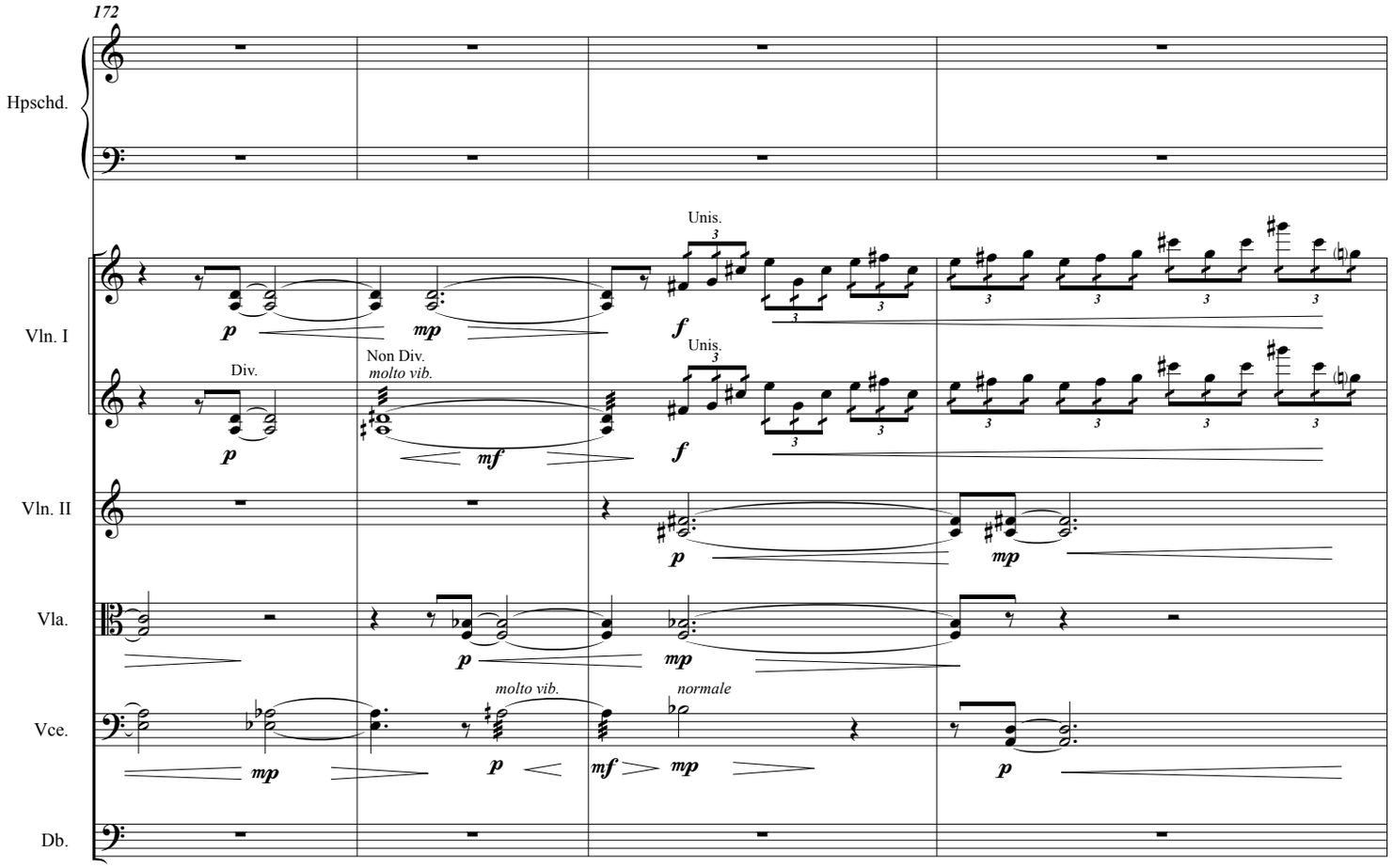

152
Vln. I
Vln. II
Non Div.
Vla.
Div. Unis.
Vce.
Db.

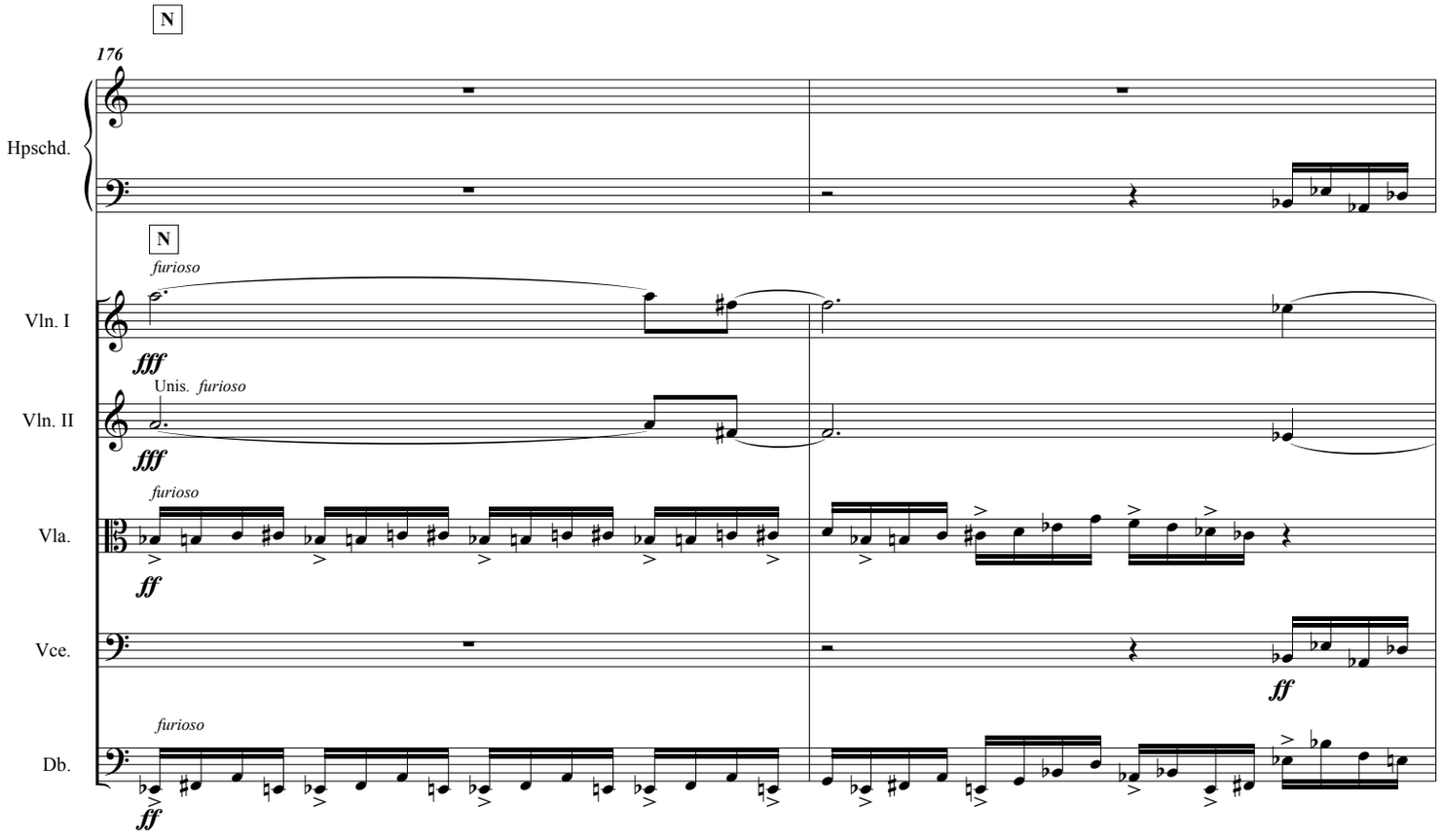

155
Vln. I
Vln. II
Vla.
Vce.
Db.

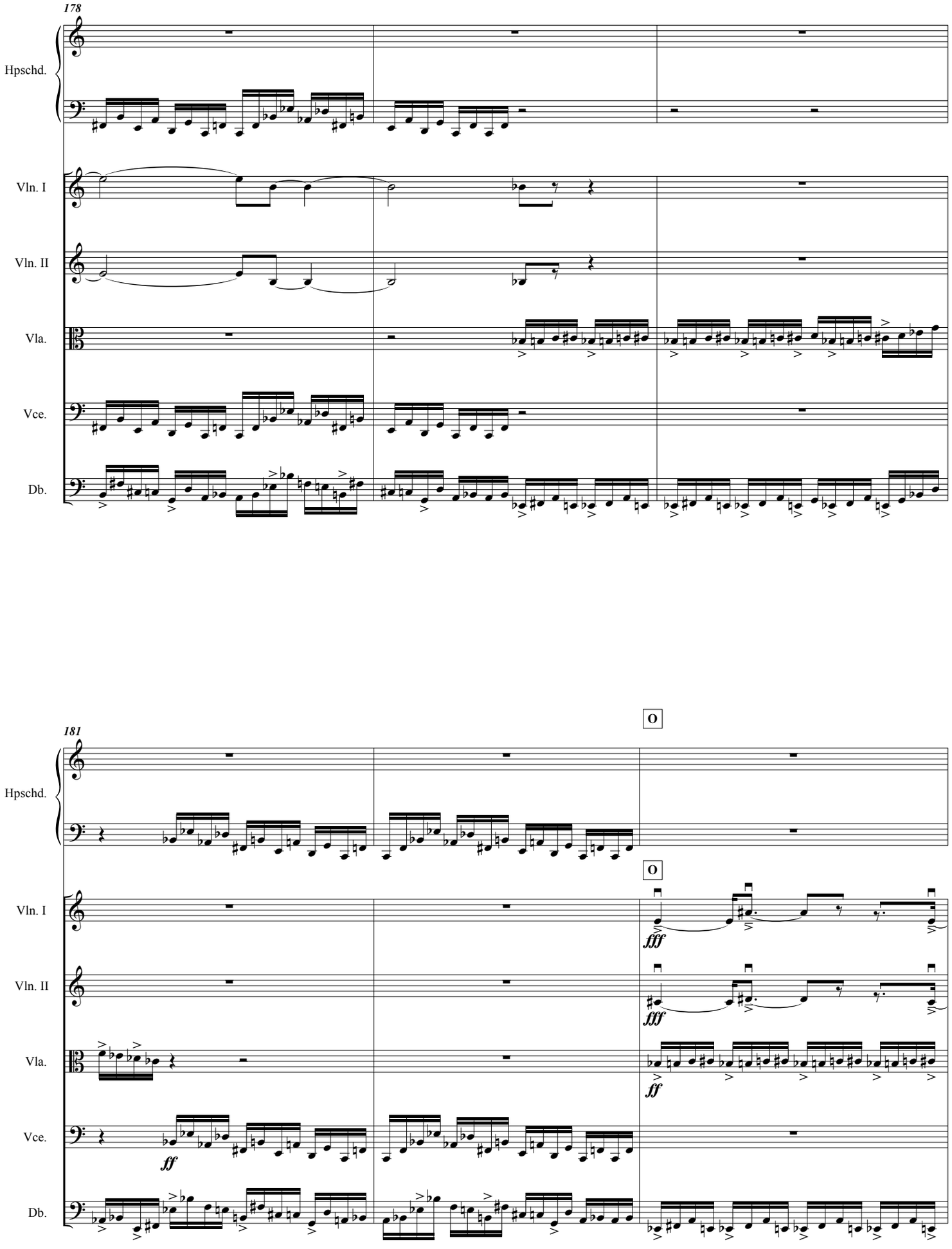

L
158
L
Vln. I
Vln. II
Vla.
pizz.
Vce.
Db.

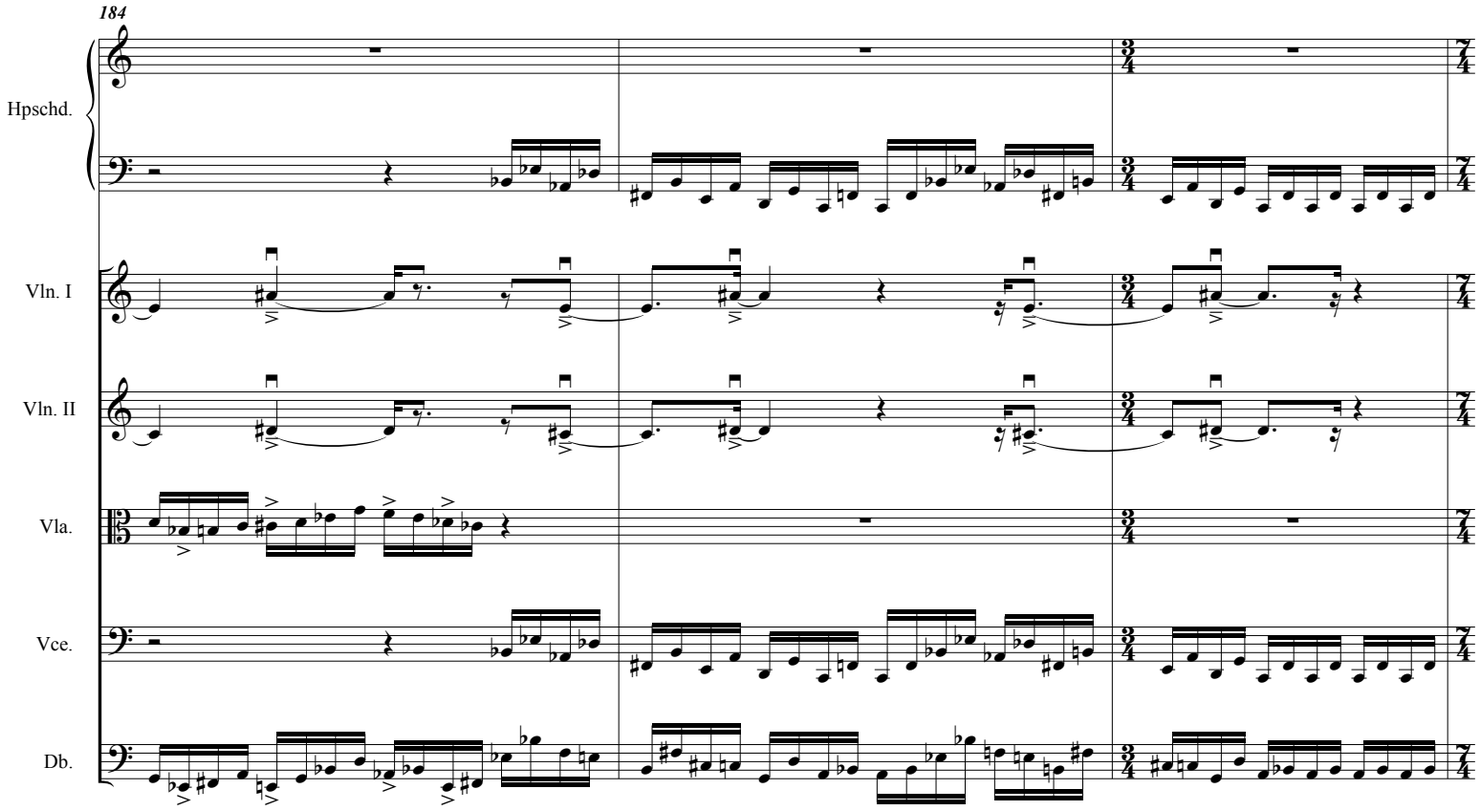

161
Hpschd.
Vln. I
Vln. II
Vla.
Div.
arco
Vce.
Db.

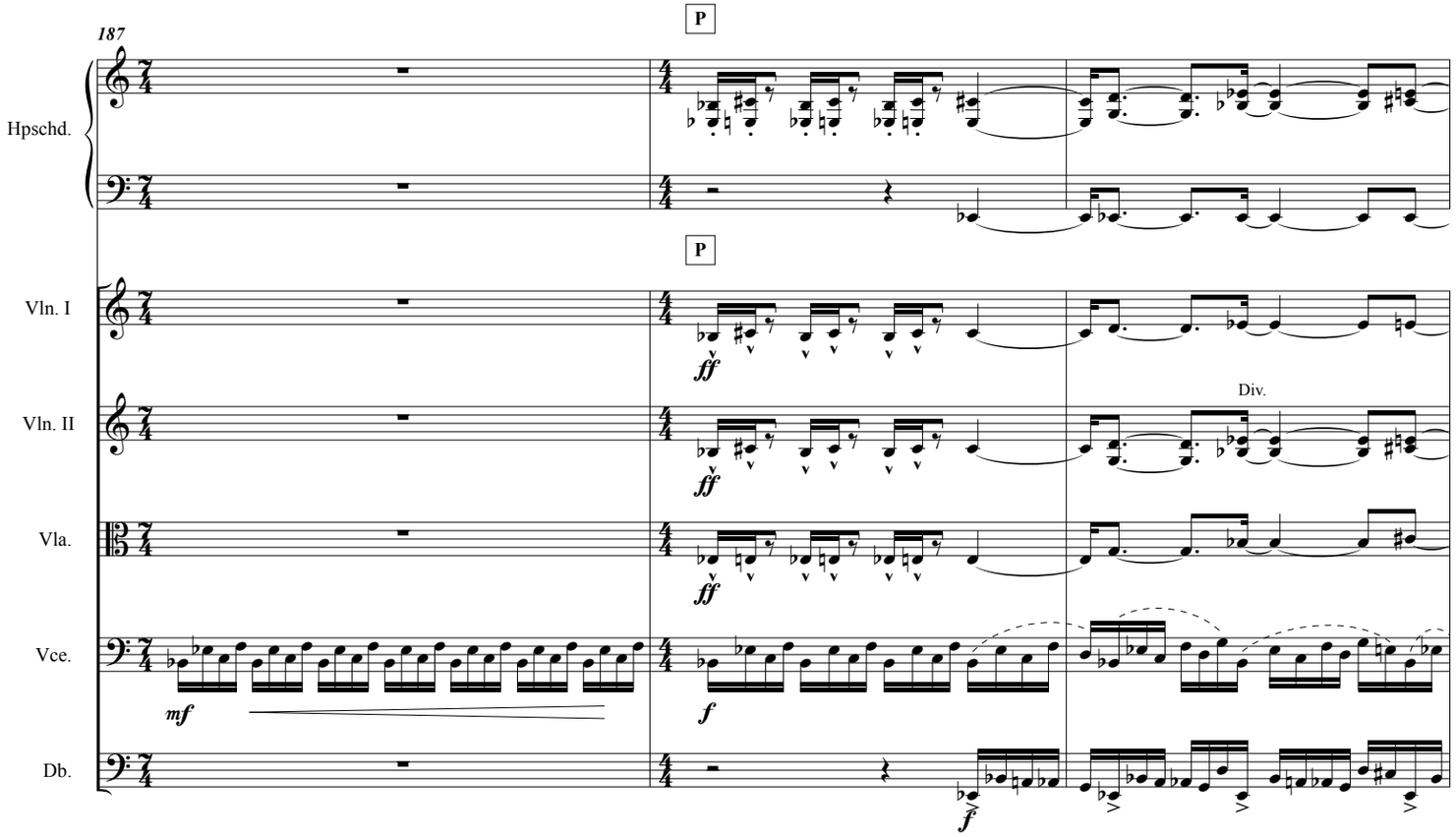

164
M
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
calmando
Div.
Non Div.
port.
normale
molto vib.
168

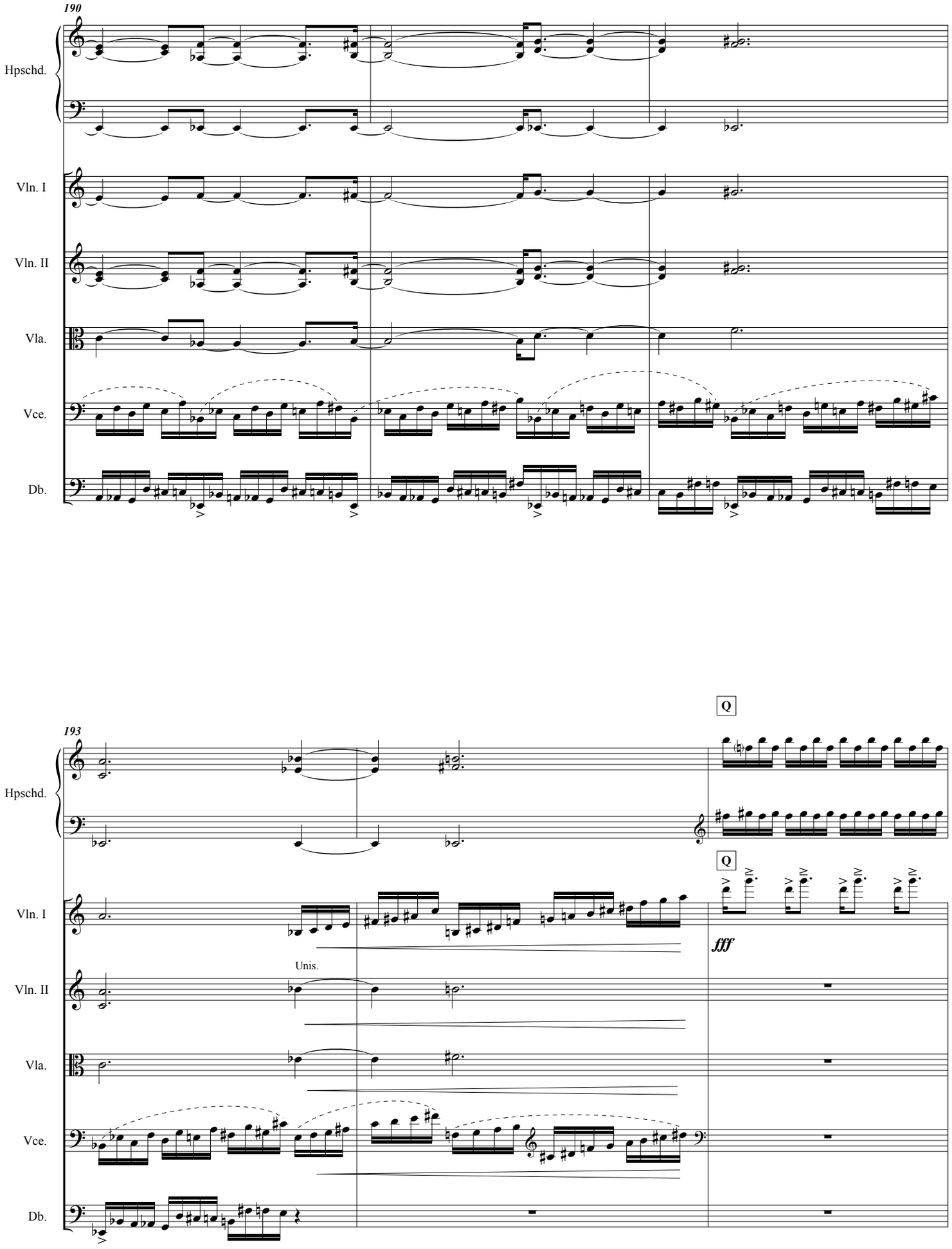

172
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
Unis.
Div.
Non Div.
molto vib.
molto vib.
normale

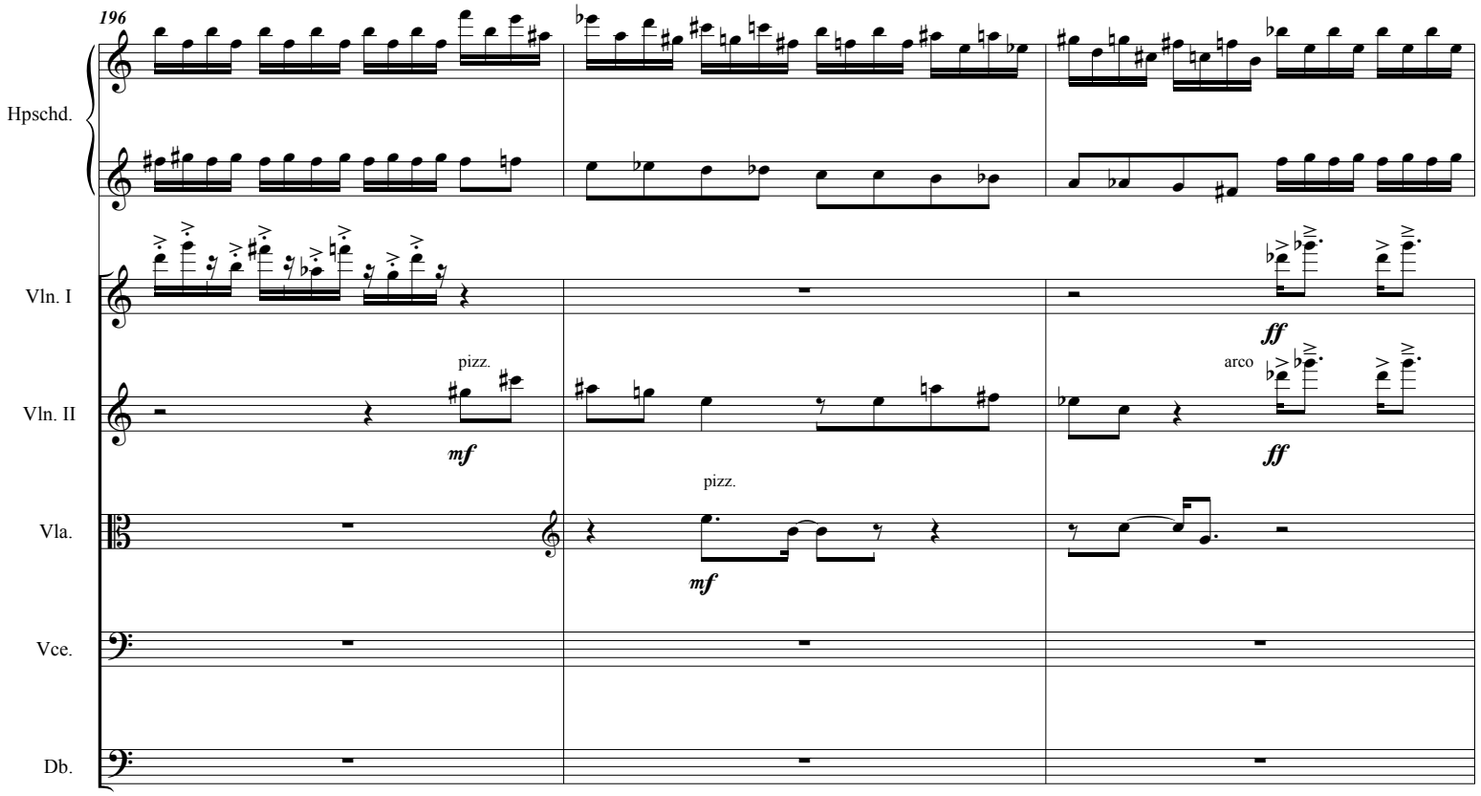

N
176
Hpschd.
N
furioso
Vln. I
Unis. furioso
Vln. II
furioso
Vla.
Vce.
furioso
Db.

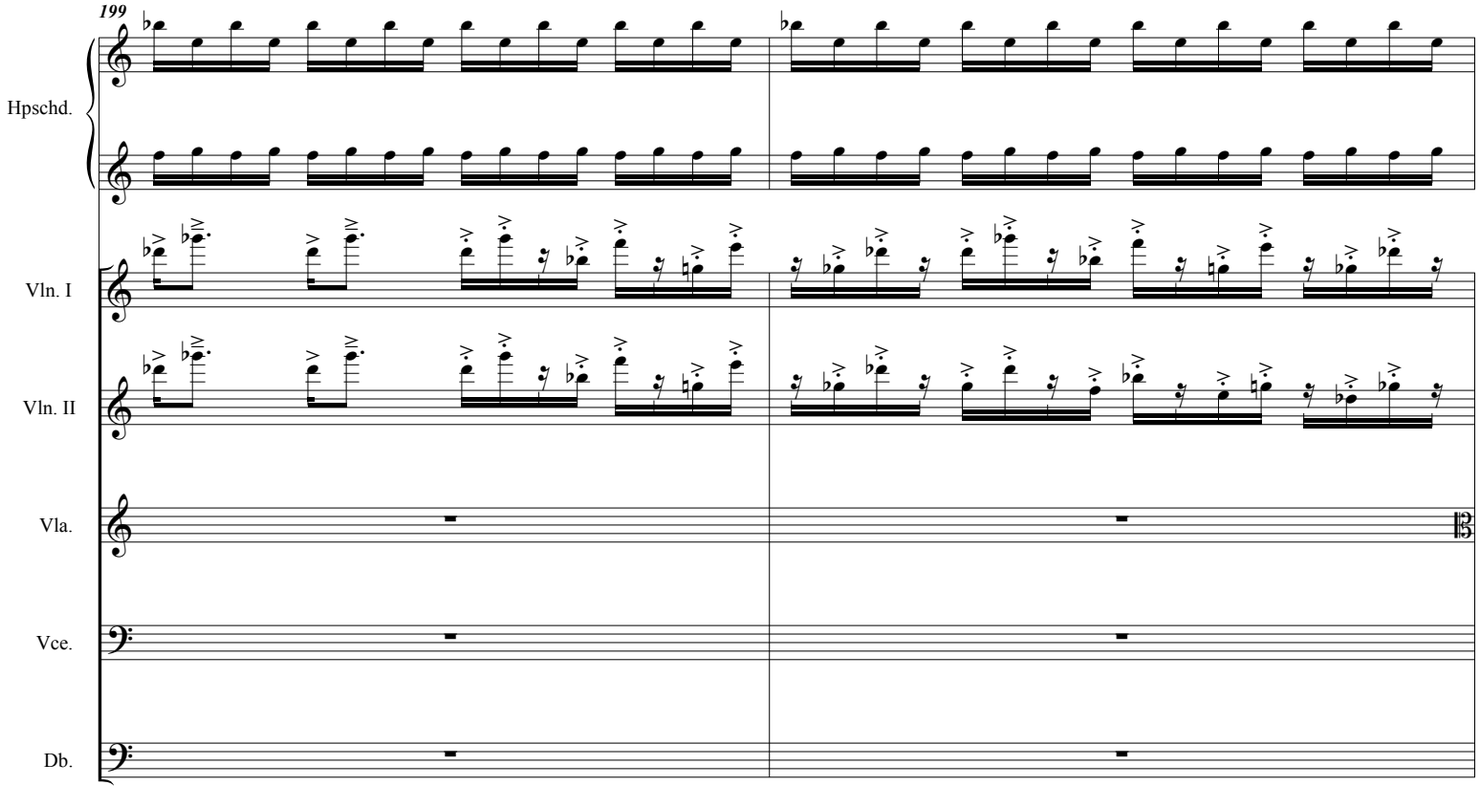

178
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
181
O
O
fff
fff
ff
ff

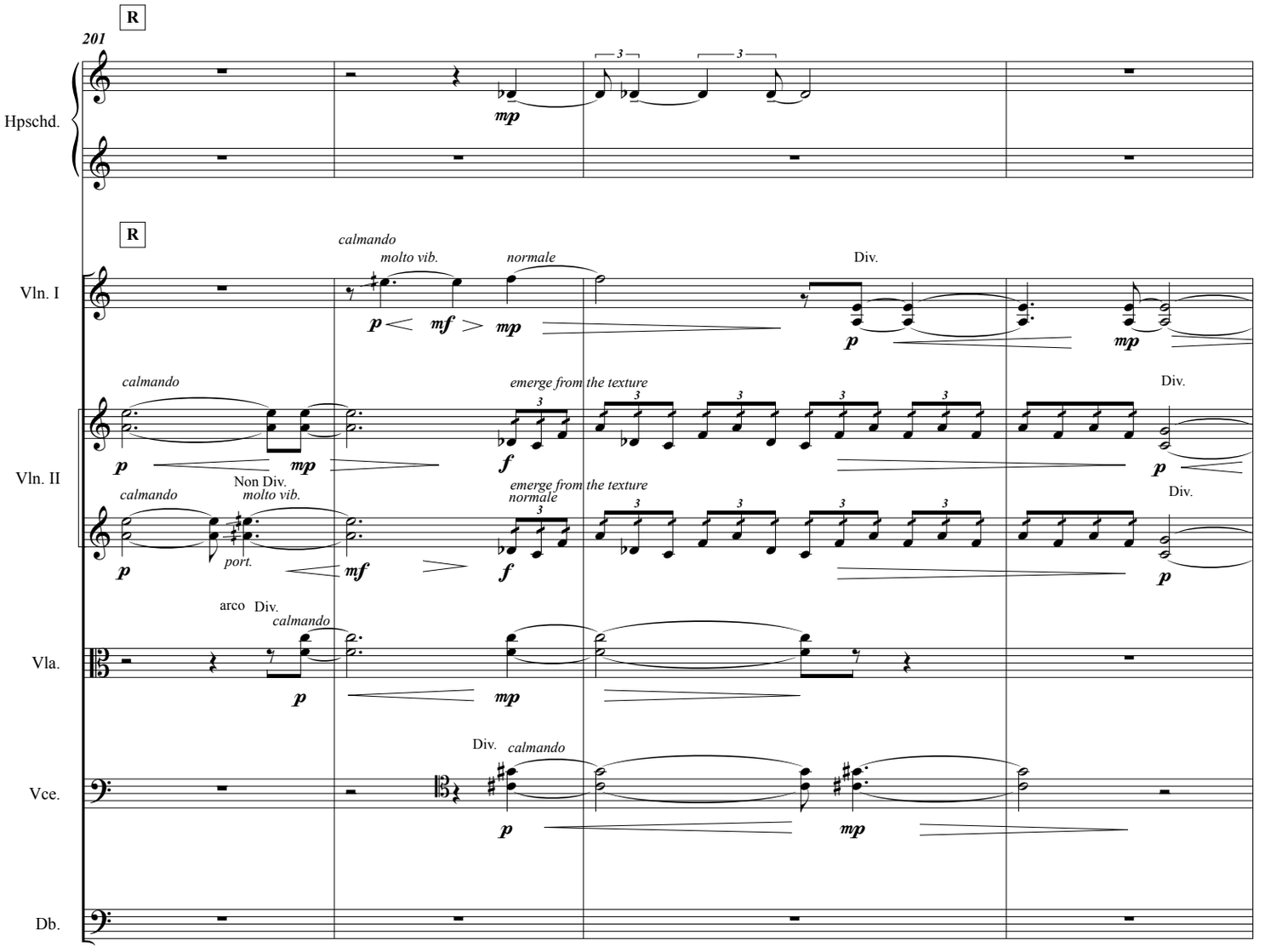

184
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.

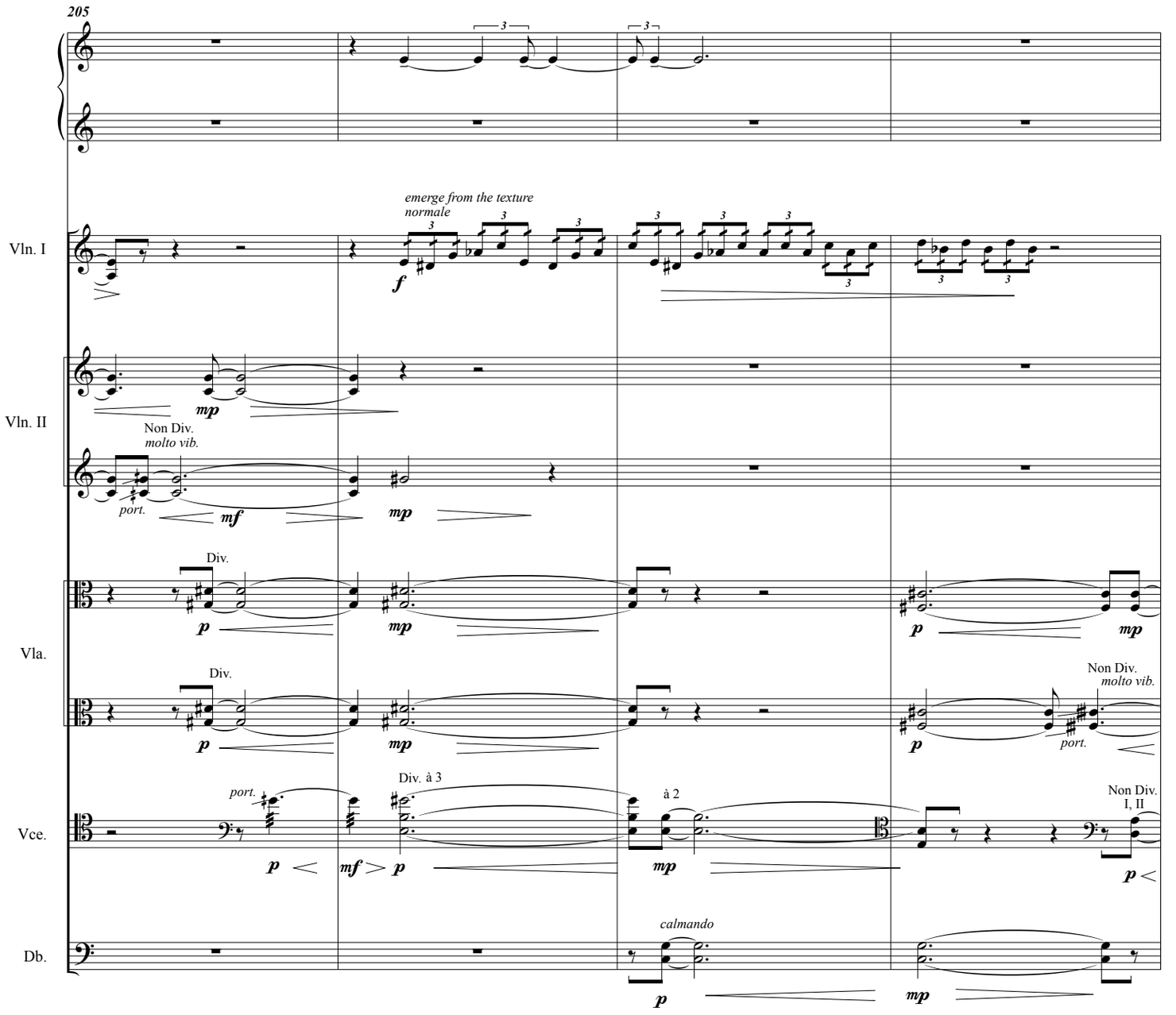

187
P
P
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
ff
ff
ff
Div.
mf
f
f

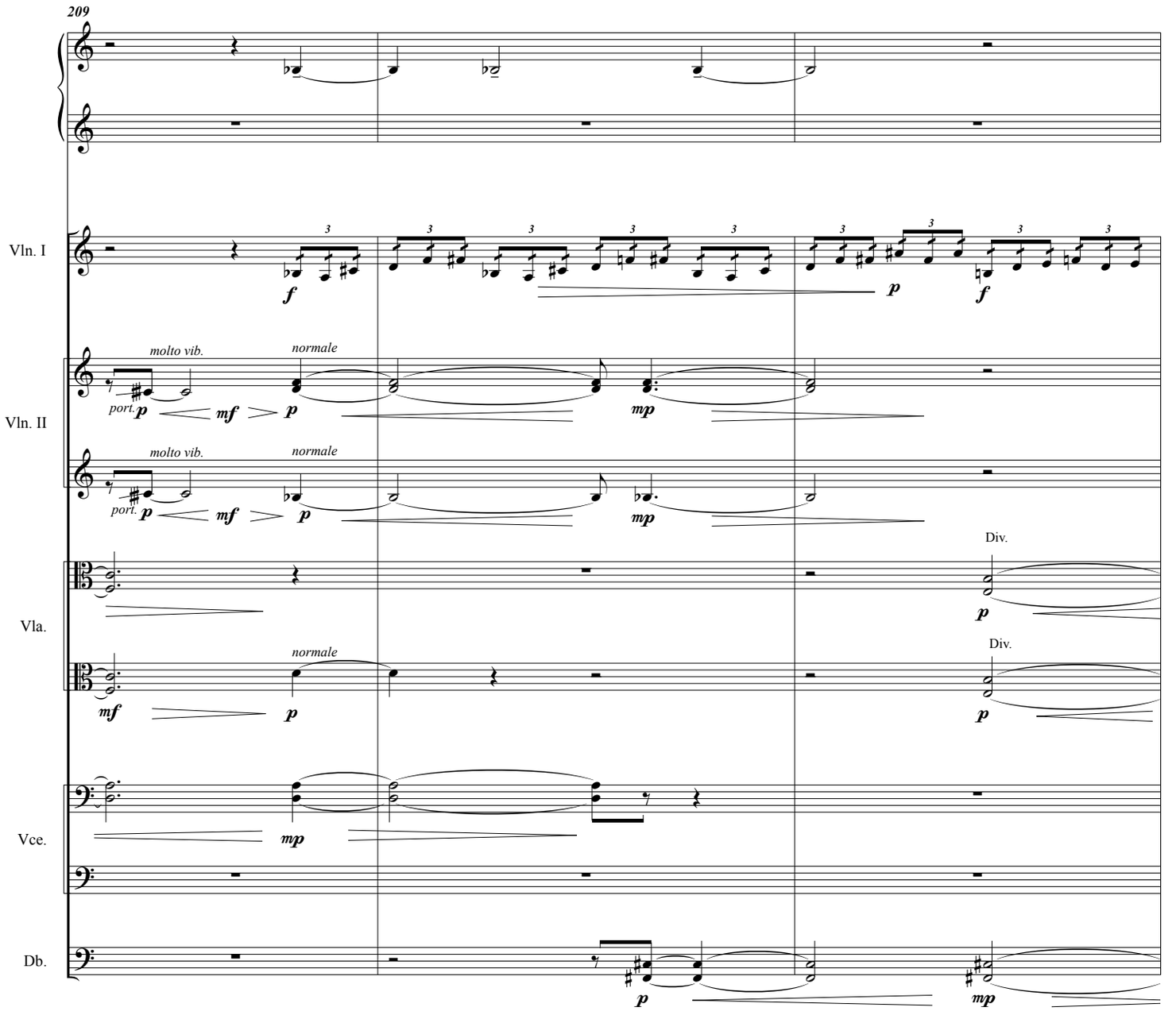

190
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
193
Q
Q
fff
Unis.

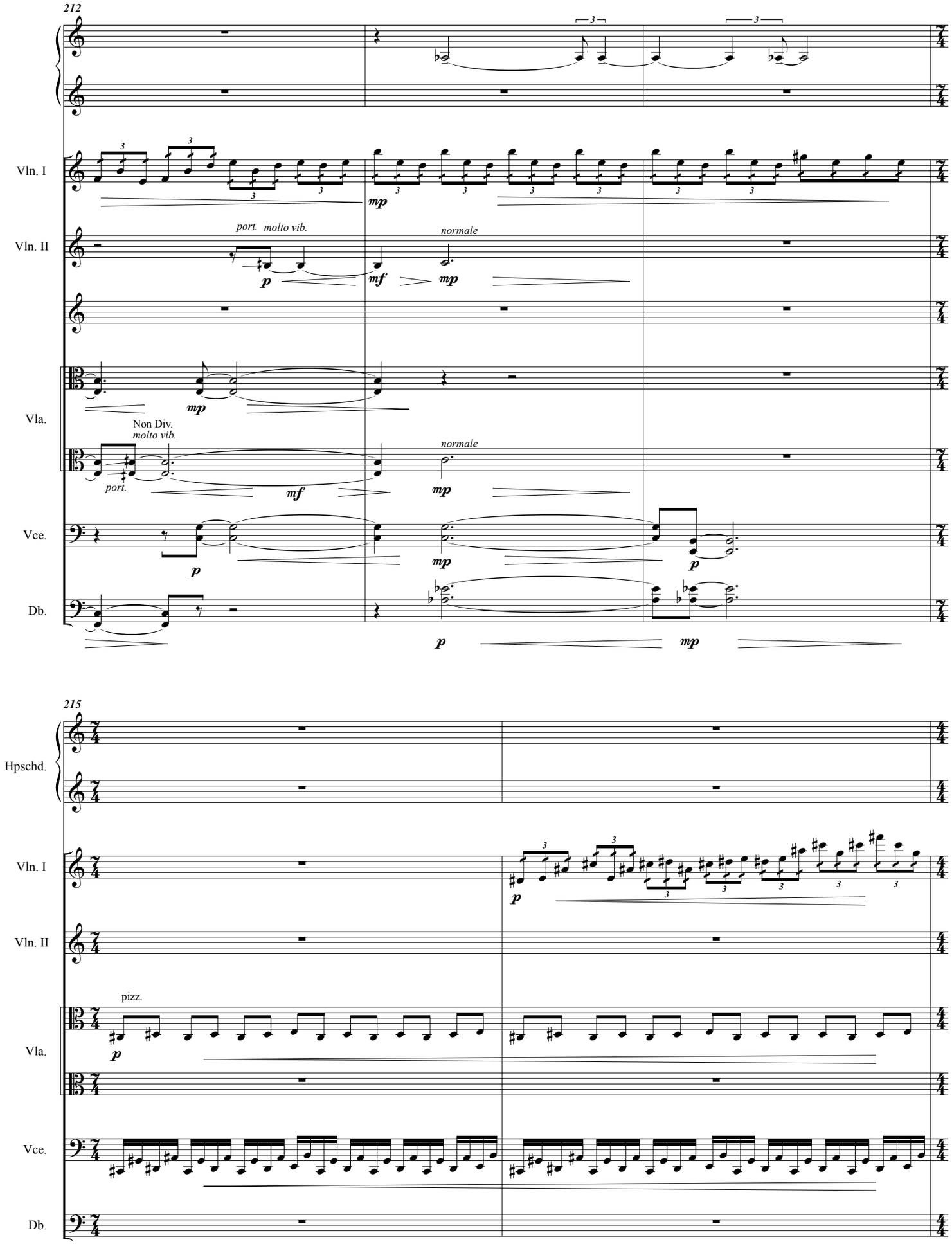

196
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
pizz.
mf
pizz.
mf
ff
arco
ff

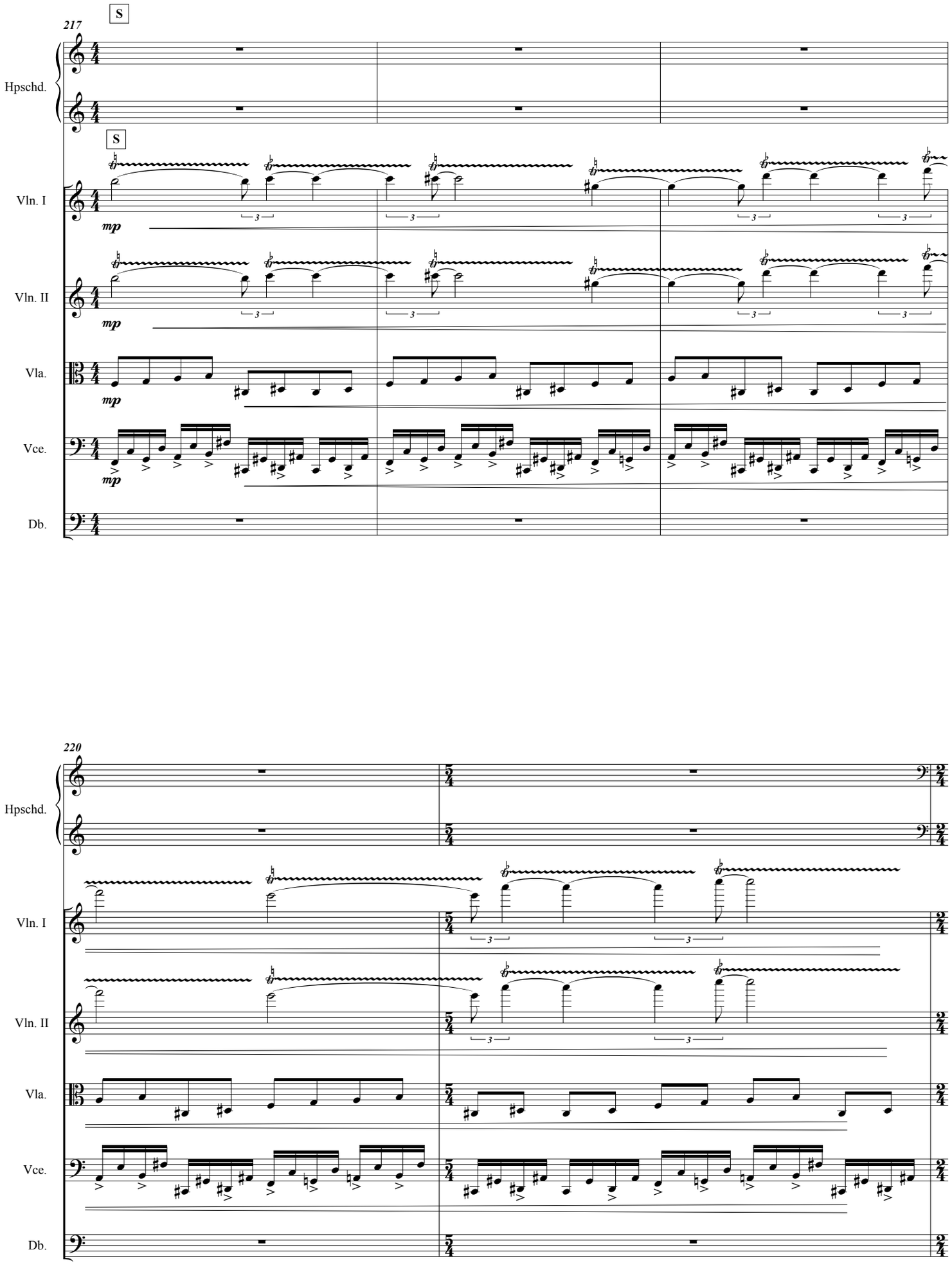

199
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.

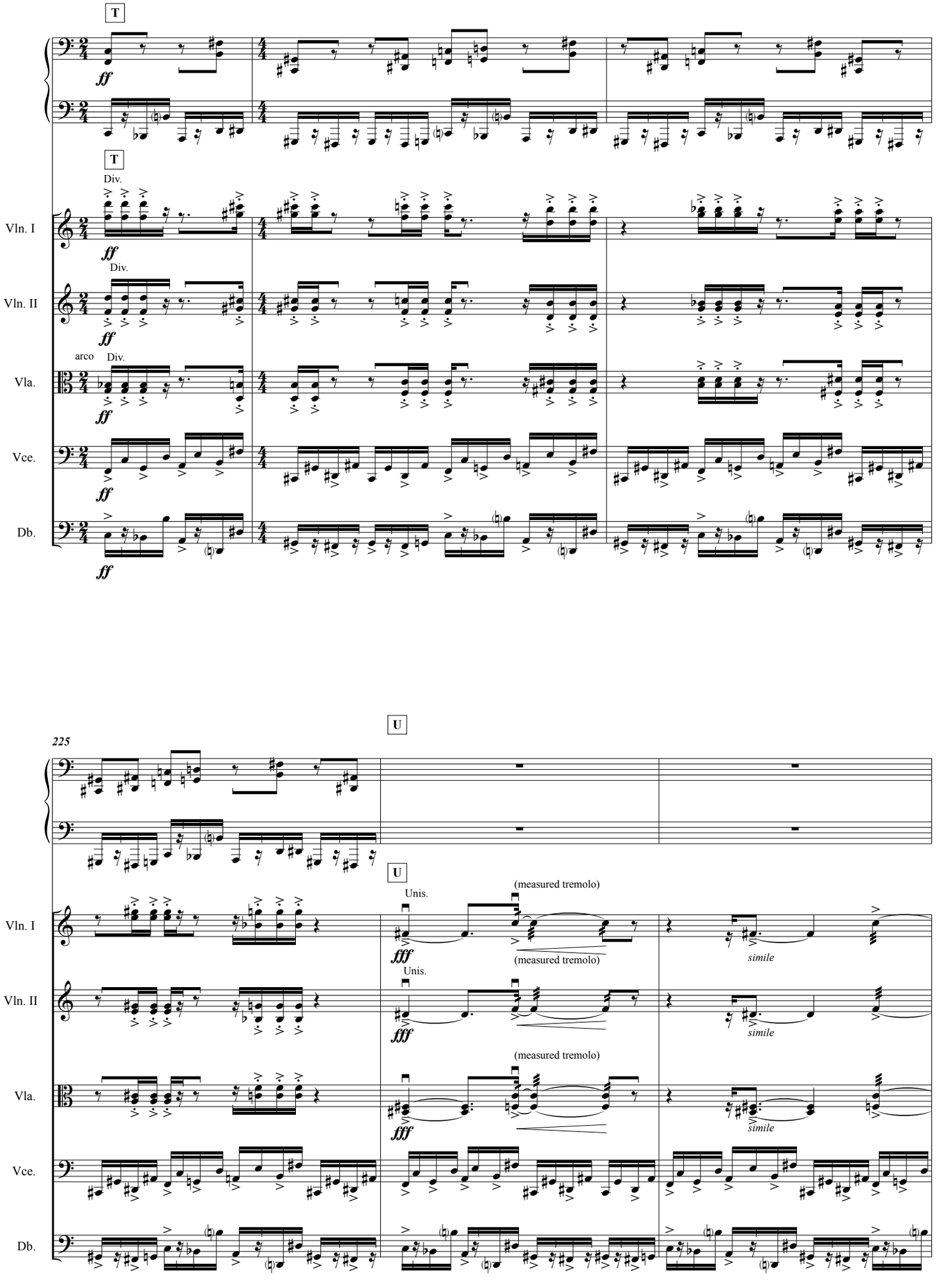

201
R
Hpschd.
mp
3
3
R
Vln. I
calmando
molto vib.
normale
Div.
p
mf
mp
p
mp
Vln. II
calmando
emerge from the texture
Div.
p
mp
f
p
calmando
Non Div.
molto vib.
emerge from the texture
normale
Div.
p
port.
mf
f
p
Vla.
arco
Div.
calmando
p
mp
Vce.
Div.
calmando
p
mp
Db.

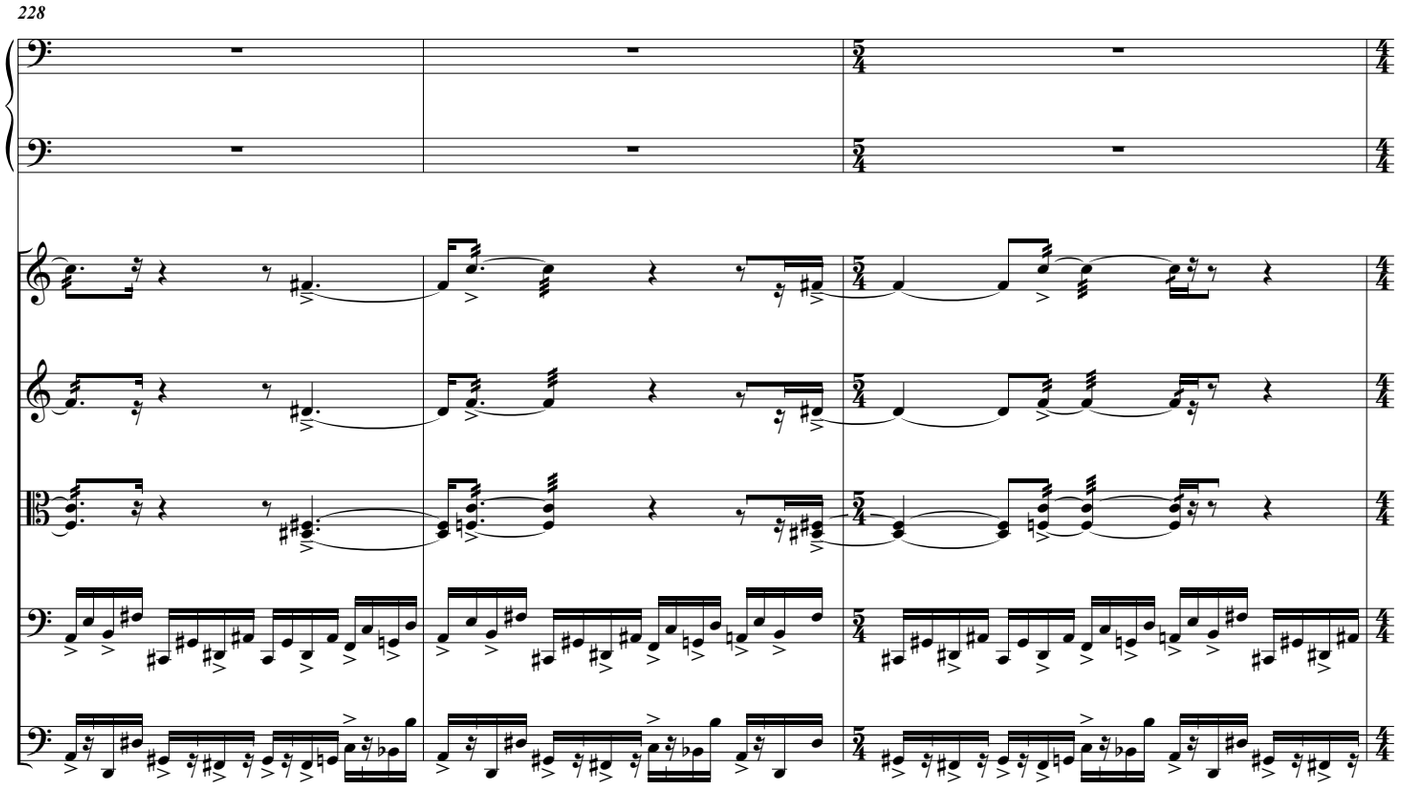

205
Vln. I
Vln. II
Vla.
Vce.
Db.
emerge from the texture
normale
Non Div.
molto vib.
port.
Div.
Div. à 3
à 2
Non Div.
I, II
calmando

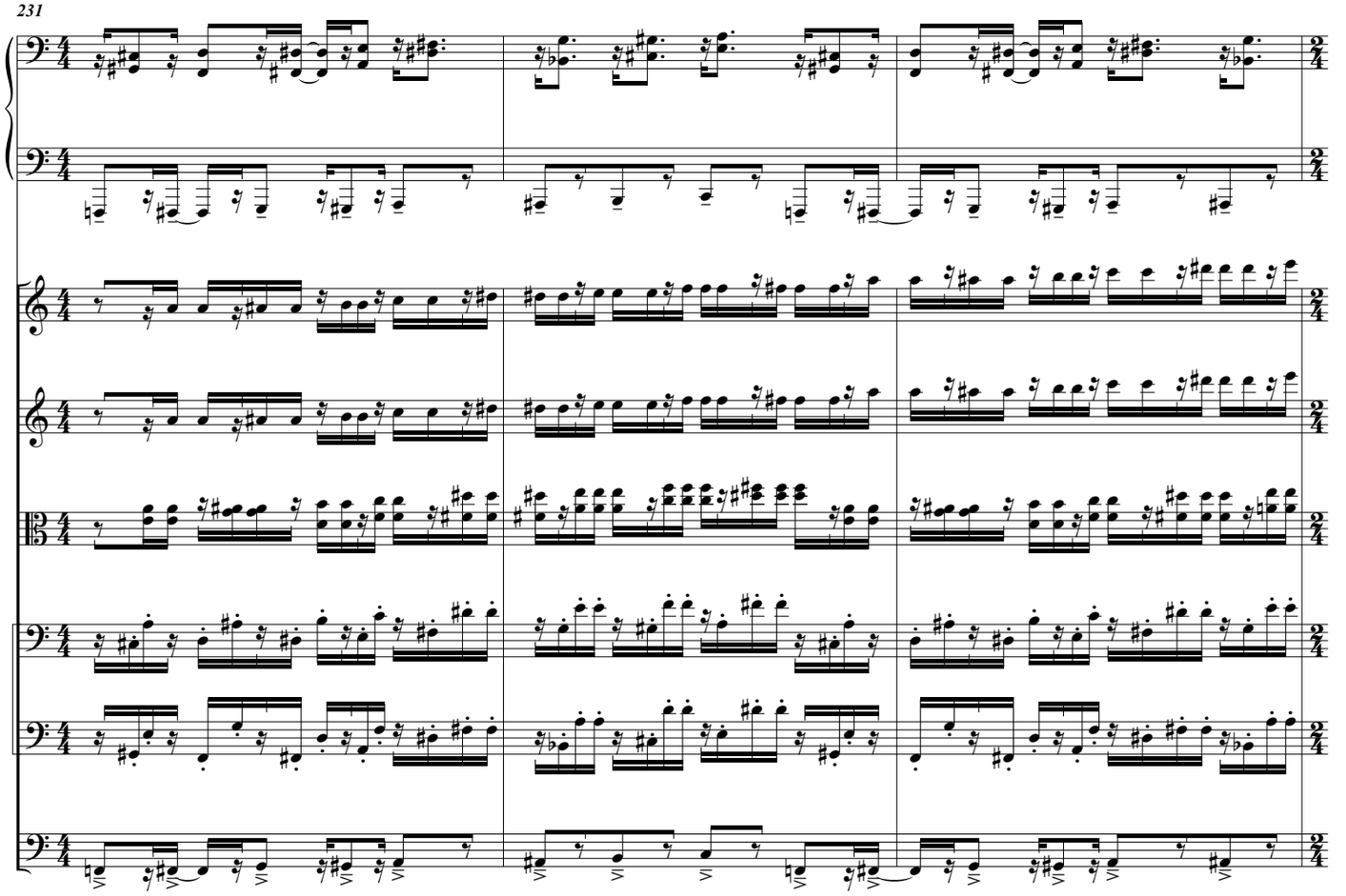

209
Vln. I
Vln. II
Vla.
Vce.
Db.
molto vib.
normale
port.
Div.

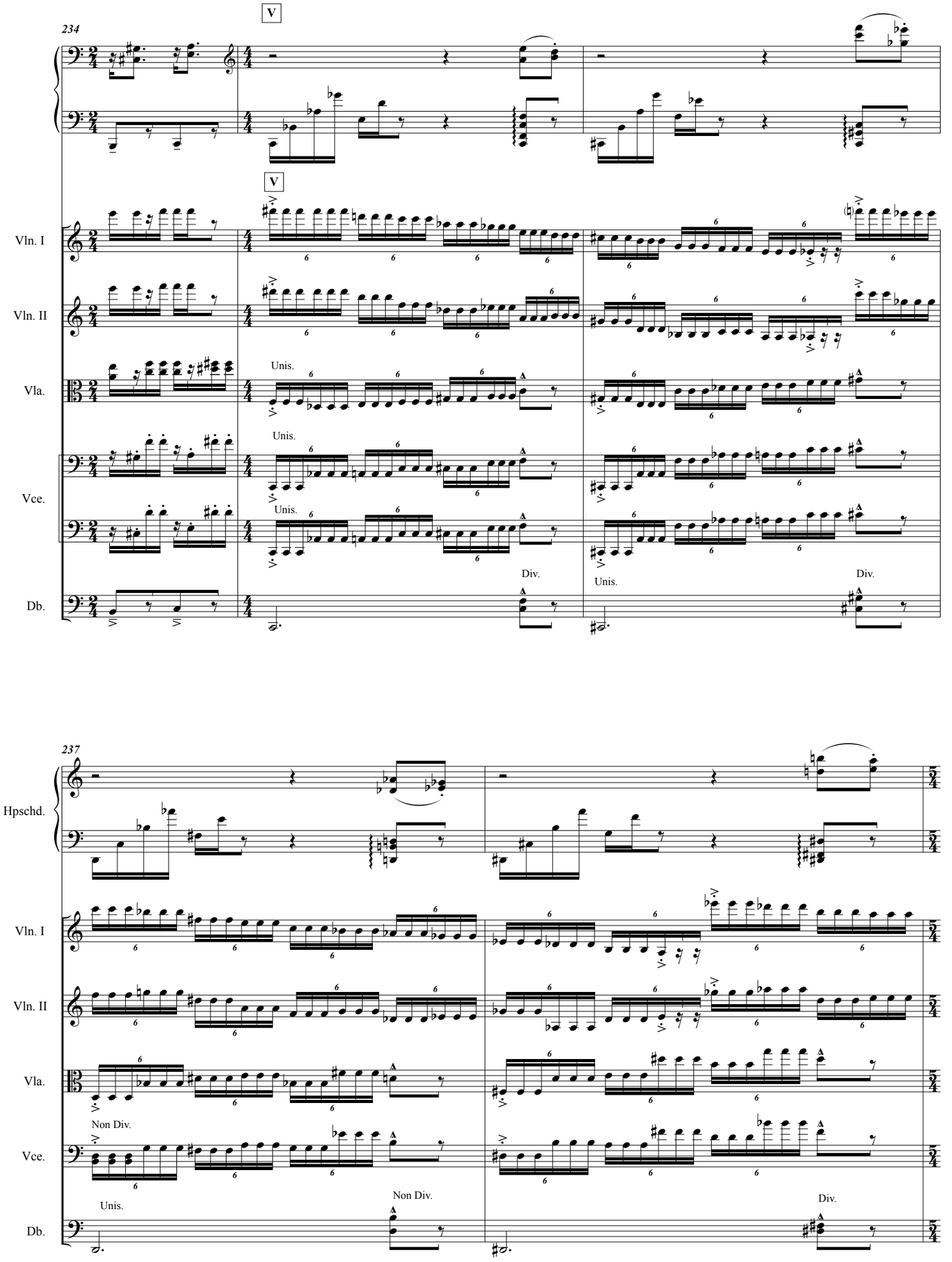

212
Vln. I
Vln. II
Vla.
Vce.
Db.
port.
molto vib.
normale
Non Div.
molto vib.
port.
215
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
pizz.

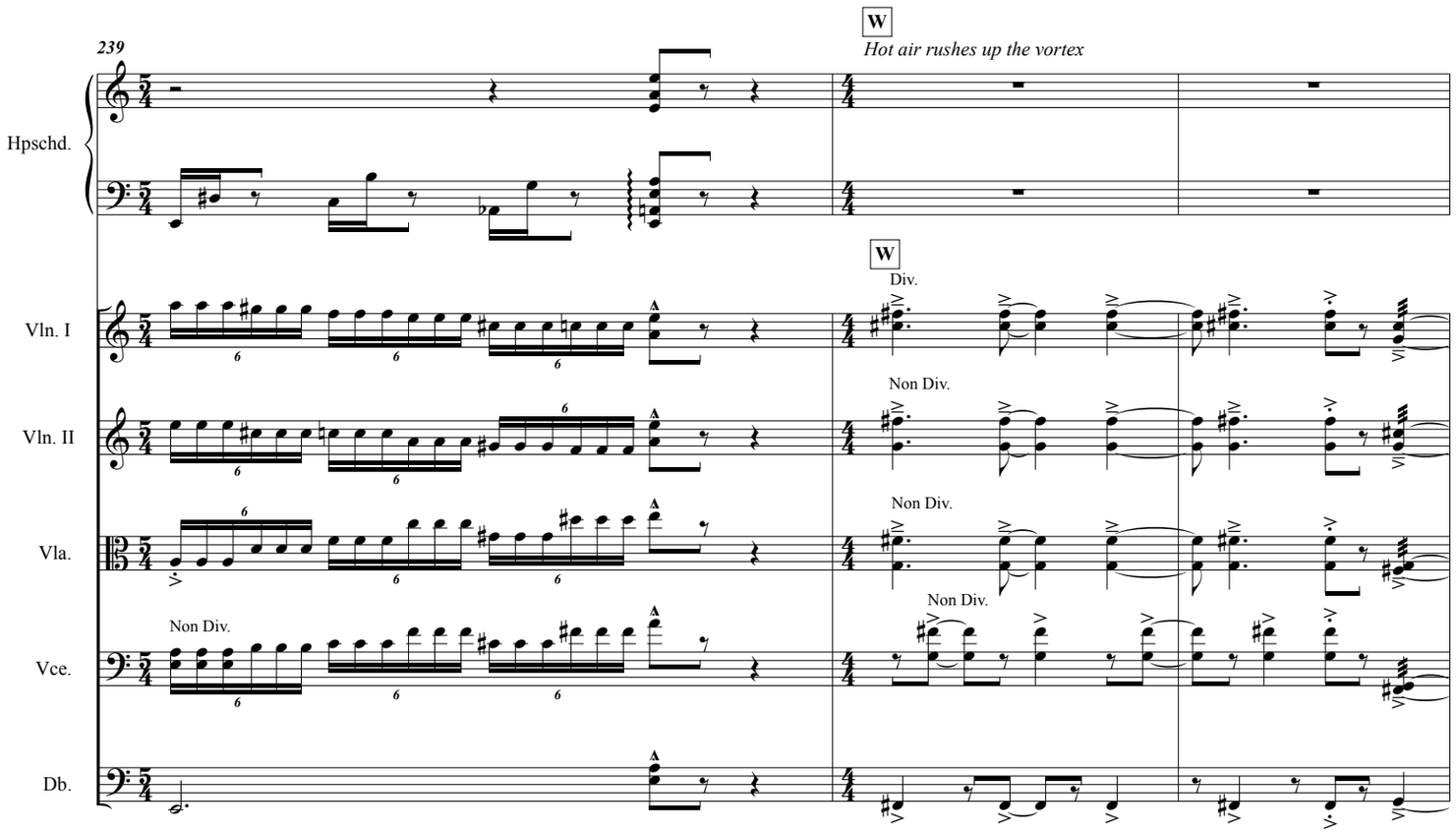

217
S
Hpschd.
S
Vln. I
mp
Vln. II
mp
Vla.
mp
Vce.
mp
Db.
220
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.

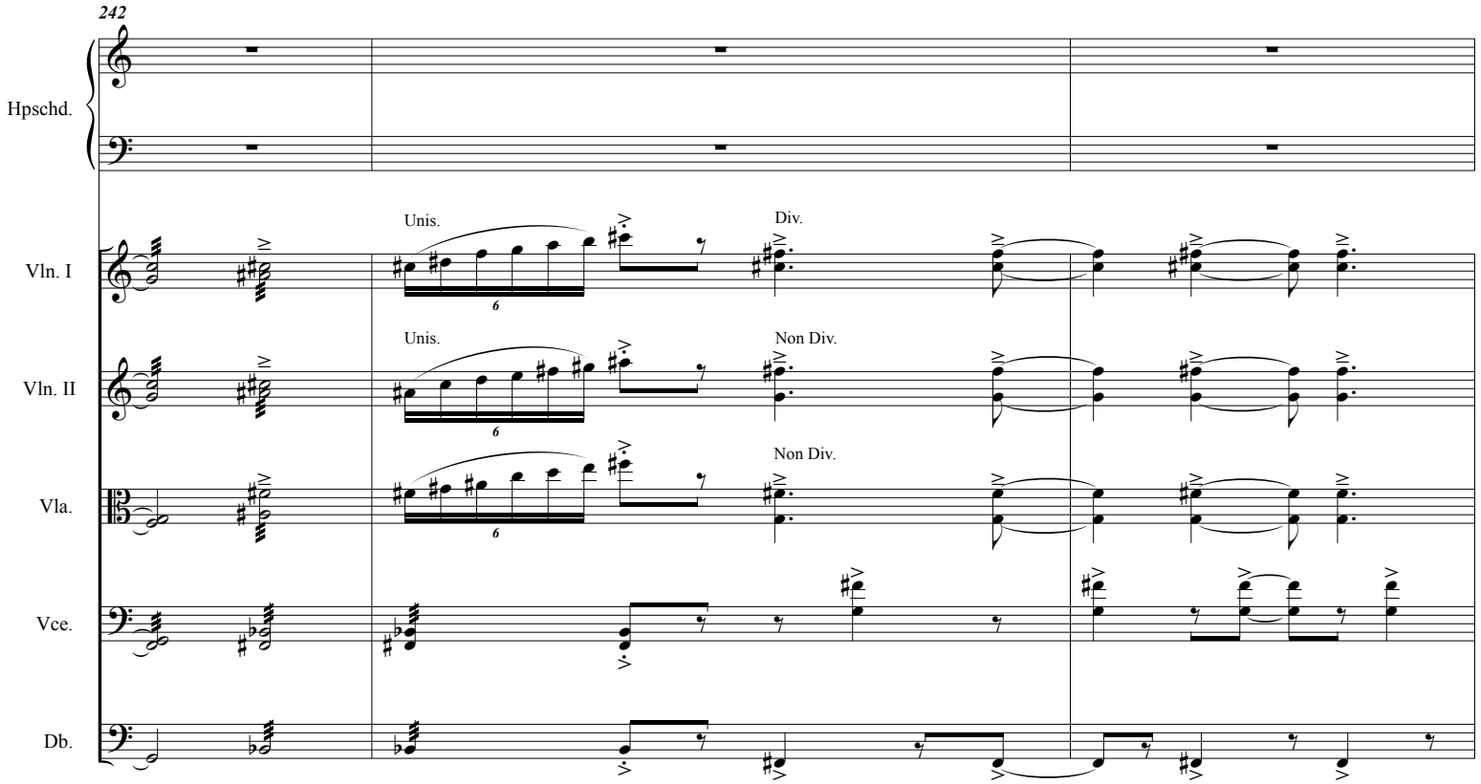

T
ff
T
Div.
Vln. I
ff
Div.
Vln. II
ff
arco
Div.
Vla.
ff
Vce.
ff
Db.
ff
U
225
U
Unis.
(measured tremolo)
Vln. I
fff
(measured tremolo)
simile
Unis.
Vln. II
fff
simile
(measured tremolo)
Vla.
fff
simile
Vce.
Db.

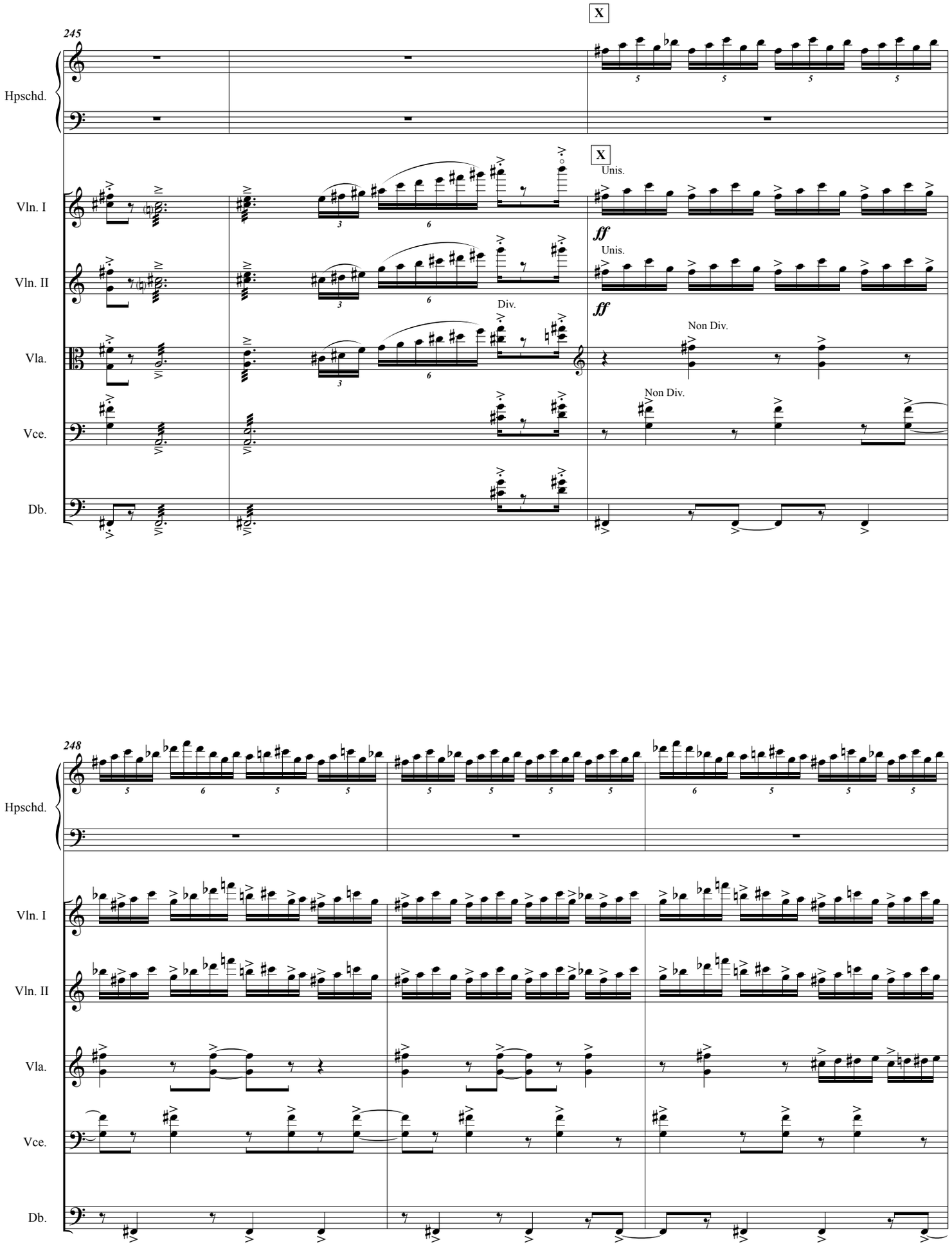

228
Vln. I
Vln. II
Vla.
Vce.
Db.

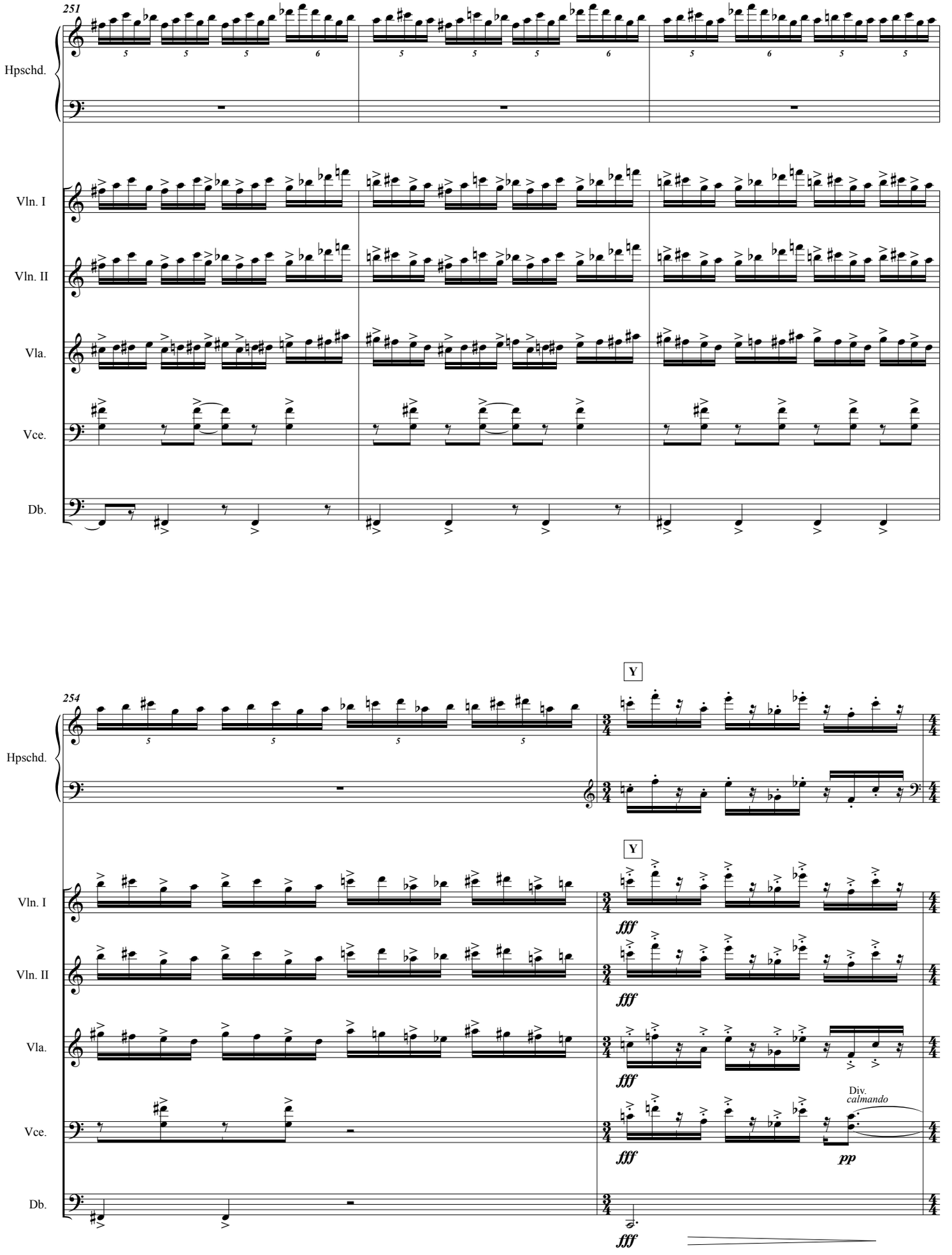

231
Vln. I
Vln. II
Vla.
Vce.
Db.

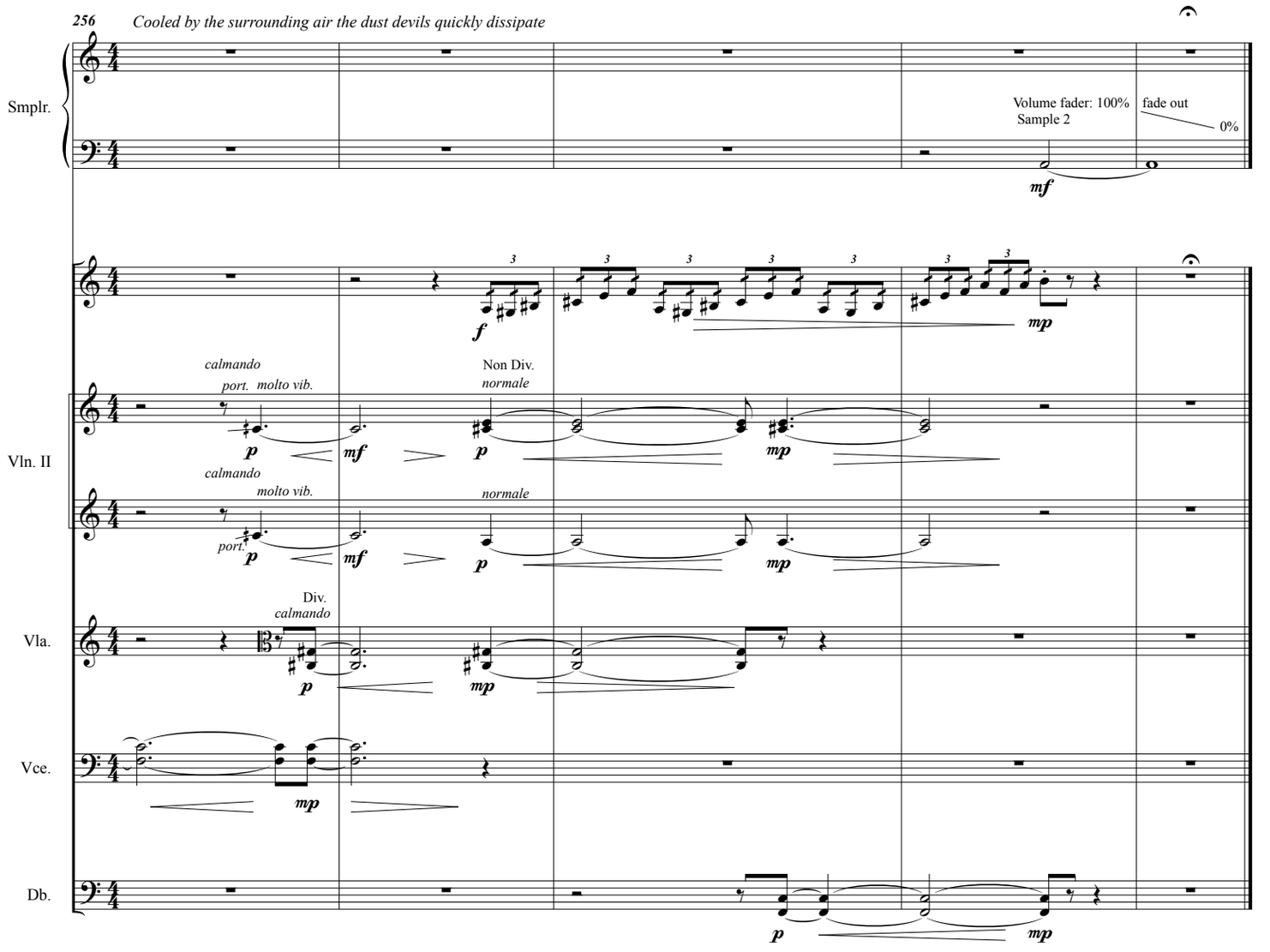

234
V
V
Vln. I
Vln. II
Vla.
Vce.
Db.
Unis.
Unis.
Unis.
Div.
Unis.
Div.
237
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
Non Div.
Unis.
Non Div.
Div.


239
W
Hot air rushes up the vortex
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
Div.
Non Div.


242
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
Unis.
Div.
Non Div.


245
X
X
Unis.
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
ff
Unis.
ff
Div.
Non Div.
Non Div.
248


251
Hpschd.
Vln. I
Vln. II
Vla.
Vce.
Db.
254
Y
Y
fff
Div.
calmando
pp


256
Cooled by the surrounding air the dust devils quickly dissipate
Smplr.
Volume fader: 100%
Sample 2
fade out
0%
Vln. II
calmando
port. molto vib.
Non Div.
normale
Vla.
Div.
calmando
Vce.
Db.