100% ORGANIC

bio&fair-trade music composition

for ensemble and live electronics

Commissioned by NUTRIRE LA MUSICA
Concorso internazionali di composizione

FEEDING THE PLANET
FEEDING THE MUSIC

EXPO MILANO 2015

100% Organic

Ingredients

Original recipe for seven instruments and live electronics

Alto Flute
Bass Larinet
Piano
Percussion

- Wood Block
- Cymbals
- Triangle
- Tam-Tam
- Bongos
- Snare-Drum
- Bass-Drum
- Vibraphone

Violin
Viola
Cello
Live Electronics

100% Organic
I remember the days when I was a child and we used to visit my grandparents, who lived in a small town in Asturias.
I remember the smell of the town, the coal-burning stove in the kitchen and the stew that my grandmother had been cooking since the day before. I also remember my grandfather proud of his garden, and teaching us to respect the fruits and vegetables that he had carefully planted, tendered and harvested.
I remember the consistency of these vegetables, their vigor and aroma and how the palette of colors were changing when the season changed.
I remember my grandmother´s long hours in the kitchen, full of flour and kneading and then, the family meals, the ritual of preparation and the reencounter of the homeland as celebration of the palate, evoking at the same time, all kinds of senses.

In those days, time stood still

100% Organic *(100% Orgánico)*
Recuerdo los tiempos en que siendo niña solíamos visitar a mis abuelos, que vivian en una pequeña villa en Asturias.
Recuerdo el aroma del pueblo, de la cocina de carbón y del guiso que mi abuela venia ya preparando desde el día anterior. Recuerdo también a mi abuelo que orgulloso de su huerto, nos enseñaba los frutos que el mismo había plantado, cuidado con mimo, y recolectado.
Recuerdo su consistencia, vigor y aroma y la paleta de colores que cambiaba así iban cambiando las estaciones del año.
Recuerdo a mi abuela largas horas en la cocina entre harinas amasando y recuerdo las comidas familiares, el ritual de su preparación y del reencuentro del terruño como una gran fiesta del paladar que evocaba a su vez todos los sentidos.

El tiempo se paraba entonces

Teresa Carrasco
Freiburg im Breisgau
31.01.2015

100% Organic is inspired by the many flavors, aromas, textures and consistencies evoked by these childhood memories and represented as a musical analogy through the development of fresh musical textures and timbres. Here the musical *ingredients* have been carefully chosen *and slow-cooked* attending to detail and sound qualities and using innovative techniques in order to address all the senses.

The use of a profuse, colorful instrumentation together with special instrumental and audio digital processing techniques, generates constant spectral variations and vivid audible surfaces. Acoustic associations are thus constructed between the electronic and instrumental sound whereby periods of tension followed by periods of relaxation are generated over time and space.

The composition demands extensive instrumental techniques from the performers as well as a intensive work to blend all voices, searching for a coherent and *appetizing* sonic result.

The instrumental sound is amplified, processed and transformed with the computer in real time.
At specific points along the score, cues for the electronic part have been integrated.
Each cue triggers off a complex algorithm changing the values and parameters in a program which I have written specifically for this piece.

The program is developed in Max/MSP environment and involves diverse electronic music processes: spectral music analysis, pitch-shifting and re-synthesis, filters and compressors and other electronic music effects such as amplitude modulation, convolution, vocoder and reverb.

Some pre-recorded sounds are also used. Most of them are recordings of percussion instruments such as crotales, cymbals, bass drum, vibraphone, wind-chimes and tam-tam.

The resonances of the instruments, as well as the resonances of the electronic part are moving in space (spatialization) in accordance with musical gestures. This process is programmed to work in real time, reacting with what players and electronic are doing at a particular moment.

In accordance with the special requirements of this contest, the movement of sound in space has been established in four channels (quadraphonic). In order to explore further the multidimensionality of the composition in space, a technique which I have been using over the last years, the number of channels can be increased to an even larger multichannel surround system.

General Observations

A conventional seating layout is preferred:
Violin, viola, cello, bass clarinet and flute in front
piano and percussion behind

All instrument are notated in C. Alto flute transposes one 4th lower. Bass clarinet transposes one 9th lower.
Scordatura for strings is not written in the score, but has to be considered, tuning strings according to scoring observations before the performance.

Microtones

Microtones are referred as a quarter-tones and octave-tones although such intervals are understood as inflectional approximations.

Quarter-tone higher 

Quarter-tone lower 

Three-quarters of a tone higher 

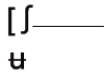
Eighth-tone higher 

Eighth-tone lower 

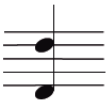
Instructions for Winds

tone

air sound
breathe-in

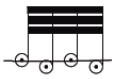


phonetic symbols.
include phonetic sound to breathe-in following international phonetic alphabet



multiphonic

frullato sound



key clicks

slap or tongue-ram as indicated

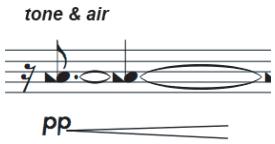
Transition from pitch to toneless

Transition from toneless to pitch

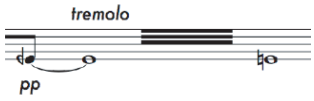
glissando

harmonic

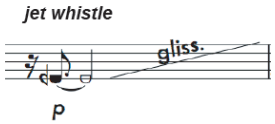
Alto flute



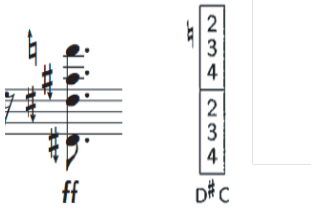
very noisy pitch



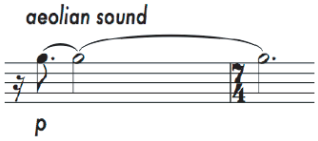
1/4 tone tremolo



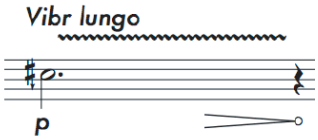
jet whistle end of the glissando



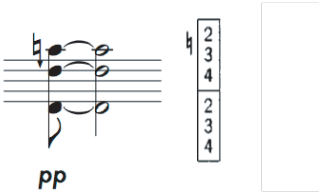
multiphonic alto flute by Carine Levine “The techniques of flute playing II”



aeolian sound

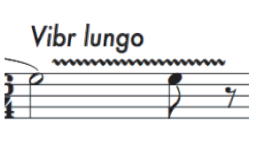


large vibrato

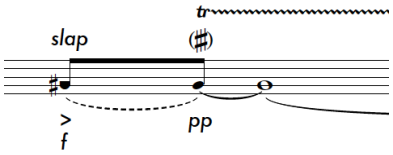


multiphonic alto flute by Carine Levine “The techniques of flute playing II”

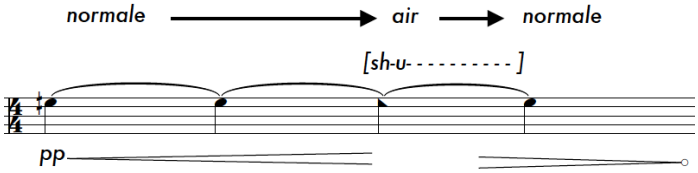
Bass Clarinet



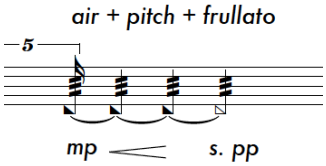
large vibrato



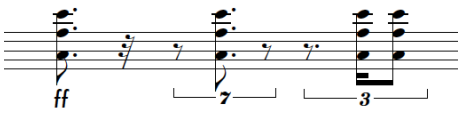
slap and tremolo in one musical gesture



playing pitch (normale) transition to breathe including phonetic and transition again to pitch



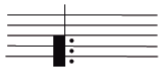
very noisy pitch with frullato effect



multiphonic bass clarinet by Phillip Rehfeldt "New Directions for Clarinet"

Piano

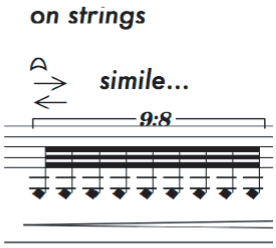
let vibrate



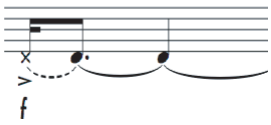
cluster

muted note
strings D4 and E6 have to be prepared
to be muted the whole piece

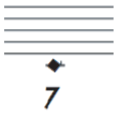
multiphonic, some of the fundamentals to get the harmonics are written in the score but for each grand piano you have to look for a different solution, keeping the resulting note as the written note



strumming strings with the nail or with a plectrum
changing direction on given velocity



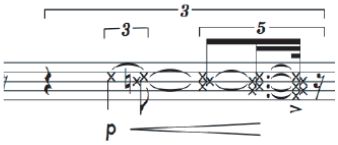
play muted D4 and let sound the resonance as long as indicated



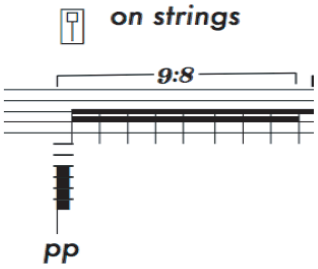
fundamental note for a harmonic (note to play)
and harmonic number

right pedal

third pedal



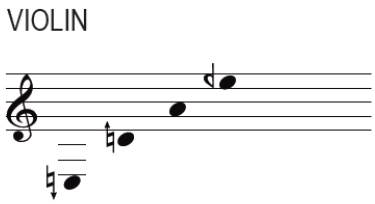
play notes with the right hand and mute at the same time the attack stopping strings with a towel or cloth in the left hand

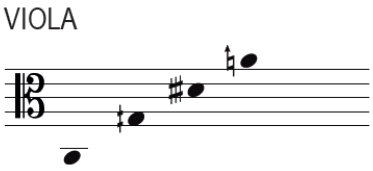


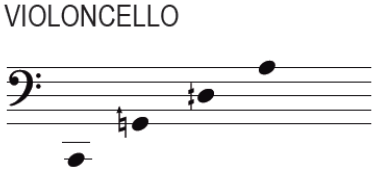
hit with sticks on given velocity directly on the strings
pitch is determinated by cluster range
(cymbal effect)

Instructions for Strings

Scordatura

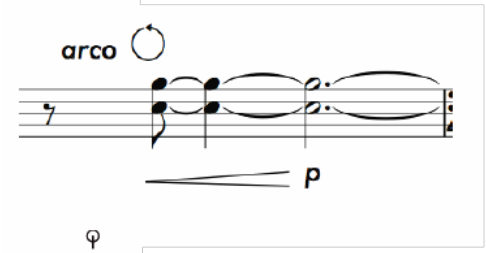






glissando

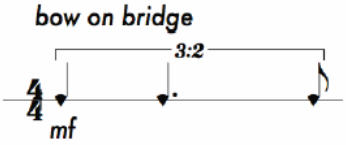
harmonic



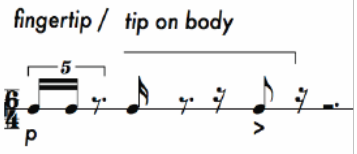
circular bow on those strings

Bartók pizz

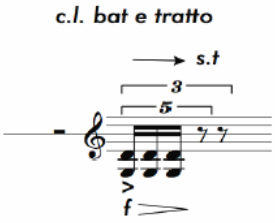
bow overpressure



playing with bow on the bridge or on the
on body of the instrument



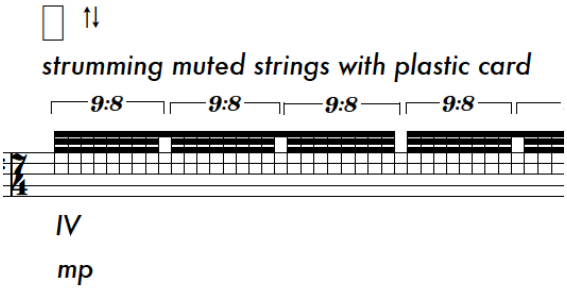
hit the body of the instrument with the fingertip/
thumb / palm / or nail as indicated



hit strings with turned bow in direction of the scroll

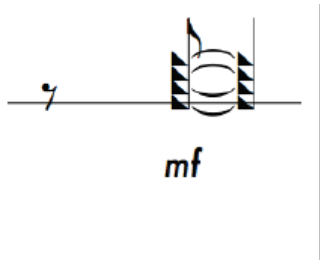
hit on fingerboard

CELLO



a nail,

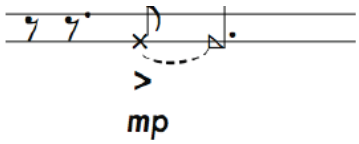
strumming muted strings with plectro or a plastic card following the arrow directions



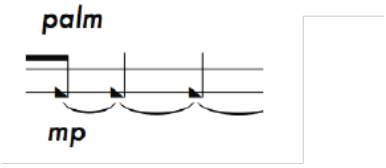
slide turned bow through fingerboard on strings following arrow directions

PERCUSSION

BONGOS

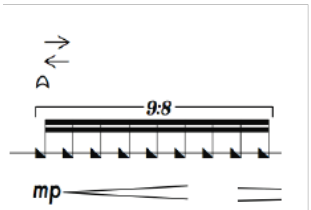


hit with nail abd slide with the palm

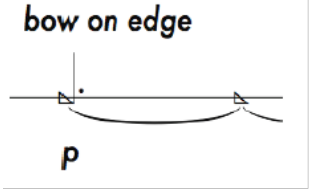


slide palm on head of bongo

SNARE DRUM

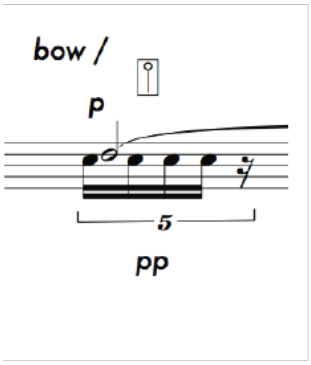


scratching softly the head with nail in both directions



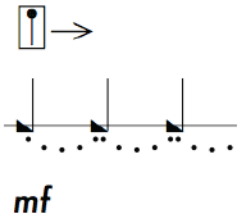
bow on edge of hoop (Rim) of snare drum

VIBRAPHONE



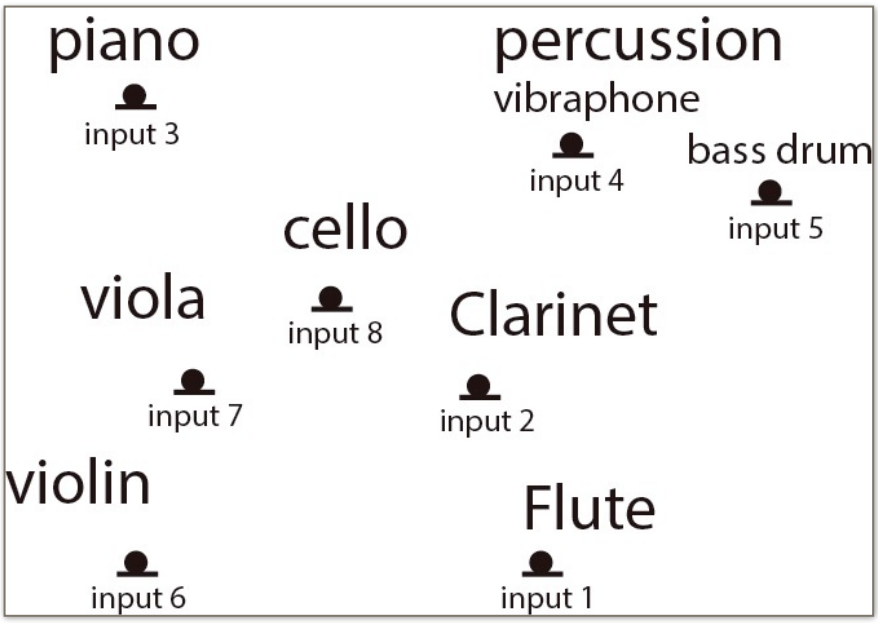
bow for the first voice / drumstick for the second voice

BASS DRUM



slide with a superball

Instructions for the live electronics

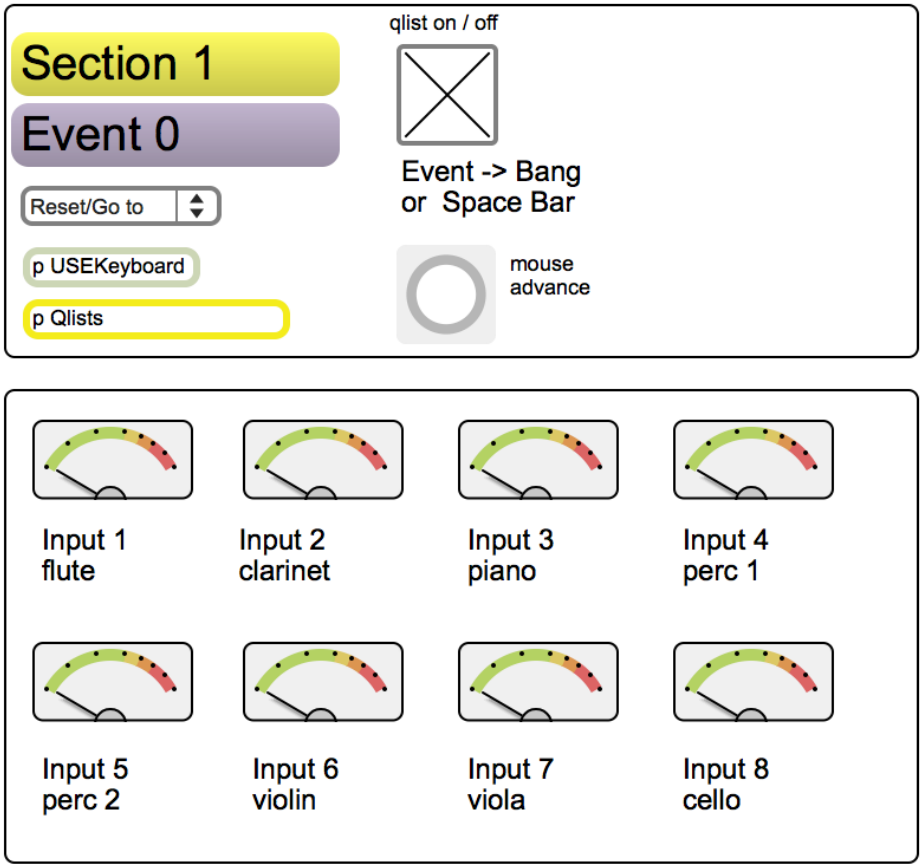


Technical requirements

8 x microphones input (schoeps MK5 or similar)
mixer
computer with Max /MSP Version 6.1.7
soundcard
surround multichannel system (at least quadraphonic)
mic-stands
cables

Instruments should be amplified directly to the mixer but all 8 inputs have to be connected with the computer through an external sound-card

The Max/MSP patch enclosed one section including 37 events or cues.
Those have to be activated by clicking the mouse or the space bar and following the notation of the score.
After reset the patch, inputs levels have to be checked for each channel using filters and compressors to avoid feedback.
An application to amplify instrumental sound through the four outputs is also programmed although the sound of instruments should come just from the front (where players are) balancing the output signal in relation to which instruments are positioned more to the right or to the left.



after inputs are checked, processes and output signal have to be also checked in a search of a good balance of the mixture.

Events

Event 1
Activate a freeze effect + transposition (from vibraphone)
wind-chimes effect
soundfile evento_1
spatialization in 4 channels

after 16500 ms change freeze parameters effect

wind-chimes effect 02
soundfile evento_1b

Event 2
From pno. - vibr. - vl. - vc. freeze effect + transposition
convolution effect
wind-chimes effect + transposition (high pitch)
spatialization in 4 channels
after 17.000 ms transposition paramenter change

Event 3
Form pno. - vl. - vla. - vc. freeze effect
convolution effect 02
spatialization in 4 channels

Event 4
freeze effect + transposition
+ spatialization in
4 channels

Event 5
freeze effect + amplitude modulation (AM)
modulation factor 2 Hz
spatialization in 4 channels

Event 6
convolution effect
(from vc.)
freeze effect
pno. + vc.
spatialization in 4 channels

Event 7
convolution effect (vc.)
freeze 01 pno. + vc.
freeze 02 + transposition (flute)
vocoder effect (from flute wishtle tone)
spatialization in 4 channels

Event 8
in 2000 ms off convolution effect
in 5000 ms off freeze 01 & 02 effects
off vocoder effect

Event 9
soundfile evento_9
vocoder effect new paramenters
(flute)
spatialization in 4 channels

Event 10
soundfile evento_10
convolution effect (flute)
vocoder effect (flute + vc.)
spatialization in 4 channels

Event 11
freeze effect + transposition
spatialization in 4 channels
off vocoder
off convolution effect

Event 12
soundfile event_12

Event 13
soundfile event_13

Event 14
freeze effect + AM
soundfile event_14
vocoder (flute + clarinet)
spatialization in 4 channels

Event 15
off all effects

Event 16
freeze effect (vla. + vc.) + trasnposition
+ spatialization in 4 channels

Event 17
soundfile evento_17

Event 18
off freeze effect

Event 19
soundfile event_19

Event 20
granulation effect
voice 1

Event 21
granulation effect
voices 1 + 2

Event 22
granulation effect
voices 1 + 2 + 3
Event 23
granulation effect
voices 1 + 2
+ 3 + 4

Event 24
granulation effect
voices 1+2+
3+4+5

Event 25
freeze + AM (vc.)
variable index modulator
granulation voice 5 off
spatialization in 4 channels

Event 26
freeze effect vc.
+2000 ms + AM
spatialization in 4 channels

Event 27
freeze + AM
granulation 4 voice off
vocoder flute (after 14.000 ms off)
spatialization in 4 channels

Event 28
freeze + AM effect off
granulation 3
voice off
spatialization in 4 channels

Event 29
granulation effect
in 12.000 ms off

Event 30
soundfile event_30

Event 31
soundfile event_31

Event 32
soundfile_32
convolution effect (bass drum)
spatialization in 4 channels

Event 33
soundfile event_33

Event 34
soundfile event_34

Event 35
soundfile event_35

Event 36
soundfile event 36
granulation (volume vl. + vla)
freeze vc + pno
spatialization in 4 channels

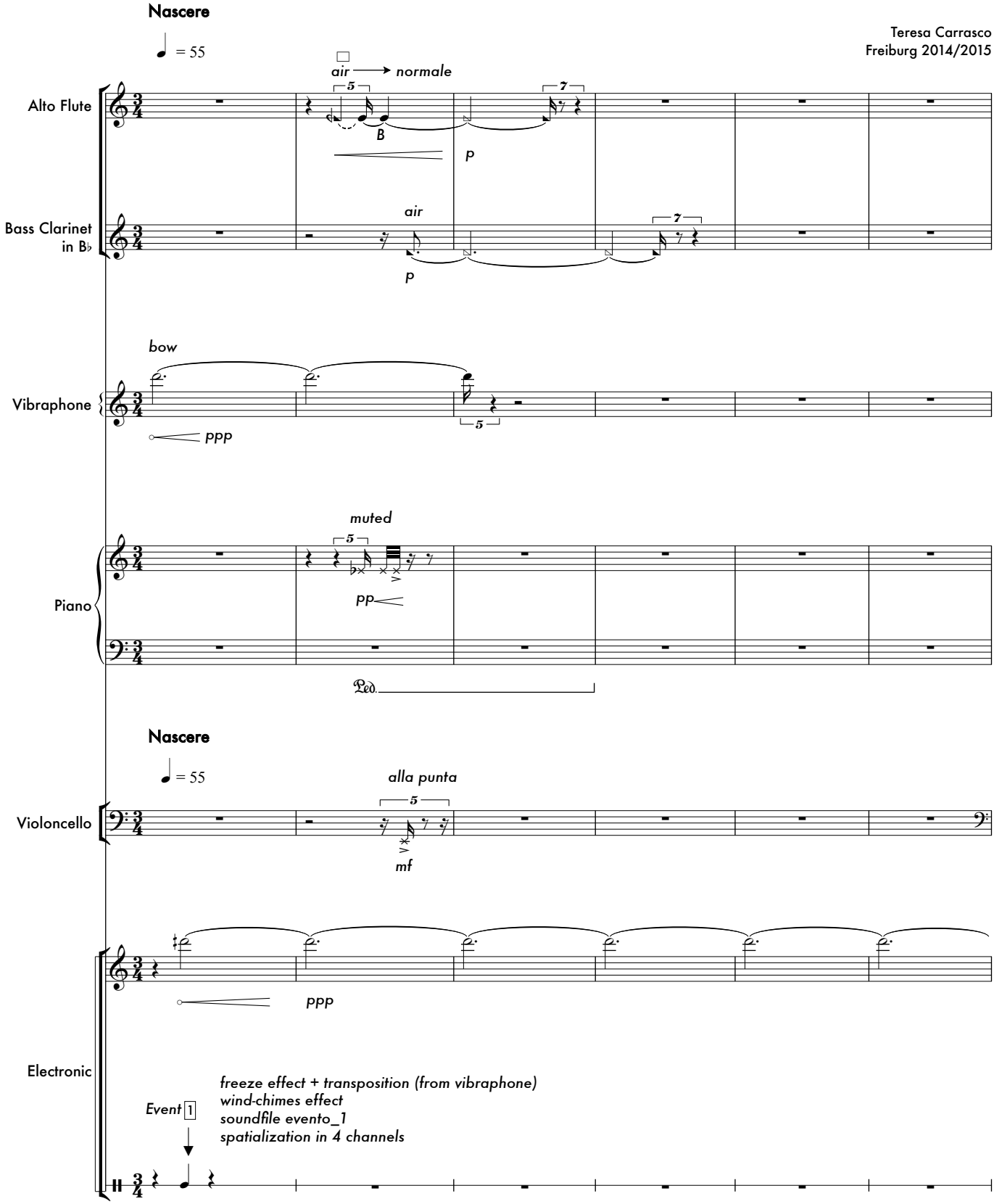
Event 37
in 1000 ms off all effects

Please contact me to get electronic materials. Patch & soundfiles
mail@tcarrasco.net

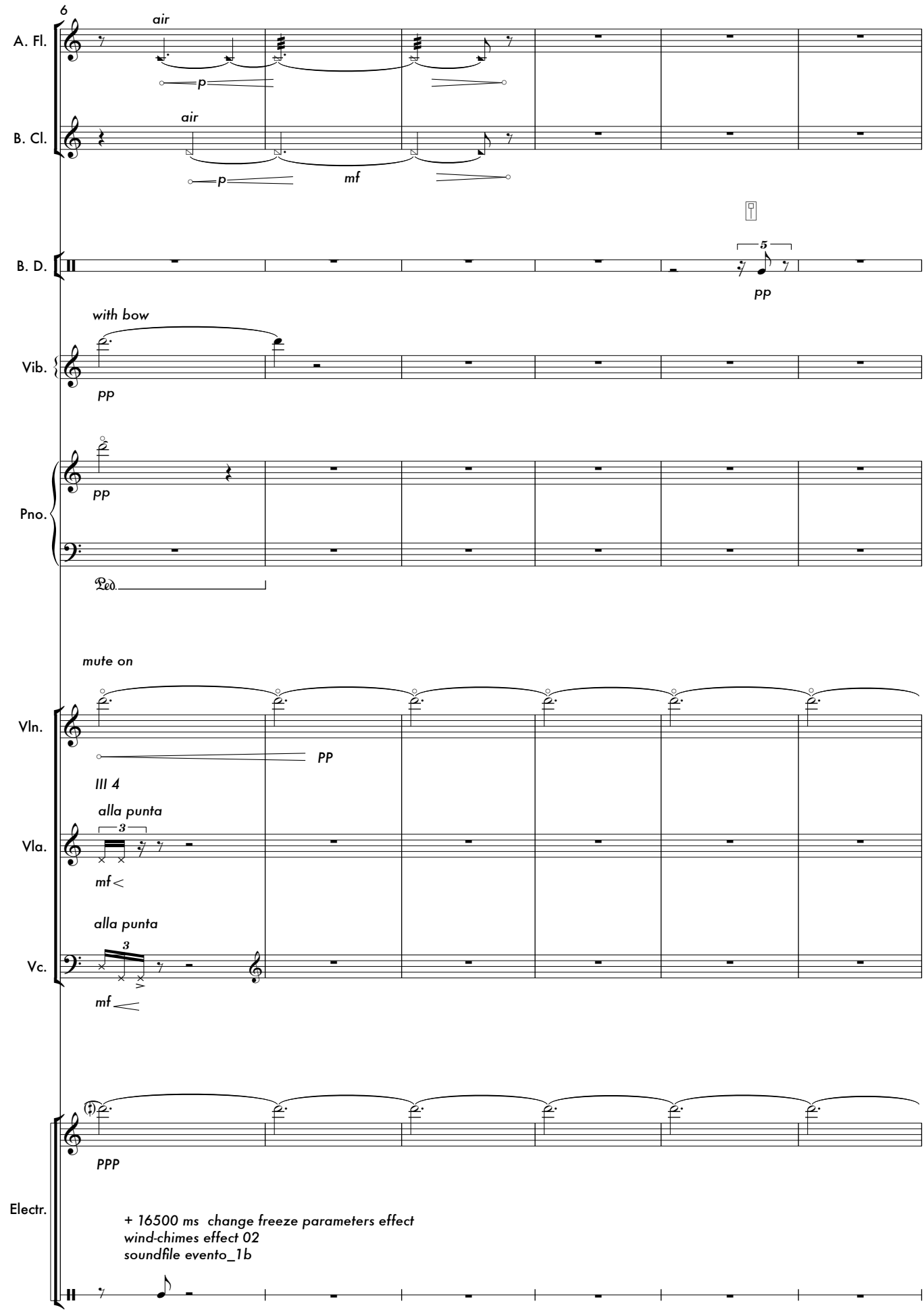
100 % Organic

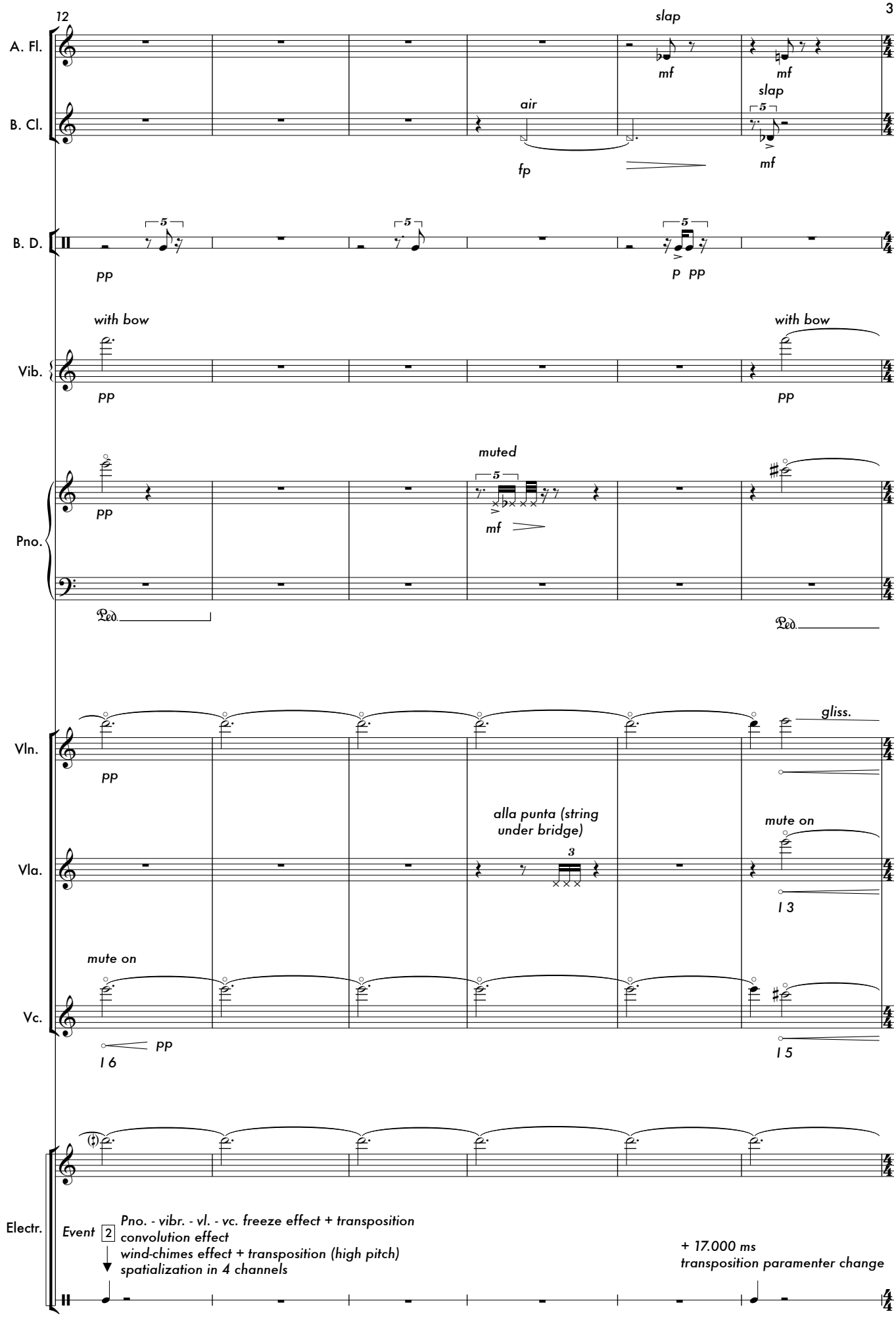
bio&fair-trade music composition

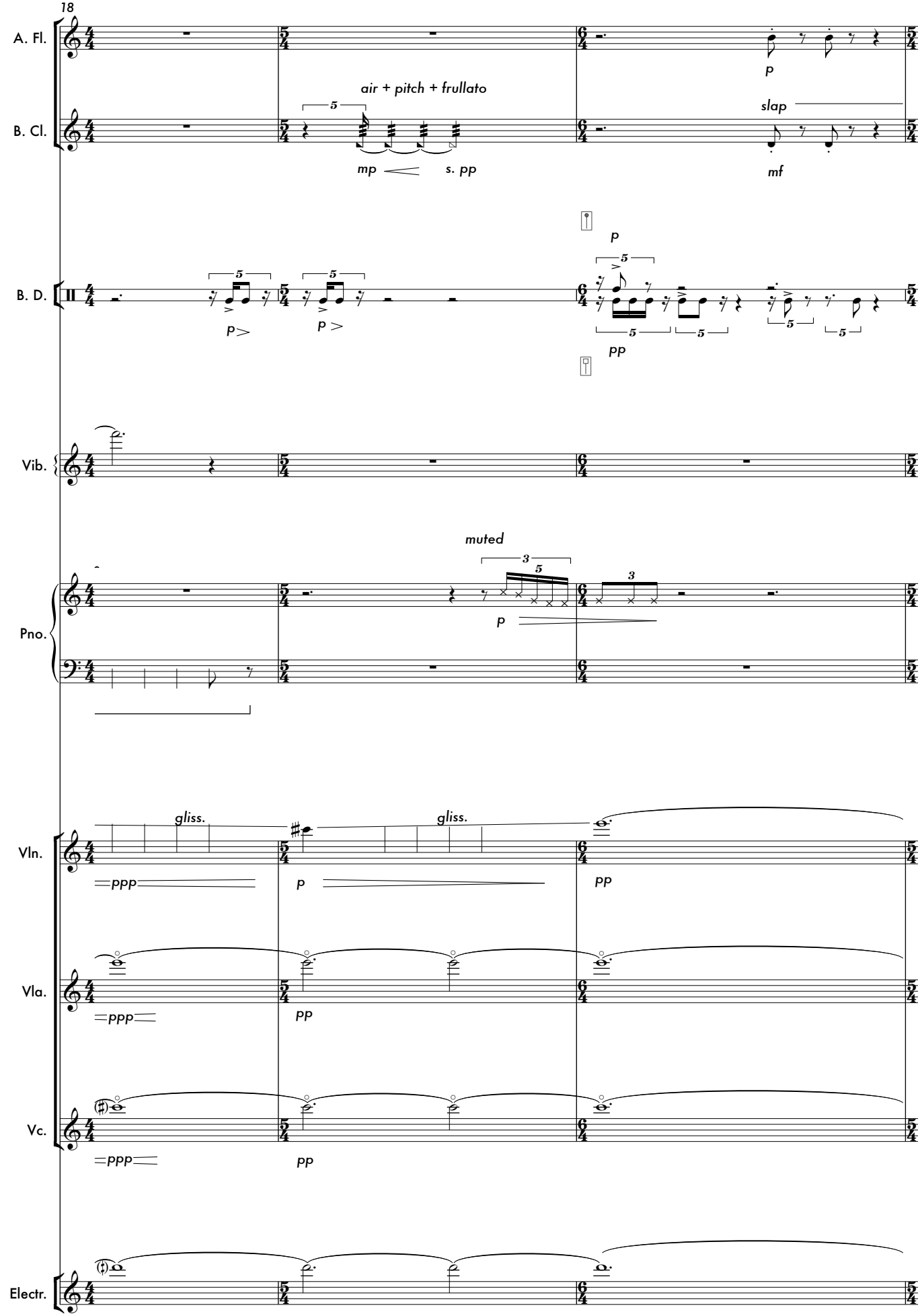
for ensemble and live electronics

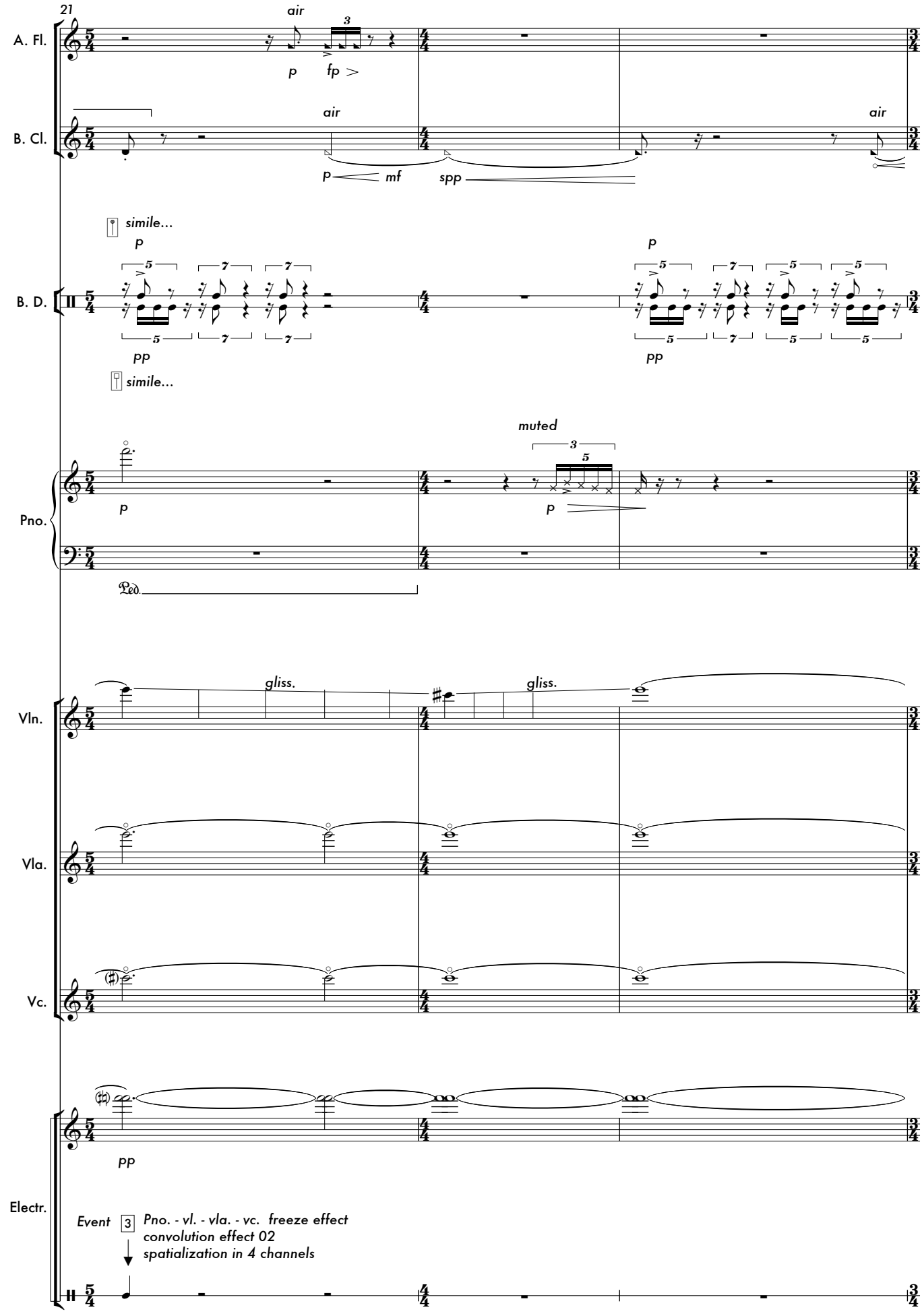


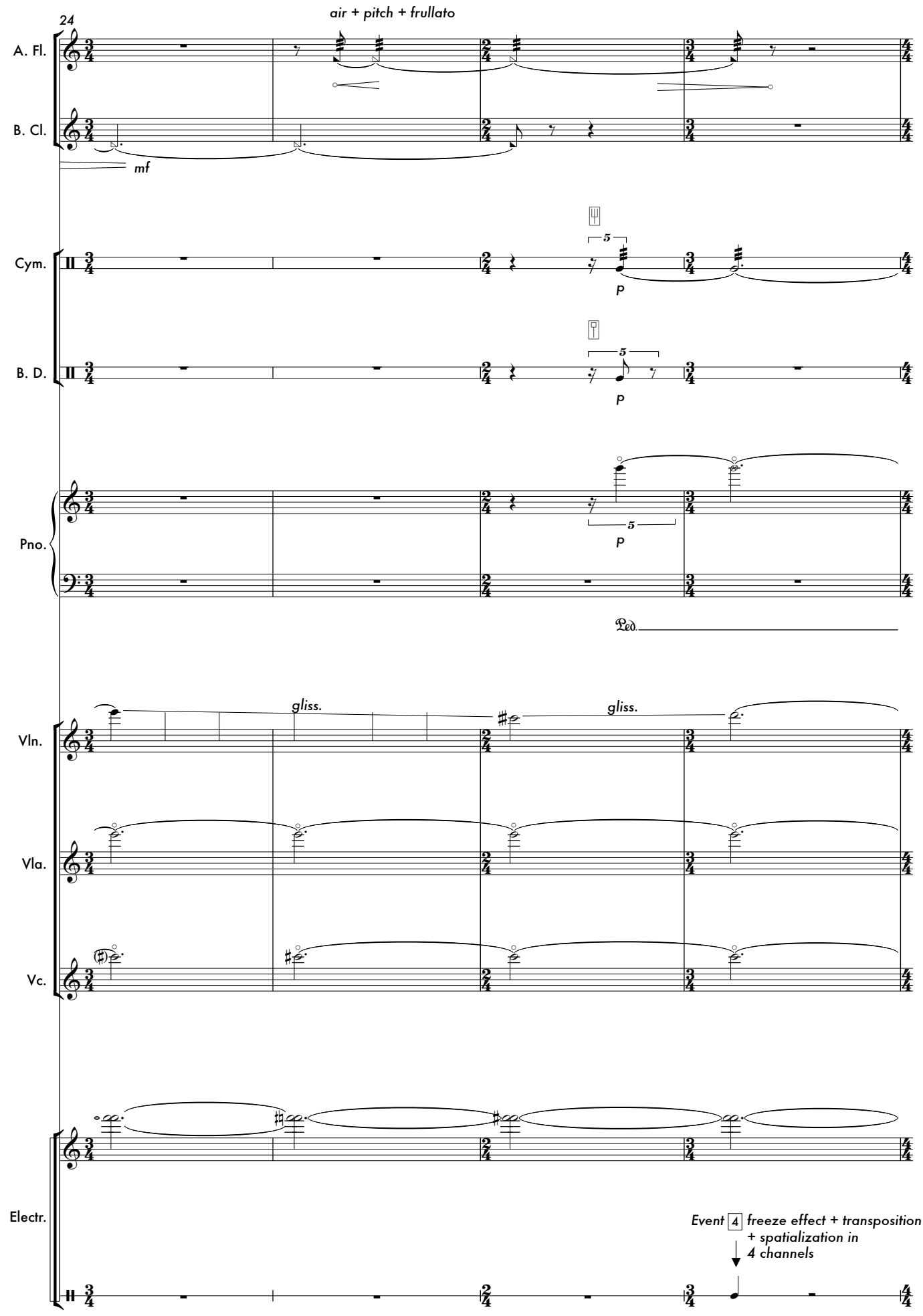
mail@tcarrasco.net

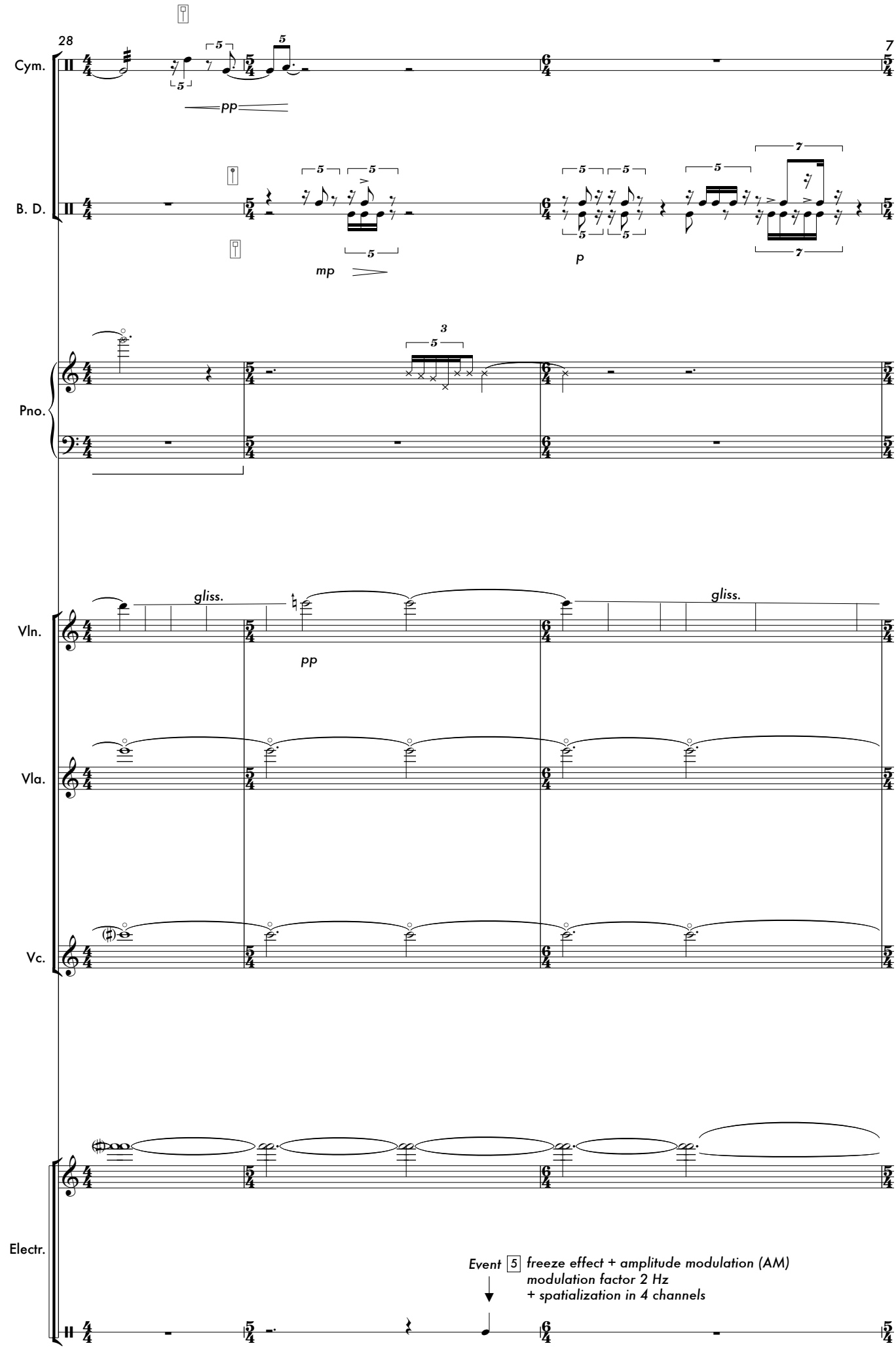

6
A. Fl.
air
p
B. Cl.
air
p
mf
B. D.
5
pp
with bow
Vib.
pp
Pno.
pp
Ped.
mute on
Vln.
pp
III 4
alla punta
Vla.
3
mf
alla punta
Vc.
3
mf
PPP
Electr.
+ 16500 ms change freeze parameters effect
wind-chimes effect 02
soundfile evento_1b

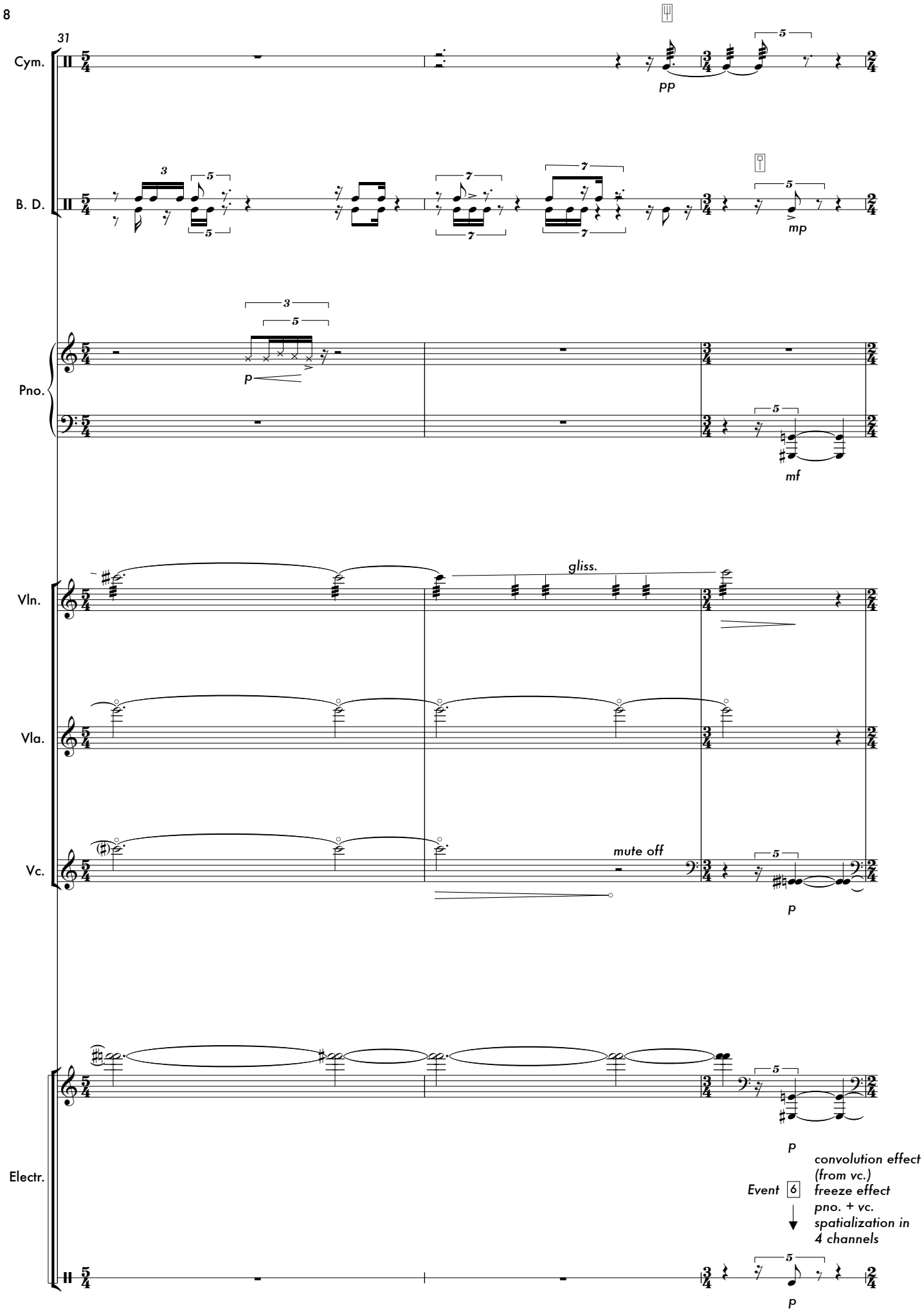

12
A. Fl.
B. Cl.
B. D.
Vib.
Pno.
Vln.
Vla.
Vc.
Electr.
slap
mf
air
fp
pp
p pp
with bow
muted
gliss.
alla punta (string under bridge)
mute on
l 3
l 6
l 5
Event 2
Pno. - vibr. - vl. - vc. freeze effect + transposition
convolution effect
wind-chimes effect + transposition (high pitch)
spatialization in 4 channels
+ 17.000 ms
transposition paramenter change

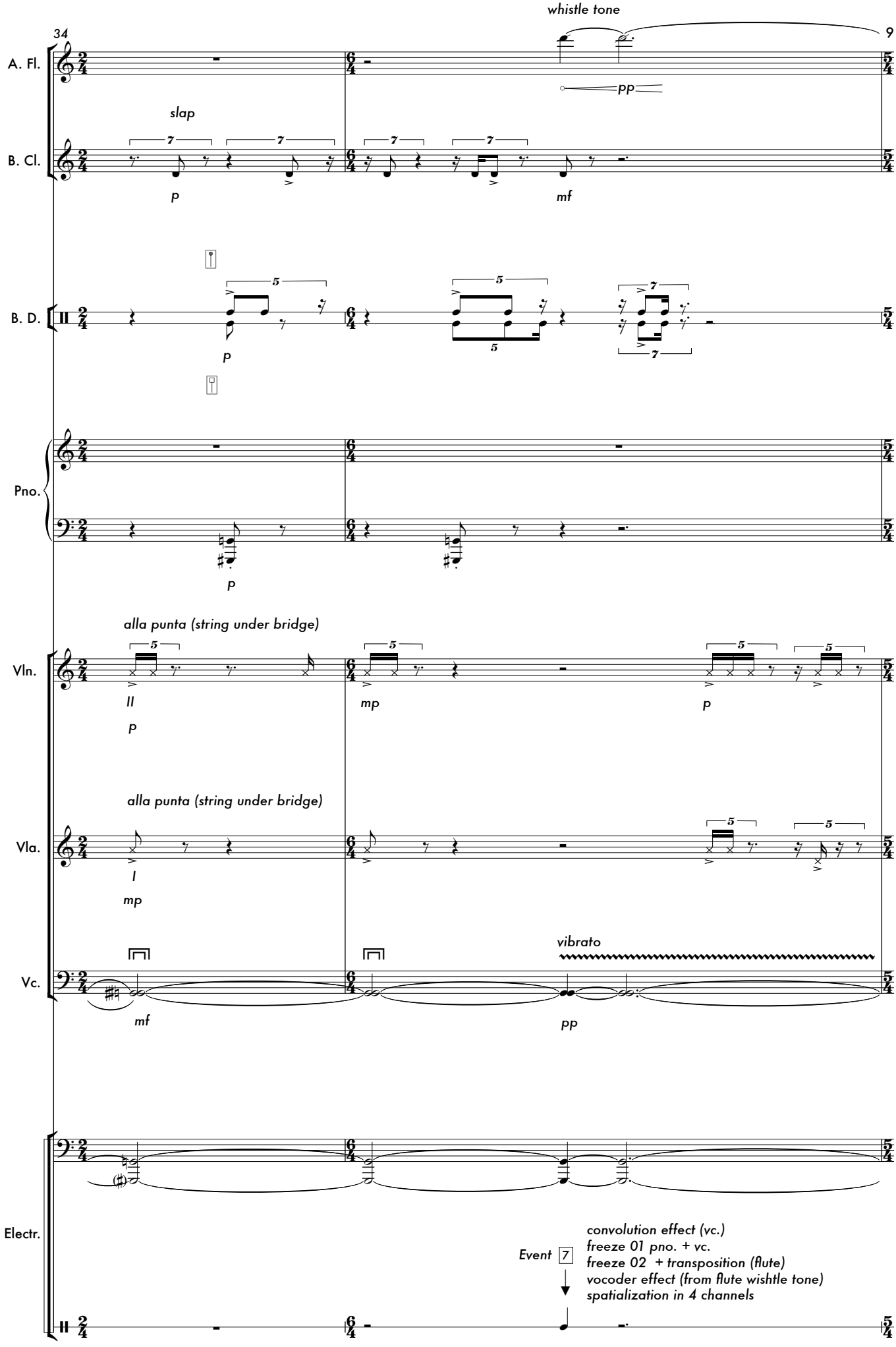

18
A. Fl.
B. Cl.
B. D.
Vib.
Pno.
Vln.
Vla.
Vc.
Electr.
air + pitch + frullato
mp
s. pp
slap
mf
p
pp
muted
gliss.
ppp

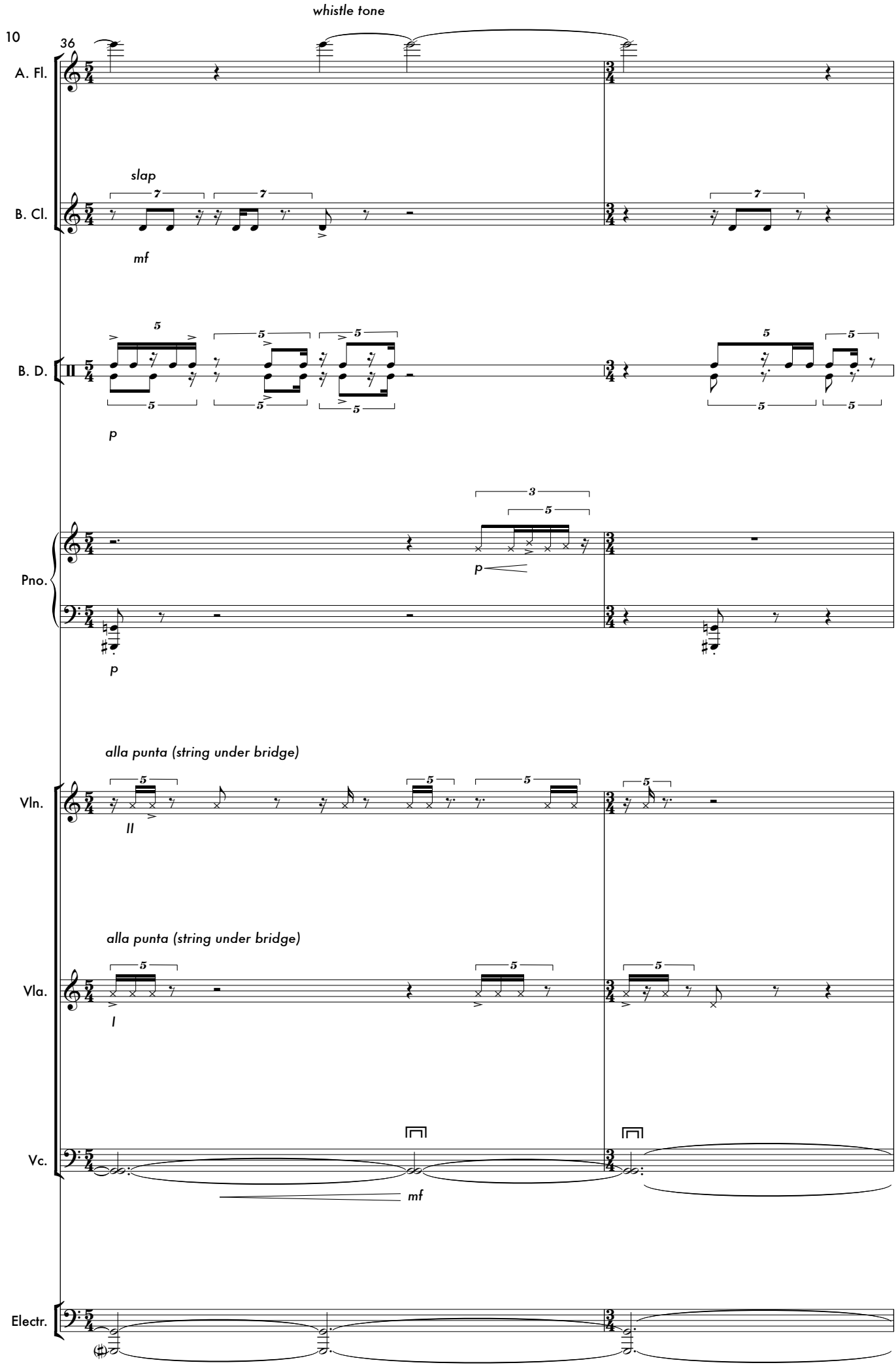

21
A. Fl.
air
p
fp >
B. Cl.
air
p
mf
spp
air
simile...
B. D.
p
pp
simile...
muted
Pno.
p
Ped.
gliss.
gliss.
Vln.
Vla.
Vc.
pp
Electr.
Event 3
Pno. - vl. - vla. - vc. freeze effect
convolution effect 02
spatialization in 4 channels

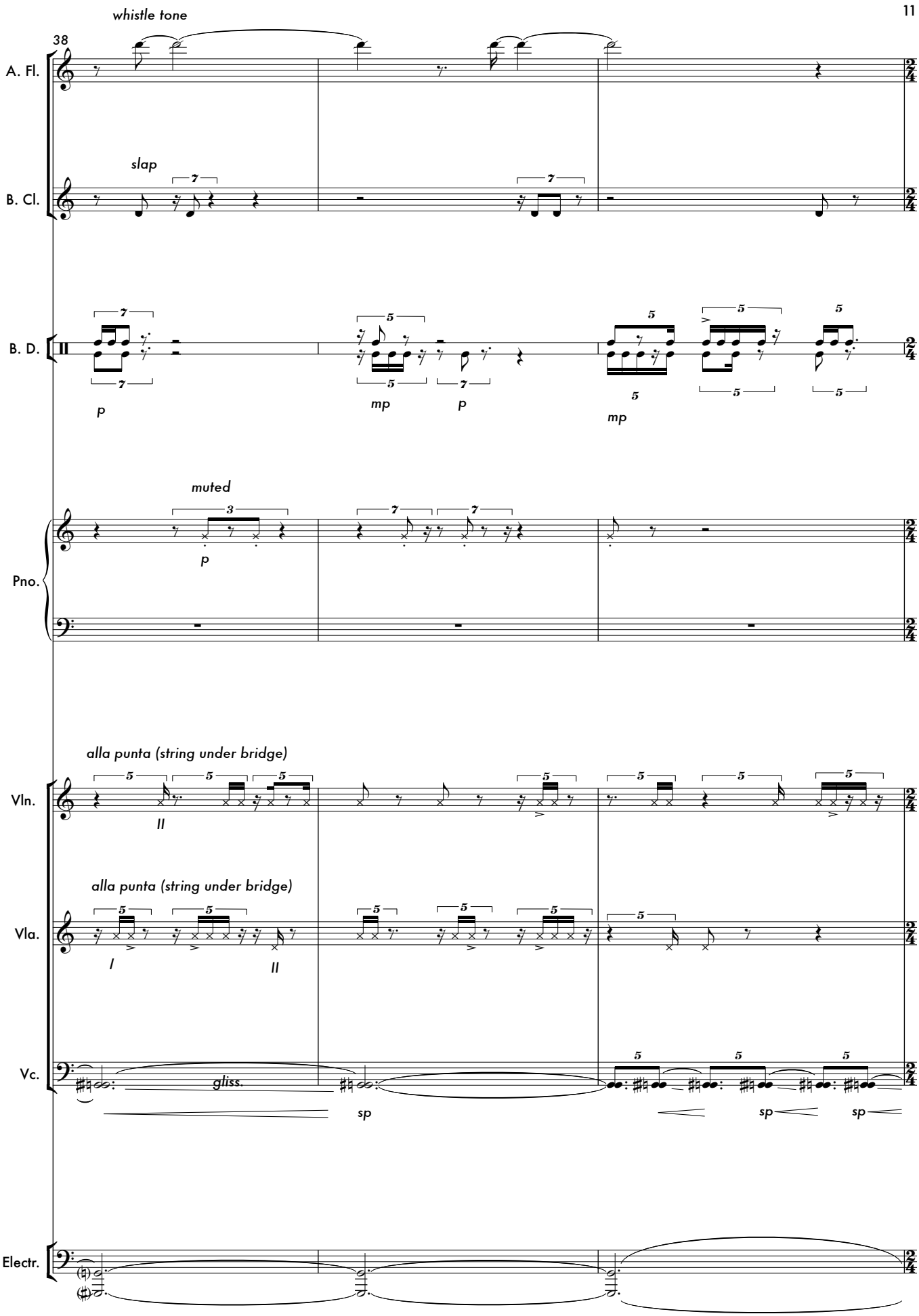

24
air + pitch + frullato
A. Fl.
B. Cl.
mf
Cym.
p
B. D.
p
Pno.
p
Ped.
gliss.
gliss.
Vln.
Vla.
Vc.
Electr.
Event 4 freeze effect + transposition
+ spatialization in
4 channels

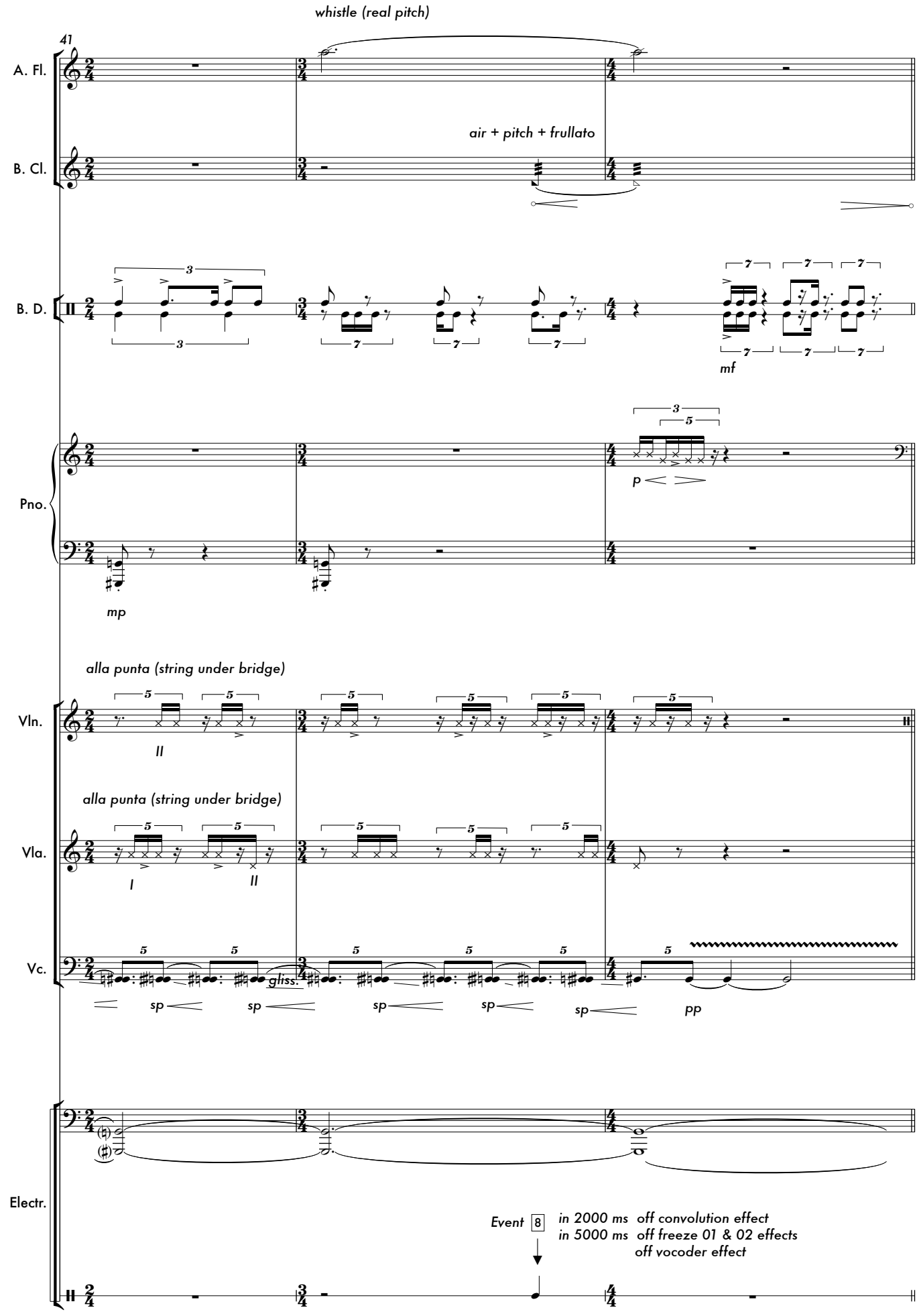

28
7
Cym.
pp
B. D.
mp
p
Pno.
Vln.
gliss.
pp
gliss.
Vla.
Vc.
Electr.
Event 5 freeze effect + amplitude modulation (AM)
modulation factor 2 Hz
+ spatialization in 4 channels


31
Cym.
pp
B. D.
mp
Pno.
p
mf
Vln.
gliss.
Vla.
Vc.
mute off
p
Electr.
p
Event 6
convolution effect
(from vc.)
freeze effect
pno. + vc.
spatialization in
4 channels
p

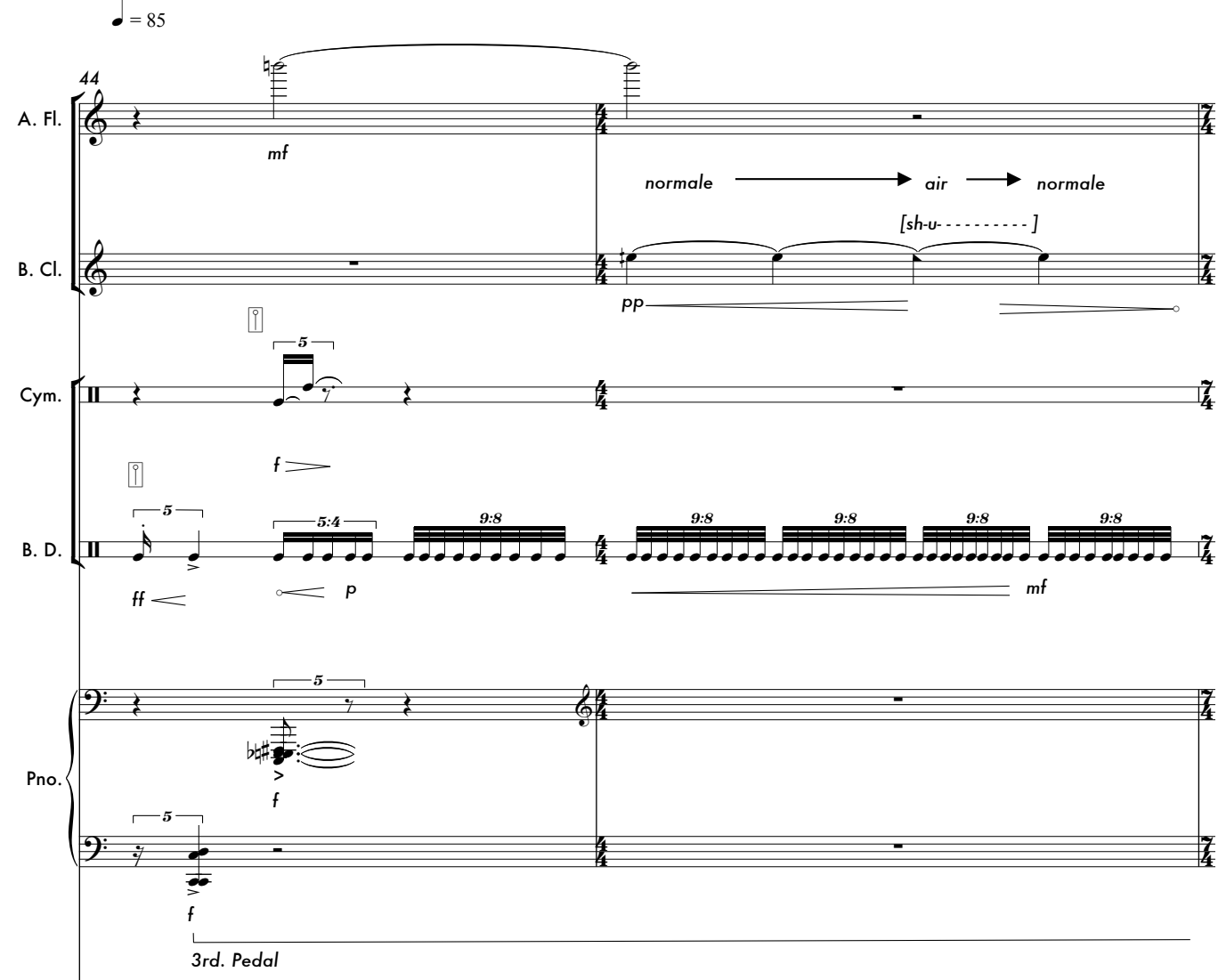

34
9
whistle tone
A. Fl.
pp
slap
B. Cl.
p
mf
B. D.
p
Pno.
p
alla punta (string under bridge)
Vln.
II
p
mp
p
alla punta (string under bridge)
Vla.
I
mp
vibrato
Vc.
mf
pp
Electr.
Event 7
convolution effect (vc.)
freeze 01 pno. + vc.
freeze 02 + transposition (flute)
vocoder effect (from flute wishtle tone)
spatialization in 4 channels


36
whistle tone
A. Fl.
slap
B. Cl.
mf
B. D.
p
Pno.
p
p
alla punta (string under bridge)
Vln.
II
alla punta (string under bridge)
Vla.
I
Vc.
mf
Electr.

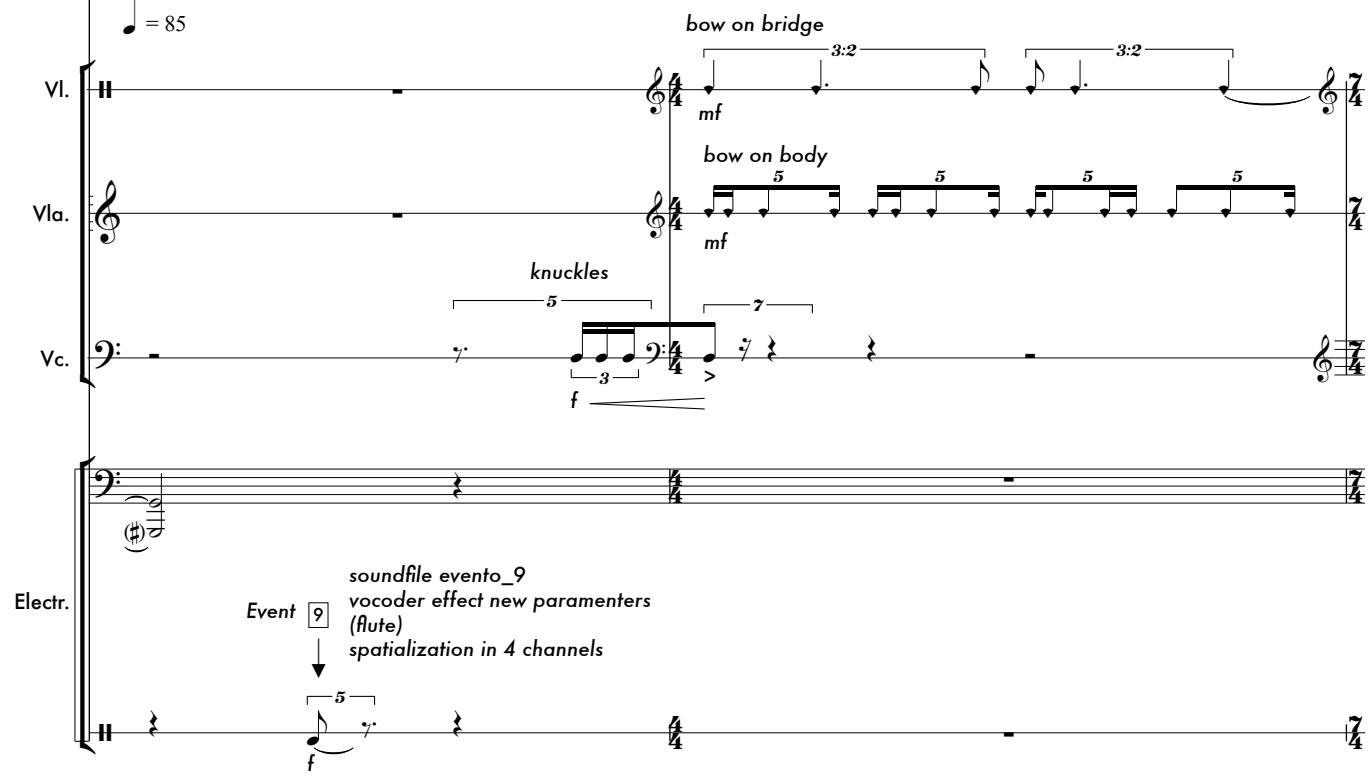

whistle tone
38
A. Fl.
slap
B. Cl.
B. D.
p
mp
p
mp
muted
p
Pno.
alla punta (string under bridge)
Vln.
II
alla punta (string under bridge)
Vla.
I
II
Vc.
gliss.
sp
sp
sp
Electr.

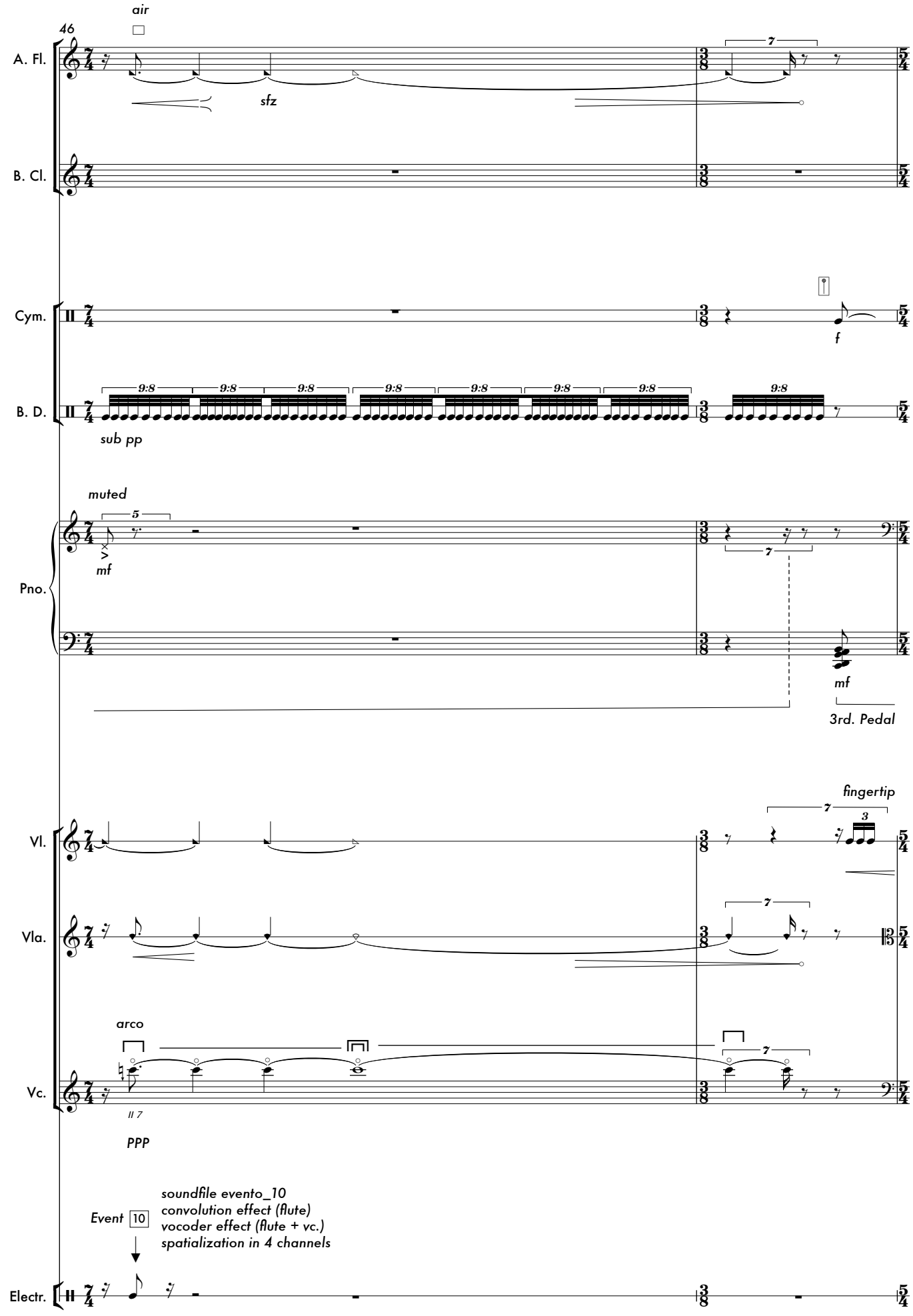

whistle (real pitch)
41
A. Fl.
air + pitch + frullato
B. Cl.
B. D.
mf
Pno.
p
mp
alla punta (string under bridge)
Vln.
II
alla punta (string under bridge)
Vla.
I
II
Vc.
gliss.
sp
sp
sp
sp
sp
pp
Electr.
Event 8
in 2000 ms off convolution effect
in 5000 ms off freeze 01 & 02 effects
off vocoder effect

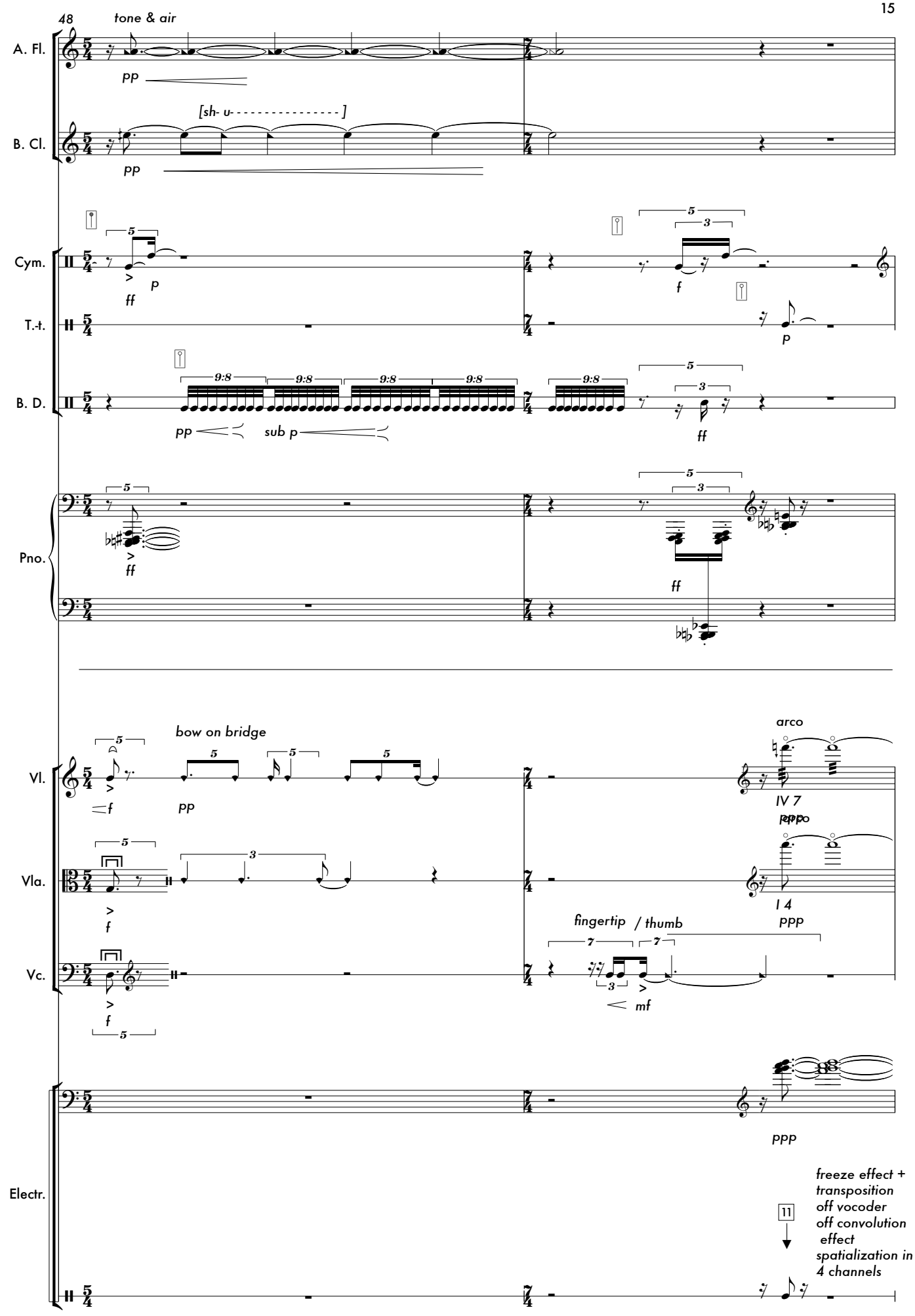
con Brio e Appasionato

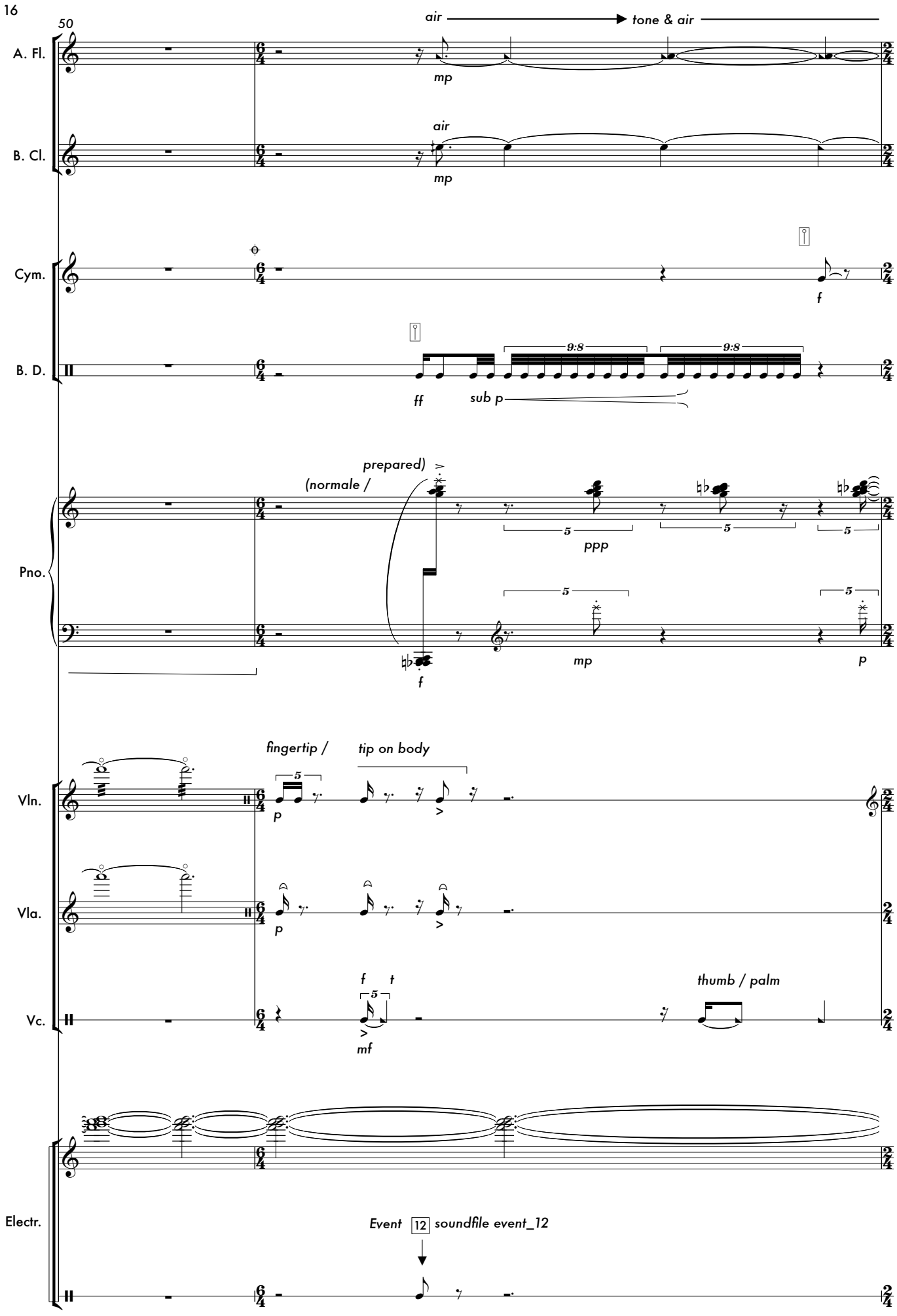


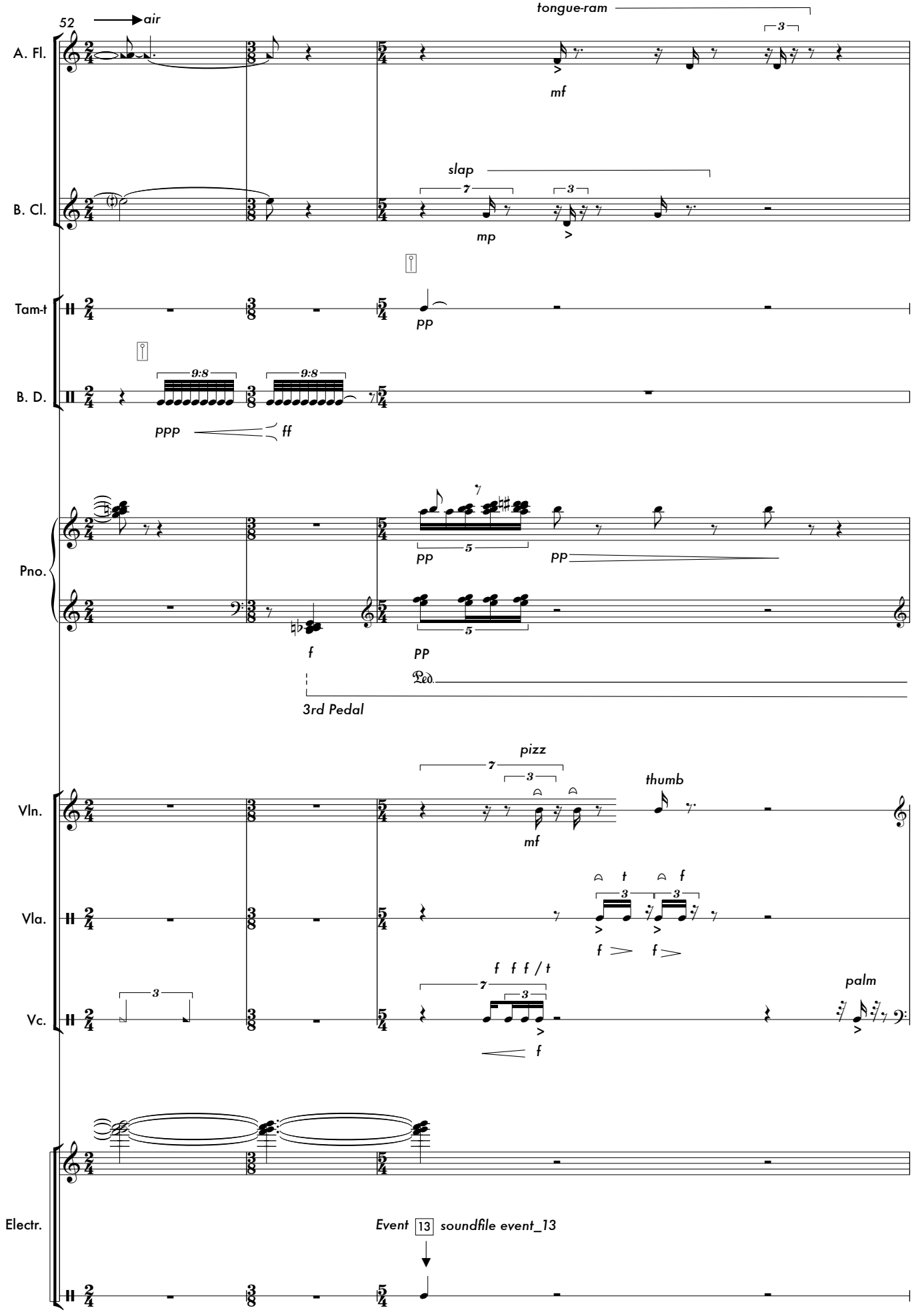
con Brio e Appasionato

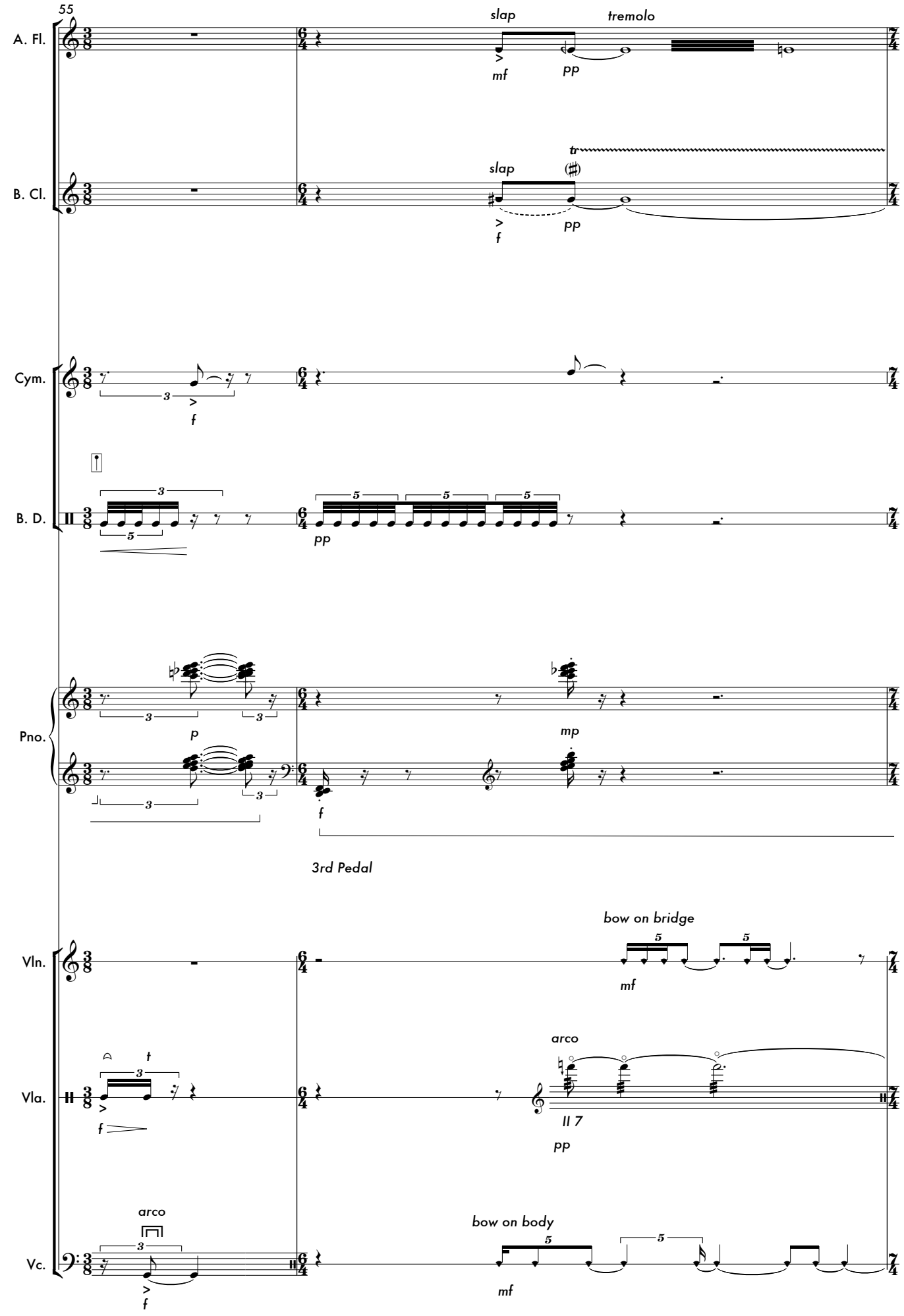


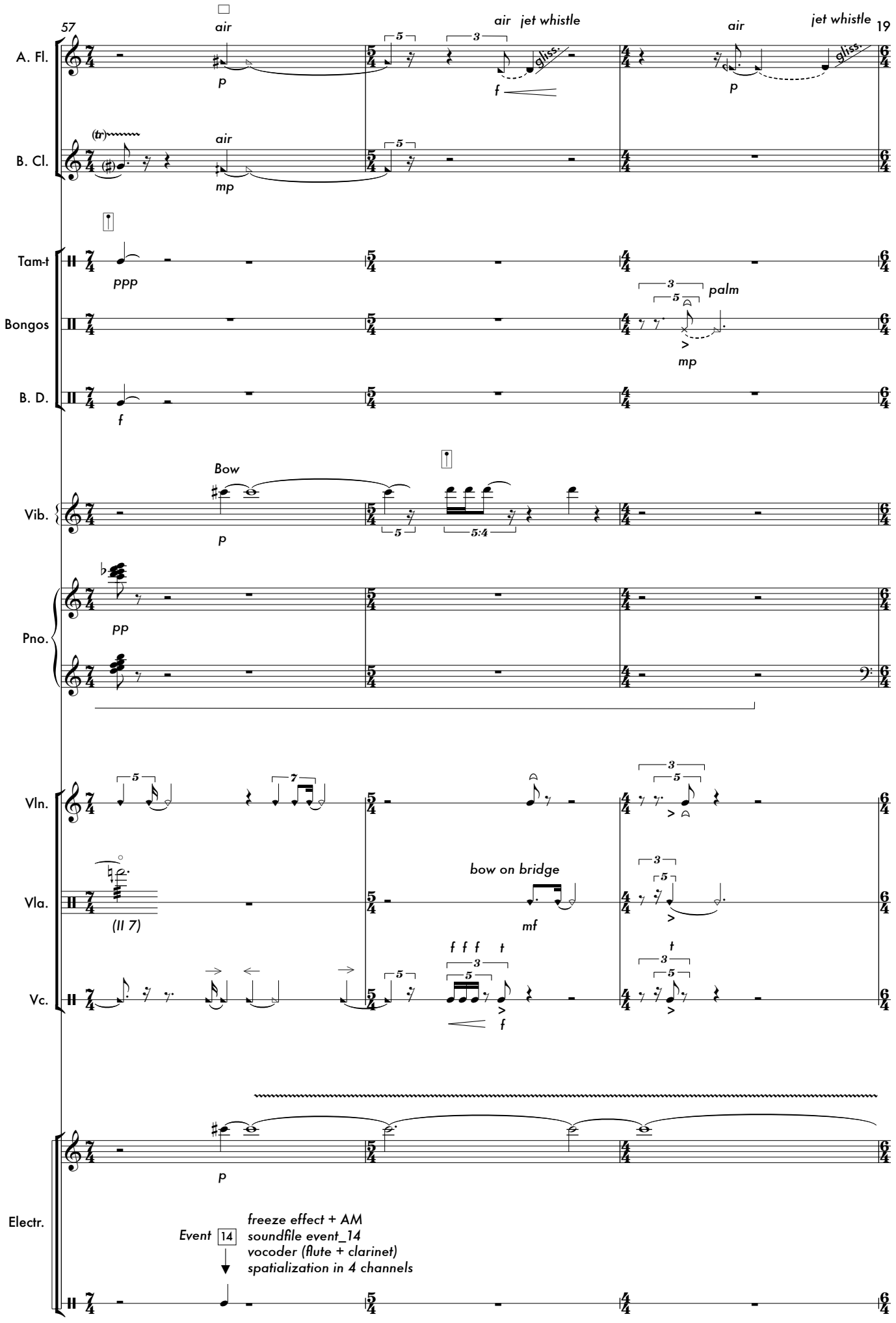

air
46
A. Fl.
sfz
B. Cl.
Cym.
f
B. D.
9:8
sub pp
muted
mf
Pno.
mf
3rd. Pedal
fingertip
Vl.
Vla.
arco
Vc.
PPP
Event 10
soundfile evento_10
convolution effect (flute)
vocoder effect (flute + vc.)
spatialization in 4 channels
Electr.

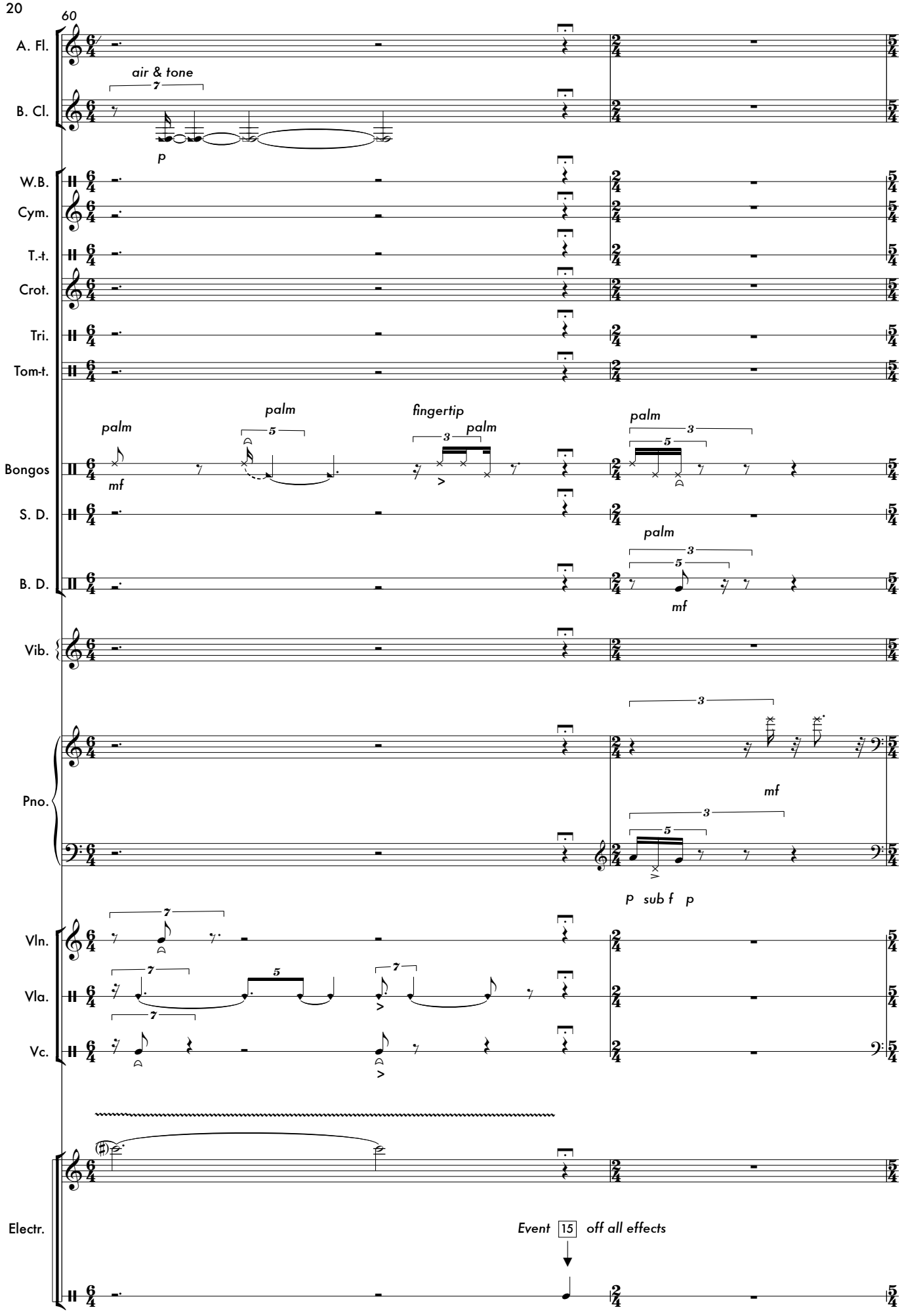

48
tone & air
A. Fl.
pp
[sh- u- - - - - - - - - - - - - - -]
B. Cl.
pp
Cym.
ff
p
f
T.-t.
p
B. D.
pp
sub p
ff
Pno.
ff
ff
bow on bridge
Vl.
f
pp
arco
IV 7
ppp
Vla.
f
I 4
ppp
fingertip / thumb
Vc.
f
mf
ppp
Electr.
freeze effect +
transposition
off vocoder
off convolution
effect
spatialization in
4 channels
11

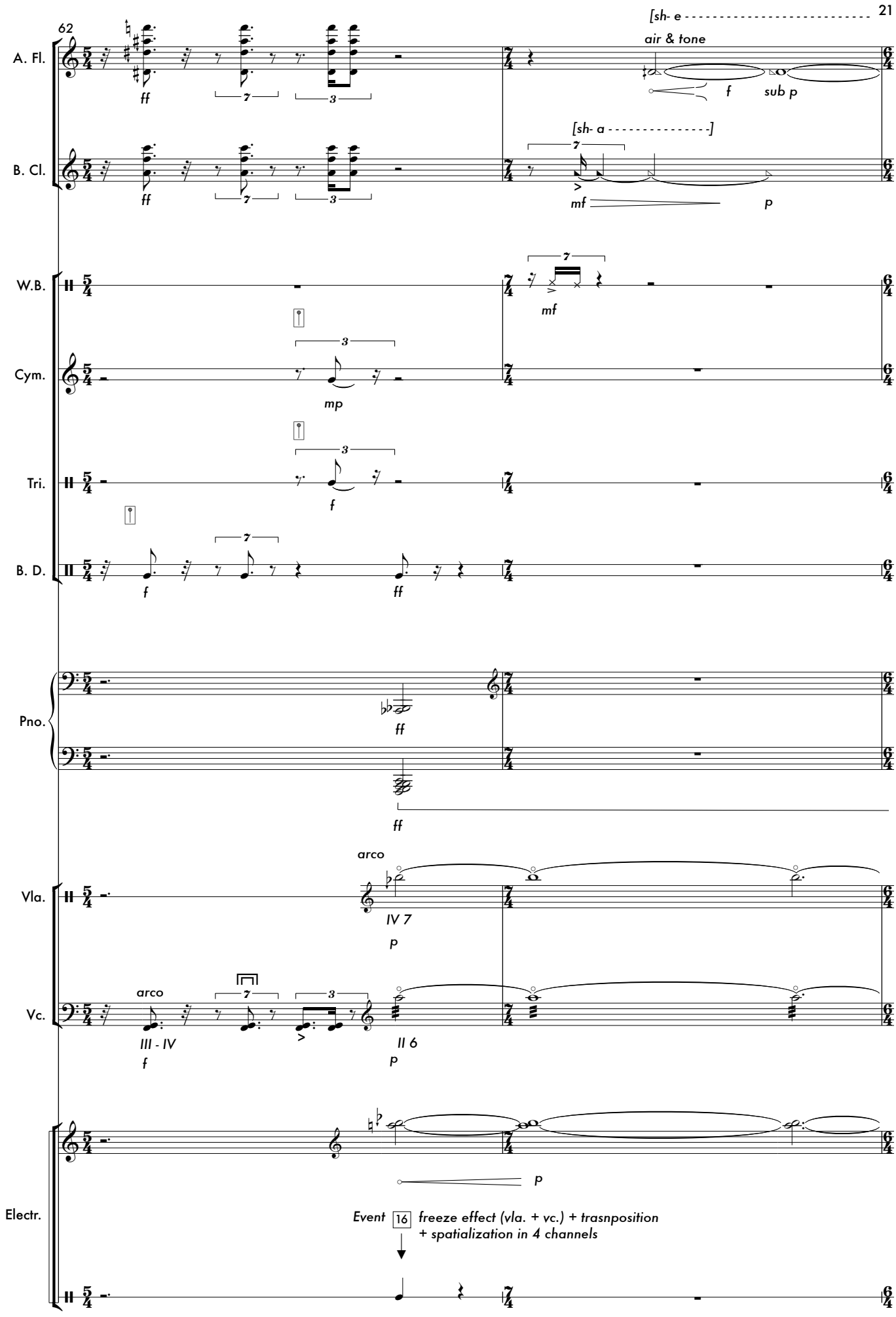

50
A. Fl.
air
tone & air
mp
B. Cl.
air
mp
Cym.
f
B. D.
9:8
9:8
ff
sub p
Pno.
prepared)
(normale /
ppp
mp
p
f
Vln.
fingertip /
tip on body
p
Vla.
p
Vc.
f t
mf
thumb / palm
Electr.
Event 12 soundfile event_12

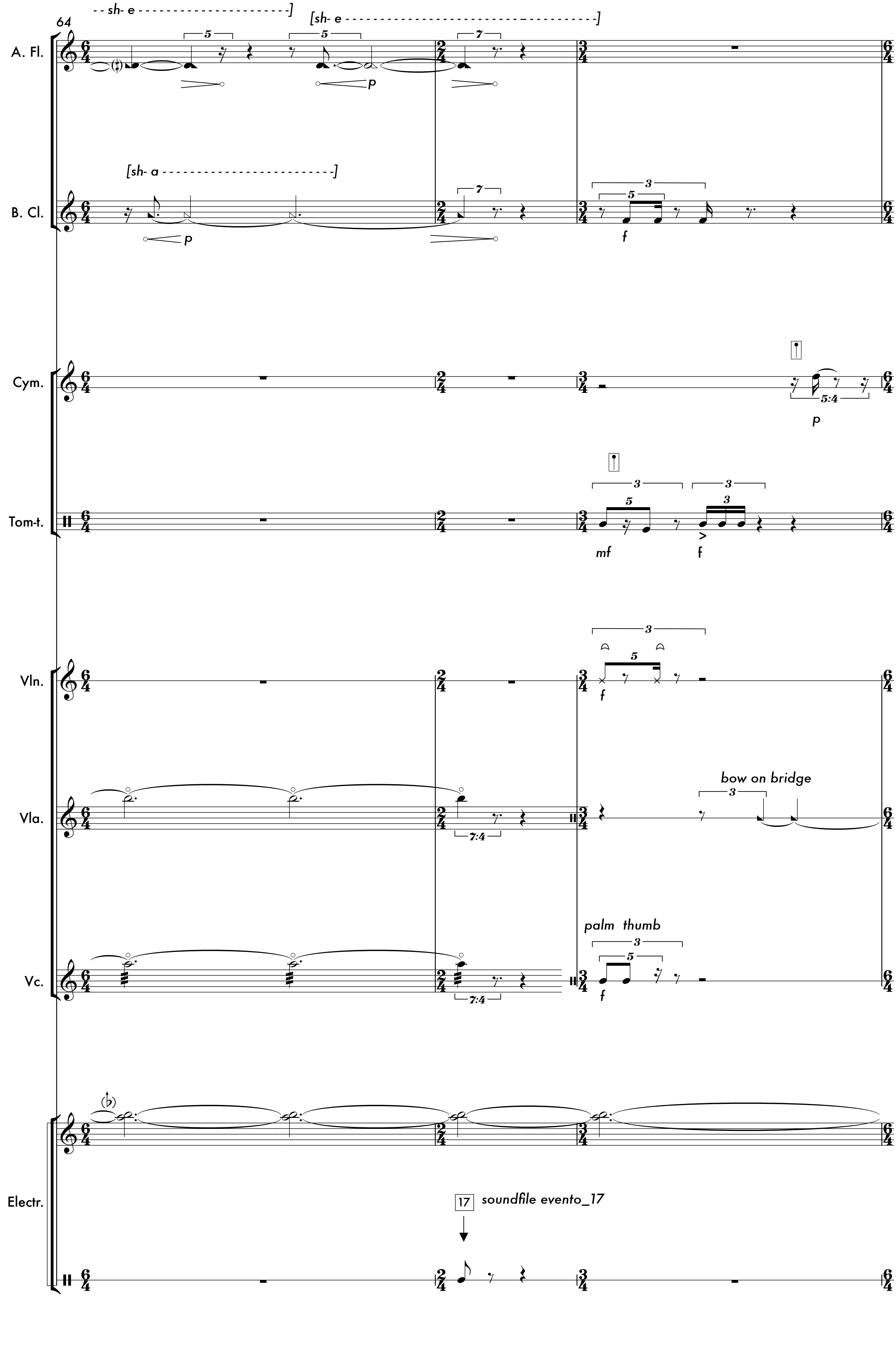

52
air
tongue-ram
A. Fl.
mf
slap
B. Cl.
mp
Tam-t
pp
B. D.
9:8
9:8
ppp
ff
Pno.
pp
pp
f
PP
Ped.
3rd Pedal
pizz
Vln.
mf
thumb
Vla.
t
f
f
f
Vc.
f f f / t
f
palm
Electr.
Event 13 soundfile event_13


55
A. Fl.
slap
tremolo
mf
pp
B. Cl.
slap
tr
f
pp
Cym.
f
B. D.
pp
Pno.
p
mp
f
3rd Pedal
Vln.
bow on bridge
mf
Vla.
arco
II 7
pp
Vc.
arco
f
bow on body
mf

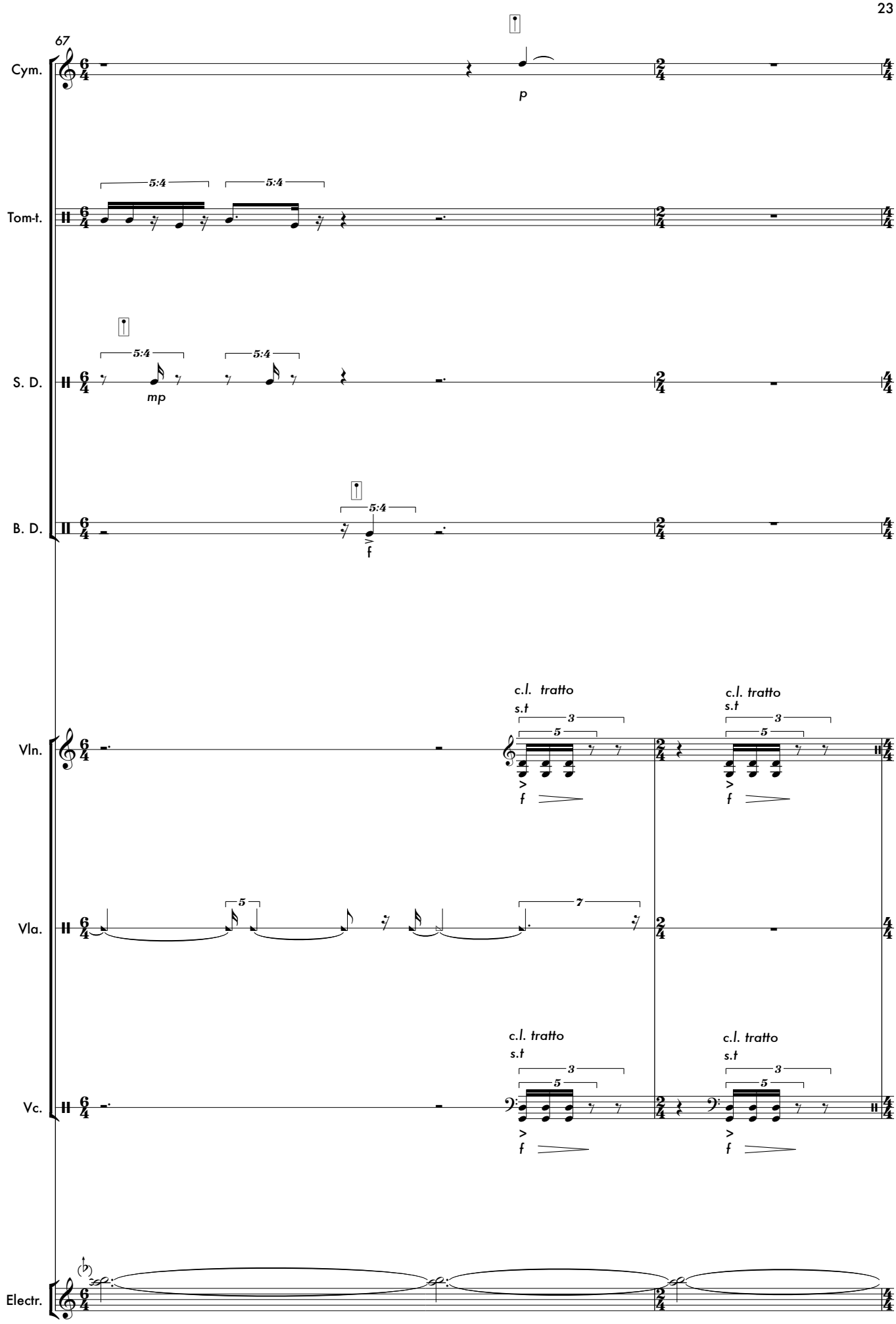

air
air jet whistle
air
jet whistle
19
A. Fl.
p
f
p
gliss.
gliss.
(tr)
B. Cl.
air
mp
Tam-t
ppp
palm
Bongos
mp
B. D.
f
Bow
Vib.
p
5:4
Pno.
pp
Vln.
(II 7)
bow on bridge
Vla.
mf
f f f t
t
Vc.
f
p
Electr.
Event 14
freeze effect + AM
soundfile event_14
vocoder (flute + clarinet)
spatialization in 4 channels

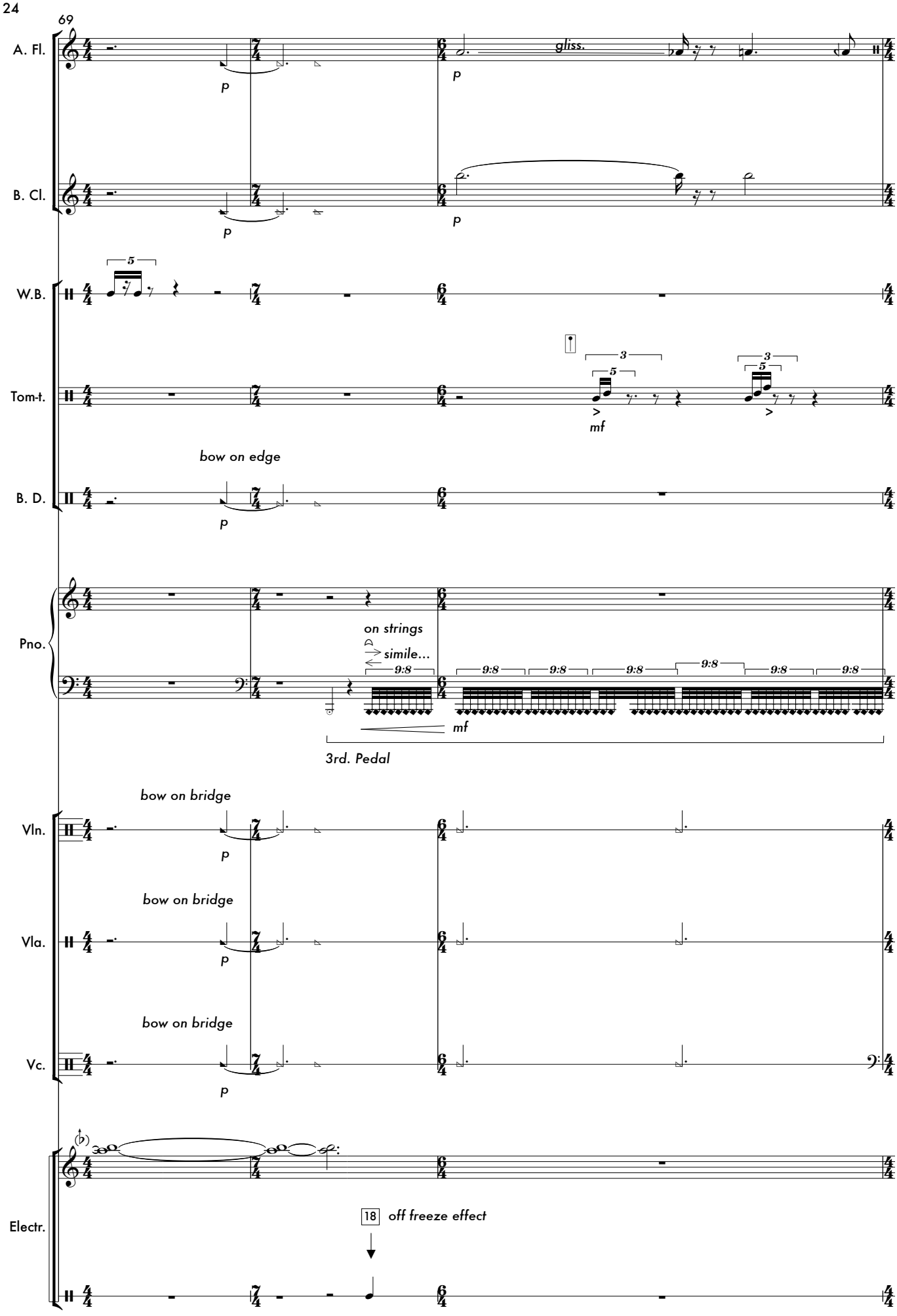

60
A. Fl.
air & tone
B. Cl.
p
W.B.
Cym.
T.-t.
Crot.
Tri.
Tom-t.
palm
palm
fingertip
palm
palm
Bongos
mf
S. D.
palm
B. D.
mf
Vib.
Pno.
mf
p sub f p
Vln.
Vla.
Vc.
Electr.
Event 15 off all effects

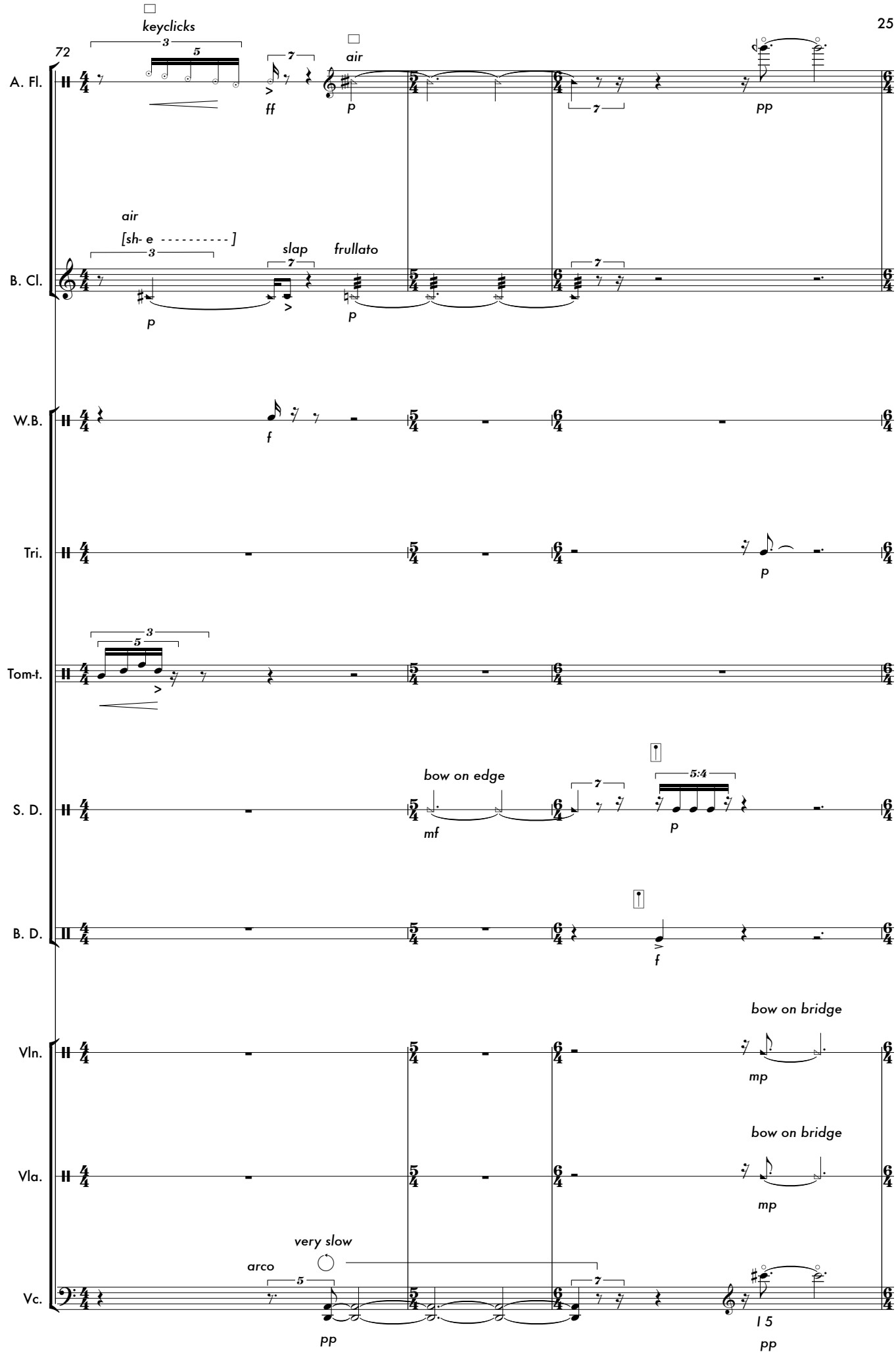

62
[sh- e
air & tone
A. Fl.
ff
f
sub p
[sh- a
B. Cl.
mf
p
W.B.
mf
Cym.
mp
Tri.
f
B. D.
f
ff
Pno.
ff
ff
arco
Vla.
IV 7
p
arco
Vc.
III - IV
f
II 6
p
p
Event 16 freeze effect (vla. + vc.) + trasnposition
+ spatialization in 4 channels
Electr.

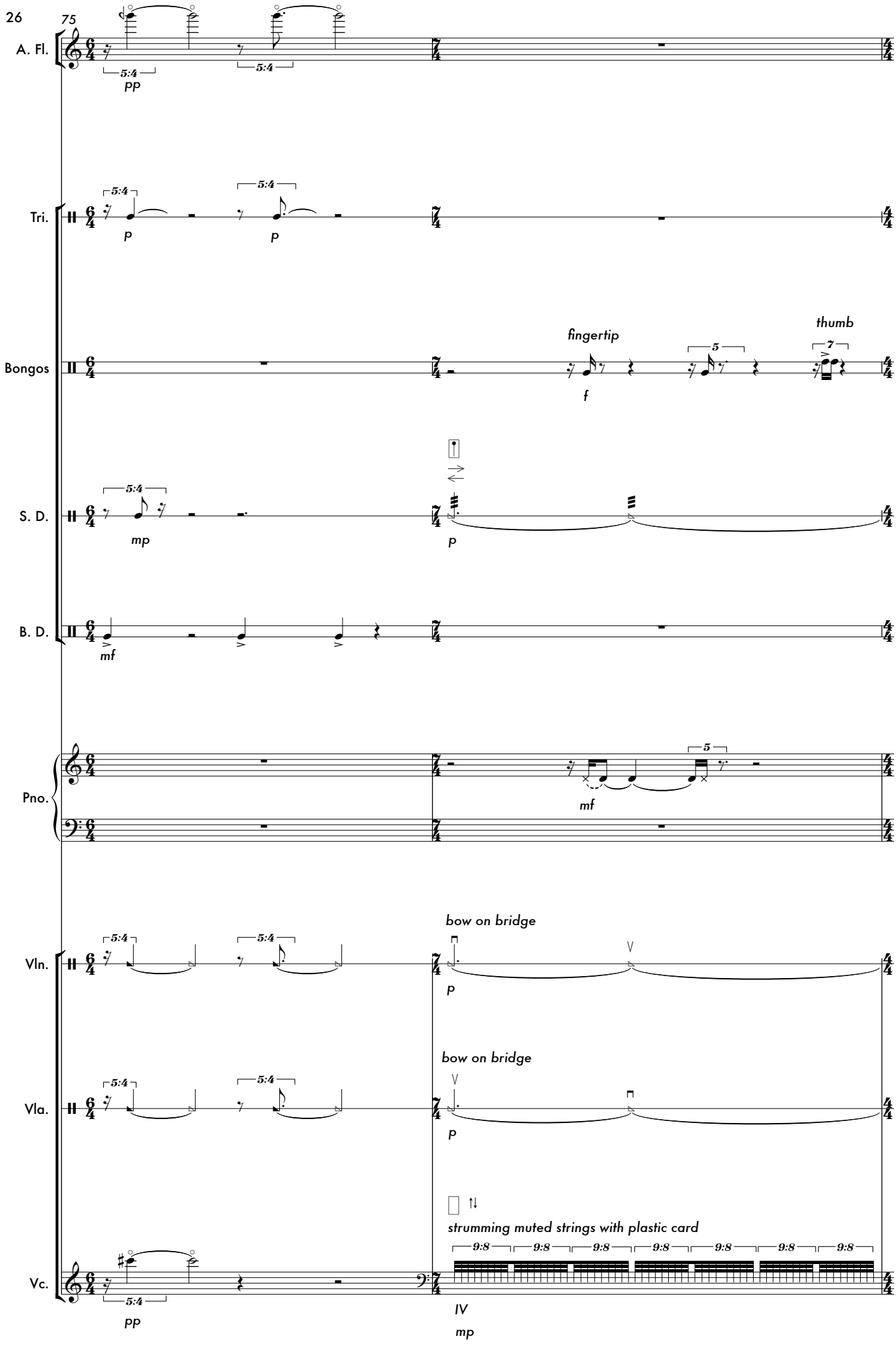


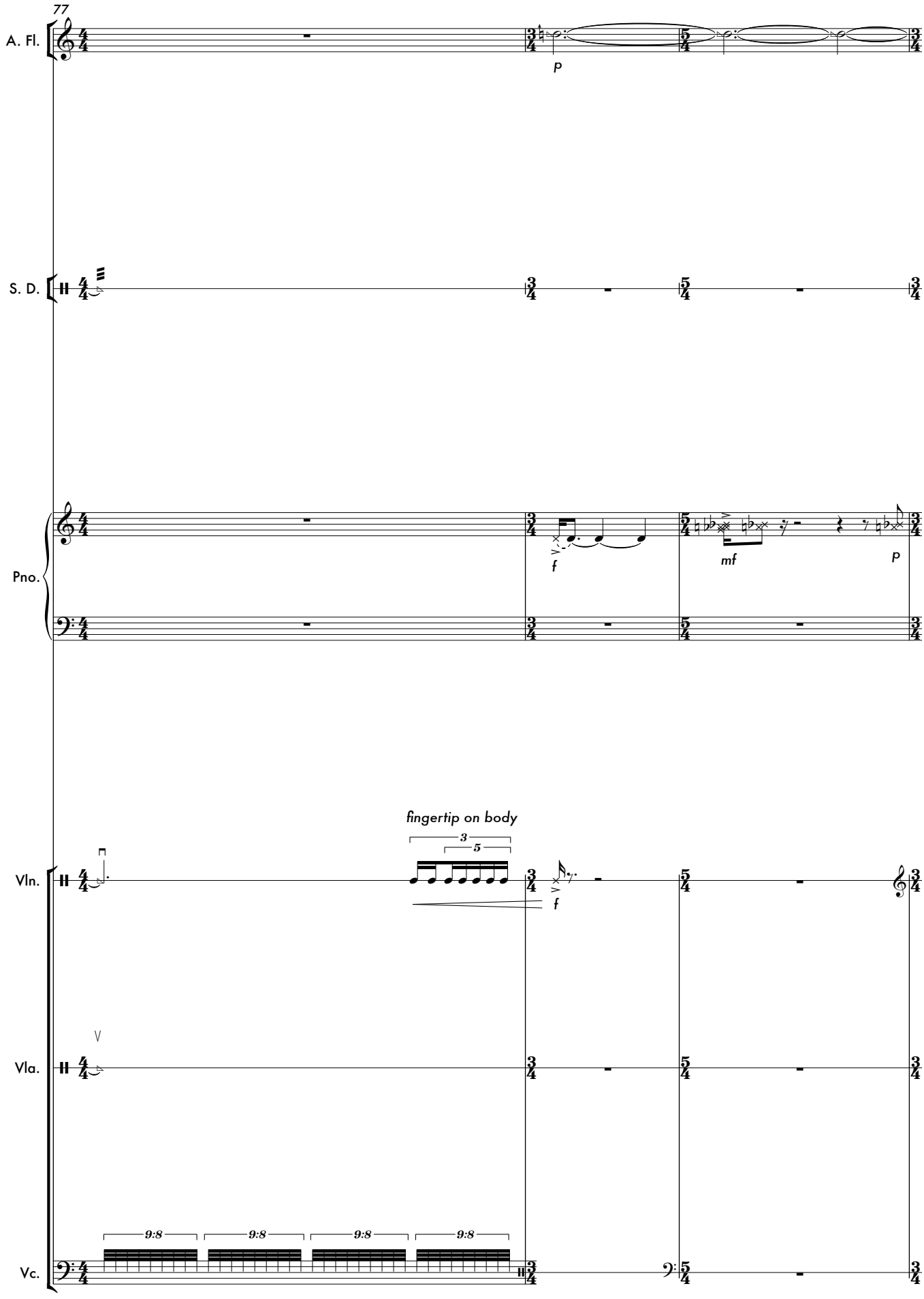
- - sh- e -]
64
[sh- e -]
A. Fl.
[sh- a -]
B. Cl.
Cym.
Tom-t.
Vln.
Vla.
bow on bridge
palm thumb
Vc.
Electr.
17 soundfile evento_17

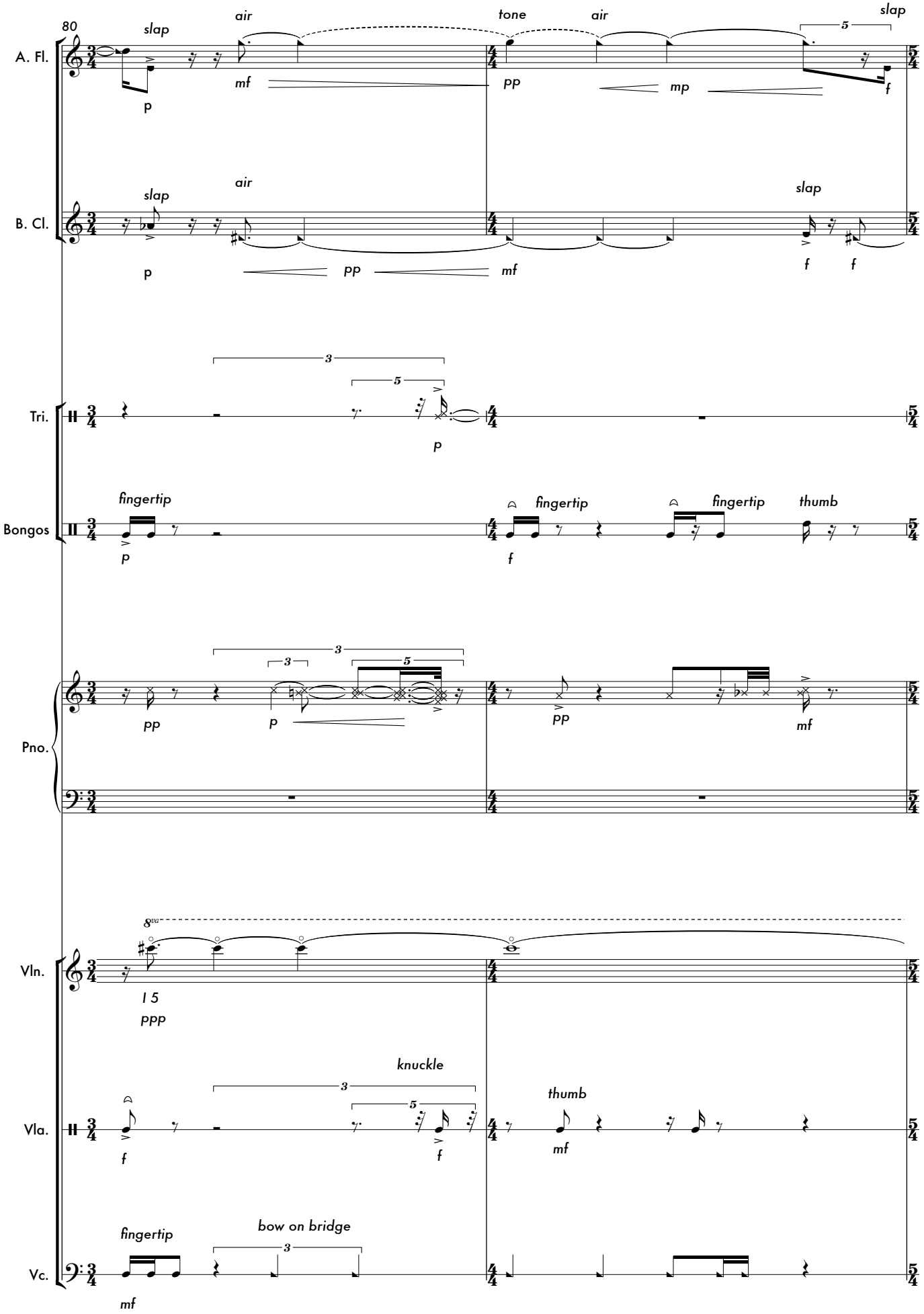

67
Cym.
p
Tom-t.
5:4
5:4
S. D.
5:4
5:4
mp
B. D.
5:4
f
Vln.
c.l. tratto
s.t
3
5
f
c.l. tratto
s.t
3
5
f
Vla.
5
7
Vc.
c.l. tratto
s.t
3
5
f
c.l. tratto
s.t
3
5
f
Electr.

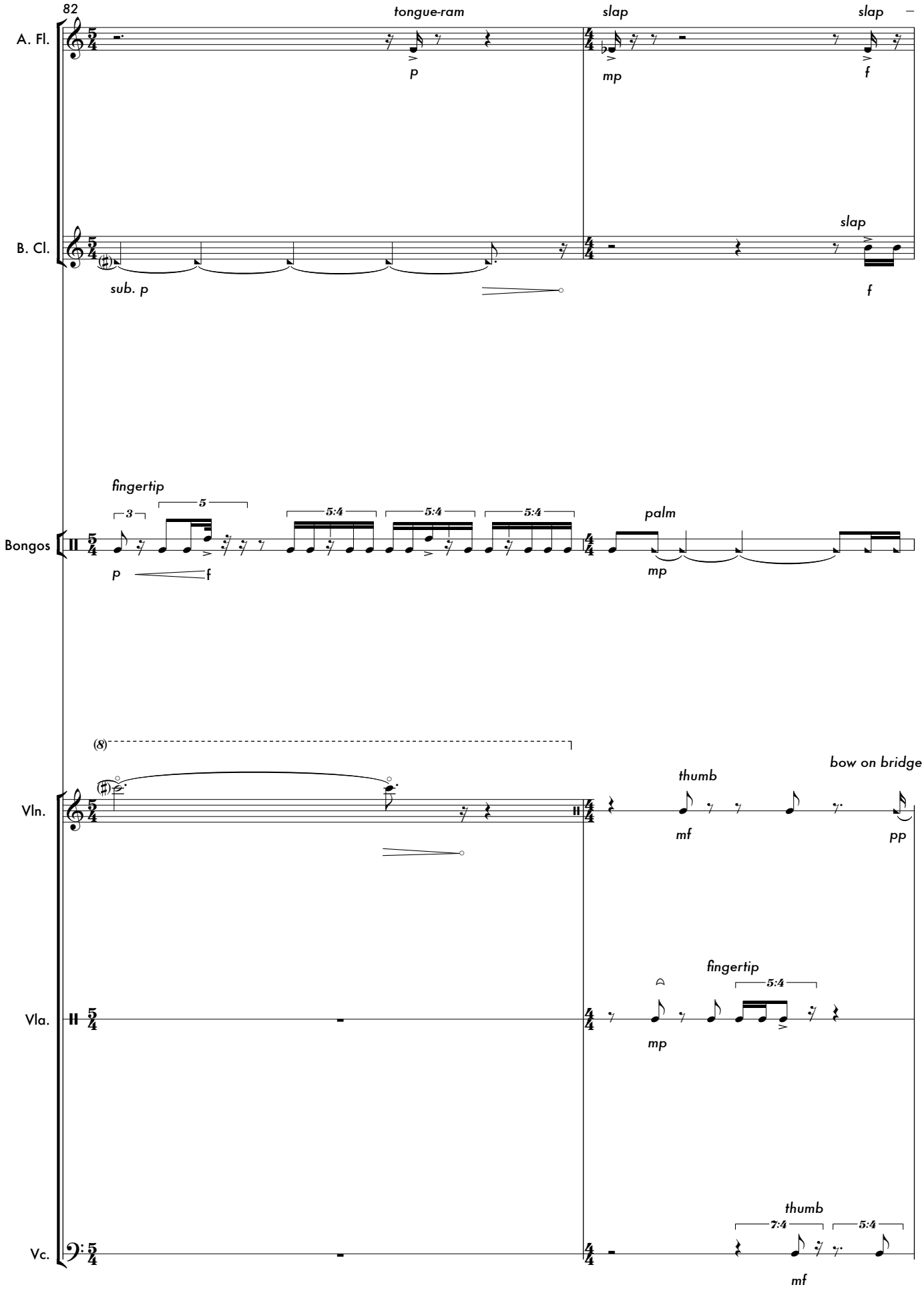

69
A. Fl.
gliss.
p
B. Cl.
W.B.
Tom-t.
mf
bow on edge
B. D.
Pno.
on strings
simile...
9:8
mf
3rd. Pedal
bow on bridge
Vln.
Vla.
Vc.
Electr.
18 off freeze effect

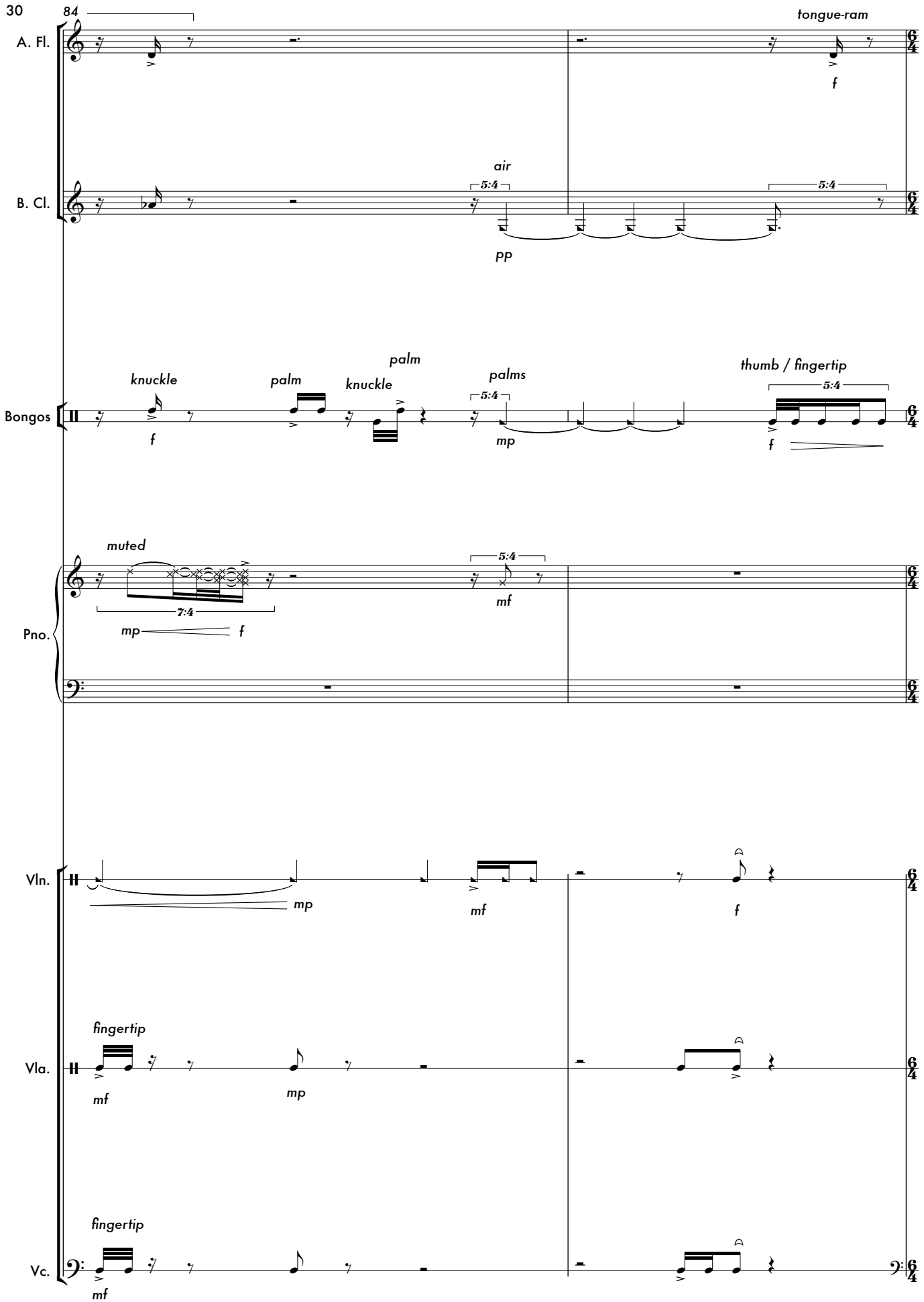

72
keyclicks
air
A. Fl.
ff
p
pp
air
[sh- e ----------]
slap
frullato
B. Cl.
p
p
W.B.
f
Tri.
p
Tom-t.
bow on edge
S. D.
mf
5:4
p
B. D.
f
bow on bridge
Vln.
mp
bow on bridge
Vla.
mp
very slow
arco
Vc.
pp
l 5
pp

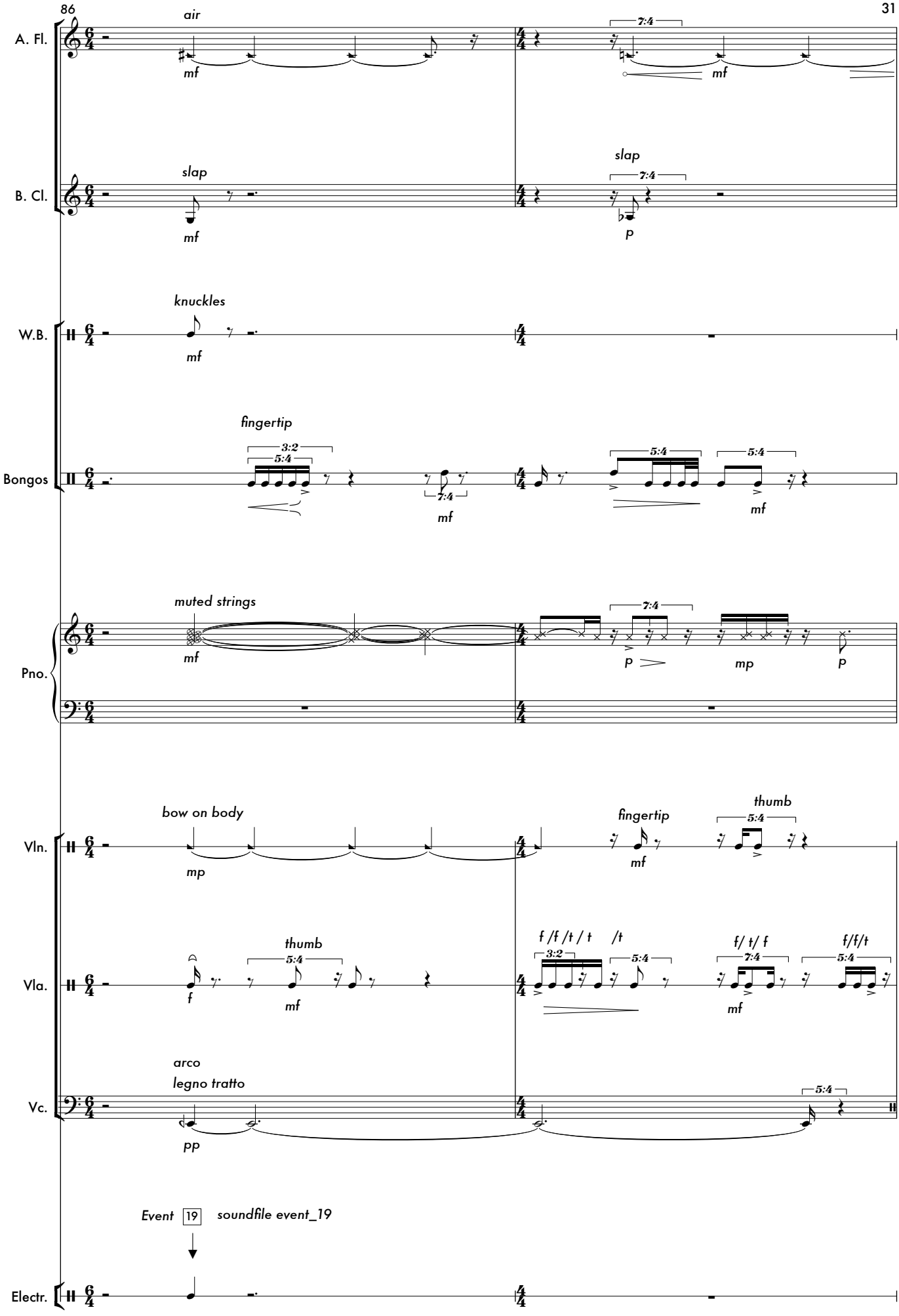

75
A. Fl.
5:4
pp
Tri.
p
Bongos
fingertip
thumb
f
S. D.
mp
B. D.
mf
Pno.
Vln.
bow on bridge
Vla.
strumming muted strings with plastic card
9:8
Vc.
IV
mp

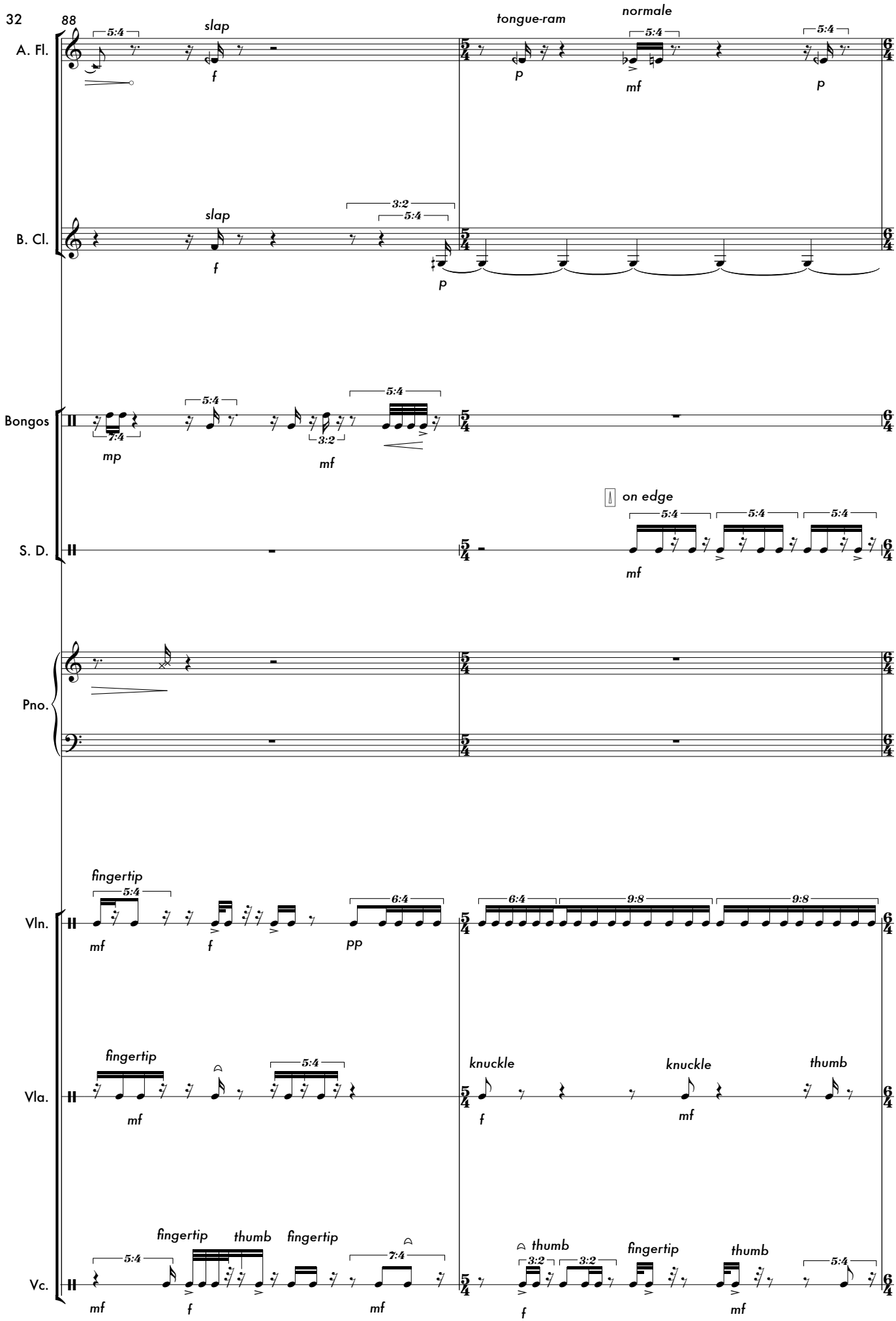

77
A. Fl.
p
S. D.
Pno.
f
mf
p
fingertip on body
3
5
Vln.
f
Vla.
Vc.
9:8
9:8
9:8
9:8

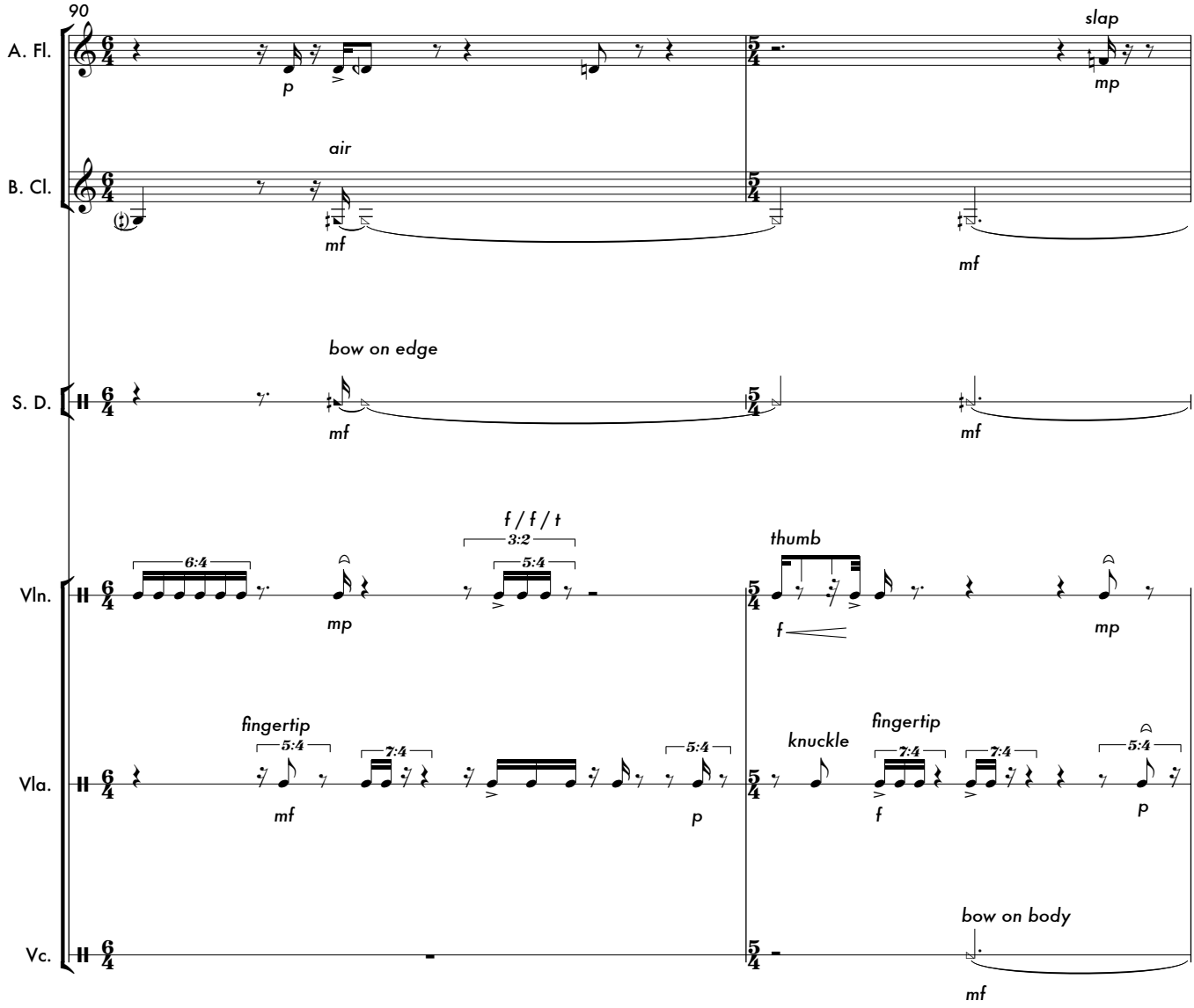

80
A. Fl.
B. Cl.
Tri.
Bongos
Pno.
Vln.
Vla.
Vc.
slap
air
tone
air
slap
mf
pp
mp
f
p
slap
air
slap
p
pp
mf
f
f
fingertip
fingertip
fingertip
thumb
p
f
pp
p
pp
mf
8va
l 5
ppp
knuckle
thumb
f
f
mf
fingertip
bow on bridge
mf

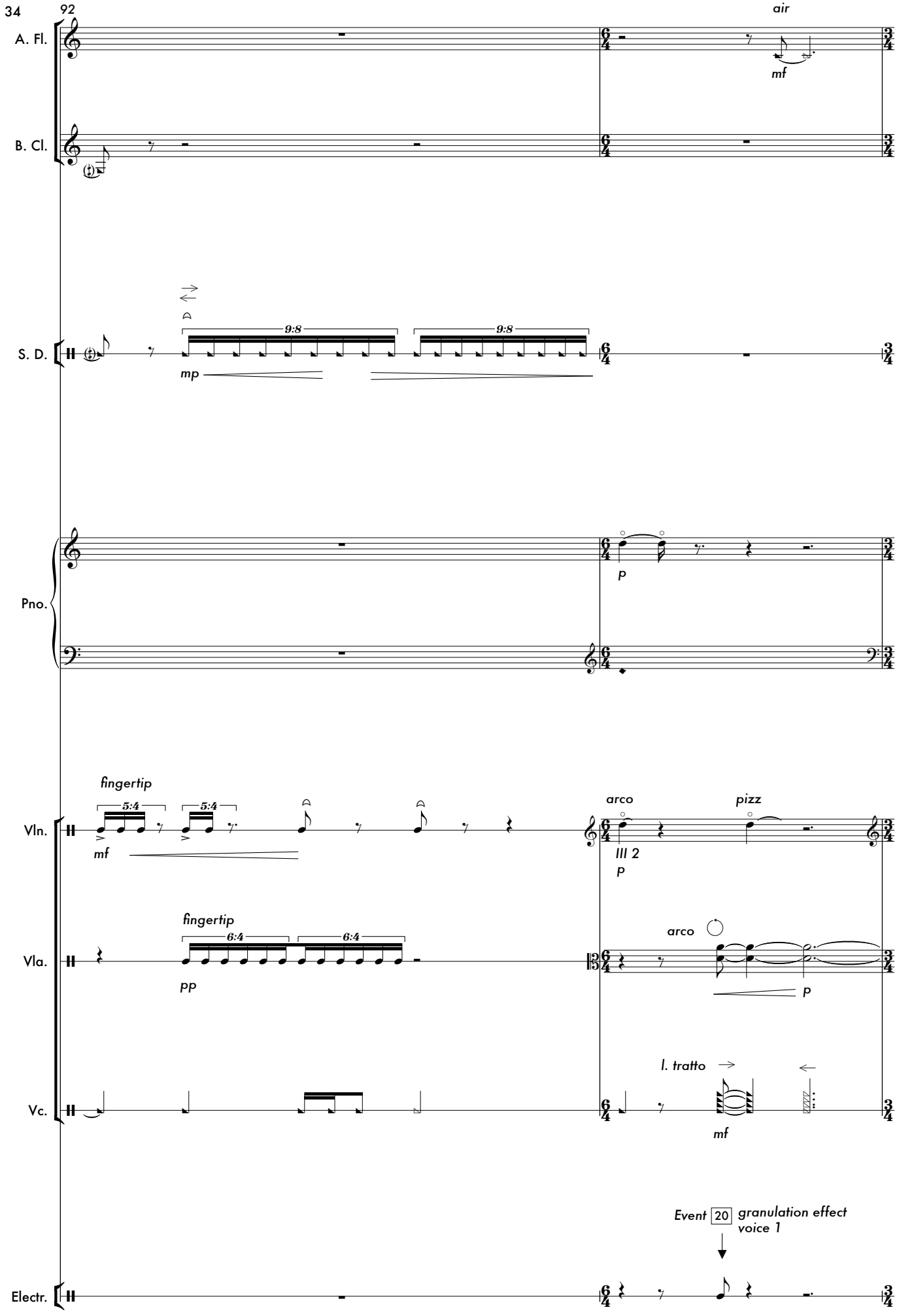

82
A. Fl.
tongue-ram
p
slap
mp
slap
f
B. Cl.
sub. p
slap
f
Bongos
fingertip
3
5
5:4
5:4
5:4
p
f
palm
mp
(8)
Vln.
thumb
mf
bow on bridge
pp
Vla.
fingertip
5:4
mp
Vc.
thumb
7:4
5:4
mf

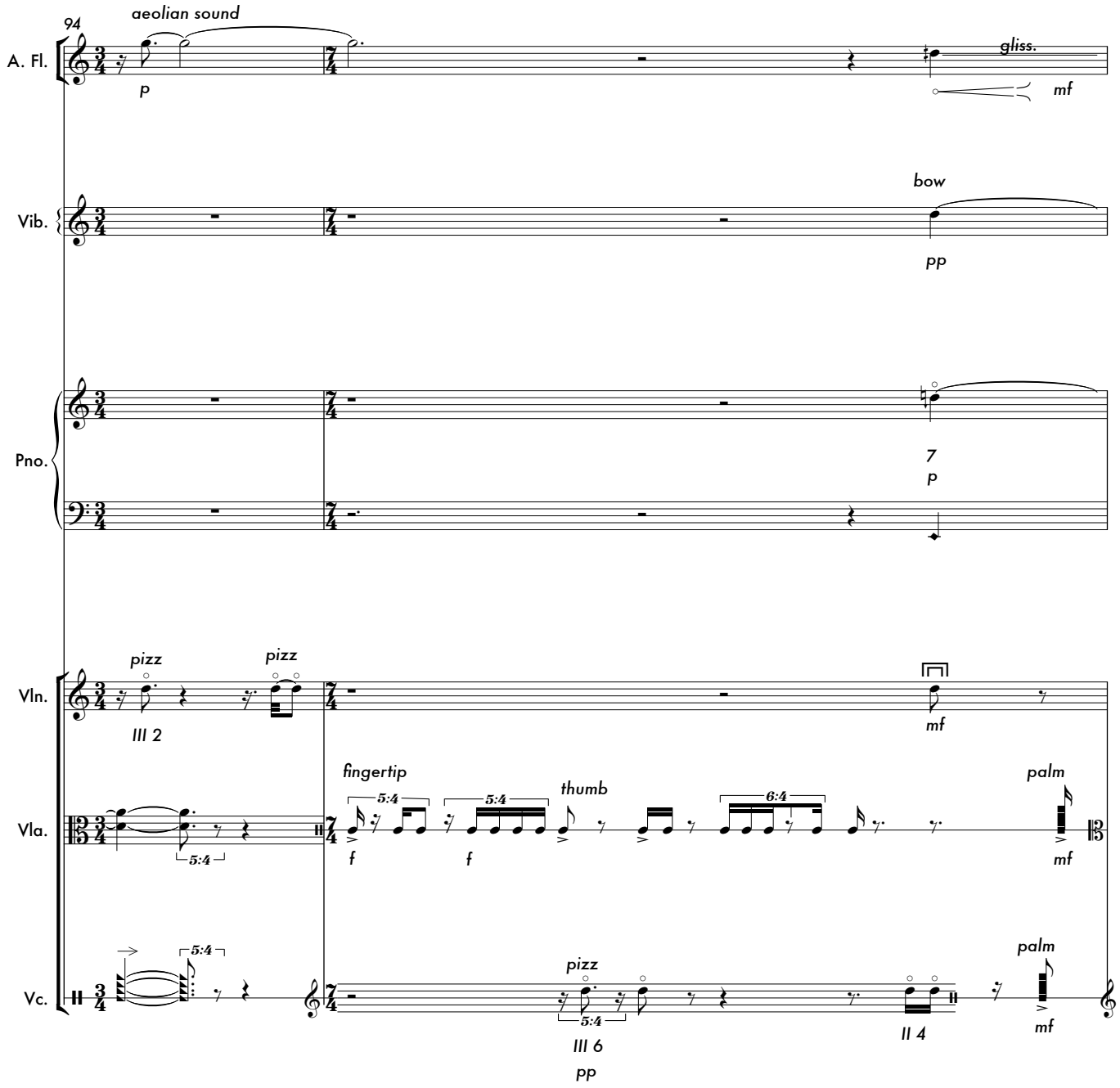

84
A. Fl.
tongue-ram
f
B. Cl.
air
5:4
5:4
pp
Bongos
knuckle
palm
knuckle
palm
palms
5:4
thumb / fingertip
5:4
f
mp
f
Pno.
muted
5:4
7:4
mp
f
mf
Vln.
mp
mf
f
Vla.
fingertip
mf
mp
Vc.
fingertip
mf

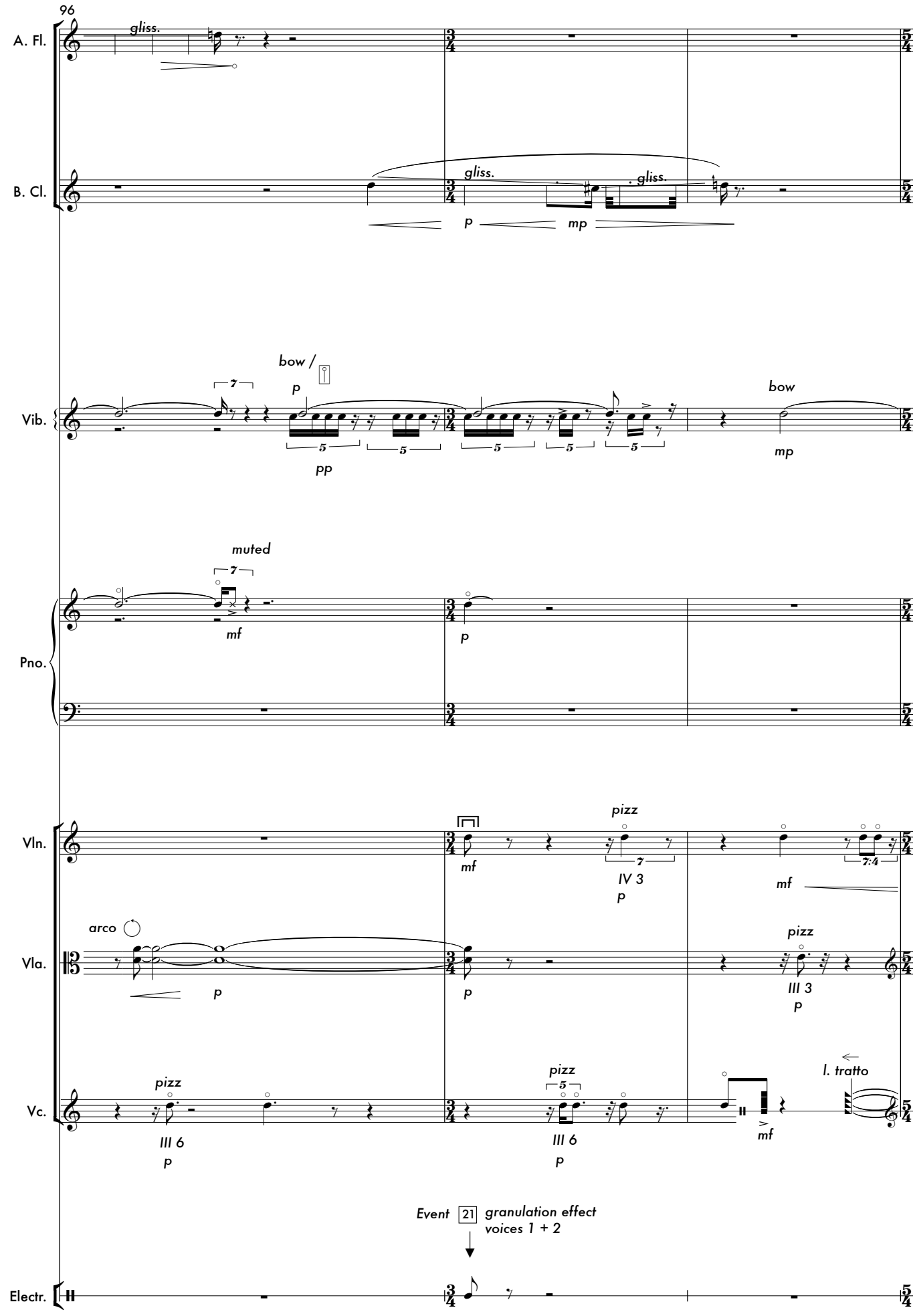

A. Fl.
air
mf
7:4
mf
B. Cl.
slap
mf
slap
7:4
p
W.B.
knuckles
mf
Bongos
fingertip
3:2
5:4
7:4
mf
5:4
5:4
mf
Pno.
muted strings
mf
7:4
p
mp
p
Vln.
bow on body
mp
fingertip
mf
thumb
5:4
Vla.
f
thumb
5:4
mf
f /f /t / t /t
3:2
5:4
f/ t/ f
7:4
mf
f/f/t
5:4
Vc.
arco
legno tratto
pp
5:4
Event 19 soundfile event_19
Electr.

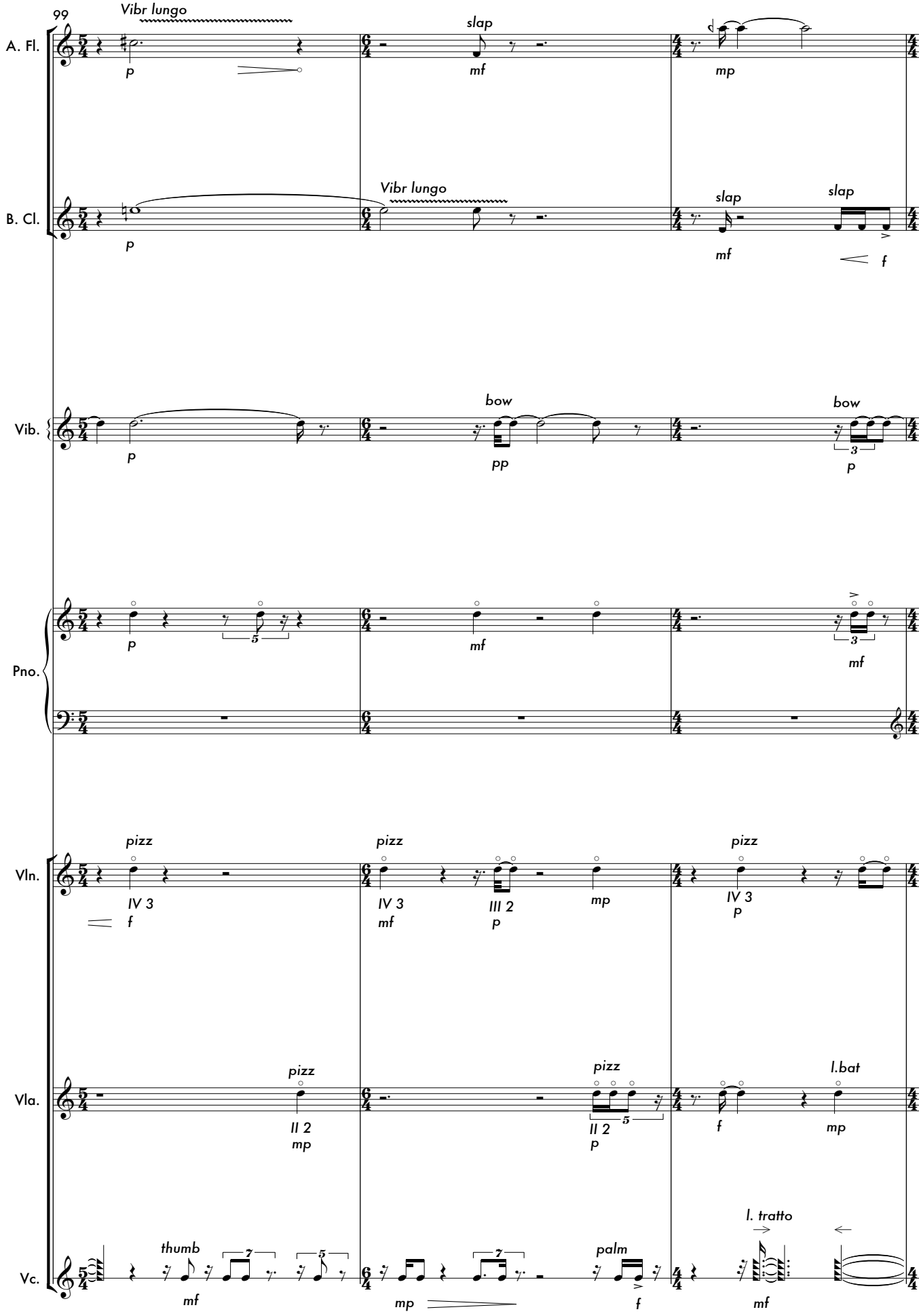

88
A. Fl.
slap
f
tongue-ram
p
normale
mf
p
B. Cl.
slap
f
p
Bongos
mp
mf
S. D.
on edge
mf
Pno.
Vln.
fingertip
mf
f
pp
Vla.
fingertip
mf
knuckle
f
knuckle
mf
thumb
Vc.
fingertip
thumb
fingertip
mf
f
mf
thumb
f
fingertip
thumb
mf

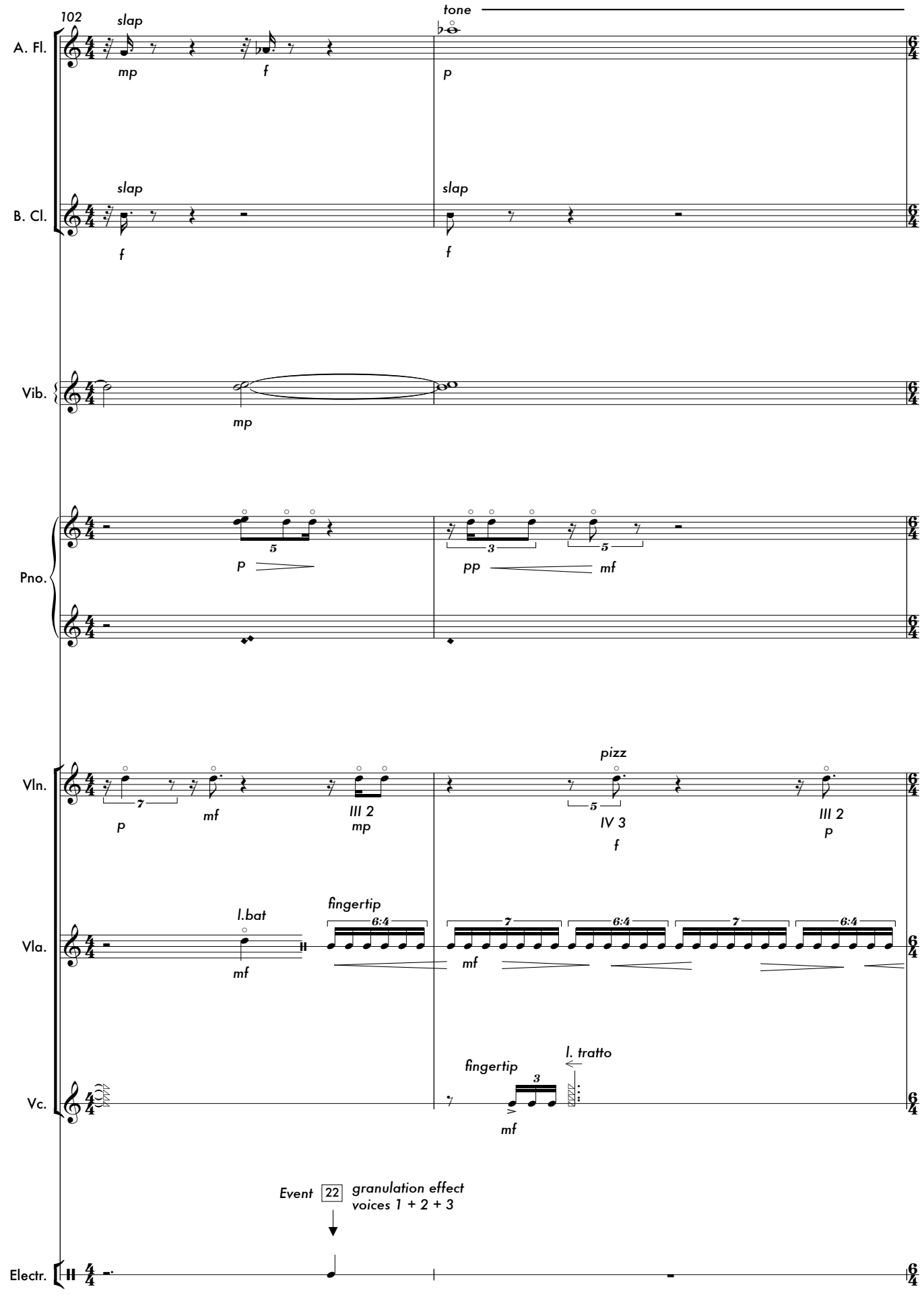

90
A. Fl.
B. Cl.
S. D.
Vln.
Vla.
Vc.
p
slap
mp
air
mf
mf
bow on edge
mf
mf
6:4
mp
f / f / t
3:2
5:4
thumb
f
mp
fingertip
5:4
7:4
mf
5:4
p
knuckle
fingertip
7:4
7:4
f
5:4
p
bow on body
mf

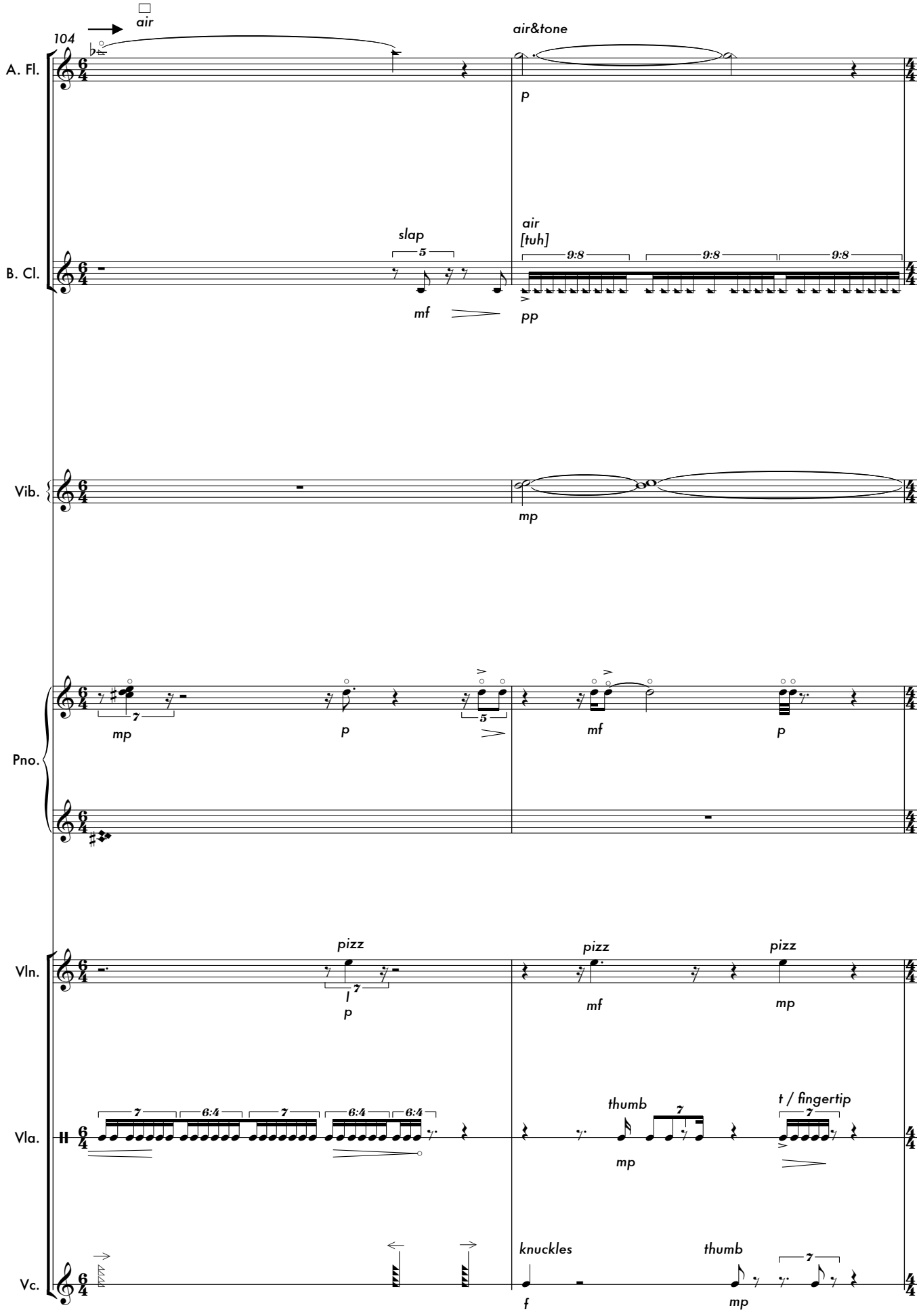

92
A. Fl.
air
mf
B. Cl.
S. D.
9:8
9:8
mp
Pno.
p
Vln.
fingertip
5:4
5:4
mf
arco
pizz
III 2
p
Vla.
fingertip
6:4
6:4
pp
arco
p
Vc.
l. tratto
mf
Event 20 granulation effect
voice 1
Electr.

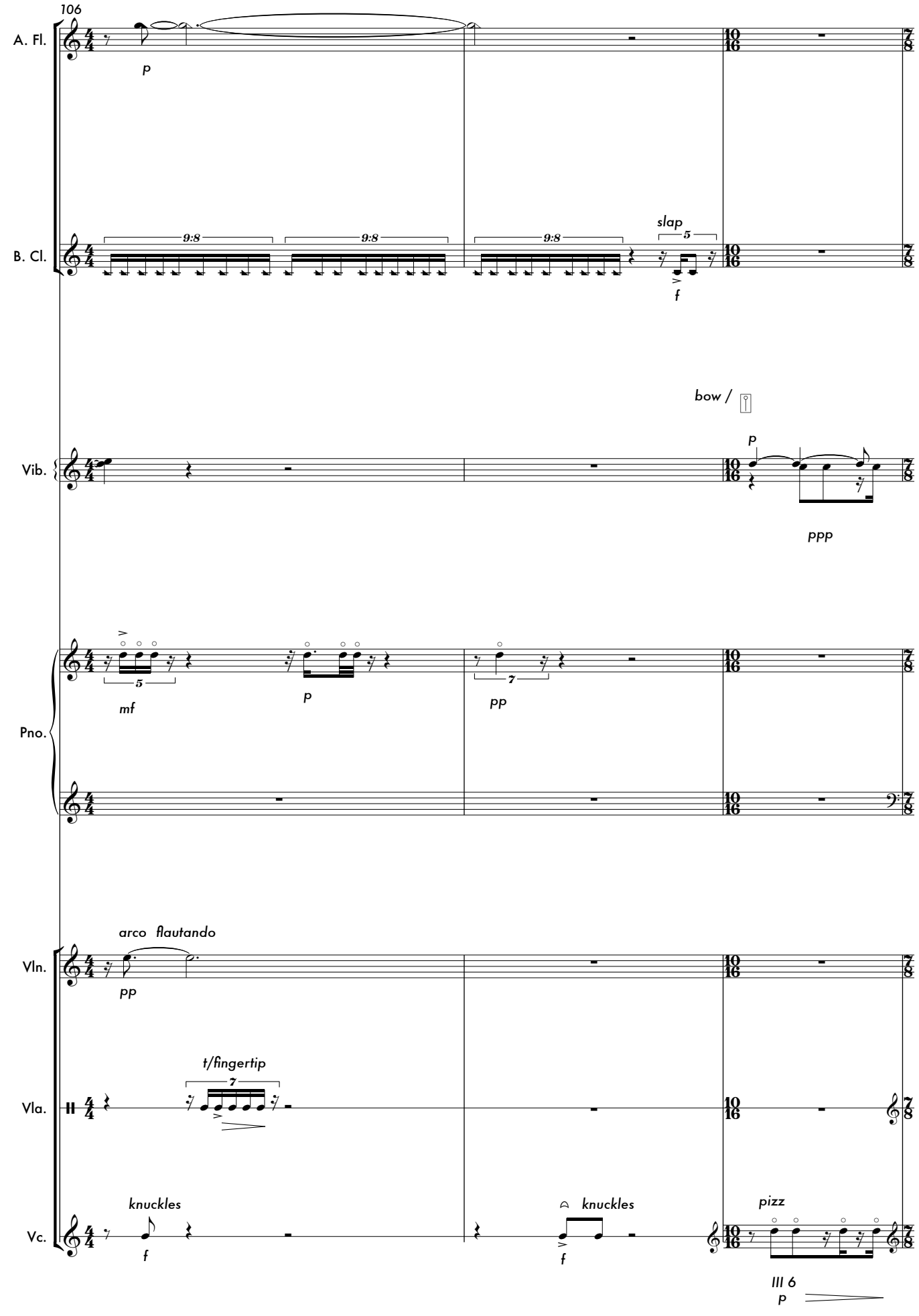

94
aeolian sound
A. Fl.
p
gliss.
mf
Vib.
bow
pp
Pno.
7
p
Vln.
pizz
pizz
III 2
mf
Vla.
fingertip
5:4
5:4
thumb
6:4
palm
f
f
mf
5:4
Vc.
5:4
pizz
palm
5:4
III 6
pp
II 4
mf

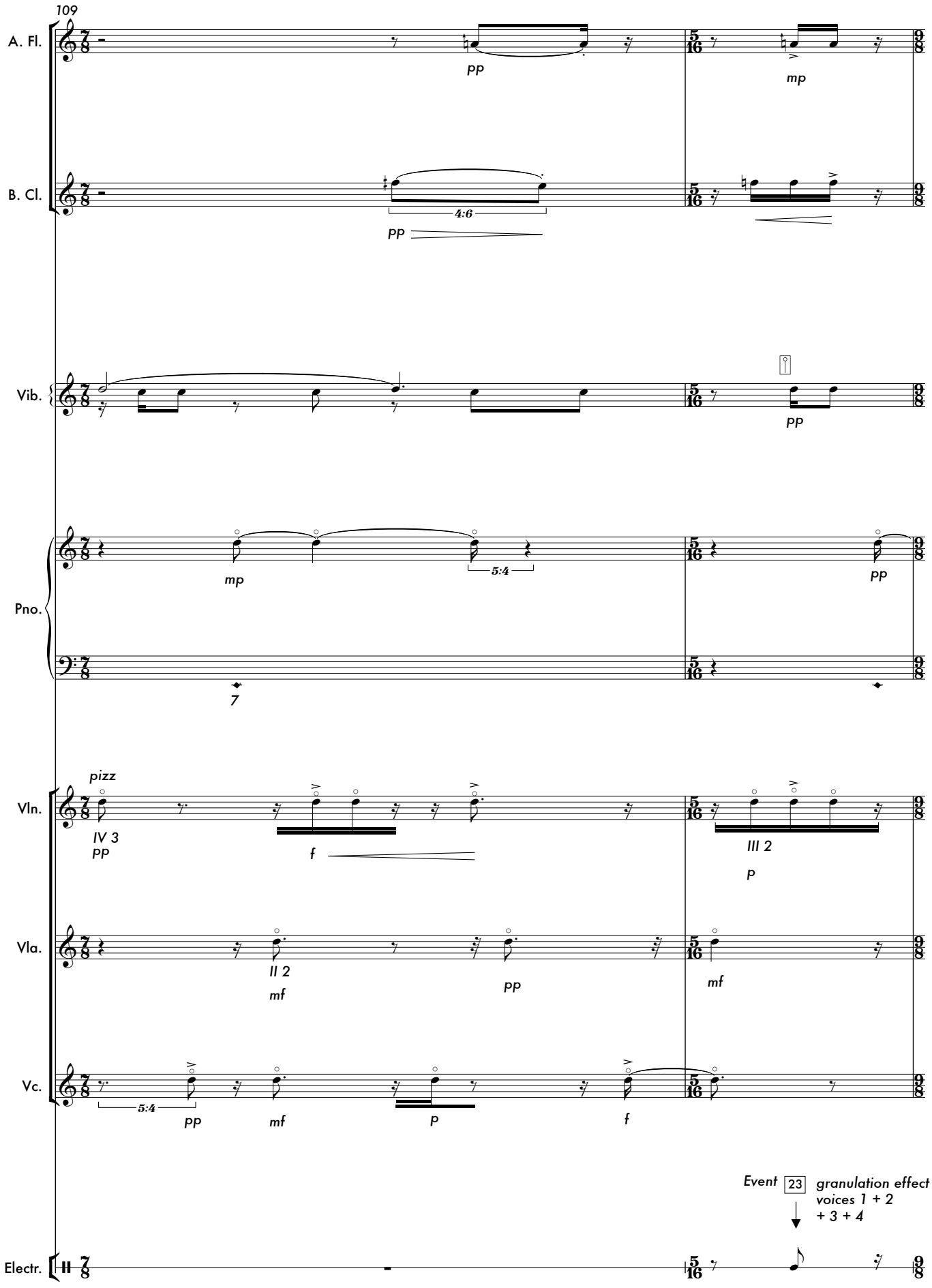

96
A. Fl.
gliss.
B. Cl.
gliss.
gliss.
p
mp
Vib.
bow /
p
pp
bow
mp
Pno.
muted
mf
p
Vln.
mf
pizz
IV 3
p
mf
Vla.
arco
p
p
pizz
III 3
p
Vc.
pizz
III 6
p
pizz
III 6
p
l. tratto
mf
Event 21 granulation effect
voices 1 + 2
Electr.

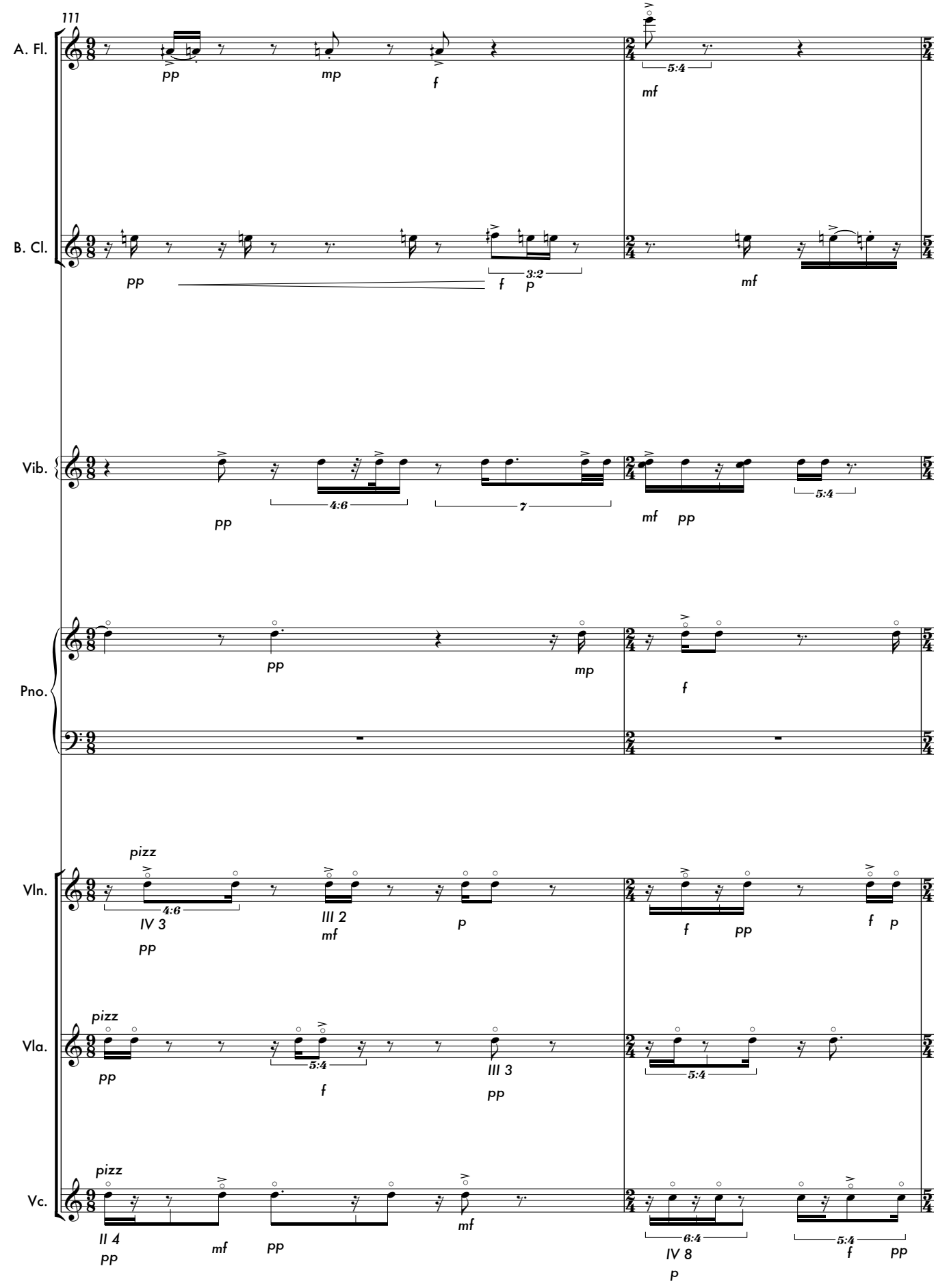

99
A. Fl.
Vibr lungo
p
slap
mf
mp
B. Cl.
Vibr lungo
p
slap
mf
slap
f
Vib.
p
bow
pp
bow
p
Pno.
p
mf
mf
Vln.
pizz
IV 3
f
pizz
IV 3
mf
III 2
p
mp
pizz
IV 3
p
Vla.
pizz
II 2
mp
pizz
II 2
p
f
l.bat
mp
Vc.
thumb
mf
mp
palm
f
l. tratto
mf

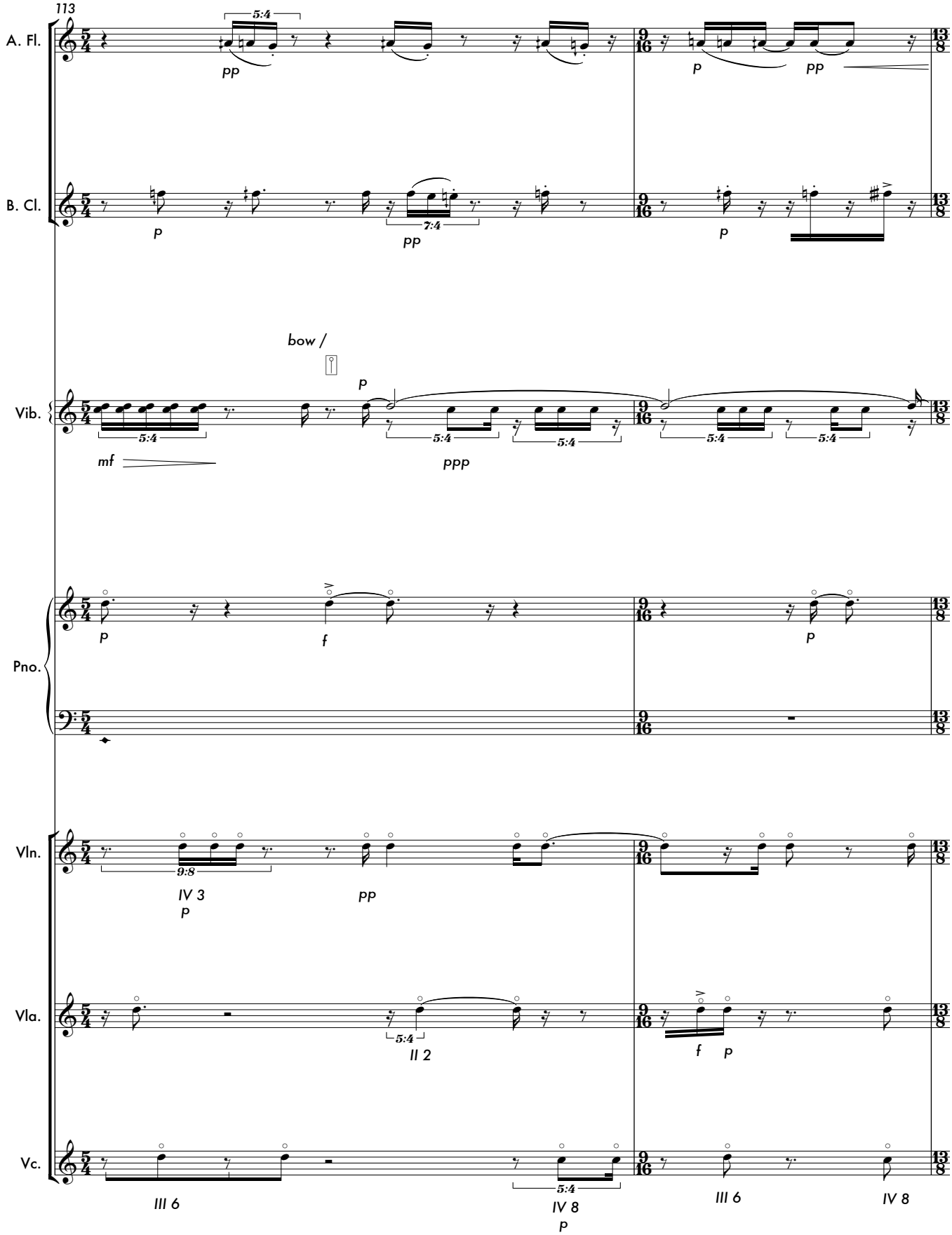

102
A. Fl.
slap
mp
f
tone
p
B. Cl.
slap
f
slap
f
Vib.
mp
Pno.
p
pp
mf
Vln.
p
mf
III 2
mp
pizz
IV 3
f
III 2
p
Vla.
l.bat
mf
fingertip
6:4
7
mf
Vc.
fingertip
mf
l. tratto
Event 22
granulation effect
voices 1 + 2 + 3
Electr.

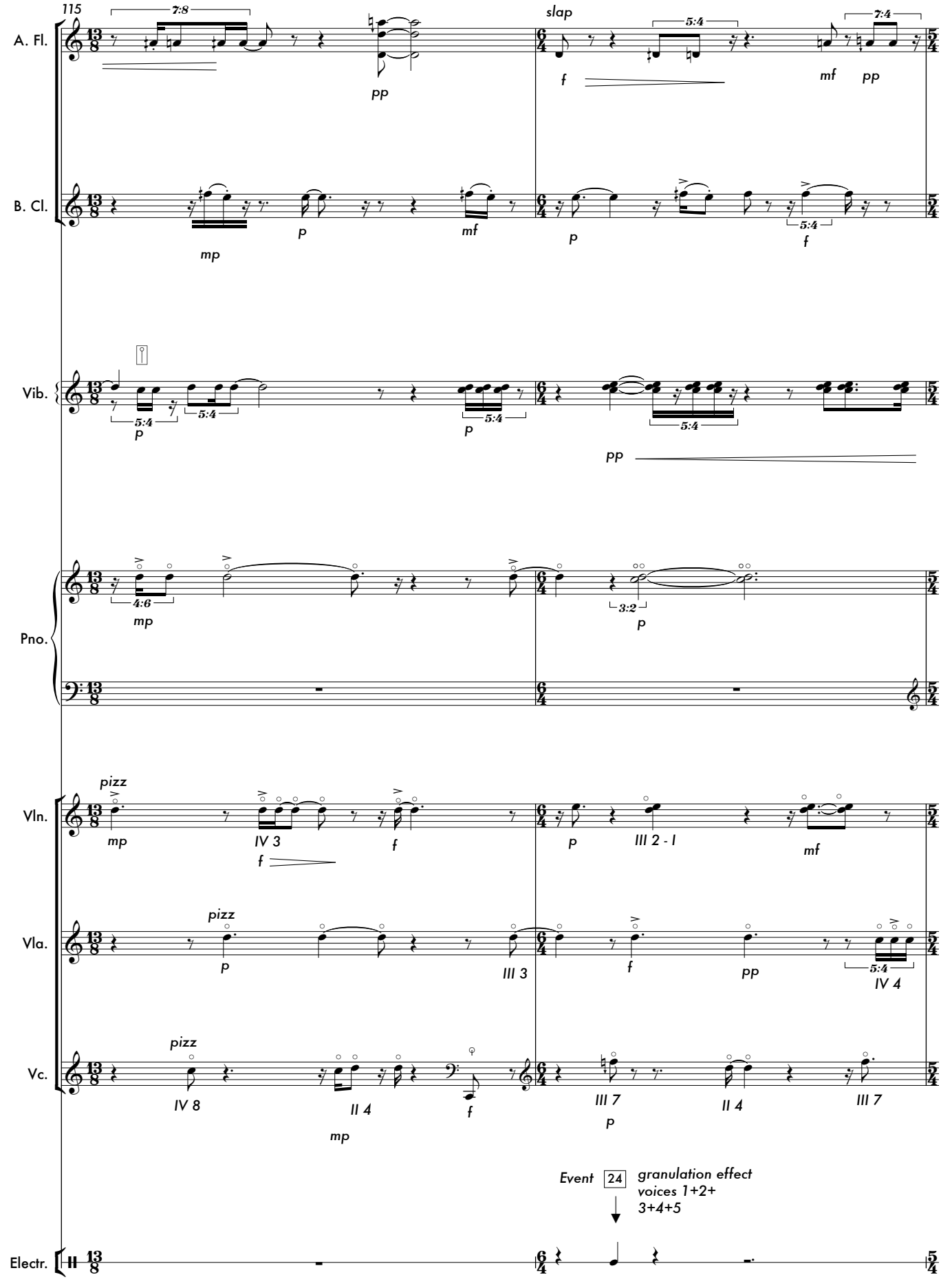

104
air
air&tone
A. Fl.
p
slap
air
[tuh]
B. Cl.
mf
pp
Vib.
mp
Pno.
mp
p
mf
p
pizz
Vln.
mf
mp
Vla.
thumb
t / fingertip
mp
knuckles
thumb
Vc.
f
mp

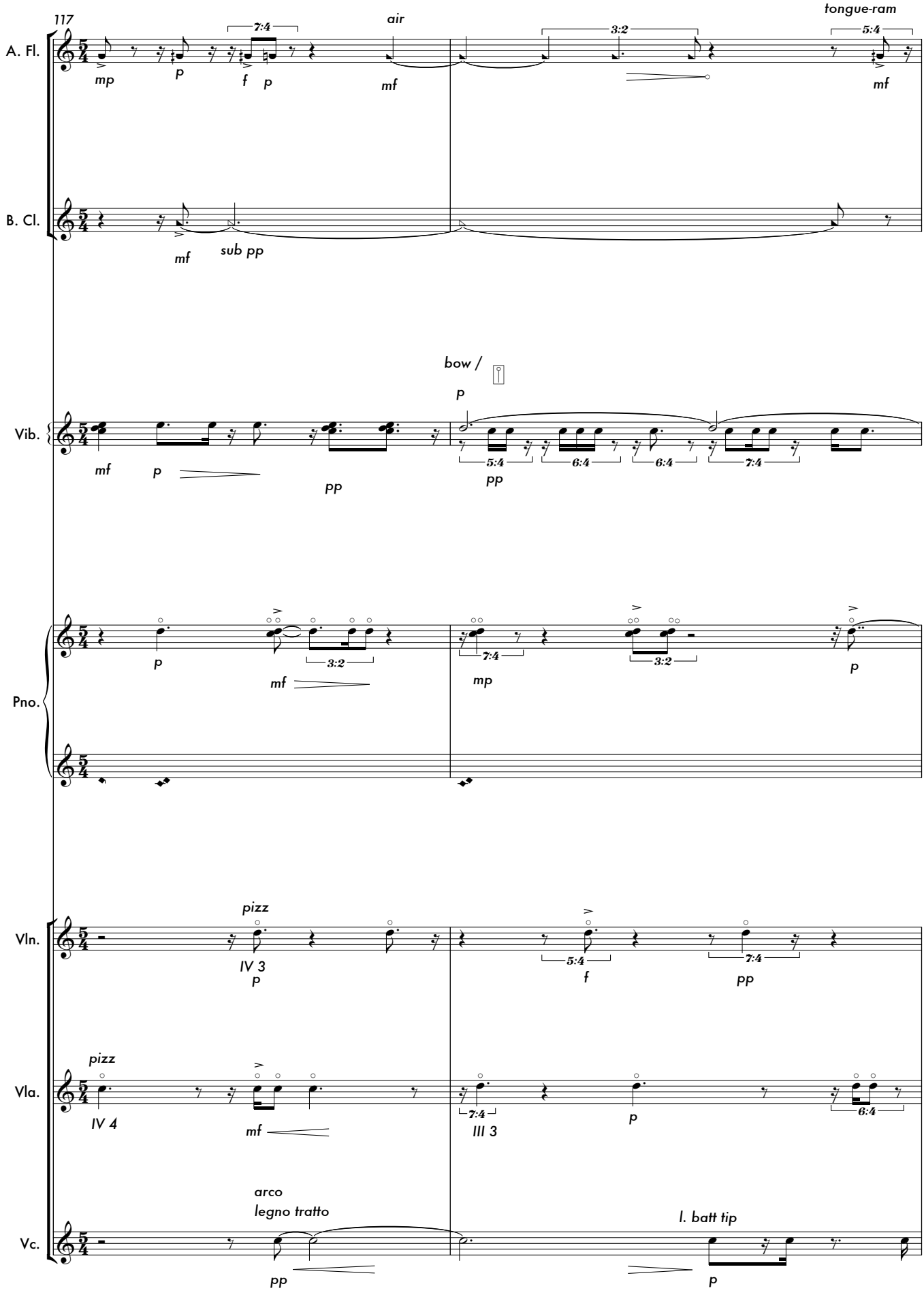

106
A. Fl.
p
B. Cl.
9:8
9:8
9:8
slap
5
f
bow /
Vib.
p
ppp
Pno.
5
mf
p
7
pp
arco flautando
Vln.
pp
t/fingertip
7
Vla.
knuckles
f
knuckles
f
pizz
Vc.
III 6
p

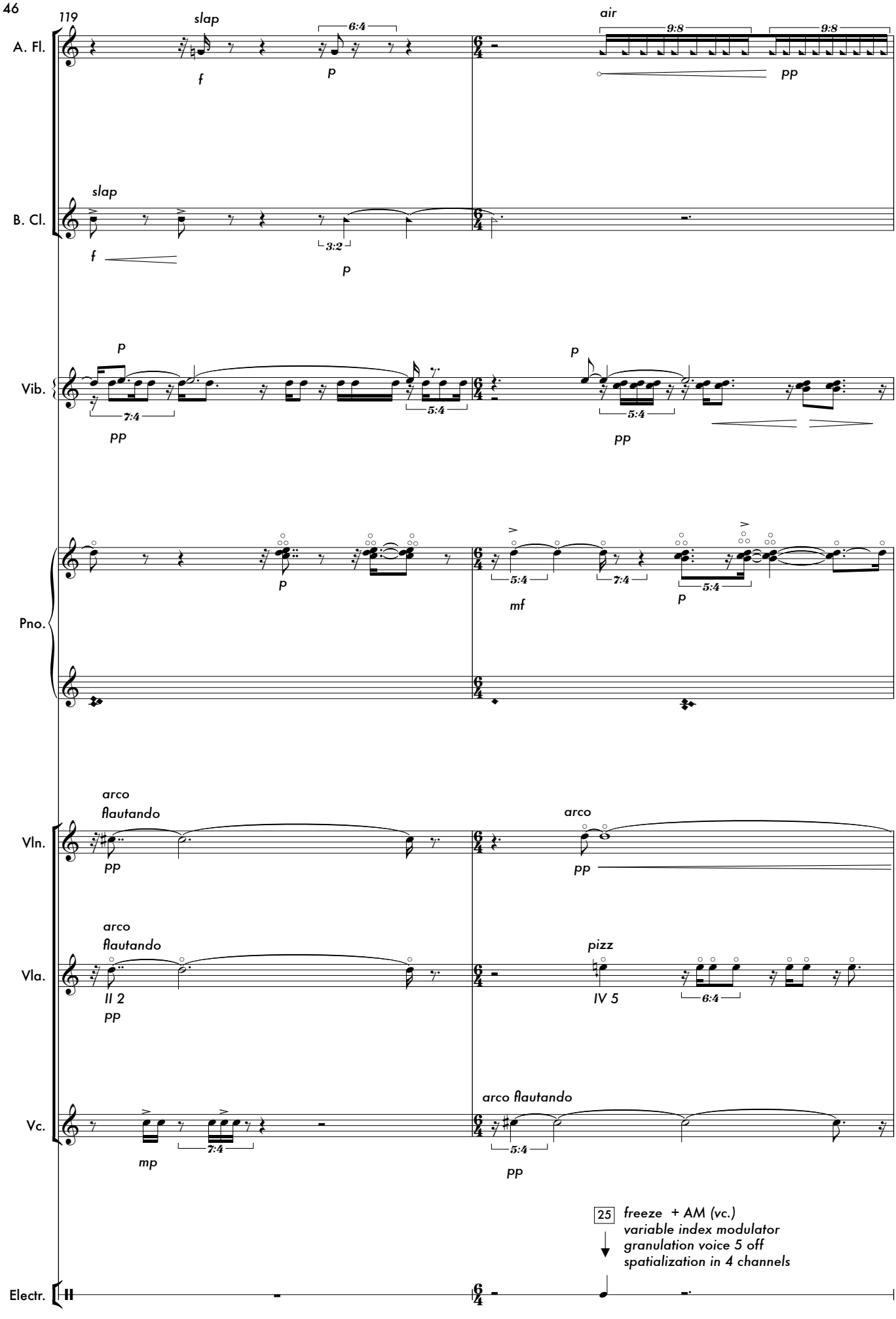

109
A. Fl.
pp
mp
B. Cl.
4:6
pp
Vib.
pp
Pno.
mp
5:4
pp
7
pizz
Vln.
IV 3
pp
f
III 2
p
Vla.
II 2
mf
pp
mf
Vc.
5:4
pp
mf
p
f
Event 23 granulation effect
voices 1 + 2
+ 3 + 4
Electr.

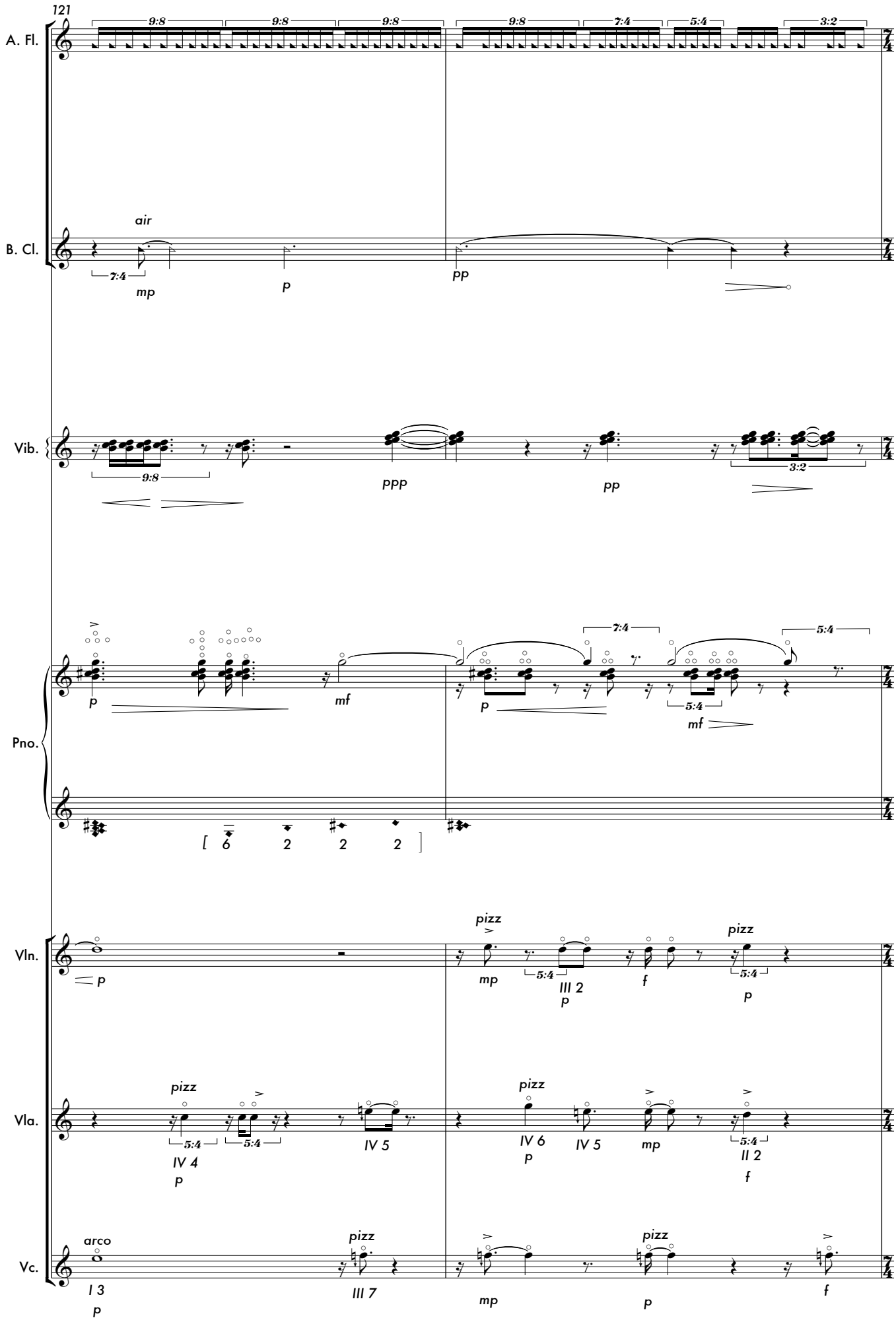

111
A. Fl.
pp
mp
f
5:4
mf
B. Cl.
pp
3:2
f
p
mf
Vib.
pp
4:6
7
mf
pp
5:4
Pno.
pp
mp
f
Vln.
pizz
4:6
IV 3
pp
III 2
mf
p
f
pp
f
p
Vla.
pizz
pp
5:4
f
III 3
pp
5:4
Vc.
pizz
II 4
pp
mf
pp
mf
6:4
IV 8
p
5:4
f
pp

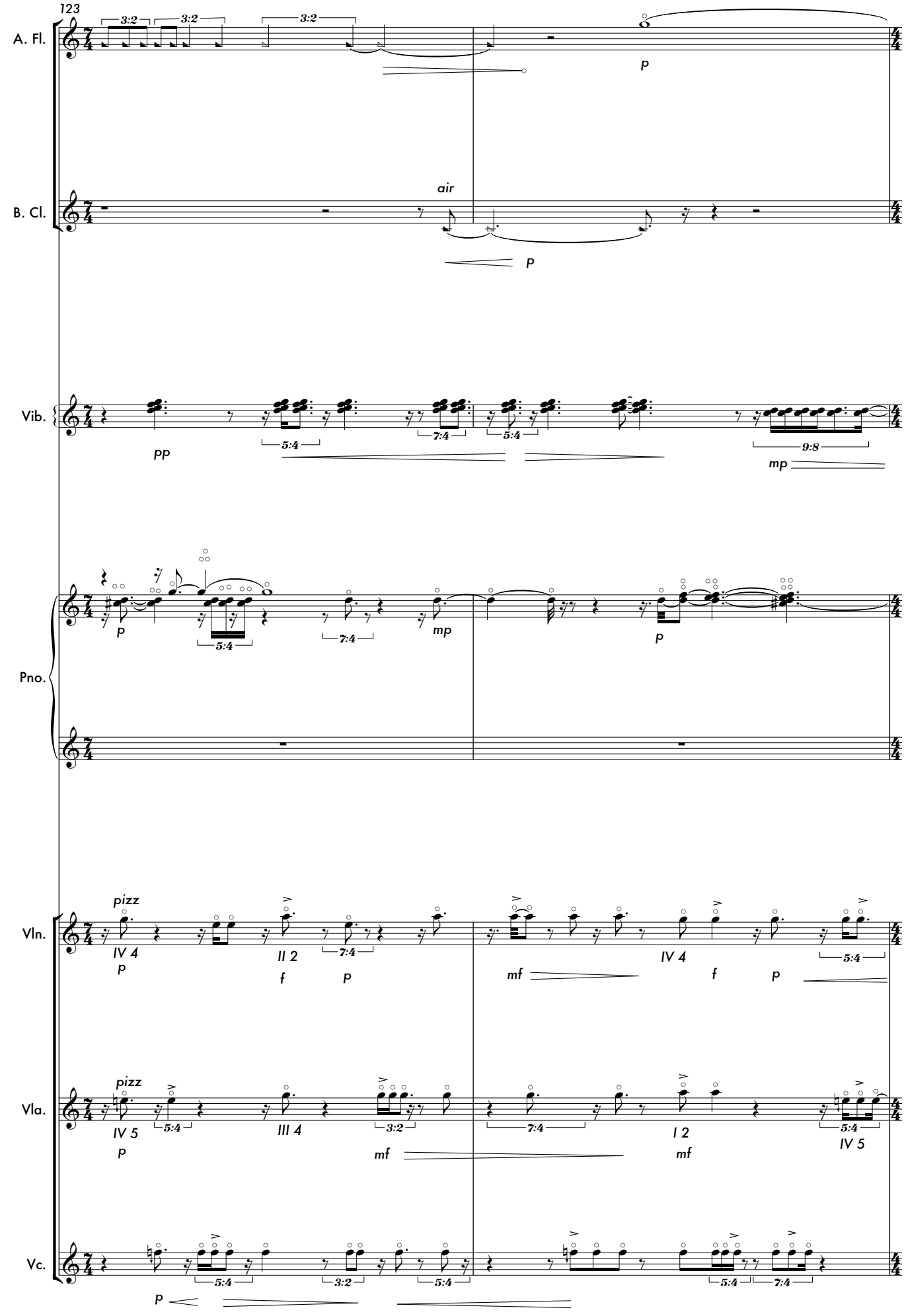

113
A. Fl.
B. Cl.
Vib.
Pno.
Vln.
Vla.
Vc.
bow /
5:4
7:4
9:8
pp
p
mf
ppp
f
IV 3
II 2
III 6
IV 8

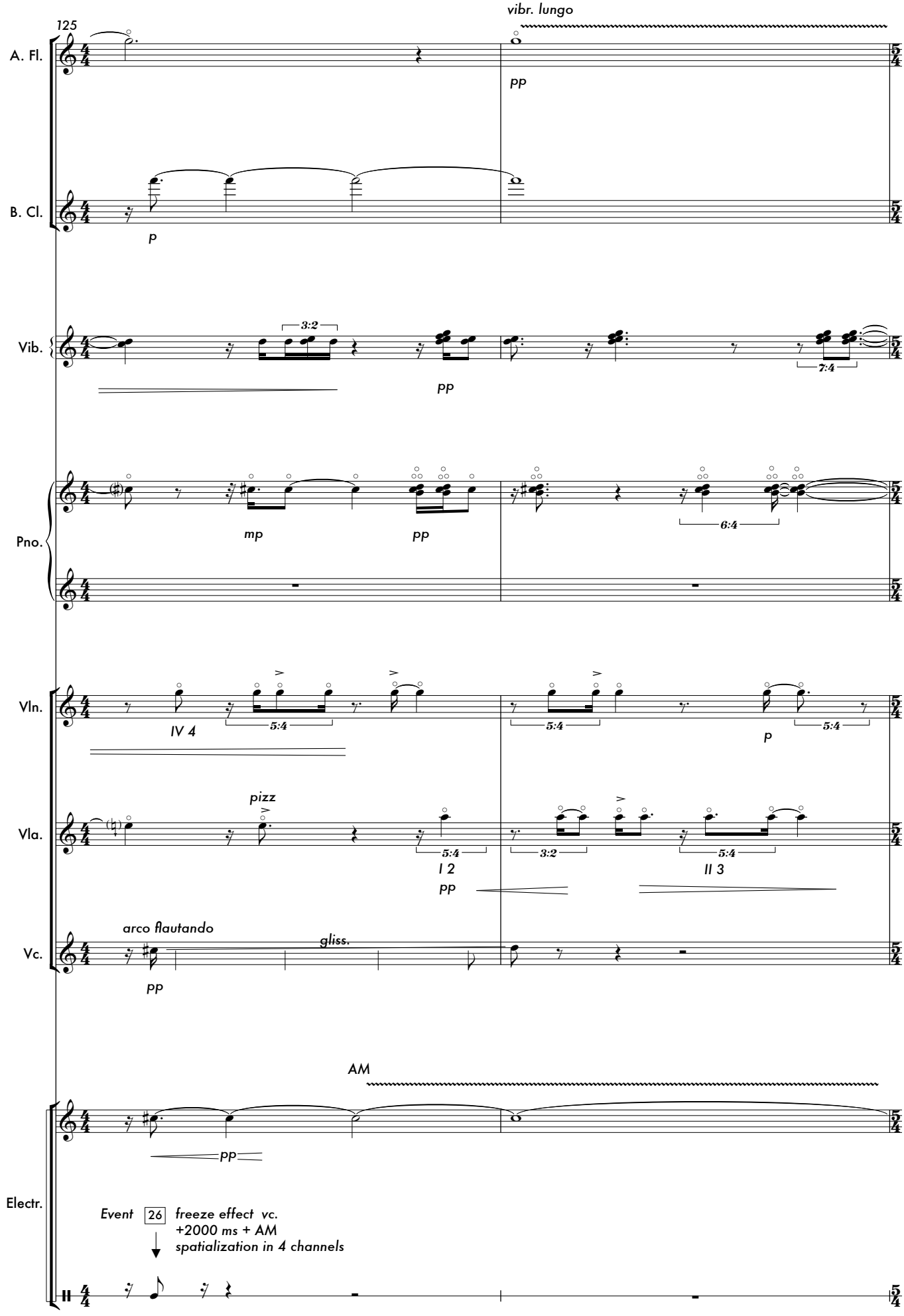

115
A. Fl.
B. Cl.
Vib.
Pno.
Vln.
Vla.
Vc.
Electr.
slap
pizz
Event 24
granulation effect
voices 1+2+
3+4+5

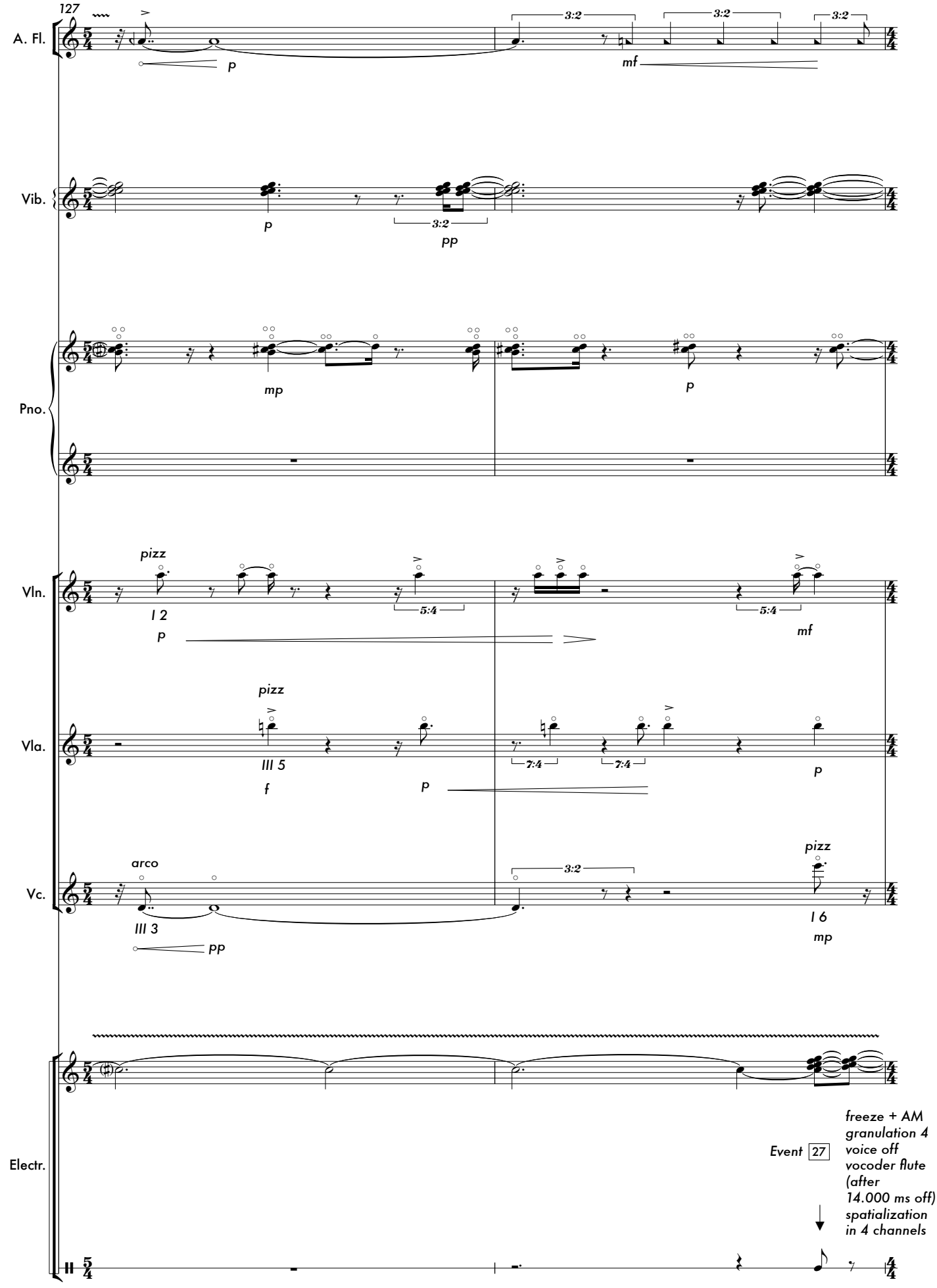

117
A. Fl.
B. Cl.
Vib.
Pno.
Vln.
Vla.
Vc.
air
tongue-ram
sub pp
bow /
pizz
IV 3
IV 4
III 3
arco
legno tratto
l. batt tip

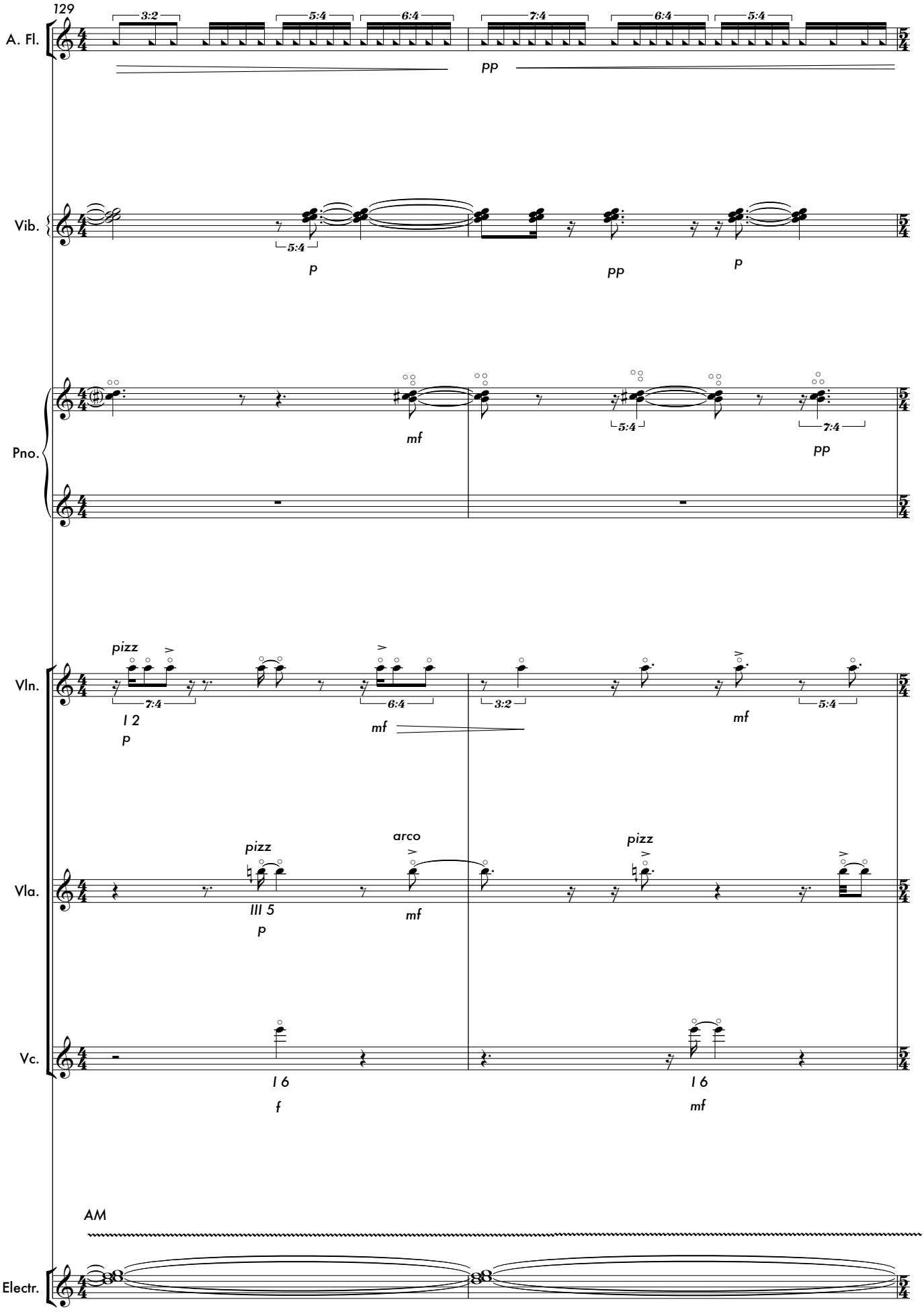

119
A. Fl.
slap
f
6:4
p
air
9:8
9:8
pp
B. Cl.
slap
f
3:2
p
Vib.
p
7:4
pp
5:4
p
5:4
pp
Pno.
p
5:4
7:4
mf
5:4
p
Vln.
arco
flautando
pp
arco
pp
Vla.
arco
flautando
II 2
pp
pizz
IV 5
6:4
Vc.
mp
7:4
arco flautando
5:4
pp
25
freeze + AM (vc.)
variable index modulator
granulation voice 5 off
spatialization in 4 channels
Electr.

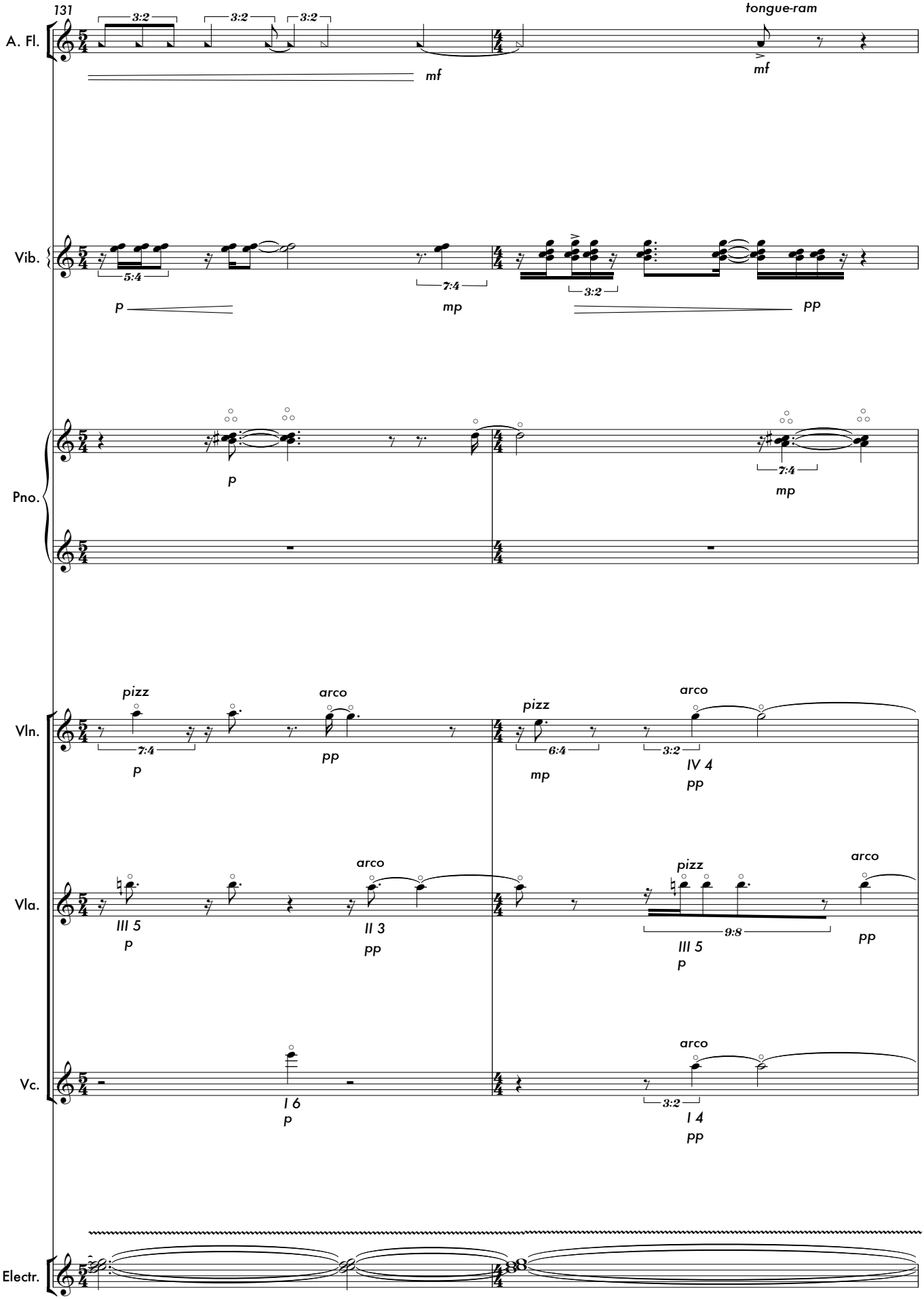

121
A. Fl.
B. Cl.
Vib.
Pno.
Vln.
Vla.
Vc.
9:8
7:4
5:4
3:2
air
mp
p
pp
ppp
mf
pizz
arco
IV 4
IV 5
IV 6
III 2
II 2
I 3
III 7
f

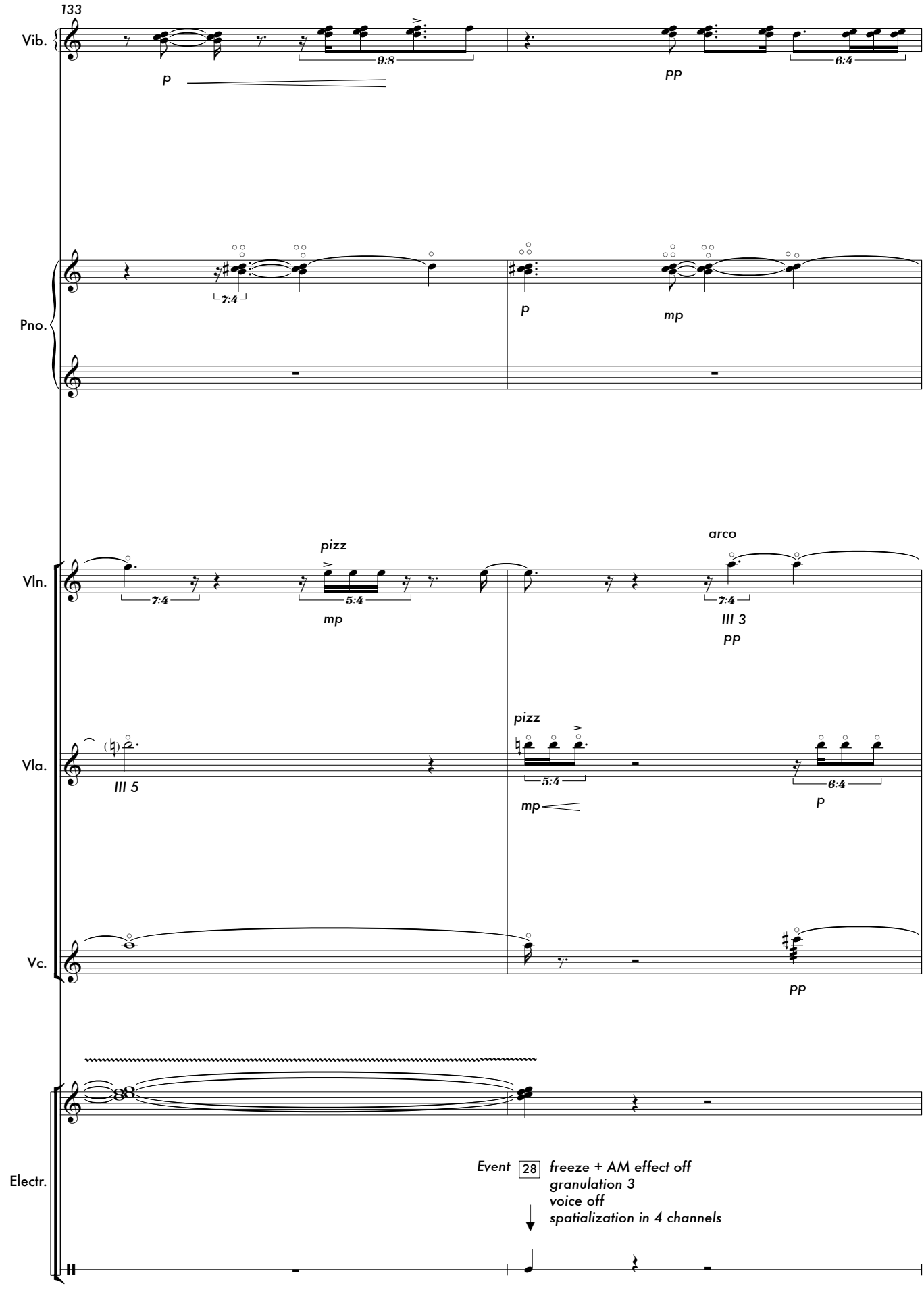

123
A. Fl.
B. Cl.
Vib.
Pno.
Vln.
Vla.
Vc.
air
pizz
IV 4
II 2
III 4
IV 5
I 2
p
pp
mp
mf
f
3:2
5:4
7:4
9:8

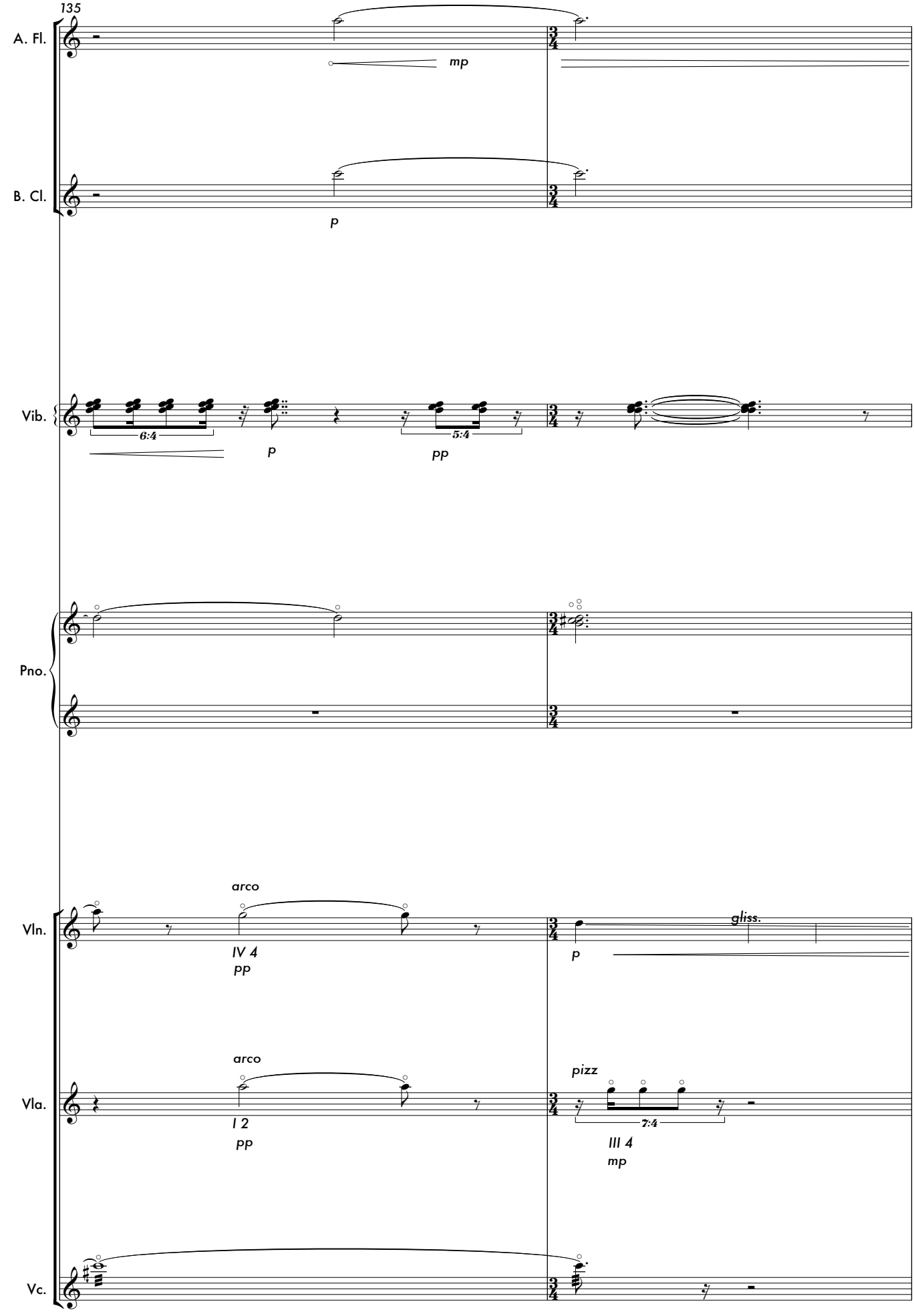

125
vibr. lungo
A. Fl.
pp
B. Cl.
p
Vib.
3:2
pp
7:4
Pno.
mp
pp
6:4
Vln.
IV 4
5:4
5:4
5:4
p
pizz
Vla.
5:4
I 2
pp
3:2
5:4
II 3
arco flautando
gliss.
Vc.
pp
AM
pp
Electr.
Event 26 freeze effect vc.
+2000 ms + AM
spatialization in 4 channels

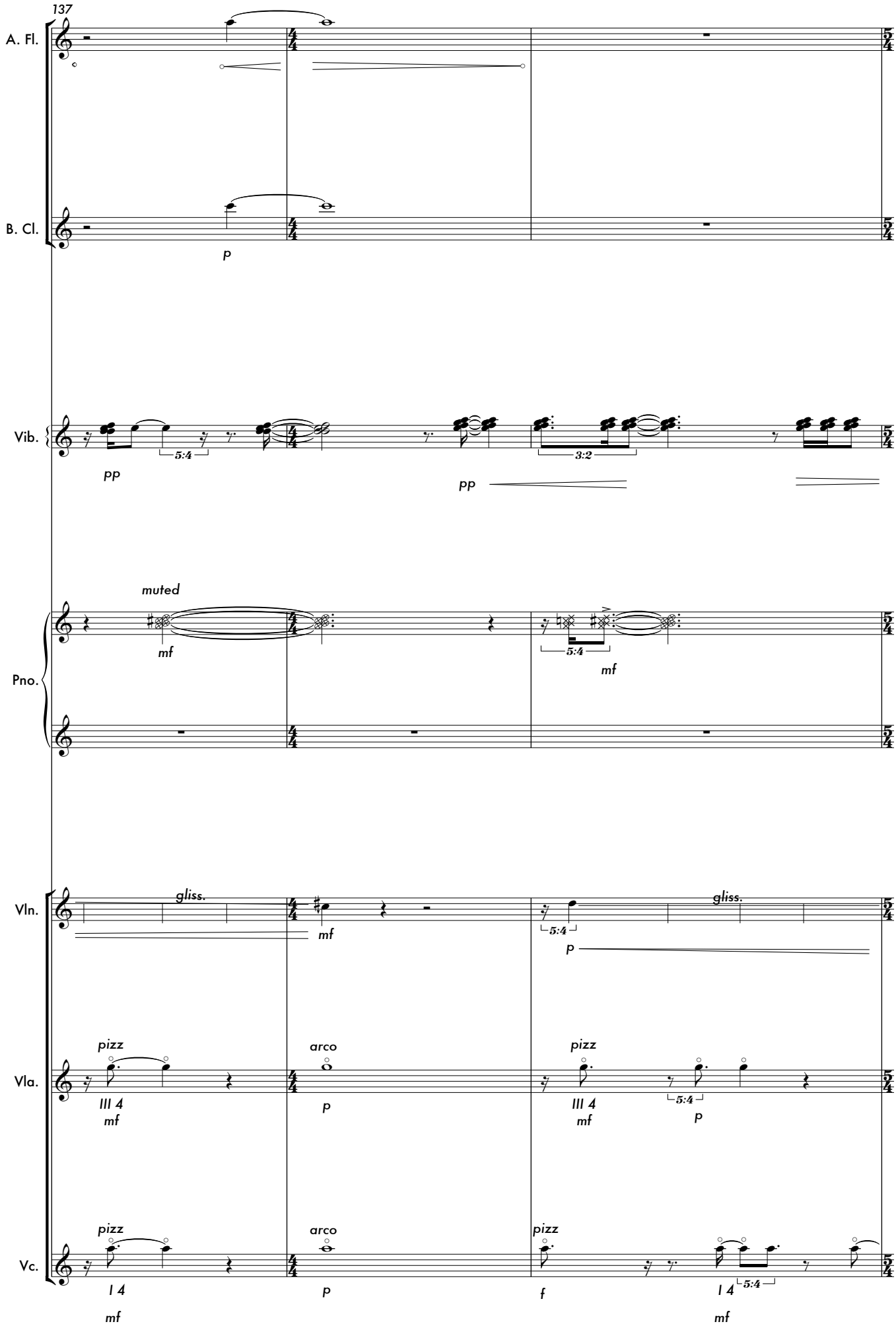

127
A. Fl.
p
3:2
mf
Vib.
p
3:2
pp
Pno.
mp
p
Vln.
pizz
I 2
p
5:4
mf
Vla.
pizz
III 5
f
p
7:4
p
Vc.
arco
III 3
pp
3:2
pizz
I 6
mp
Electr.
Event 27
freeze + AM
granulation 4
voice off
vocoder flute
(after
14.000 ms off)
spatialization
in 4 channels

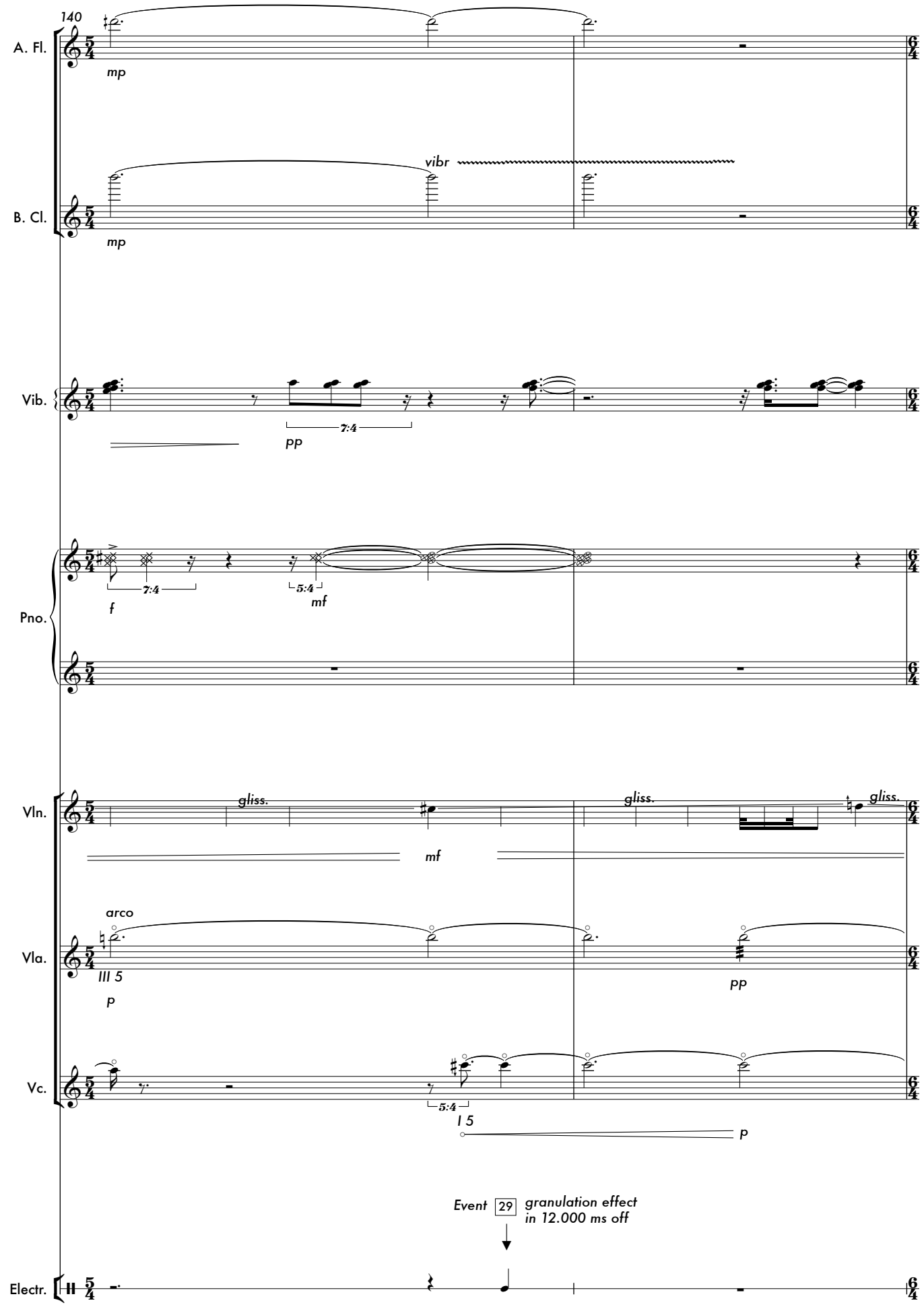

129
A. Fl.
3:2
5:4
6:4
7:4
6:4
5:4
pp
Vib.
5:4
p
pp
p
Pno.
mf
5:4
7:4
pp
Vln.
pizz
7:4
I 2
p
6:4
mf
3:2
mf
5:4
Vla.
pizz
III 5
p
arco
mf
pizz
Vc.
I 6
f
I 6
mf
AM
Electr.

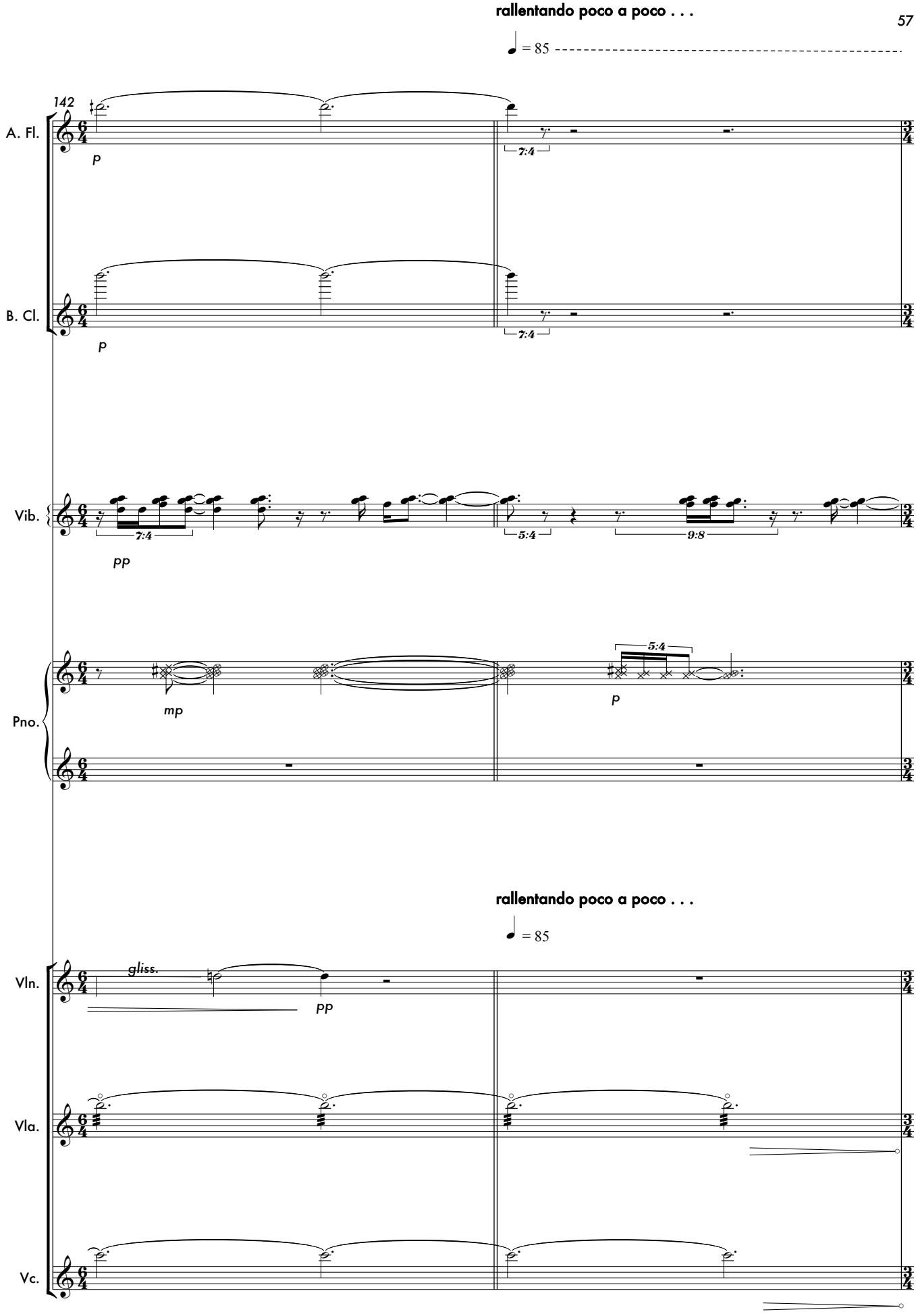

131
A. Fl.
3:2
3:2
3:2
mf
tongue-ram
mf
Vib.
5:4
p
7:4
mp
3:2
pp
Pno.
p
7:4
mp
Vln.
pizz
7:4
p
arco
pp
pizz
6:4
mp
arco
3:2
IV 4
pp
Vla.
III 5
p
arco
II 3
pp
pizz
9:8
III 5
p
arco
pp
Vc.
I 6
p
arco
3:2
I 4
pp
Electr.

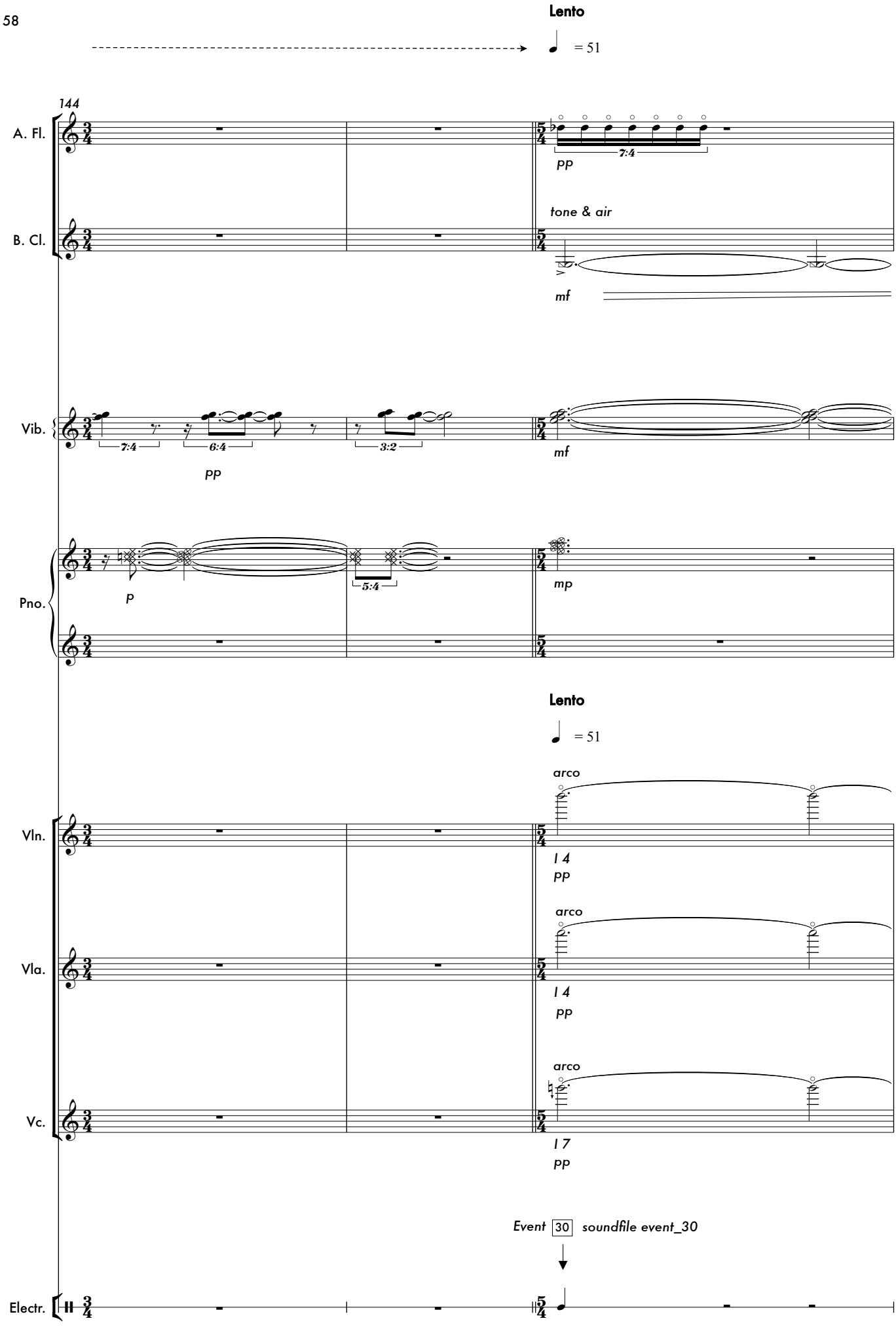

133
Vib.
p
9:8
pp
6:4
Pno.
7:4
p
mp
Vln.
pizz
7:4
5:4
mp
arco
7:4
III 3
pp
Vla.
III 5
pizz
5:4
mp
6:4
p
Vc.
pp
Electr.
Event 28 freeze + AM effect off
granulation 3
voice off
spatialization in 4 channels

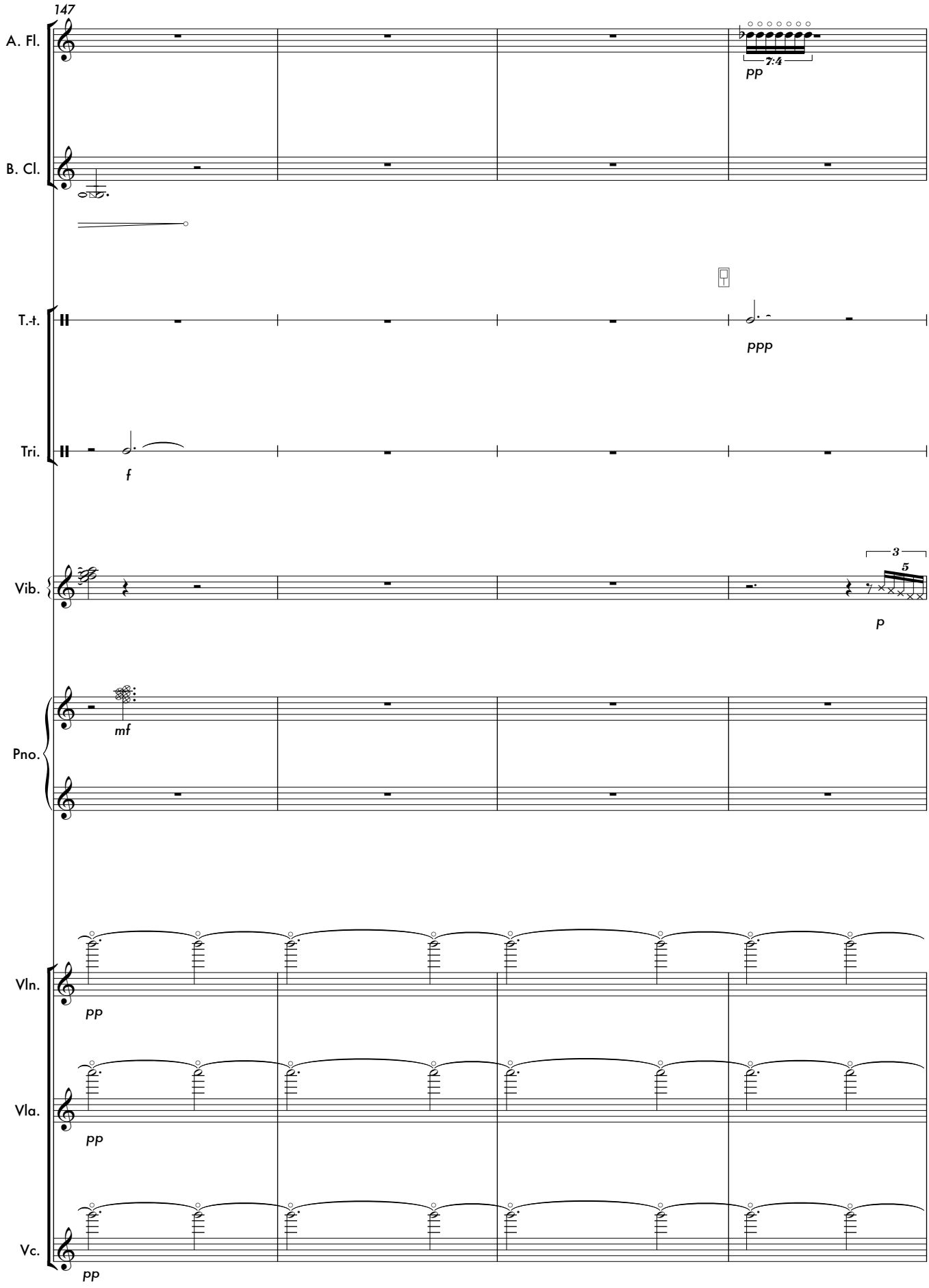

135
A. Fl.
mp
B. Cl.
p
Vib.
6:4
p
5:4
pp
Pno.
Vln.
arco
IV 4
pp
p
gliss.
Vla.
arco
I 2
pp
pizz
7:4
III 4
mp
Vc.

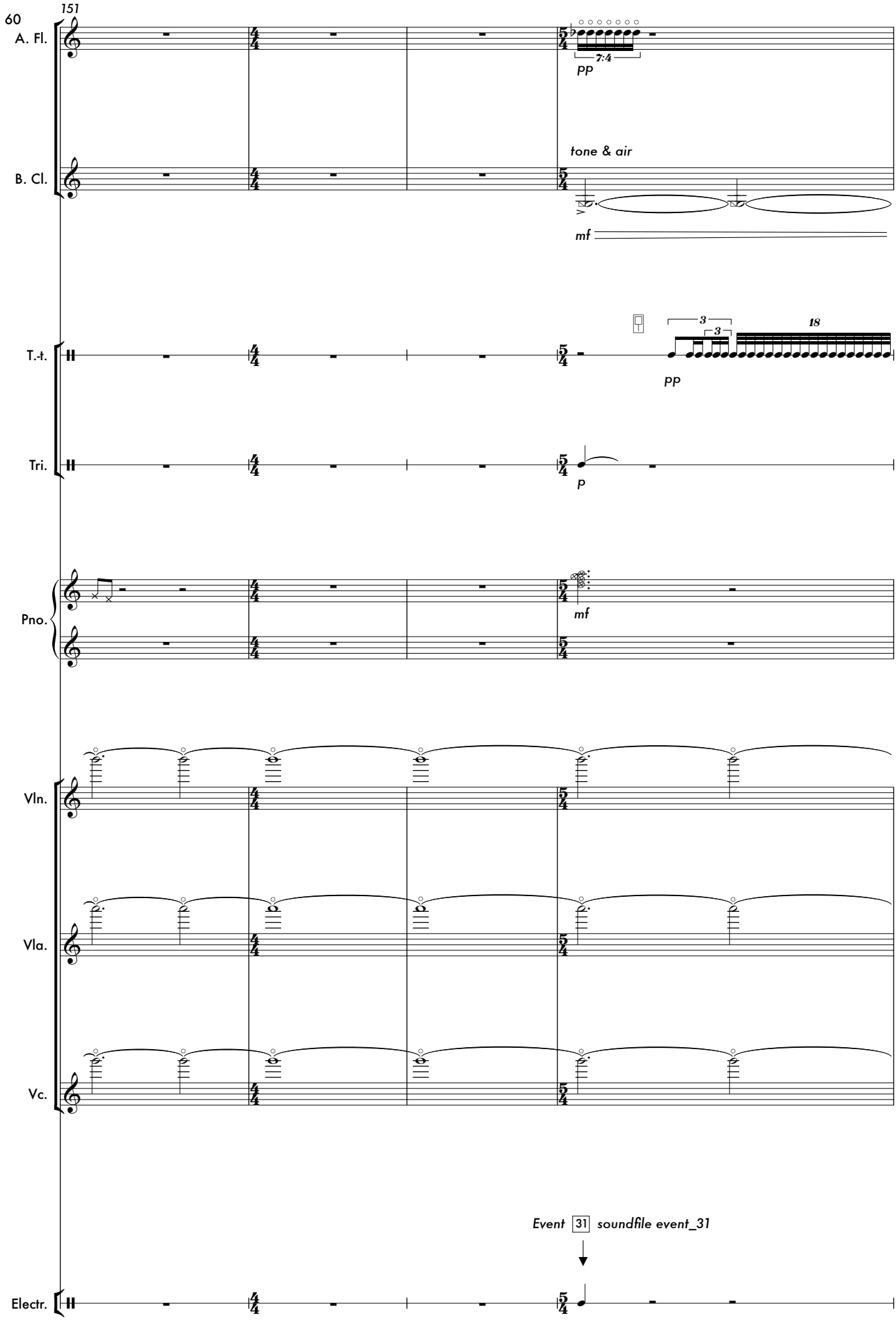

137
A. Fl.
B. Cl.
p
Vib.
pp
5:4
pp
3:2
muted
Pno.
mf
5:4
mf
Vln.
gliss.
mf
5:4
p
gliss.
Vla.
pizz
III 4
mf
arco
p
pizz
III 4
mf
5:4
p
Vc.
pizz
I 4
mf
arco
p
pizz
f
I 4
5:4
mf

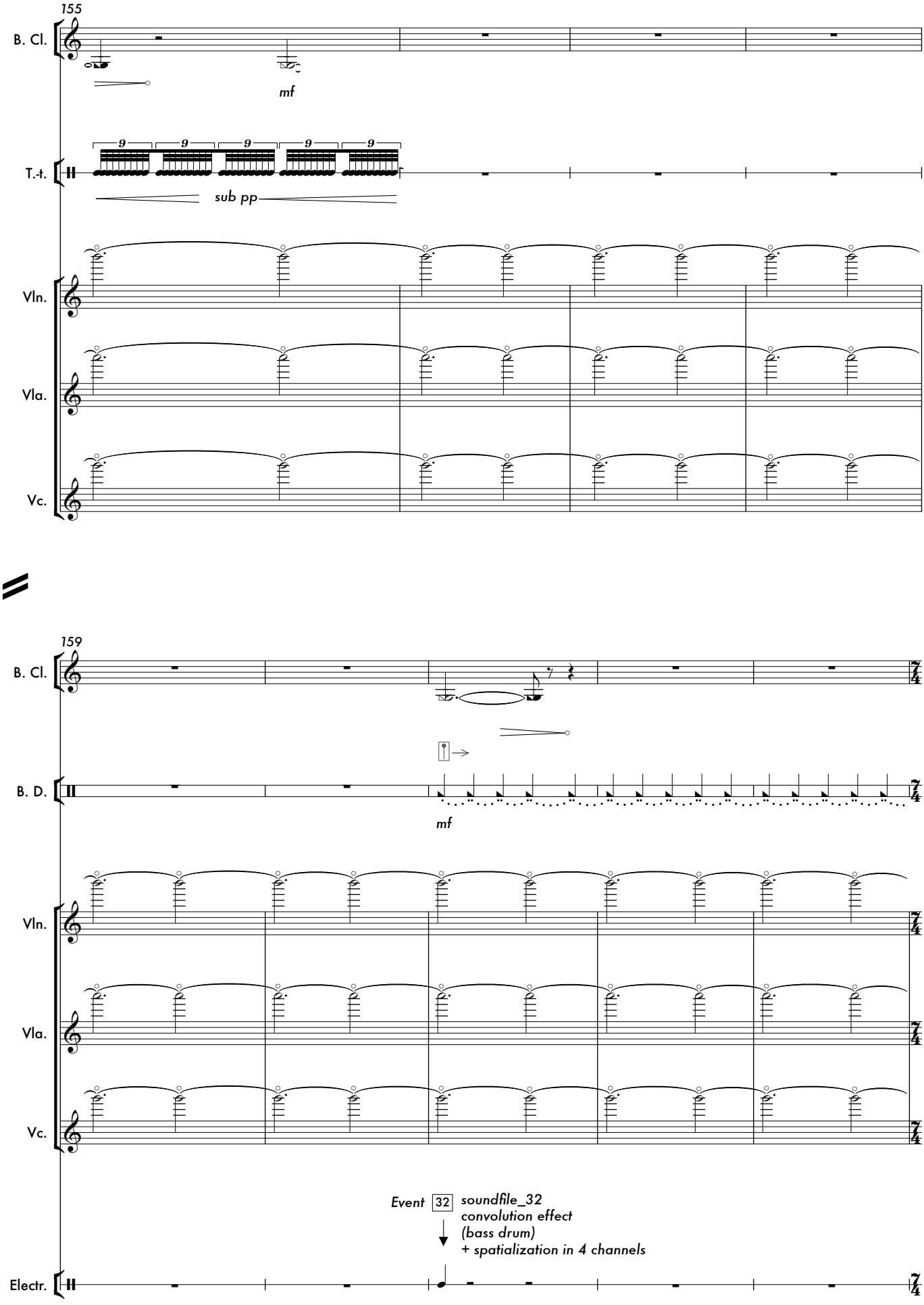

140
A. Fl.
mp
vibr
B. Cl.
mp
Vib.
7:4
pp
Pno.
7:4
f
5:4
mf
Vln.
gliss.
mf
gliss.
gliss.
arco
Vla.
III 5
p
pp
Vc.
5:4
I 5
p
Event 29 granulation effect in 12.000 ms off
Electr.

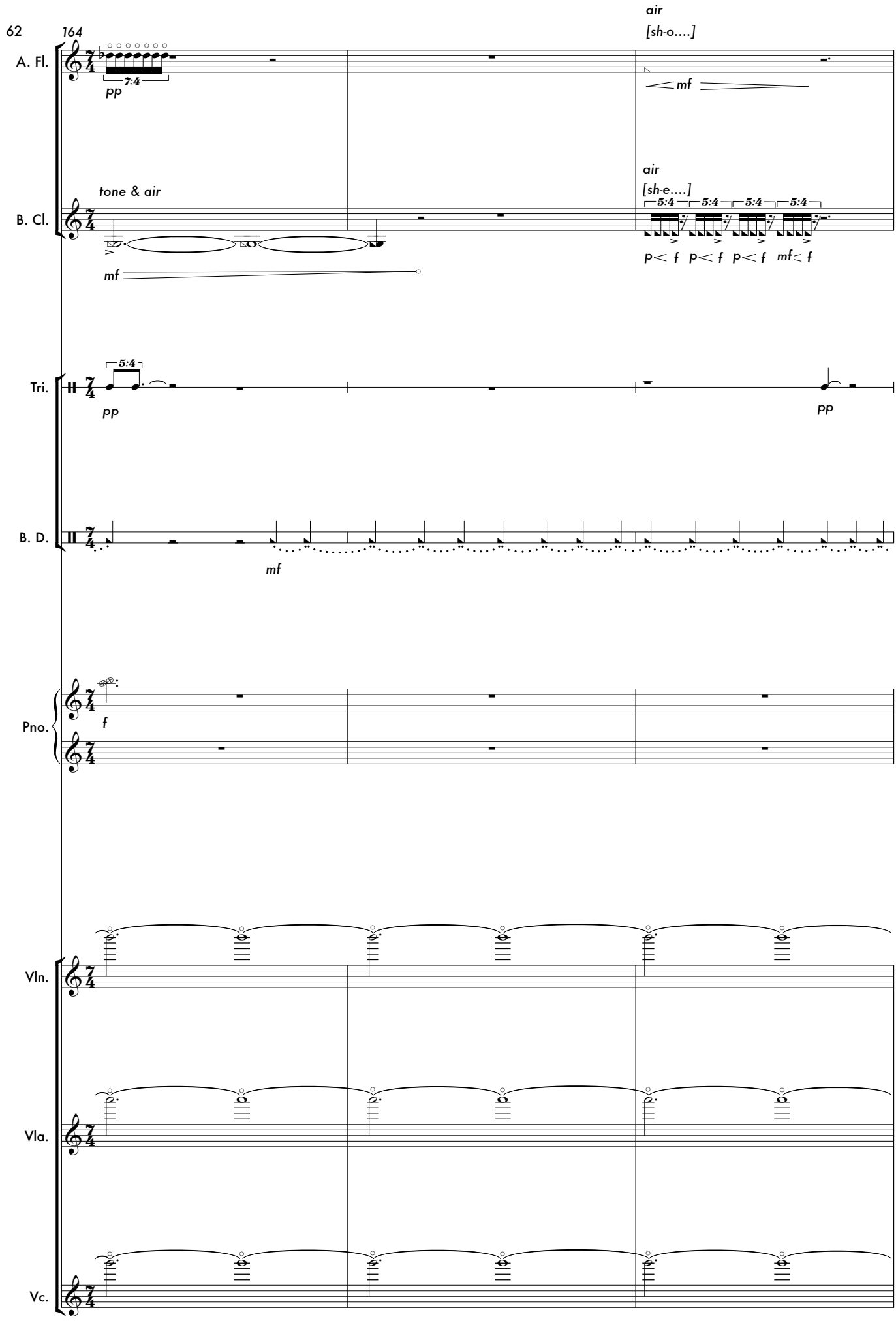

rallentando poco a poco . . .
♩ = 85
142
A. Fl.
p
7:4
B. Cl.
p
7:4
Vib.
7:4
pp
5:4
9:8
Pno.
mp
5:4
p
rallentando poco a poco . . .
♩ = 85
Vln.
gliss.
pp
Vla.
Vc.

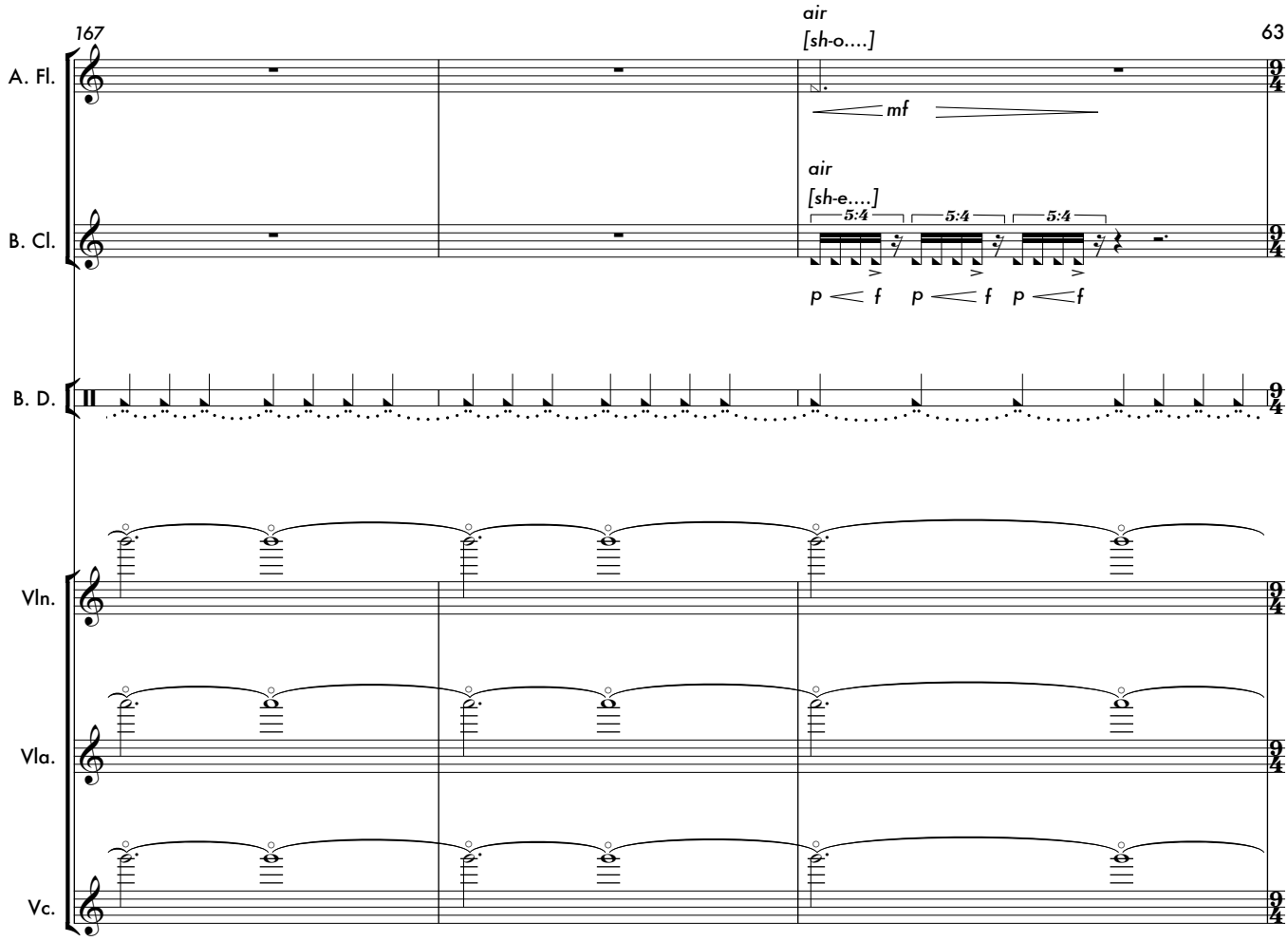

Lento
= 51
144
A. Fl.
B. Cl.
Vib.
Pno.
7:4
pp
tone & air
mf
6:4
3:2
p
5:4
mp
Lento
= 51
Vln.
Vla.
Vc.
arco
l 4
pp
l 7
Event 30 soundfile event_30
Electr.

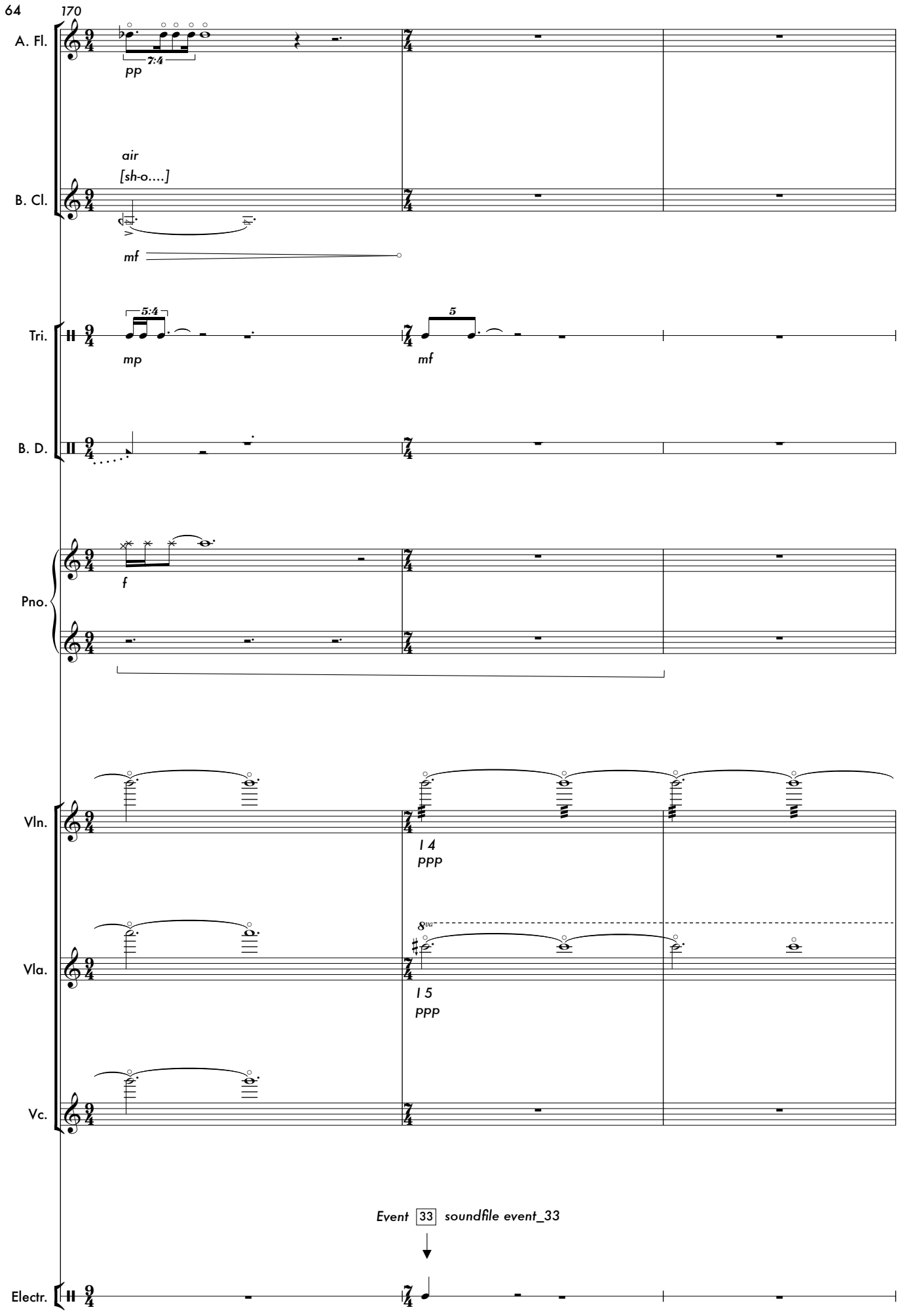

147
A. Fl.
B. Cl.
T.-t.
Tri.
Vib.
Pno.
Vln.
Vla.
Vc.
7:4
pp
ppp
f
3
5
p
mf
pp
pp
pp

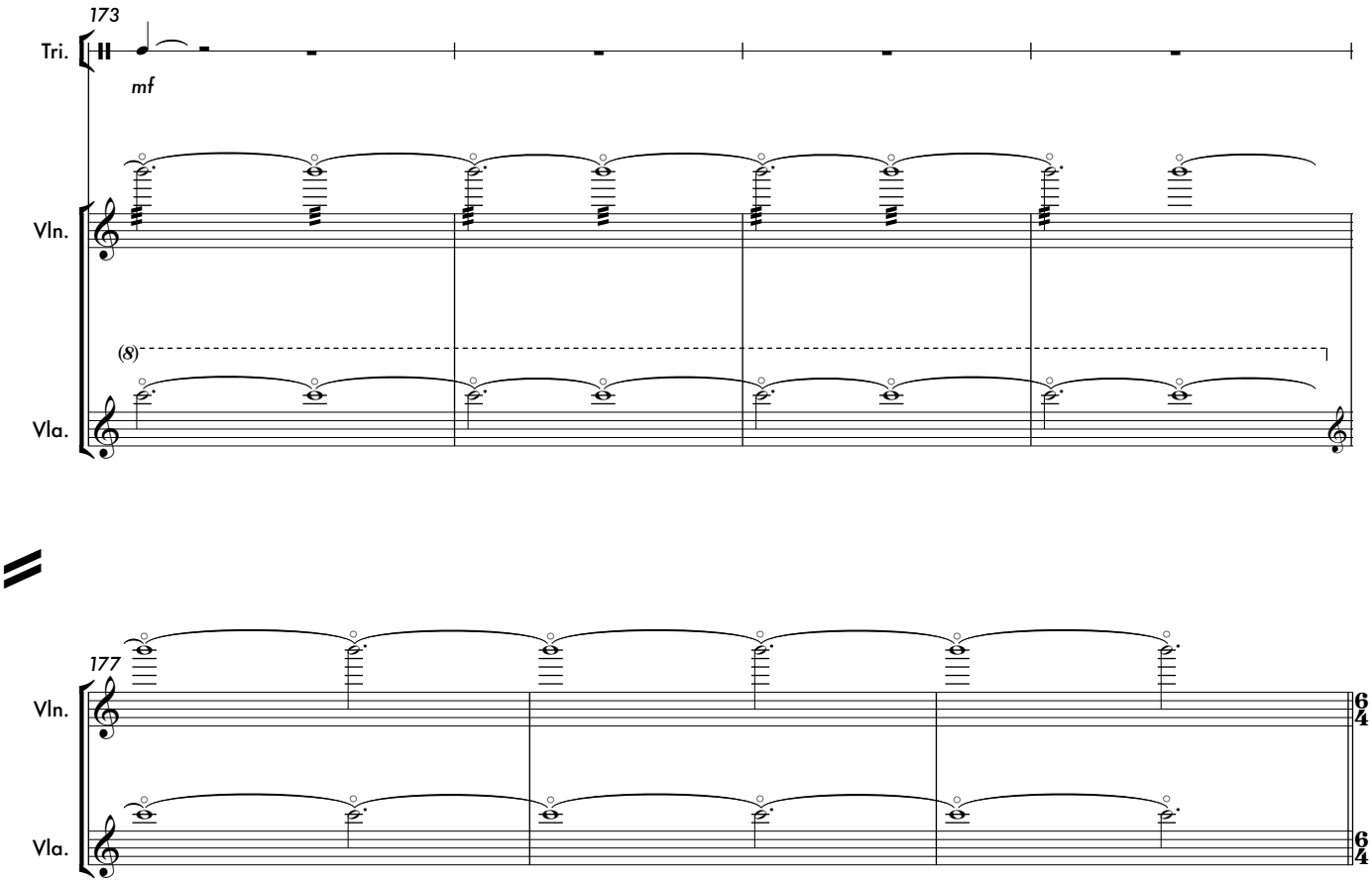

60
151
A. Fl.
7:4
pp
B. Cl.
tone & air
mf
T.-t.
3
3
18
pp
Tri.
p
Pno.
mf
Vln.
Vla.
Vc.
Event 31 soundfile event_31
Electr.


155
B. Cl.
mf
T.-t.
sub pp
Vln.
Vla.
Vc.
159
B. Cl.
B. D.
mf
Vln.
Vla.
Vc.
Event 32 soundfile_32
convolution effect
(bass drum)
+ spatialization in 4 channels
Electr.

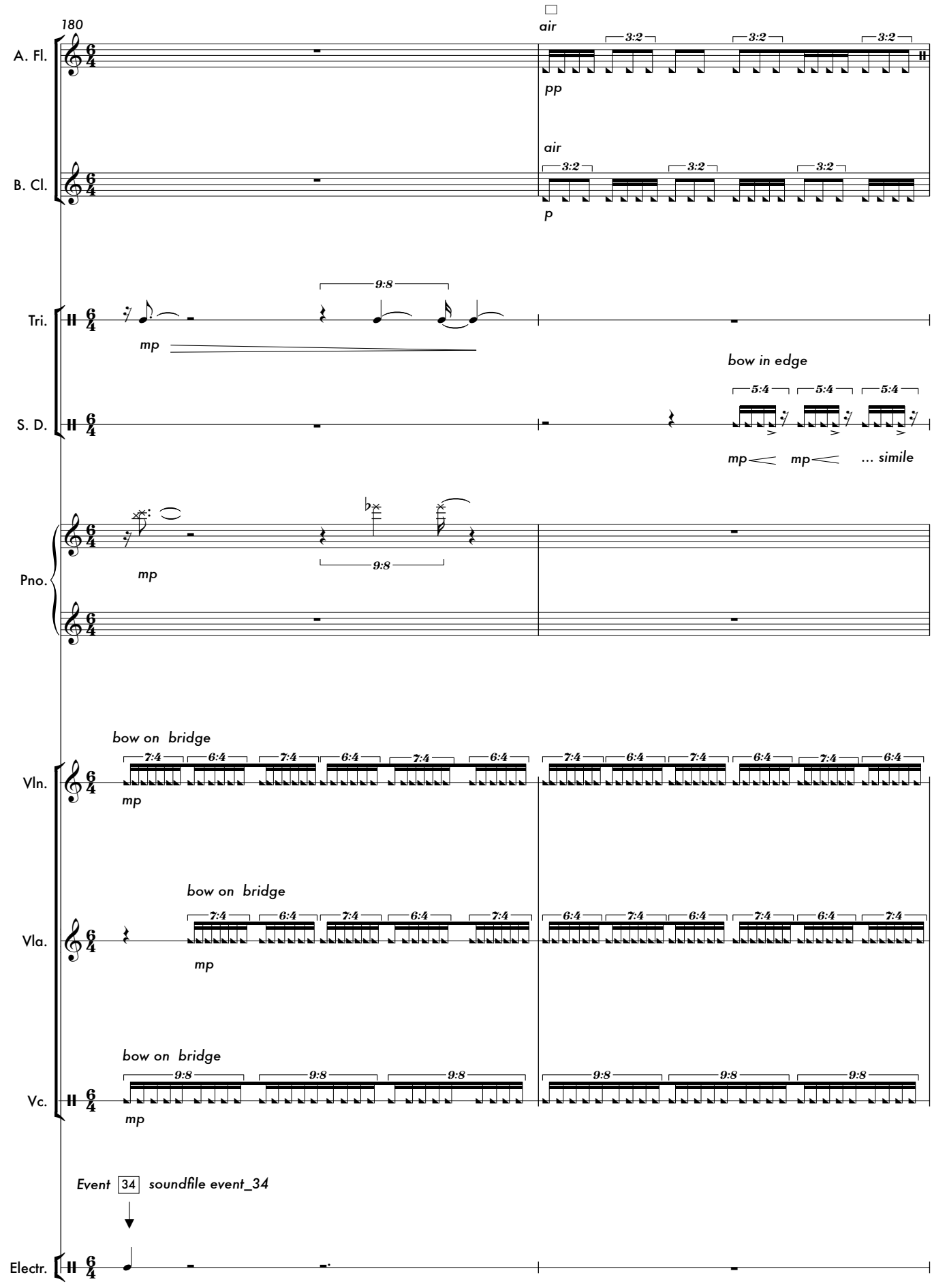

164
A. Fl.
pp
7:4
air
[sh-o....]
mf
B. Cl.
tone & air
mf
air
[sh-e....]
5:4
5:4
5:4
5:4
p< f p< f p< f mf< f
Tri.
5:4
pp
pp
B. D.
mf
Pno.
f
Vln.
Vla.
Vc.

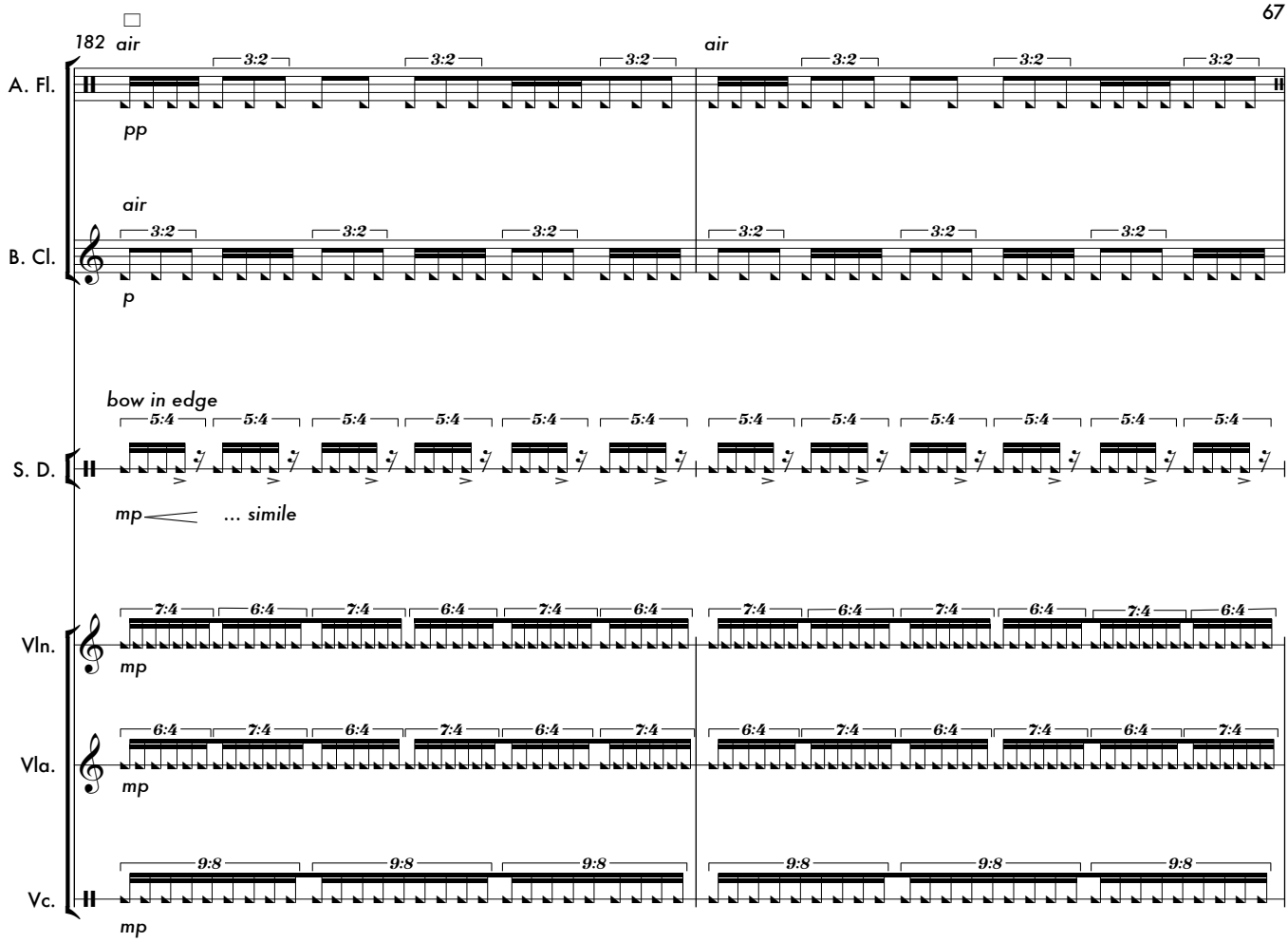

167
air
[sh-o....]
63
A. Fl.
mf
air
[sh-e....]
B. Cl.
5:4
5:4
5:4
p f p f p f
B. D.
Vln.
Vla.
Vc.

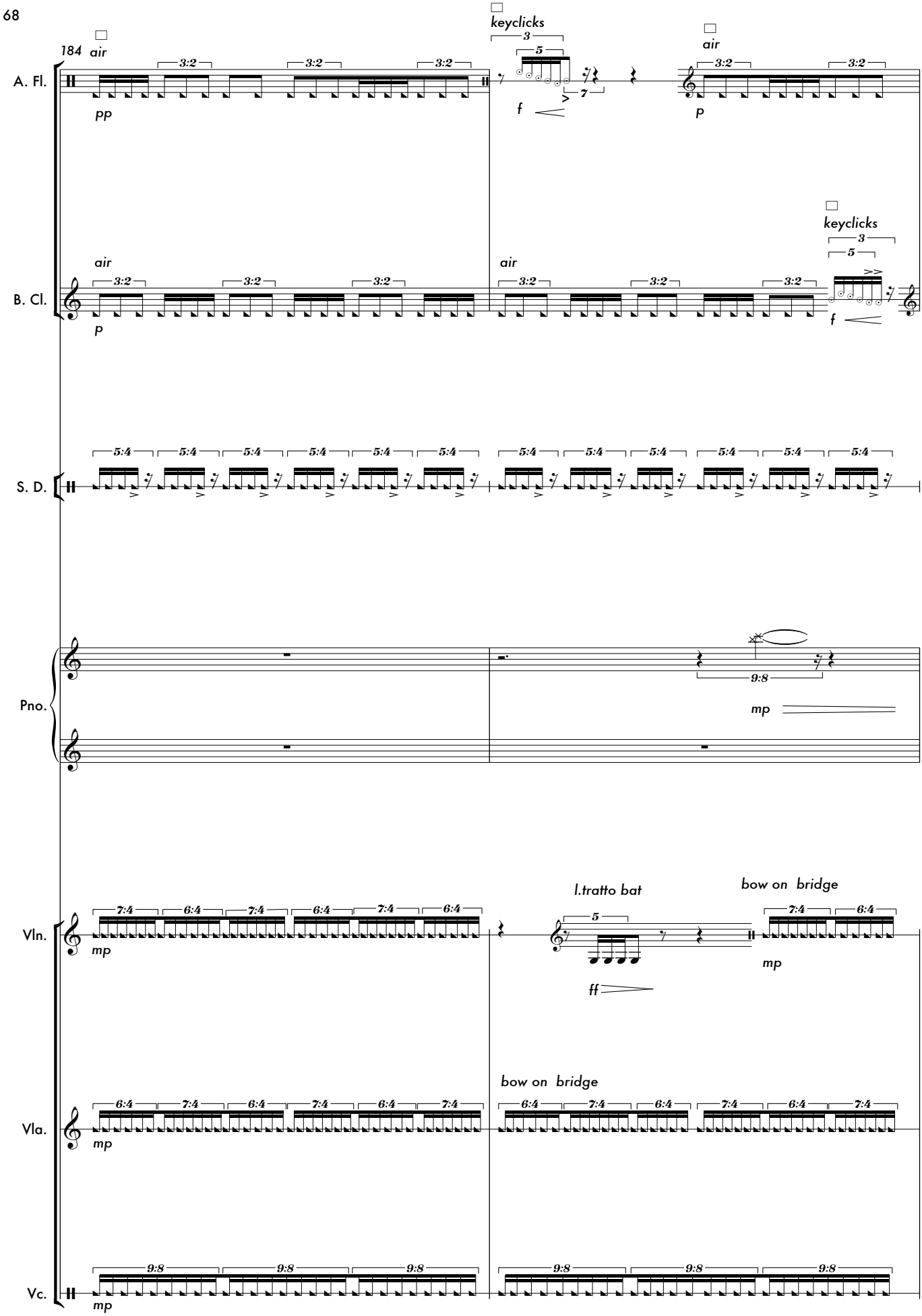

170
A. Fl.
7:4
pp
air
[sh-o....]
B. Cl.
mf
Tri.
5:4
mp
5
mf
B. D.
Pno.
f
Vln.
l 4
ppp
8va
Vla.
l 5
ppp
Vc.
Event 33 soundfile event_33
Electr.

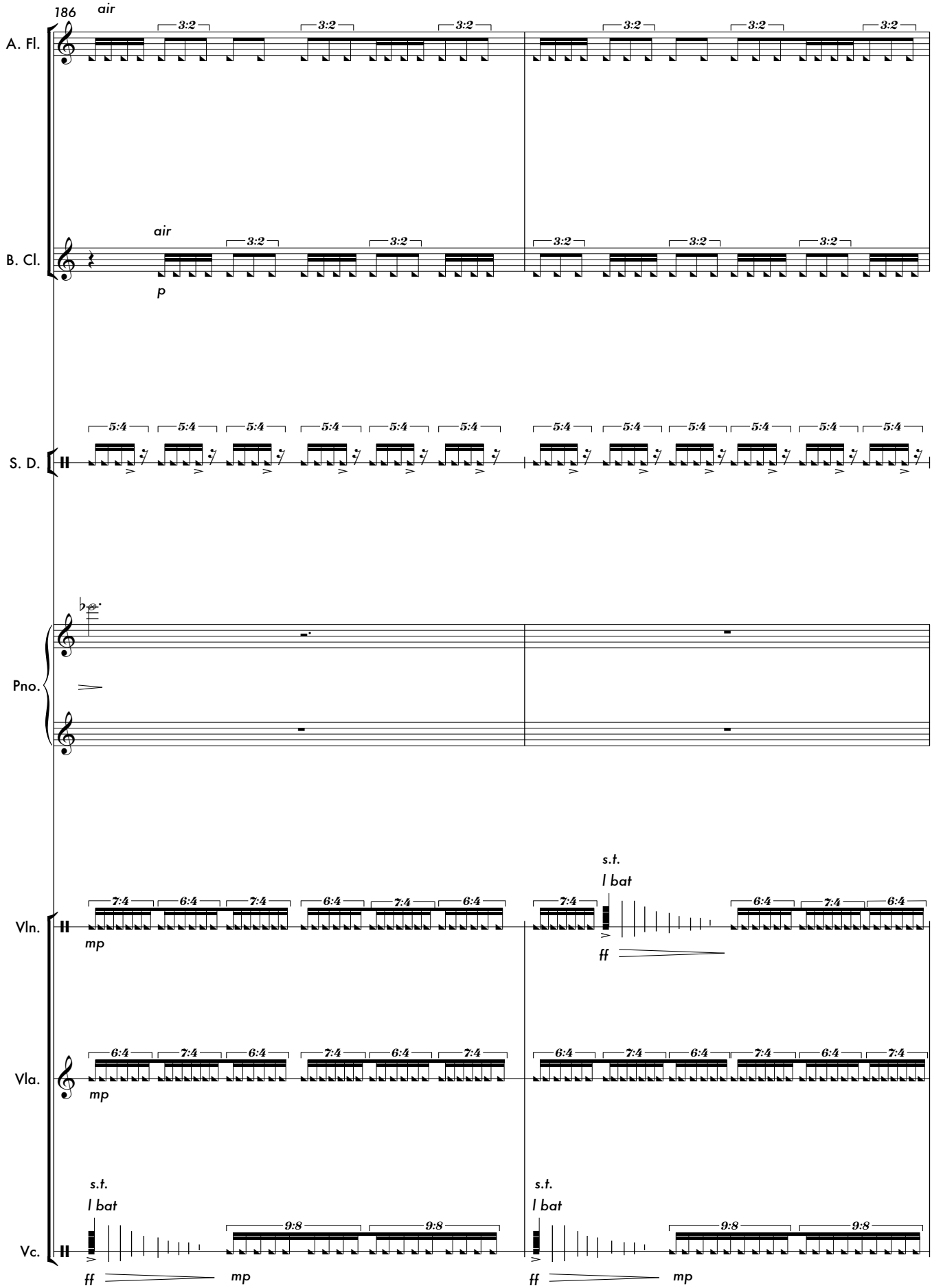

173
Tri.
mf
Vln.
(8)
Vla.

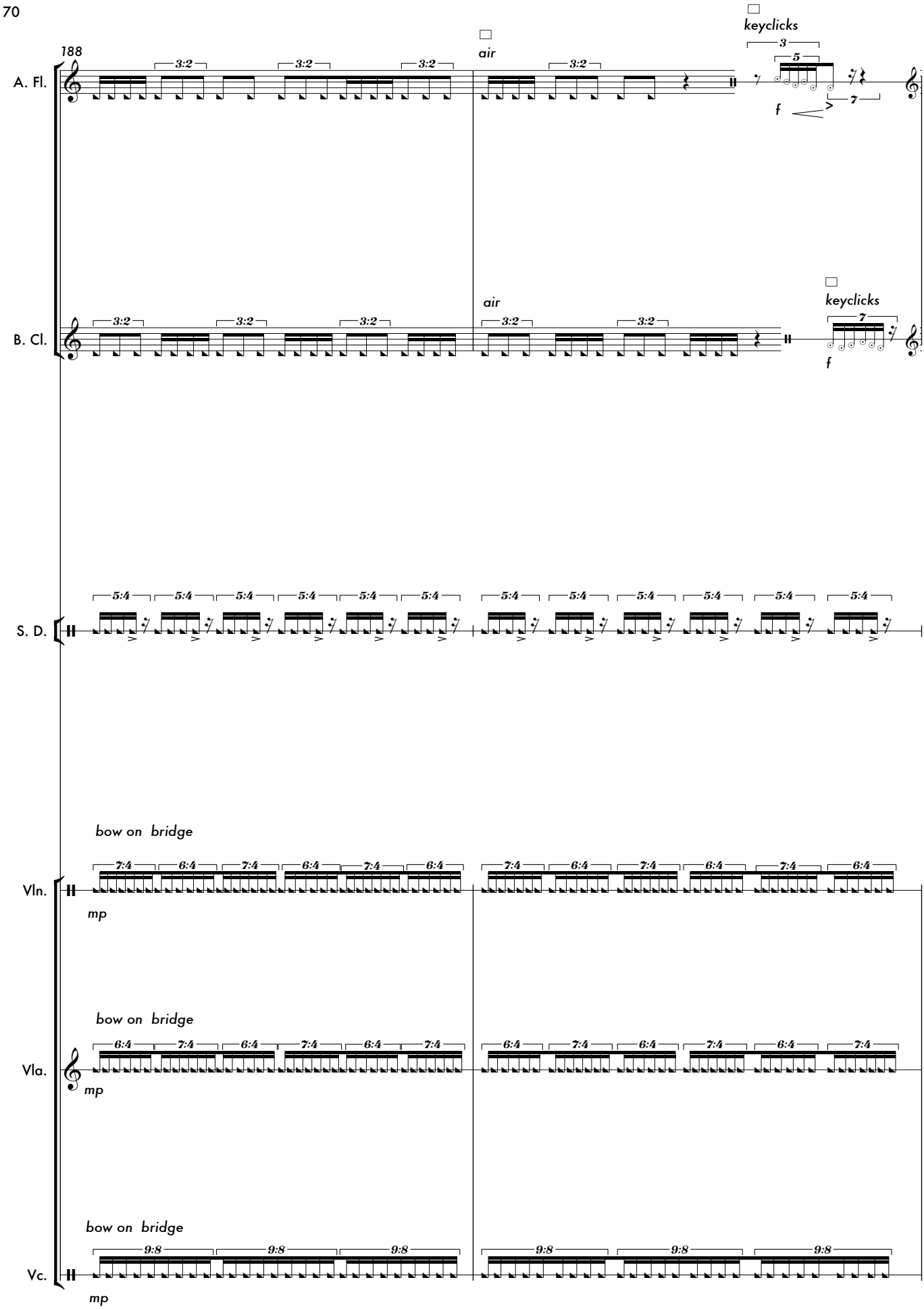
177
Vln.
Vla.
6
4
6
4

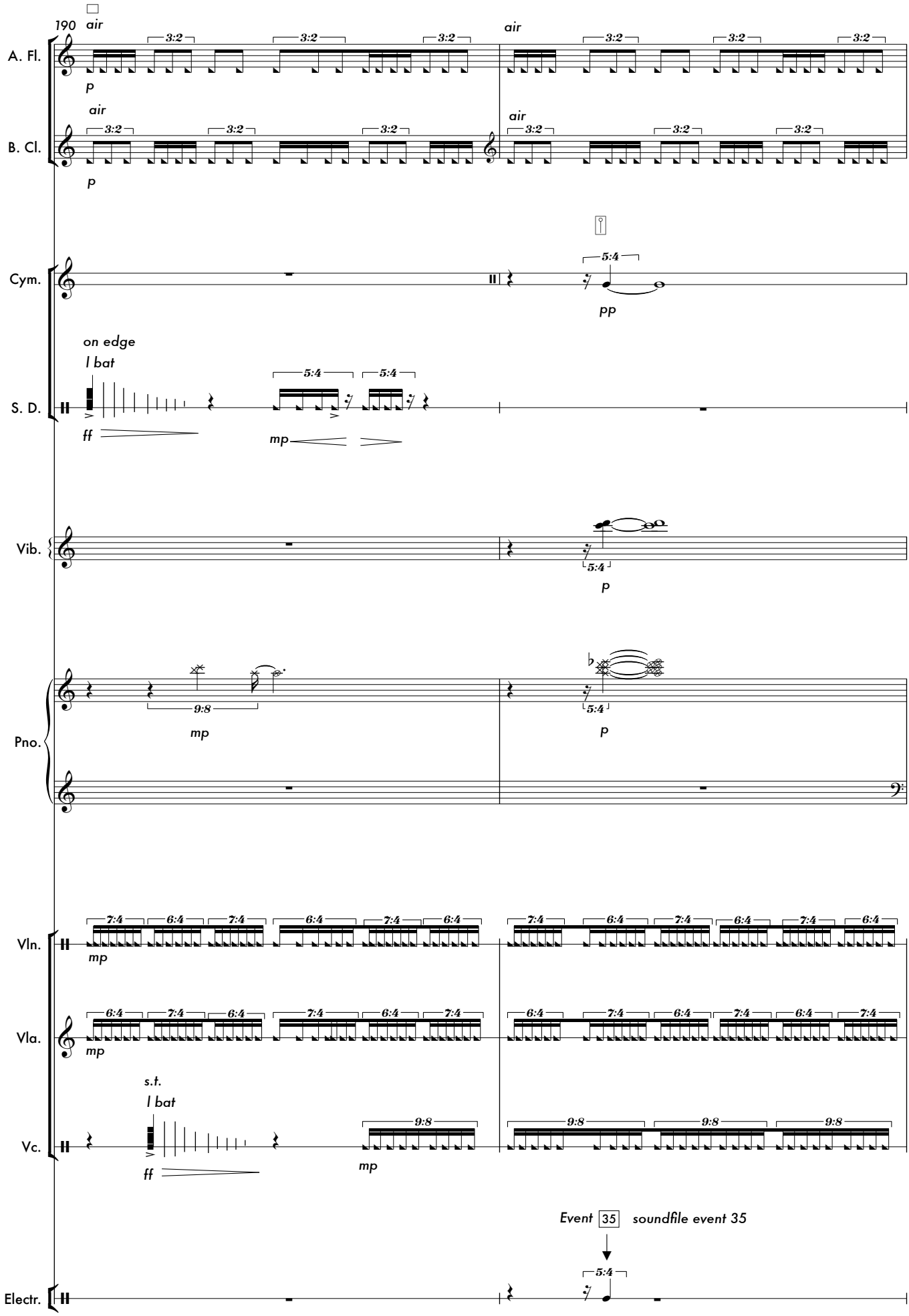

180
A. Fl.
air
3:2
3:2
3:2
pp
B. Cl.
air
3:2
3:2
3:2
p
Tri.
9:8
mp
bow in edge
S. D.
5:4
5:4
5:4
mp
mp
... simile
Pno.
mp
9:8
bow on bridge
Vln.
7:4
6:4
mp
bow on bridge
Vla.
7:4
6:4
mp
bow on bridge
Vc.
9:8
mp
Event 34 soundfile event_34
Electr.

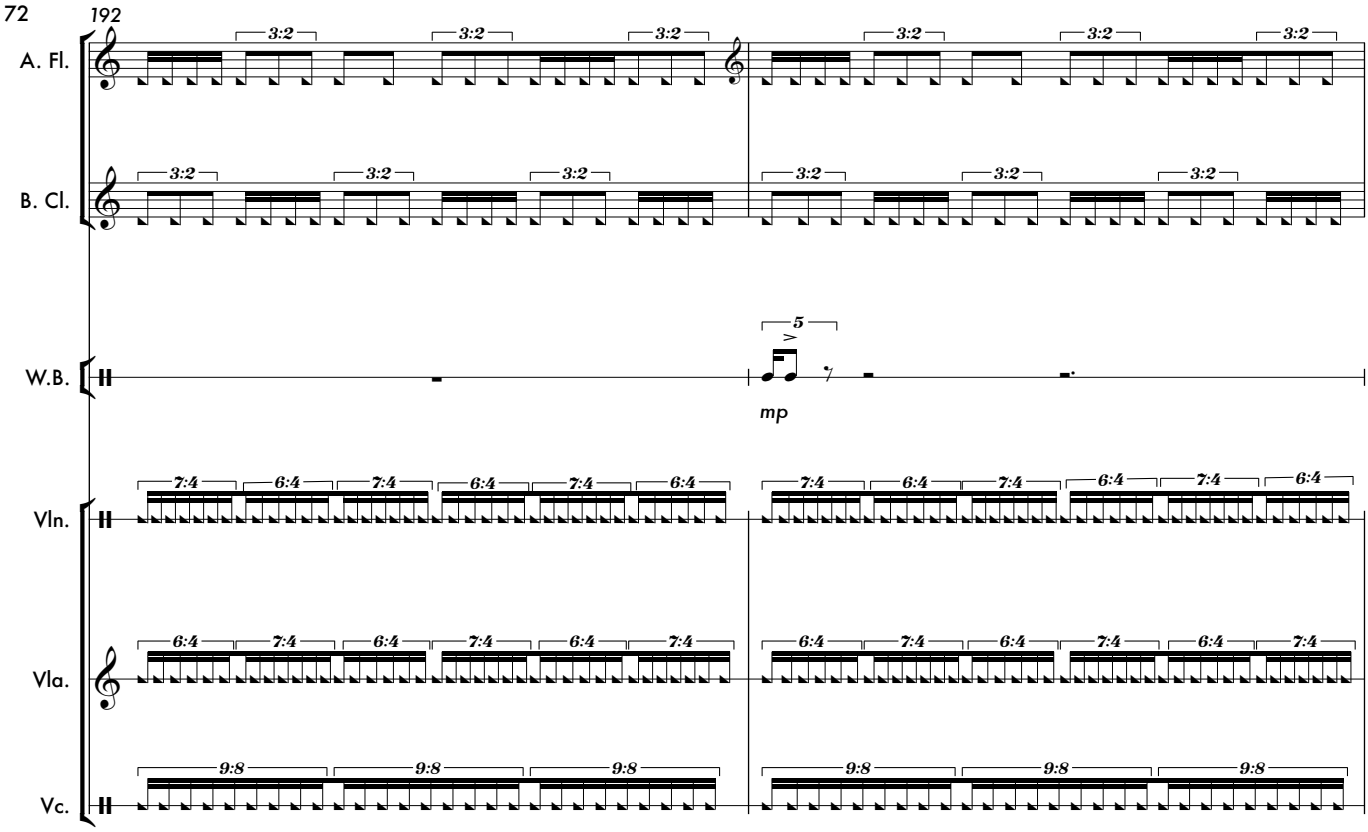

182
air
air
A. Fl.
3:2
pp
air
B. Cl.
p
bow in edge
5:4
S. D.
mp
... simile
Vln.
7:4
6:4
mp
Vla.
mp
Vc.
9:8
mp

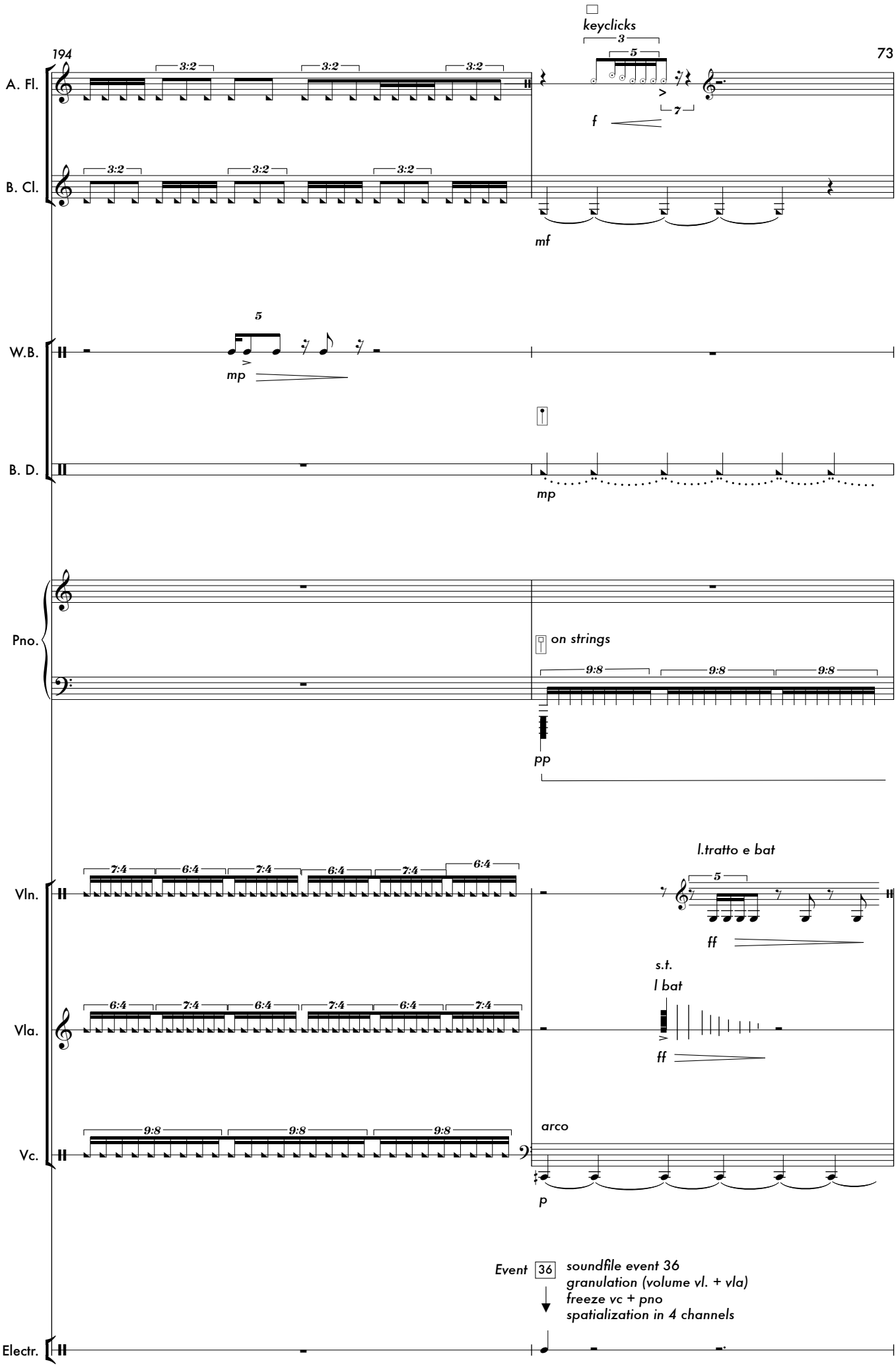

184
air
keyclicks
air
A. Fl.
pp
f
p
air
keyclicks
air
air
B. Cl.
p
f
S. D.
Pno.
mp
l.tratto bat
bow on bridge
Vln.
mp
ff
mp
bow on bridge
Vla.
mp
Vc.
mp

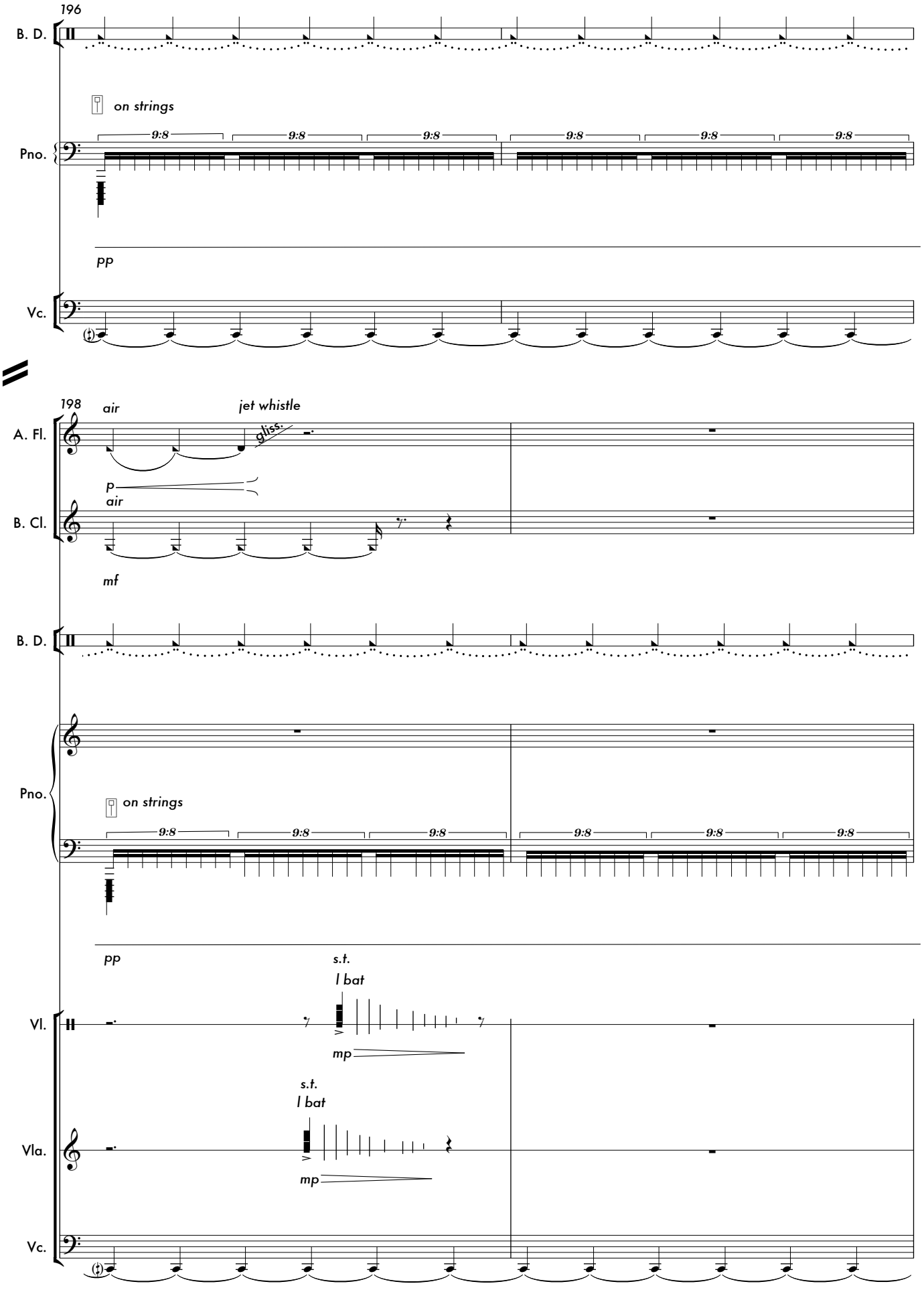

186
air
A. Fl.
3:2
air
B. Cl.
p
S. D.
5:4
Pno.
Vln.
7:4
6:4
mp
s.t.
l bat
ff
Vla.
mp
Vc.
9:8
ff
mp

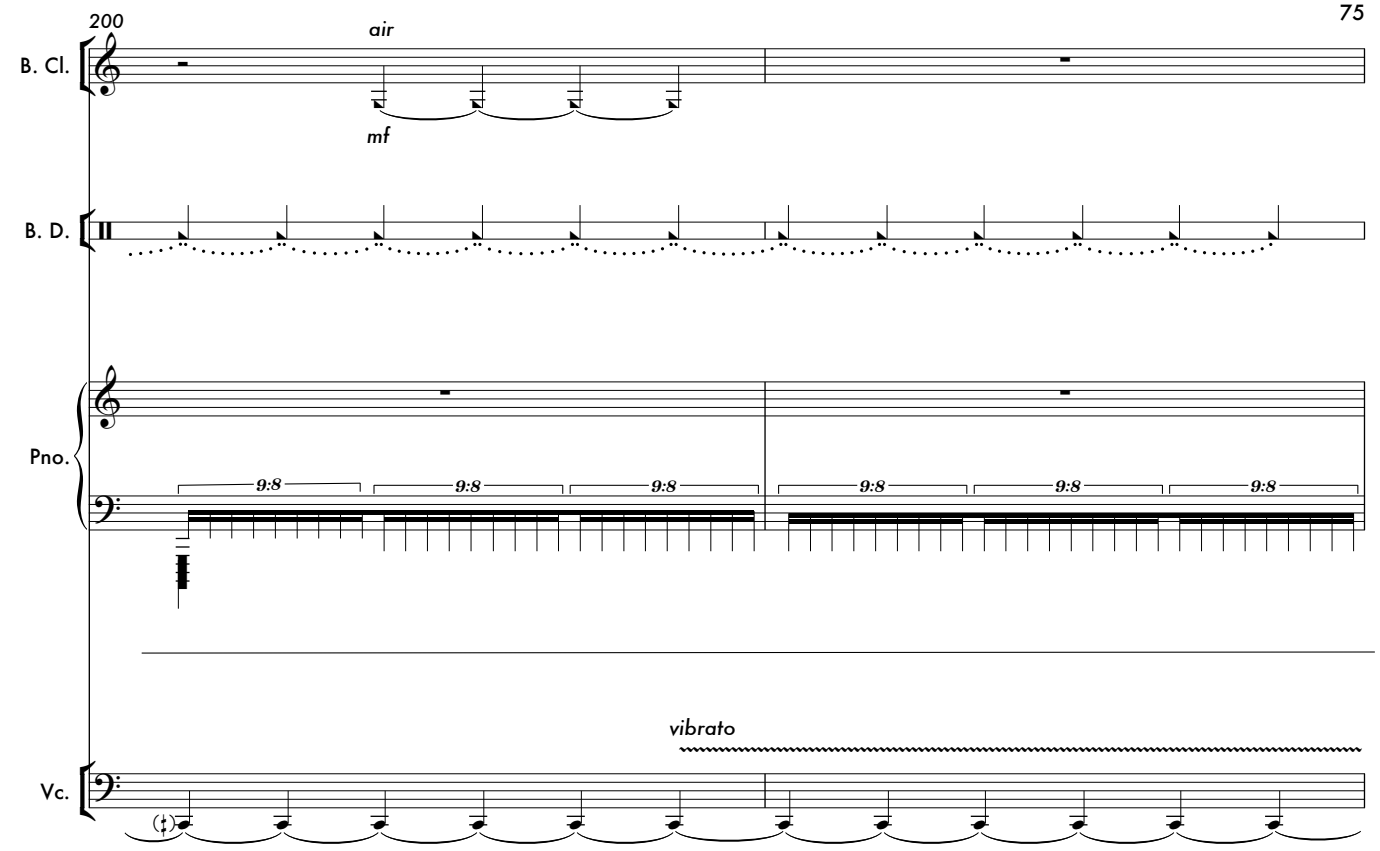

188
A. Fl.
air
keyclicks
B. Cl.
S. D.
bow on bridge
Vln.
mp
Vla.
Vc.

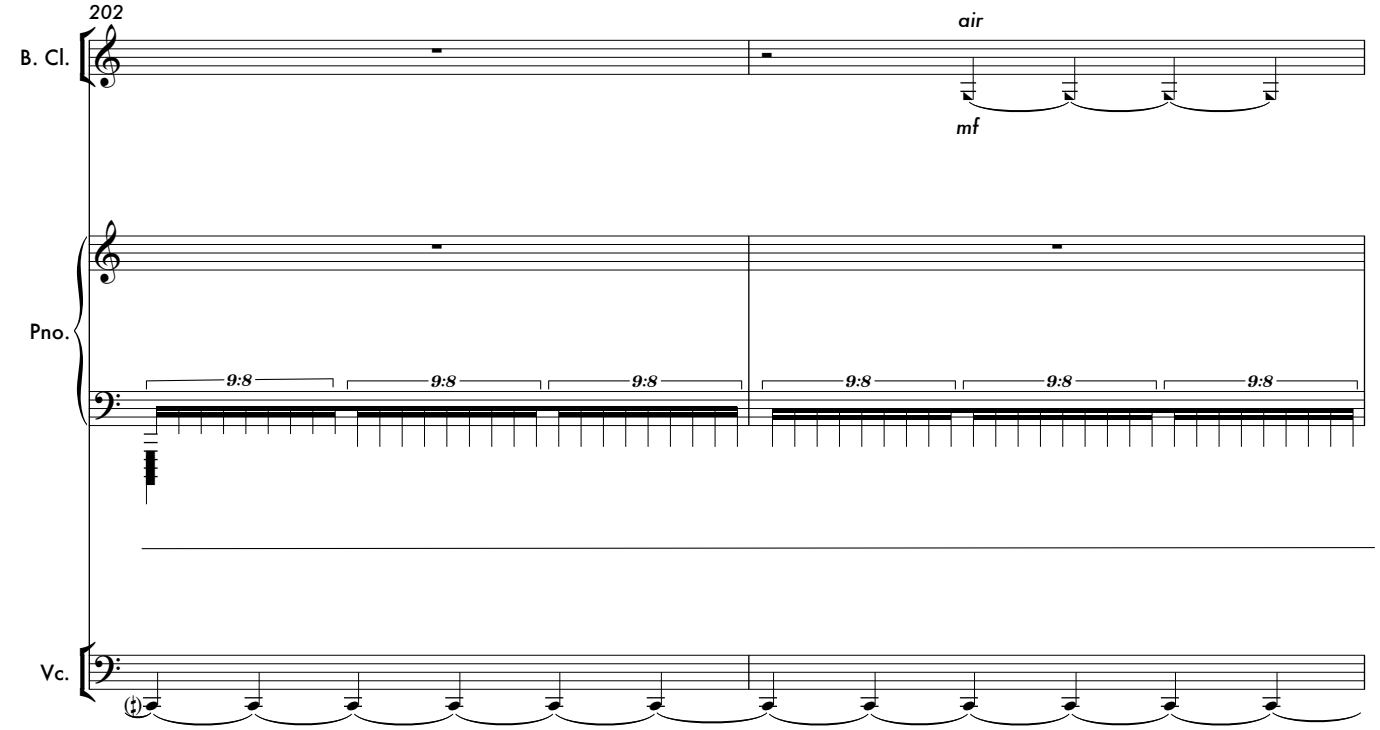

190
air
A. Fl.
B. Cl.
Cym.
S. D.
Vib.
Pno.
Vln.
Vla.
Vc.
Electr.
on edge
l bat
s.t.
Event 35 soundfile event 35

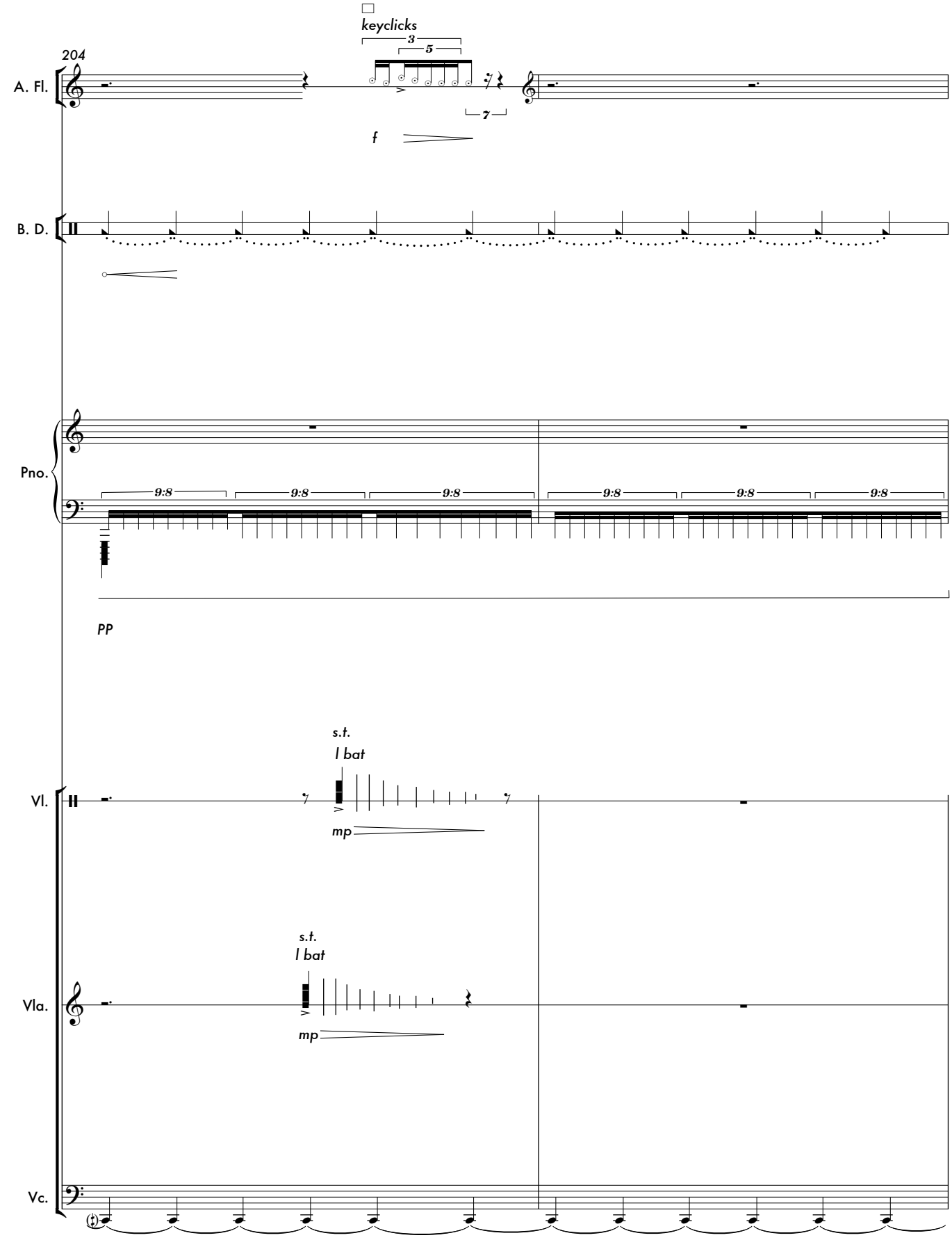

192
A. Fl.
B. Cl.
W.B.
Vln.
Vla.
Vc.
3:2
5
mp
7:4
6:4
9:8

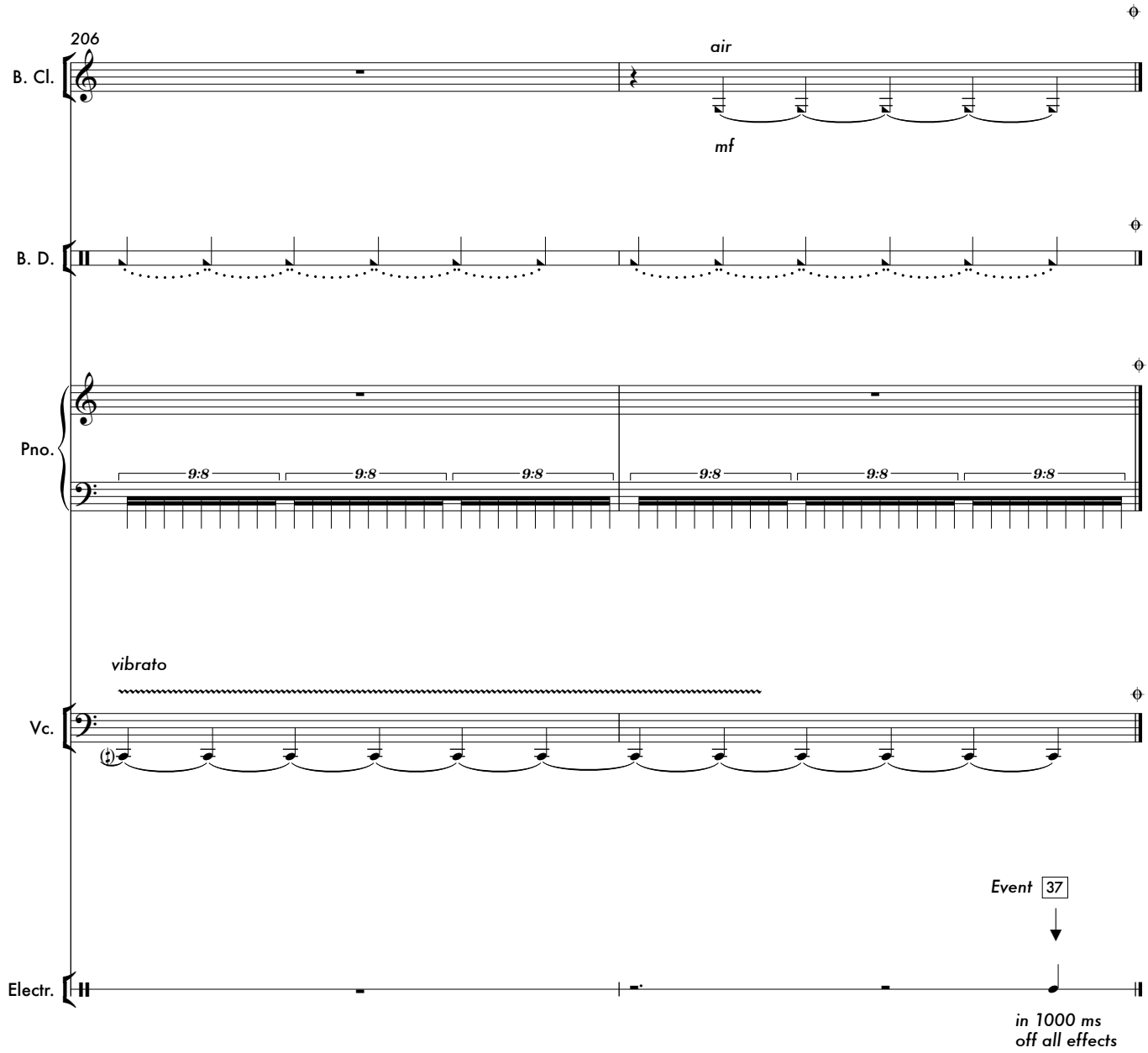

keyclicks
A. Fl.
B. Cl.
W.B.
B. D.
Pno.
on strings
Vln.
l.tratto e bat
Vla.
s.t.
l bat
Vc.
arco
Event 36
soundfile event 36
granulation (volume vl. + vla)
freeze vc + pno
spatialization in 4 channels
Electr.


196
B. D.
on strings
Pno.
9:8
pp
Vc.
198
air
jet whistle
A. Fl.
gliss.
p
air
B. Cl.
mf
B. D.
Pno.
on strings
9:8
pp
s.t.
l bat
Vl.
mp
s.t.
l bat
Vla.
mp
Vc.


200
air
mf
B. Cl.
B. D.
Pno.
9:8
9:8
9:8
9:8
9:8
9:8
vibrato
Vc.


202
air
mf
B. Cl.
Pno.
9:8
9:8
9:8
9:8
9:8
9:8
Vc.


204
keyclicks
3
5
7
A. Fl.
f
B. D.
Pno.
9:8
9:8
9:8
9:8
9:8
9:8
PP
s.t.
l bat
Vl.
mp
s.t.
l bat
Vla.
mp
Vc.


206
B. Cl.
air
mf
B. D.
Pno.
9:8
9:8
9:8
9:8
9:8
9:8
vibrato
Vc.
Event 37
Electr.
in 1000 ms
off all effects