Sistema di Prossimità

for violin, cello, double bass and electronics

Daniela Fantechi

Sistema di Prossimità is a cycle of four pieces:

Prossimo, for violin and electronics

Prossimo, II for doublebass and electronics

Prossimo, III for cello and electronics

Sistema di Prossimità, for violin, cello, double bass and electronics

Each piece of the series can also be played separately.

When the four pieces are played together they should be played one after each other, seamlessly.

Violin
1 fixed piezoelectric microphone (to be fixed on the soundboard)
1 mobile piezoelectric microphone (to be connected to the volume pedal)
1 condenser microphone
1 volume pedal

Cello
1 fixed piezoelectric microphone (to be fixed on the soundboard)
1 mobile piezoelectric microphone (to be connected to the volume pedal)
1 condenser microphone
1 volume pedal

Doublebass
1 mobile piezoelectric microphone (to be fixed on the soundboard)
1 fixed piezoelectric microphone (to be connected to the volume pedal)
1 condenser microphone
1 volume pedal

2 loudspeakers
1 mixer

1 audio interface
1 midi controller
1 laptop (Super Collider)

Documentation for the Electronics

The Patch contains the following instruments:

Recorder
Player
Player2
Granulator.1
Granulator.2
Granulator.3 [GrainHigh]
Granulator.4 [GrainLow]
Delay
Delay2
Freeze.1
Freeze.2
Freeze.3
Freeze.4

A MIDI controller with 8 sliders, 4 knobs is required to play the piece.
Default setting:
2 sliders → volume of the Players
2 sliders → volume of the Delays
4 sliders → volume of the Freezes
4 knobs → volume of the Granulators

1 button (now set as the space bar of the keyboard)→ move forward in the Cue List

The different thickness of the lines in the score indicates the variations of the volume, controlled by the sliders. The small black squares represent the cues. The notated material enclosed in rectangles corresponds to the buffers that have to be recorded live (the start and the end of the recording are already programmed in each related cue). There is just one pre-recorded sample (~buf1 in the patch), which is provided by the composer.
Each player should be able to control the volume of the mobile piezo with the volume pedal. A second piezo has to be fixed on the body of each instrument, in order to amplify its sound, together with the condenser microphone. The balance between the volume of the different microphones has to be checked during the setup, according to the features of the space where the pieces will be performed.

A possible setting of the microphones could be the following:

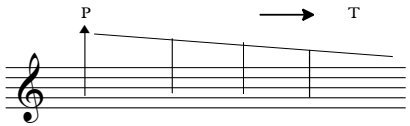
Violin
Mobile Piezo → Volume Pedal → Input 1 (Mixer) → Aux 1
Fixed Piezo → Input 2 (Mixer) → Aux 1
Condenser Microphone → Input 3 (Mixer) → Aux 1
// Aux 1 → as channel 0 in the Audio Interface

Cello
Mobile Piezo → Volume Pedal → Input 4 (Mixer) → Aux 2
Fixed Piezo → Input 5 (Mixer) → Aux 2
Condenser Microphone → Input 6 (Mixer) → Aux 2
// Aux 2 → as channel 1 in the Audio Interface

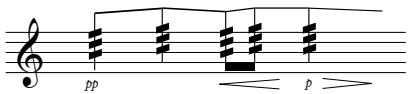
Double bass
Mobile Piezo → Volume Pedal → Input 7 (Mixer) → Aux 3
Fixed Piezo → Input 8 (Mixer) → Aux 3
Condenser Microphone → Input 9 (Mixer) → Aux 3
// Aux 3 → as channel 2 in the Audio Interface

Performance Notes

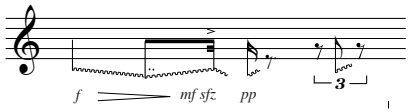
Violin - actions with piezo [the piezo is used instead of the bow. they are never used together]



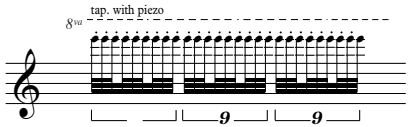
glissando with flat piezo on the indicated string (right hand)



tremolo with flat piezo on the indicated string (right hand)

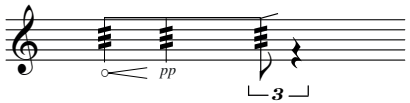


piezo oblique in order to obtain a scraped sound
control the pressure, little/slow movements helps to get a darker sound (right hand)

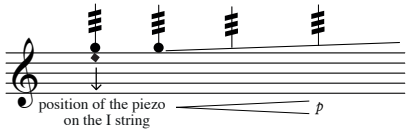


ribattuto with piezo: tapping the string with the piezo
in the indicated position (right hand)

Double bass - actions with piezo [the piezo and the bow are sometimes also used together]

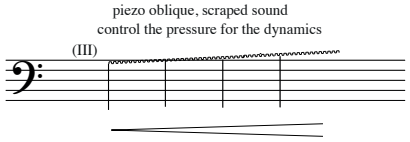


tremolo with flat piezo on the indicated string (right or left hand)

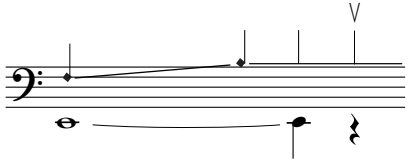


hold the piezo (left hand) on the indicated position.
tap the string with the right hand, touching the fingerboard

glissando with flat piezo on the indicated string

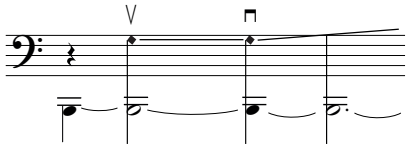


piezo oblique in order to obtain a scraped sound
control the pressure, little/slow movements helps to get a darker sound

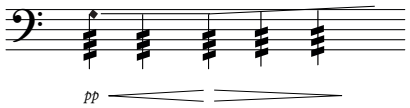


slowly glissando with the flat piezo (left hand) while bowing the string.
when a double stop is required the player should found a balance between
the sound of the open string and the sound of the glissando with the piezo

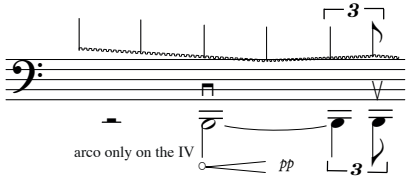
Cello - actions with piezo [the piezo and the bow are most of the times used together]



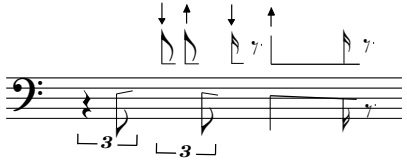
slowly glissando with the flat piezo (left hand) while bowing the string.
when a double stop is required the player should found a balance between
the sound of the open string and the sound of the glissando with the piezo



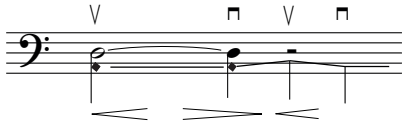
moving the flat piezo on the indicated string (left hand)
while doing the tremolo with the bow.



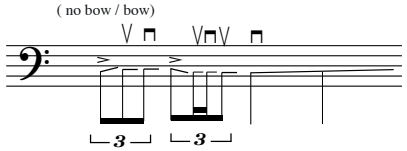
piezo oblique in order to obtain a scraped sound (left hand)
control the pressure, little/slow movements helps to get a darker sound
sometimes the player is asked to play meanwhile with the bow on another (open) string



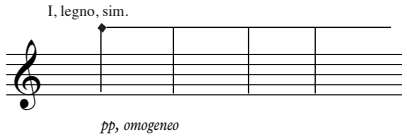
the piezo and the bow play on the same indicated string doing separated actions:
the bow (right hand) does a vertical movement in the space between the bridge and the fingerboard,
with few pressure. the flat piezo (left hand) moves as indicated



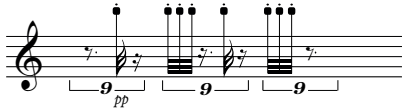
double stop with the bow on the open string (III) and on the II string,
where the piezo (left hand) moves, following the indicated position



a short glissando with flat piezo is alternated with an up and down
bow movement, done on the same string where the piezo is



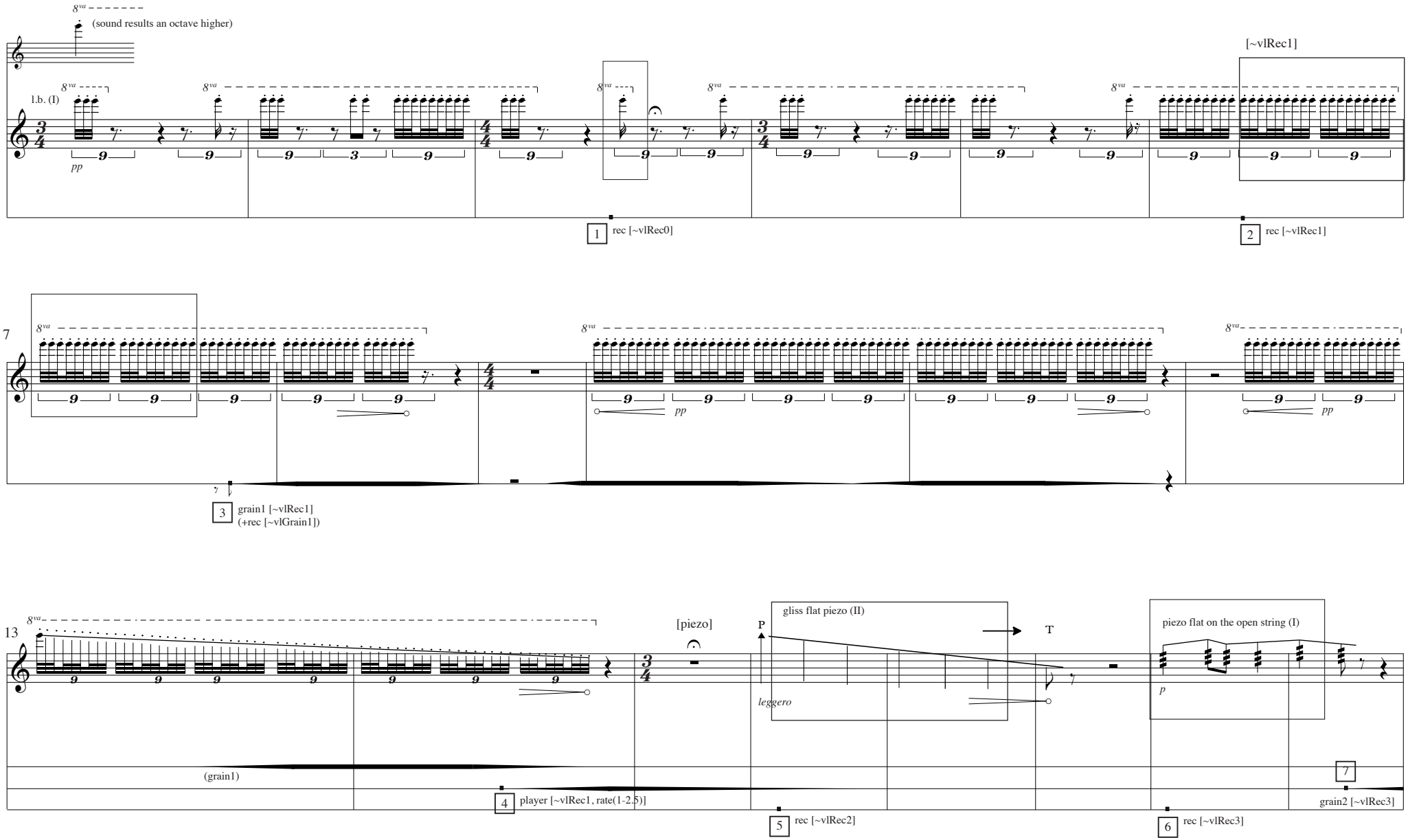
place the piezo on any high point between fingerboard and bridge
on the indicated string and bow with legno to get an airy sound

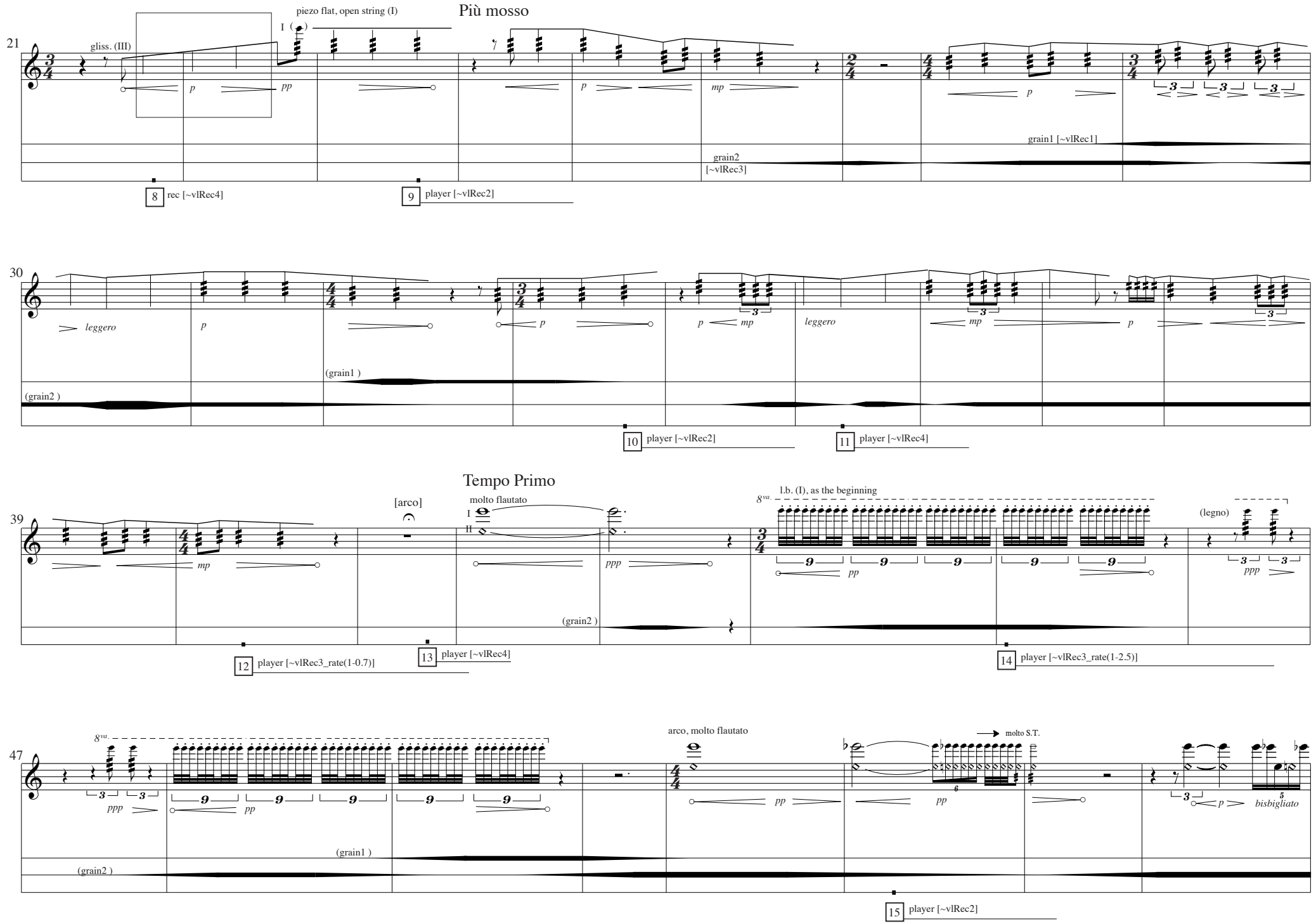


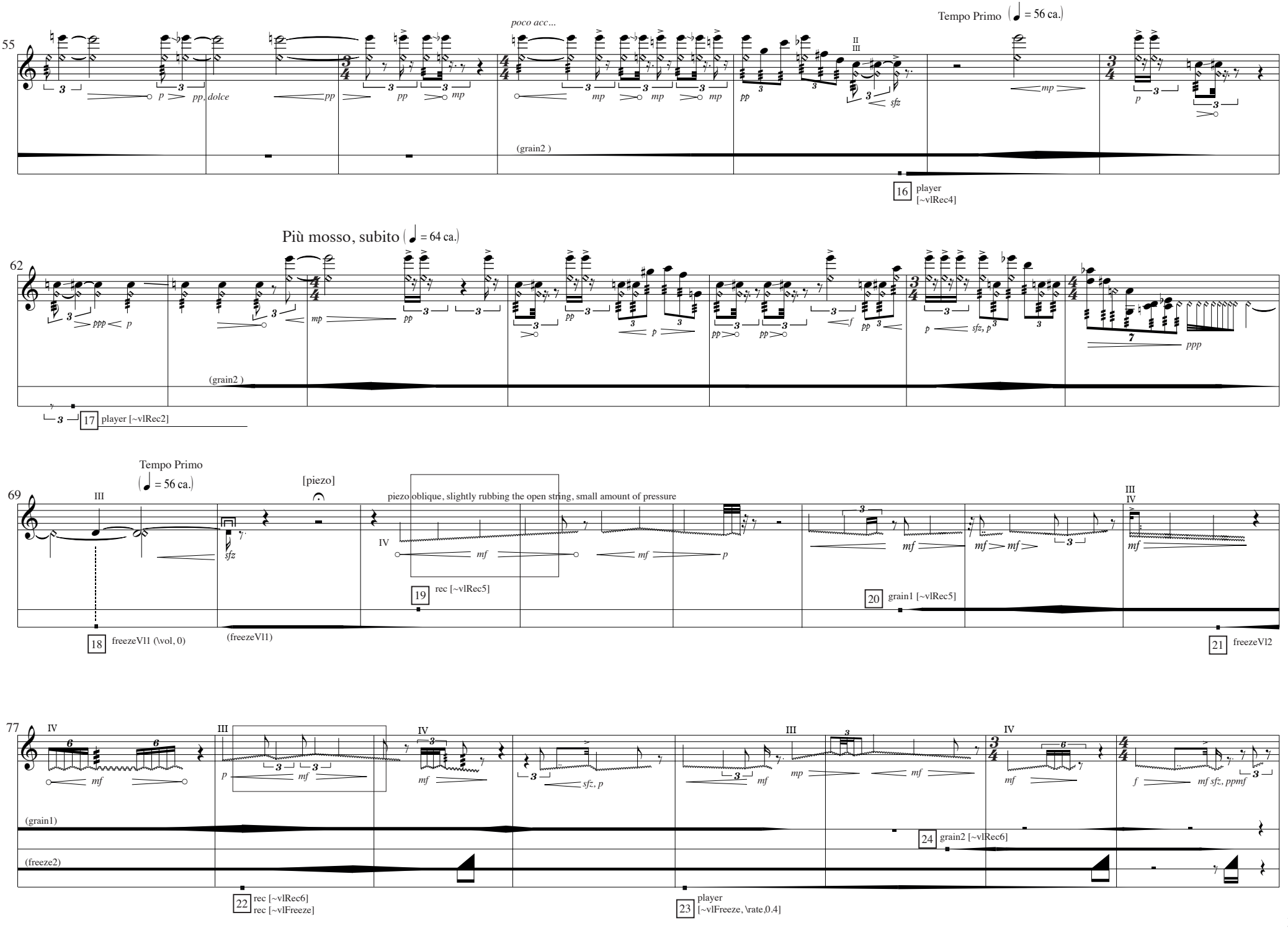
tap with legno on the string where the piezo is placed.

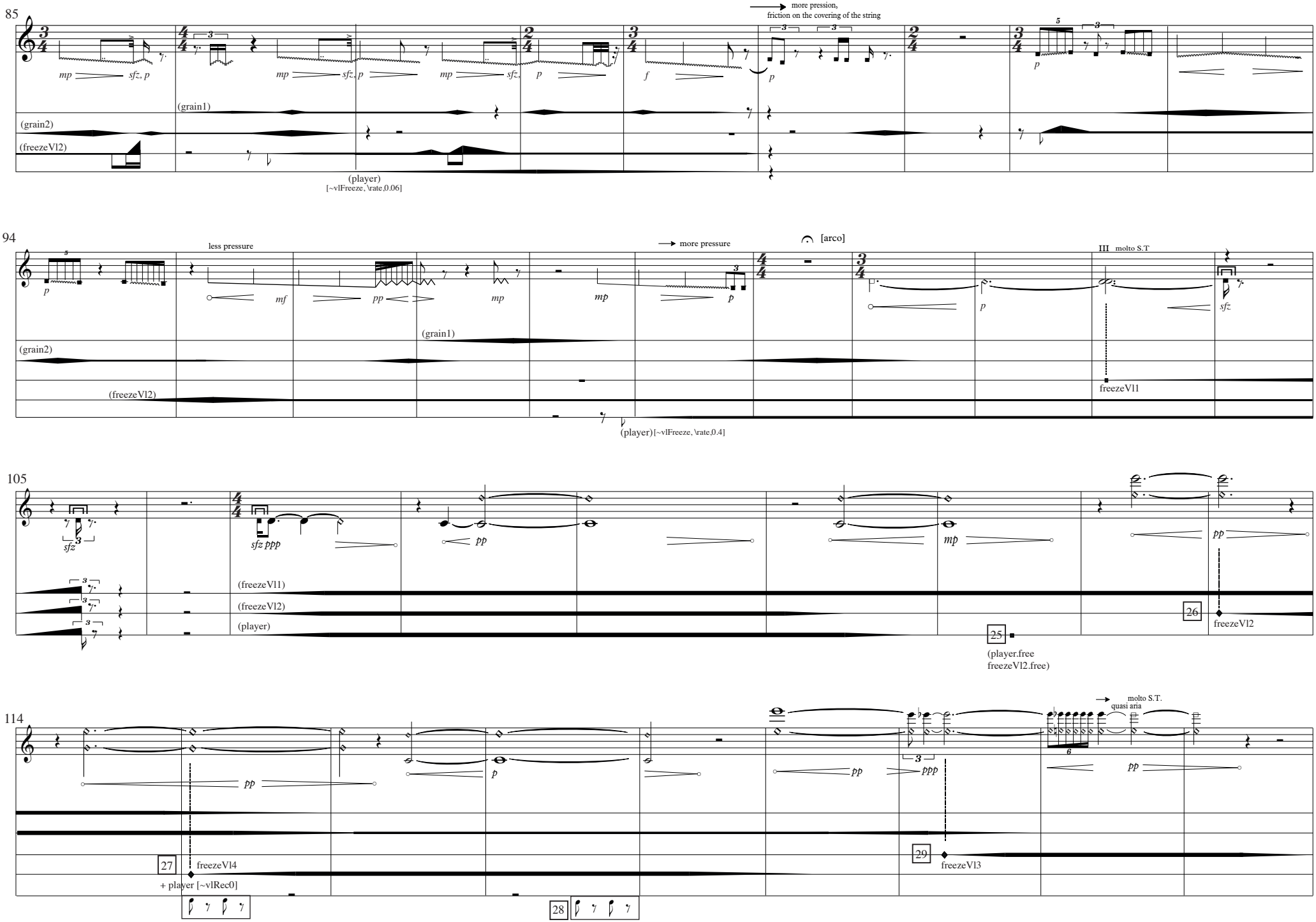
Prossimo

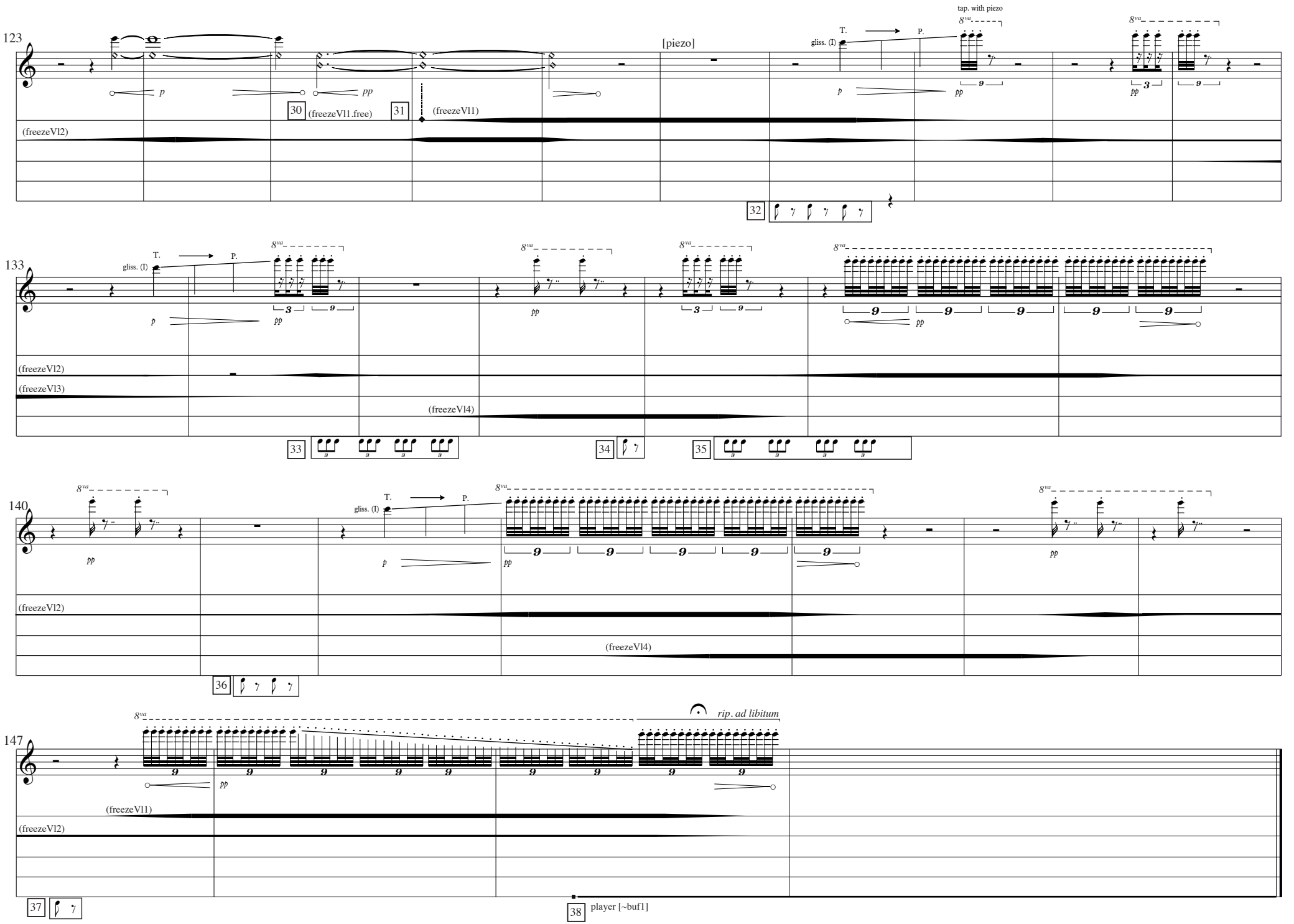
♩ = 54/56



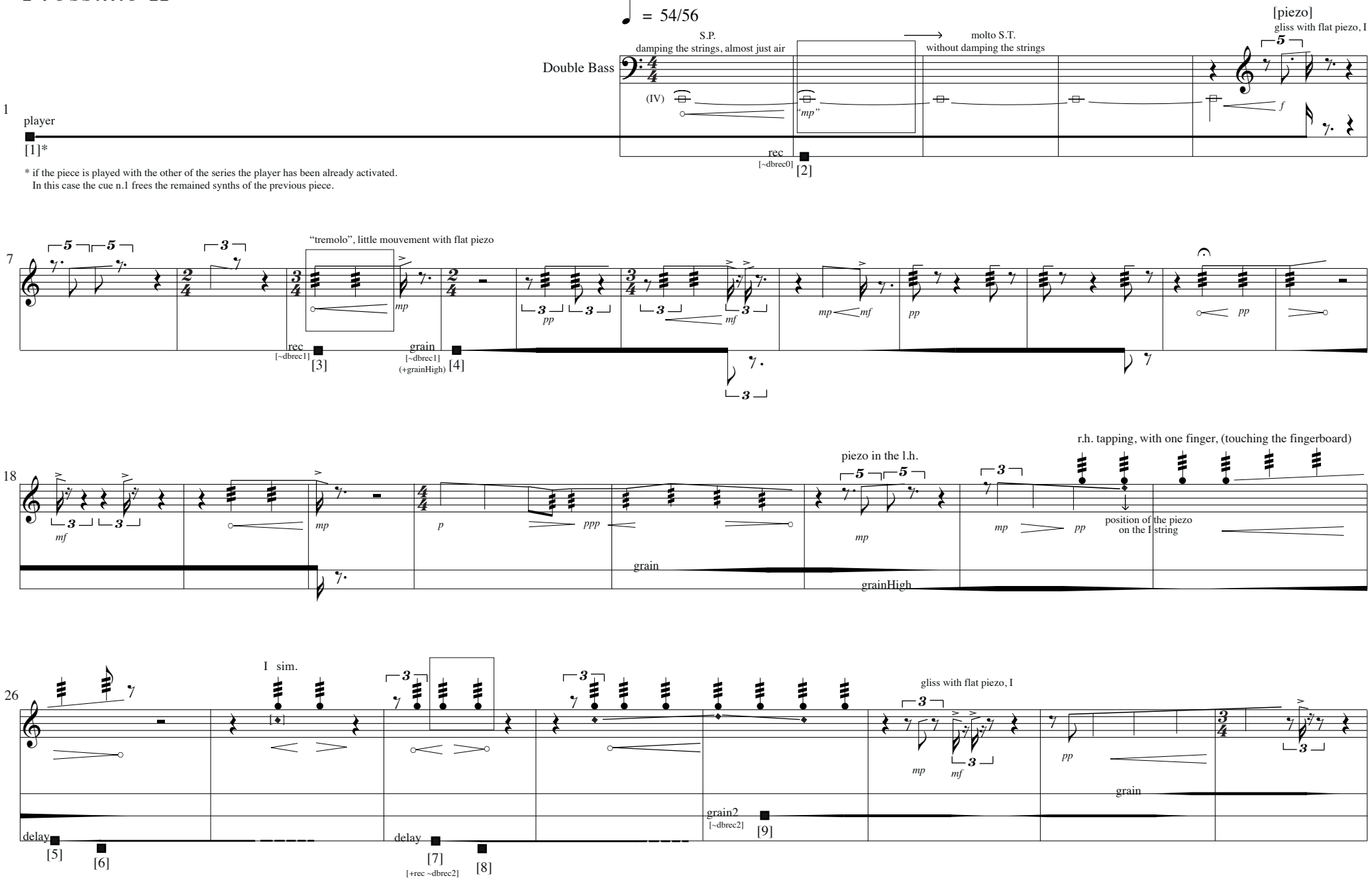

21
gliss. (III)
piezo flat, open string (I)
I
Più mosso
p
pp
p
mp
p
grain1 [~vlRec1]
grain2
[~vlRec3]
8 rec [~vlRec4]
9 player [~vlRec2]
30
leggero
p
p
p
mp
leggero
mp
p
(grain1)
(grain2)
10 player [~vlRec2]
11 player [~vlRec4]
Tempo Primo
39
[arco]
molto flautato
I
II
mp
ppp
8va.
l.b. (I), as the beginning
pp
(legno)
ppp
(grain2)
12 player [~vlRec3_rate(1-0.7)]
13 player [~vlRec4]
14 player [~vlRec3_rate(1-2.5)]
47
8va.
ppp
pp
arco, molto flautato
pp
molto S.T.
pp
p
bisbigliato
(grain1)
(grain2)
15 player [~vlRec2]

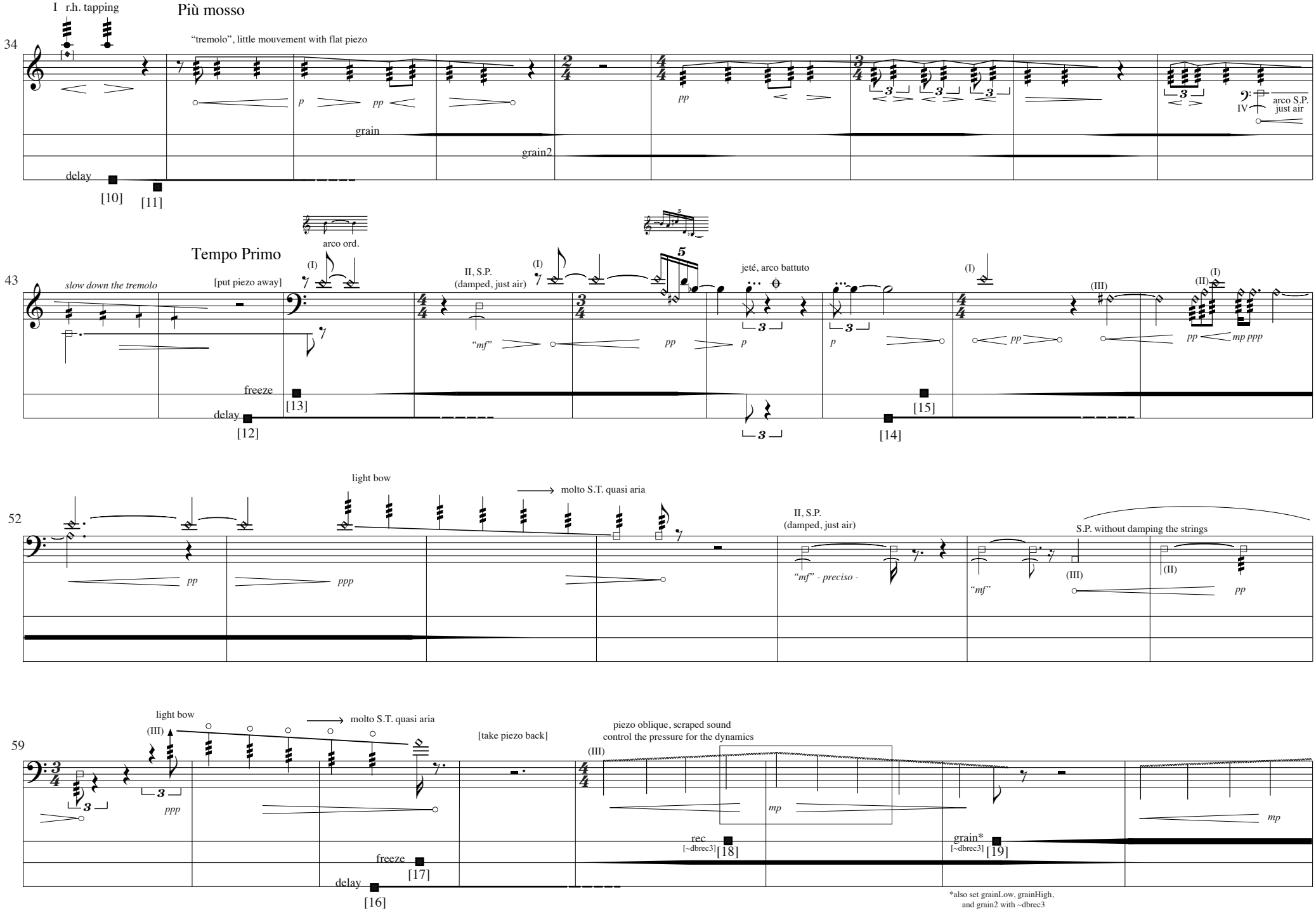

55
poco acc...
Tempo Primo (♩ = 56 ca.)
II
III
(grain2)
16 player [~vlRec4]
62
Più mosso, subito (♩ = 64 ca.)
(grain2)
17 player [~vlRec2]
69
Tempo Primo
(♩ = 56 ca.)
III
[piezo]
piezo oblique, slightly rubbing the open string, small amount of pressure
IV
III
IV
19 rec [~vlRec5]
20 grain1 [~vlRec5]
18 freezeVl1 (\vol, 0)
(freezeVl1)
21 freezeVl2
77
IV
III
IV
III
IV
(grain1)
(freeze2)
24 grain2 [~vlRec6]
22 rec [~vlRec6]
rec [~vlFreeze]
23 player
[~vlFreeze, \rate,0.4]

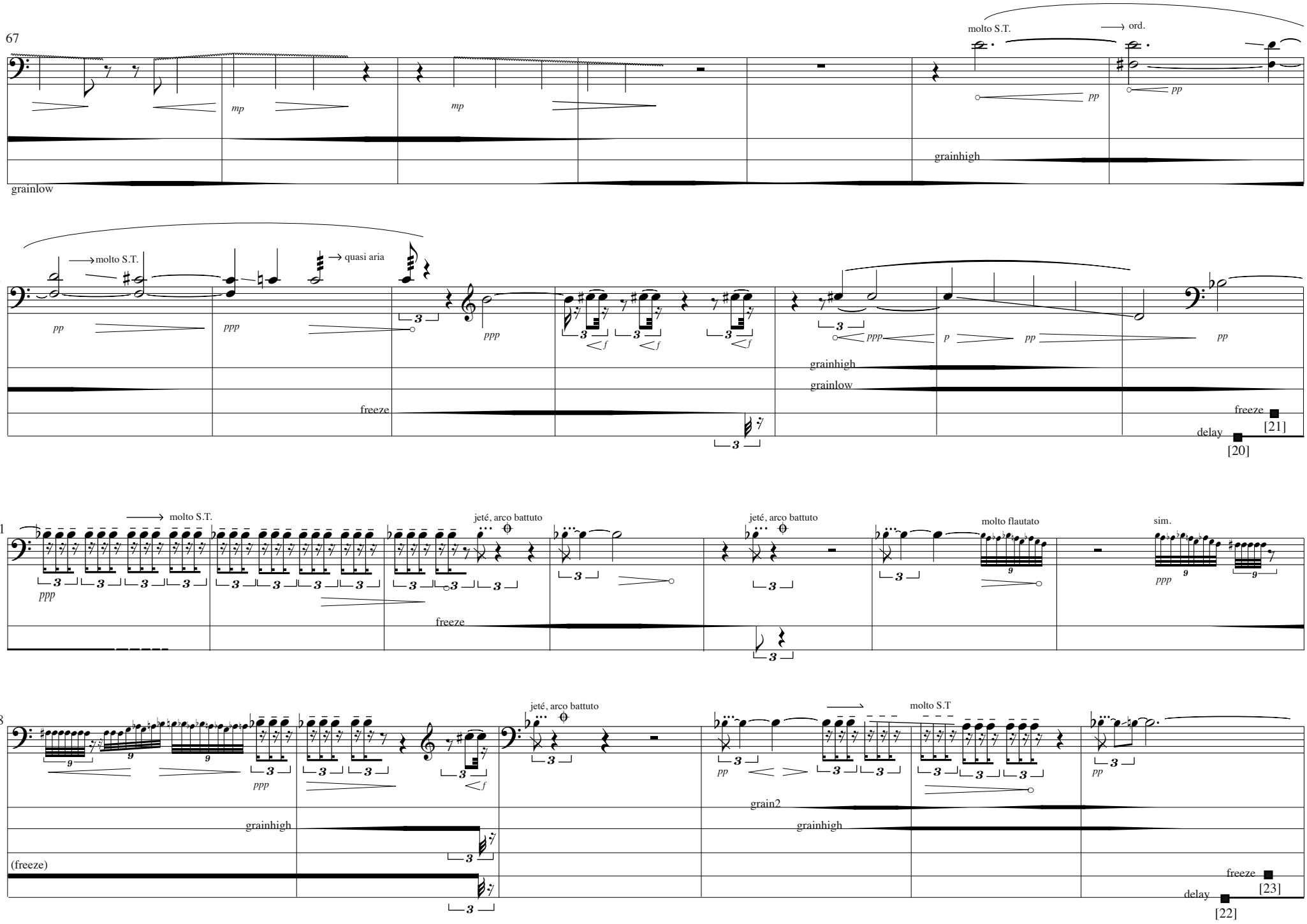

85
more pression,
friction on the covering of the string
mp
sfz, p
(grain1)
(grain2)
(freezeVl2)
(player)
[~vlFreeze, \rate,0.06]
94
less pressure
more pressure
[arco]
III molto S.T
mf
pp
mp
(grain1)
(grain2)
(freezeVl2)
freezeVl1
(player)[~vlFreeze, \rate,0.4]
105
sfz
sfz ppp
(freezeVl1)
(freezeVl2)
(player)
26
freezeVl2
25
(player.free
freezeVl2.free)
114
molto S.T.
quasi aria
27
freezeVl4
+ player [~vlRec0]
28
29
freezeVl3

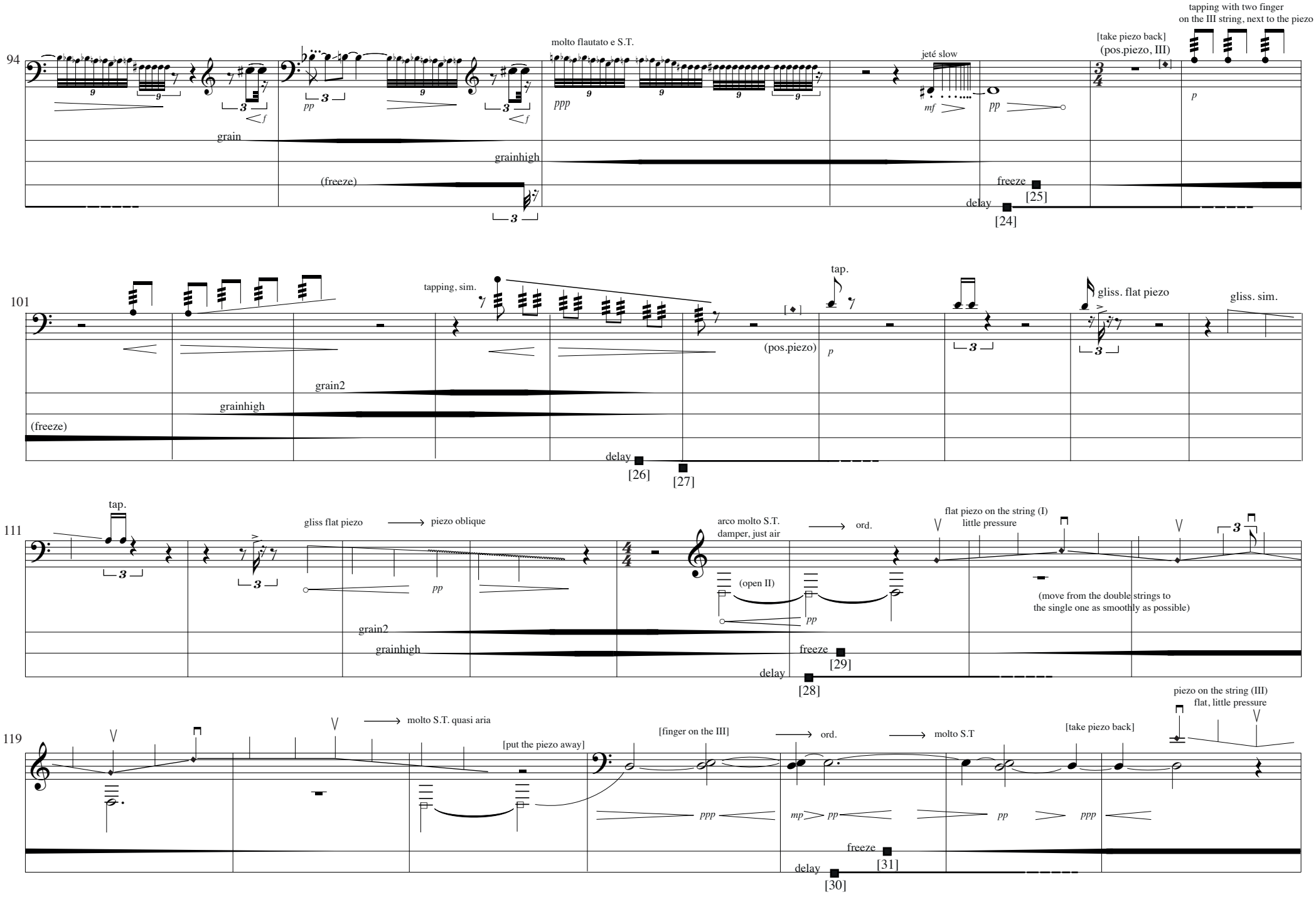

123
[piezo]
tap. with piezo
gliss. (I)
T.
P.
8va
p
pp
30
(freezeVl1.free)
31
(freezeVl1)
(freezeVl2)
32
133
(freezeVl3)
(freezeVl4)
33
34
35
140
36
147
rip. ad libitum
(freezeVl1)
37
38
player [~buf1]

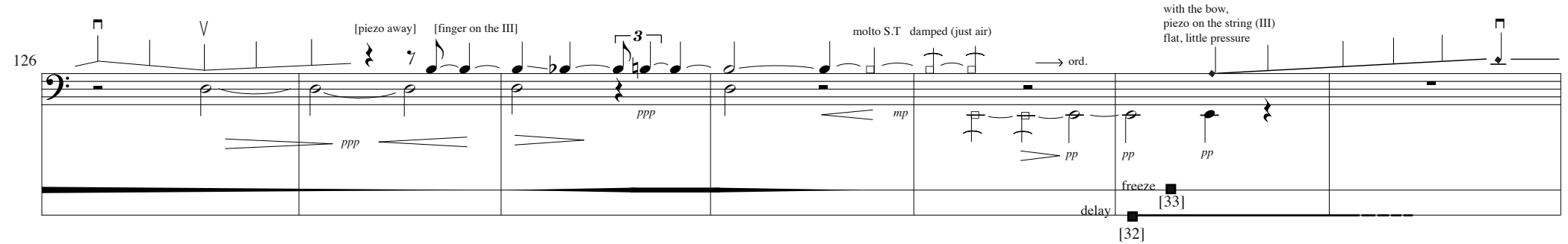
Prossimo II

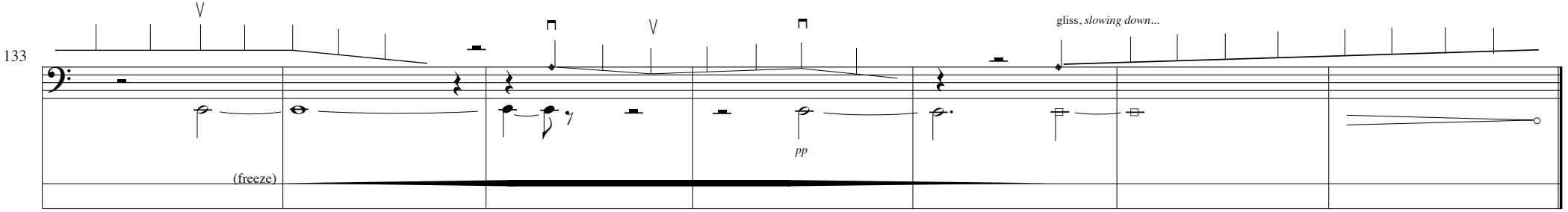

= 54/56
Double Bass
S.P.
damping the strings, almost just air
molto S.T.
without damping the strings
[piezo]
gliss with flat piezo, I
1
player
[1]*
(IV)
"mp"
f
rec
[~dbrec0]
[2]
* if the piece is played with the other of the series the player has been already activated.
In this case the cue n.1 frees the remained synths of the previous piece.
7
"tremolo", little mouvement with flat piezo
mp
pp
mf
rec
[~dbrec1]
[3]
grain
[~dbrec1]
(+grainHigh)
[4]
18
r.h. tapping, with one finger, (touching the fingerboard)
piezo in the l.h.
mf
p
ppp
grain
grainHigh
position of the piezo
on the I string
26
I sim.
gliss with flat piezo, I
grain2
[~dbrec2]
[9]
delay
[5]
[6]
[7]
[+rec ~dbrec2]
[8]
grain


I r.h. tapping
Più mosso
34
"tremolo", little mouvement with flat piezo
p
pp
grain
grain2
pp
IV
arco S.P.
just air
delay
[10]
[11]
Tempo Primo
arco ord.
43
slow down the tremolo
[put piezo away]
II, S.P.
(damped, just air)
"mf"
jeté, arco battuto
freeze
delay
[12]
[13]
[14]
[15]
52
light bow
molto S.T. quasi aria
pp
ppp
II, S.P.
(damped, just air)
"mf" - preciso -
S.P. without damping the strings
"mf"
59
light bow
molto S.T. quasi aria
[take piezo back]
piezo oblique, scraped sound
control the pressure for the dynamics
ppp
mp
rec
[~dbrec3]
[18]
grain*
[~dbrec3]
[19]
freeze
[17]
delay
[16]
*also set grainLow, grainHigh,
and grain2 with ~dbrec3

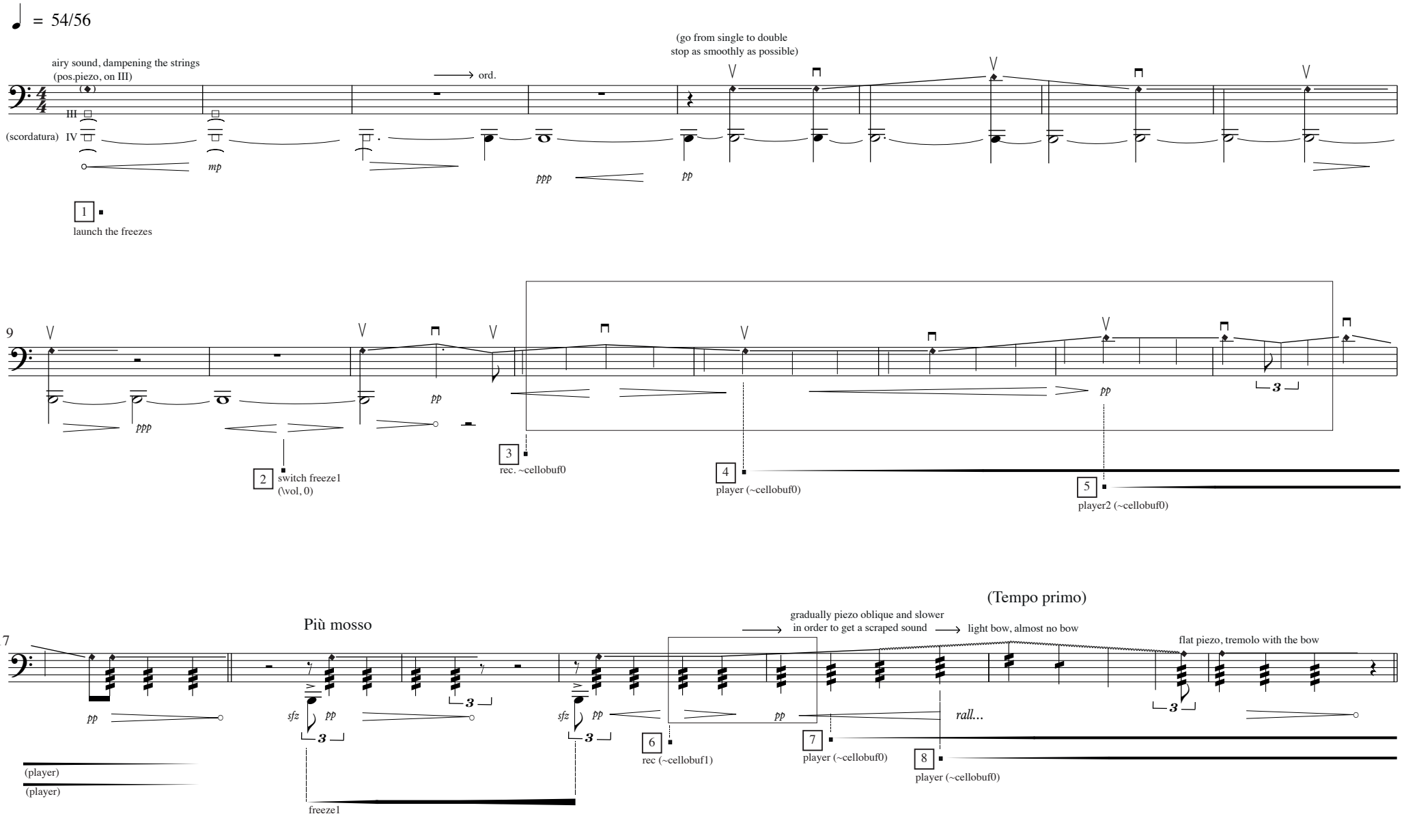

67
molto S.T.
ord.
mp
mp
pp
pp
grainhigh
grainlow
74
molto S.T.
quasi aria
pp
ppp
ppp
ppp
p
pp
pp
grainhigh
grainlow
freeze
freeze
delay
[21]
[20]
81
molto S.T.
jeté, arco battuto
jeté, arco battuto
molto flautato
sim.
ppp
ppp
freeze
88
jeté, arco battuto
molto S.T
ppp
pp
pp
grain2
grainhigh
grainhigh
(freeze)
freeze
delay
[23]
[22]

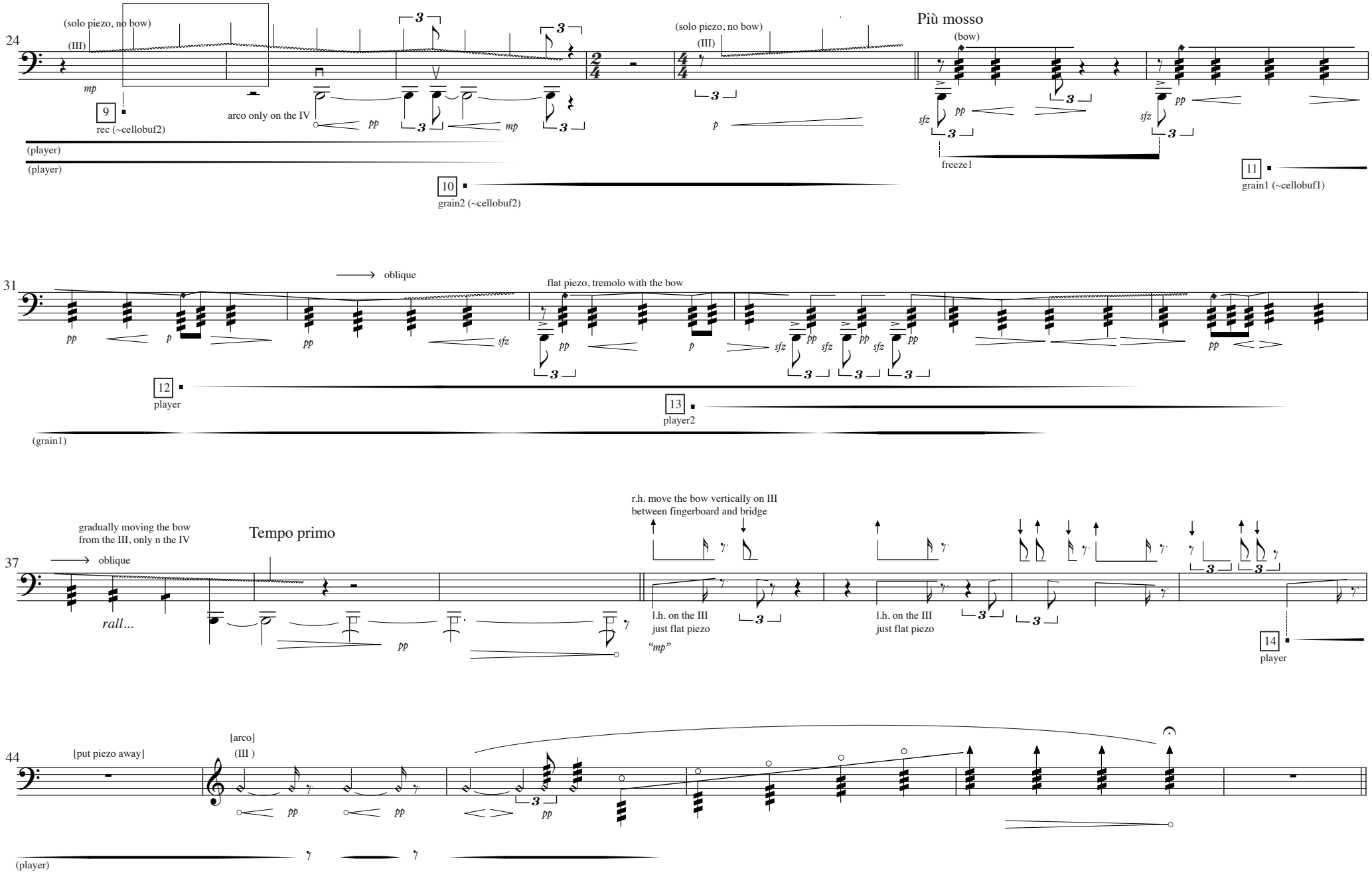

94
molto flautato e S.T.
jeté slow
[take piezo back]
(pos.piezo, III)
tapping with two finger
on the III string, next to the piezo
grain
grainhigh
(freeze)
freeze
[25]
delay
[24]
101
tapping, sim.
tap.
(pos.piezo)
gliss. flat piezo
gliss. sim.
grain2
grainhigh
(freeze)
delay
[26]
[27]
111
tap.
gliss flat piezo
piezo oblique
arco molto S.T.
damper, just air
ord.
flat piezo on the string (I)
little pressure
(open II)
(move from the double strings to
the single one as smoothly as possible)
grain2
grainhigh
freeze
[29]
delay
[28]
119
molto S.T. quasi aria
[put the piezo away]
[finger on the III]
ord.
molto S.T
[take piezo back]
piezo on the string (III)
flat, little pressure
freeze
[31]
delay
[30]

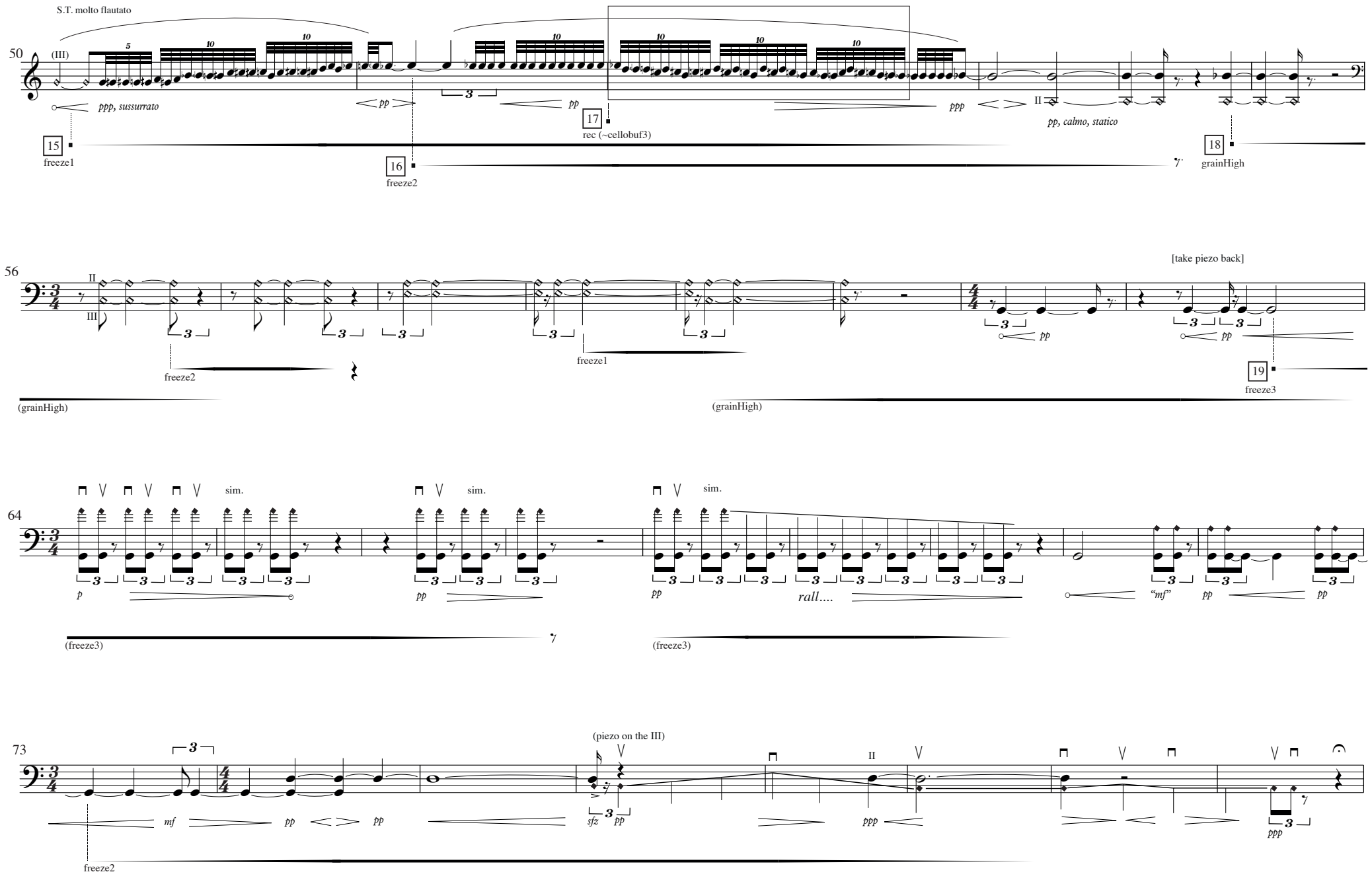

126
[piezo away]
[finger on the III]
3
molto S.T
damped (just air)
→ ord.
with the bow,
piezo on the string (III)
flat, little pressure
ppp
ppp
mp
pp
pp
pp
freeze
[33]
delay
[32]

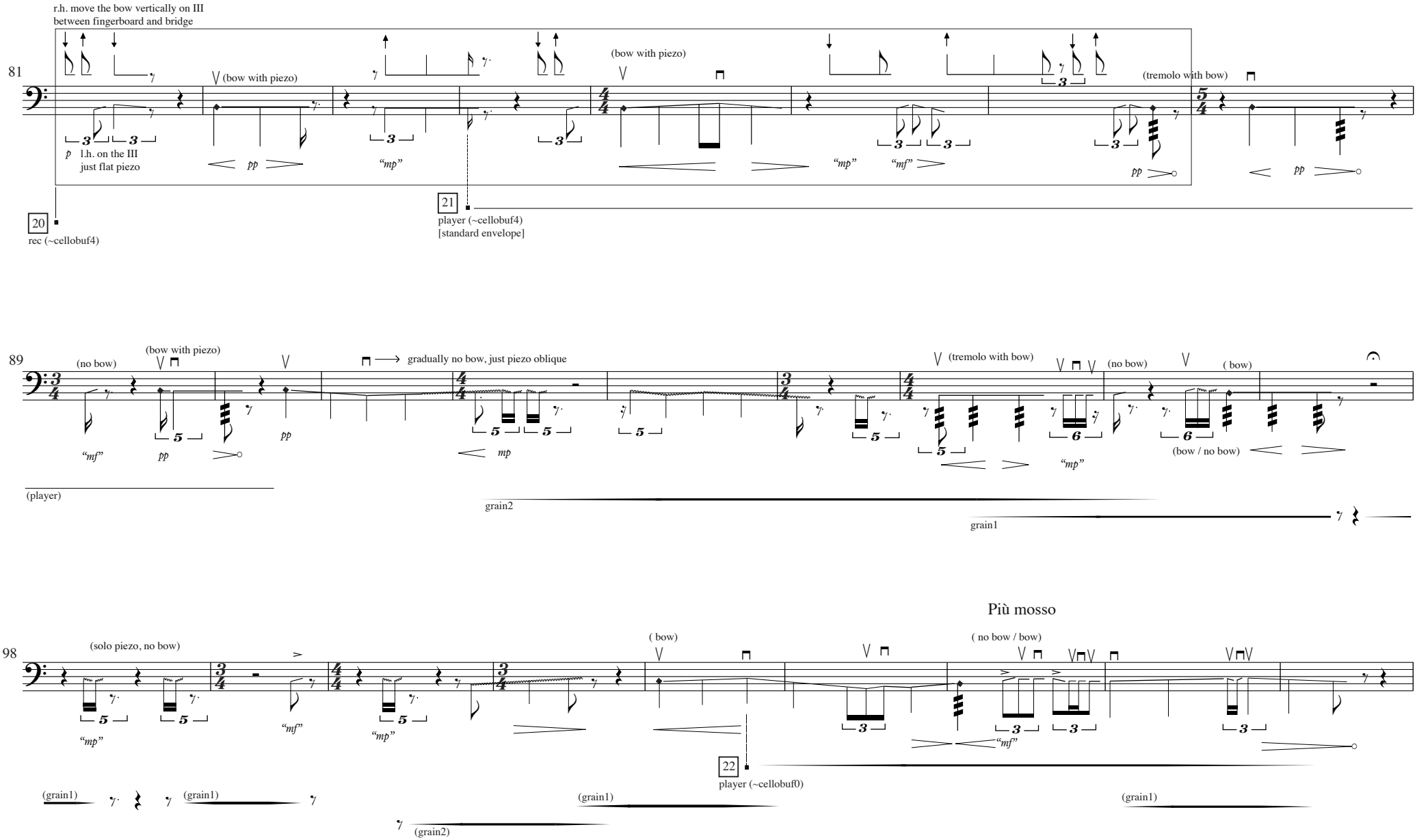

133
gliss, slowing down...
pp
(freeze)

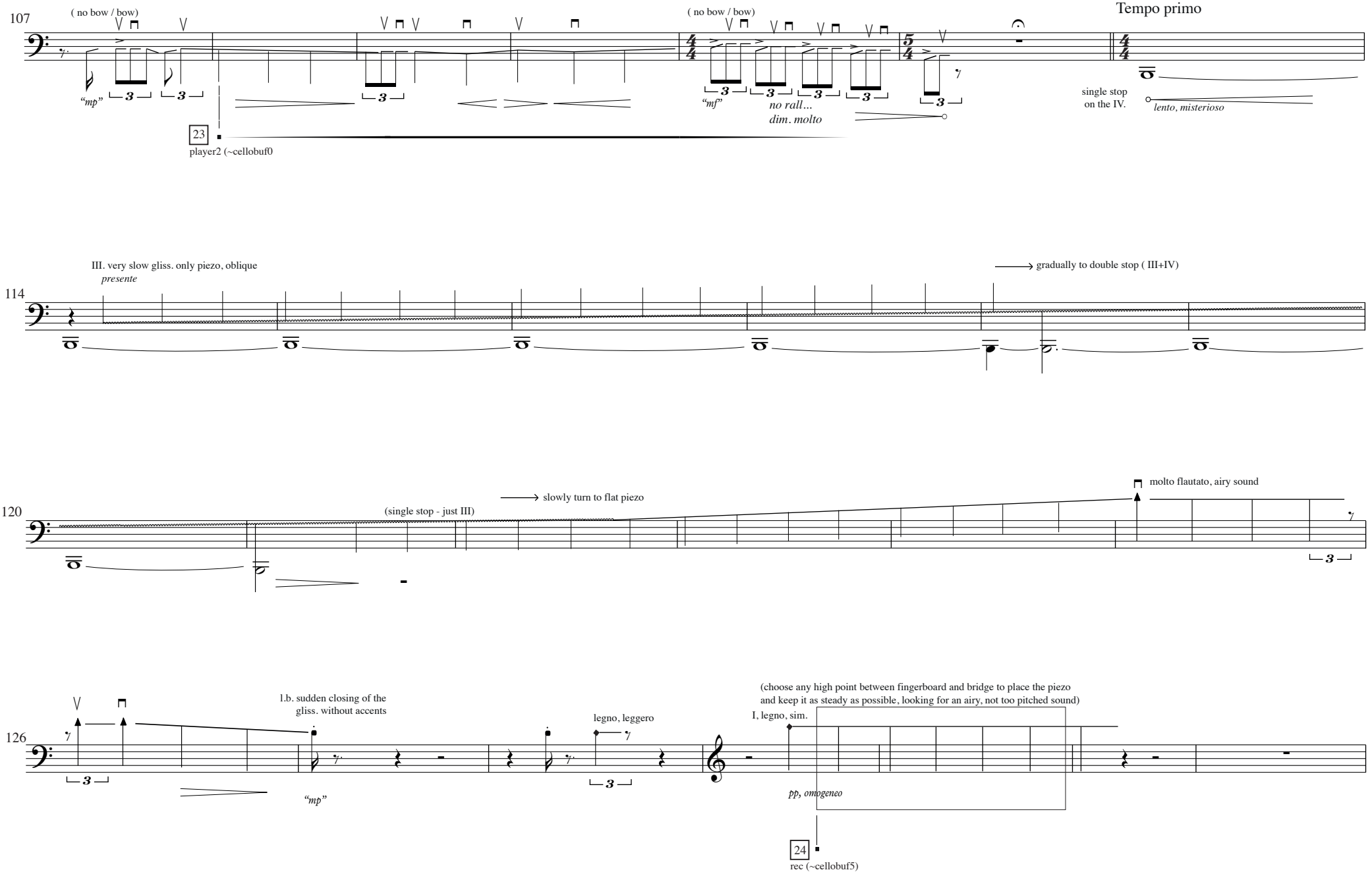
Prossimo III

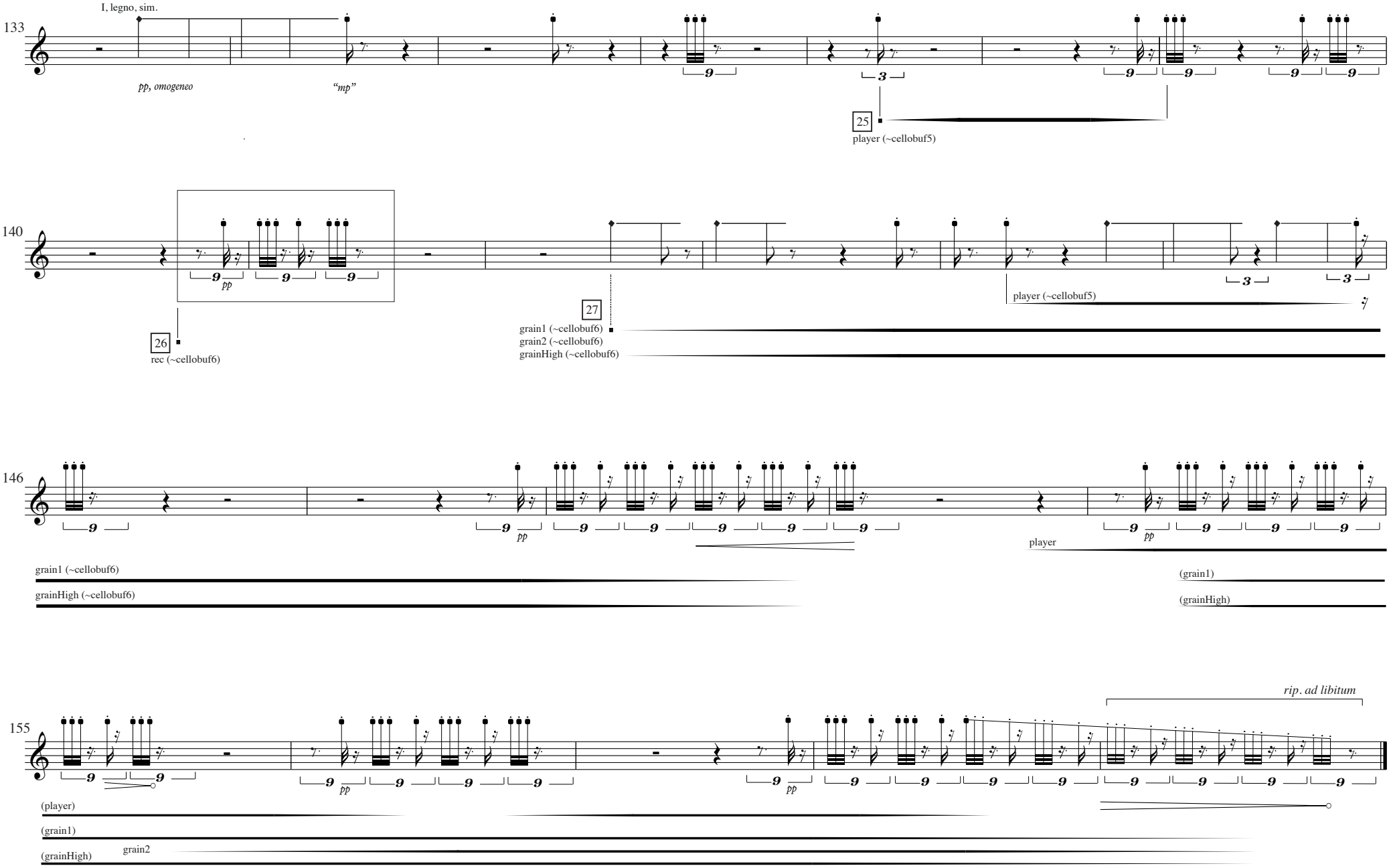



24
(solo piezo, no bow)
(III)
mp
9
rec (~cellobuf2)
arco only on the IV
pp
mp
(player)
(player)
10
grain2 (~cellobuf2)
(solo piezo, no bow)
(III)
p
Più mosso
(bow)
sfz
pp
freeze1
11
grain1 (~cellobuf1)
31
oblique
pp
p
sfz
flat piezo, tremolo with the bow
12
player
13
player2
(grain1)
37
gradually moving the bow
from the III, only n the IV
oblique
rall...
Tempo primo
r.h. move the bow vertically on III
between fingerboard and bridge
l.h. on the III
just flat piezo
"mp"
14
player
44
[put piezo away]
[arco]
(III)
(player)


S.T. molto flautato
50
(III)
ppp, sussurrato
pp
pp
ppp
II
pp, calmo, statico
15
freeze1
16
freeze2
17
rec (~cellobuf3)
18
grainHigh
56
II
III
freeze2
freeze1
[take piezo back]
pp
pp
19
freeze3
(grainHigh)
(grainHigh)
64
sim.
sim.
sim.
p
pp
pp
rall....
"mf"
pp
pp
(freeze3)
(freeze3)
73
mf
pp
pp
(piezo on the III)
sfz
pp
II
ppp
ppp
freeze2

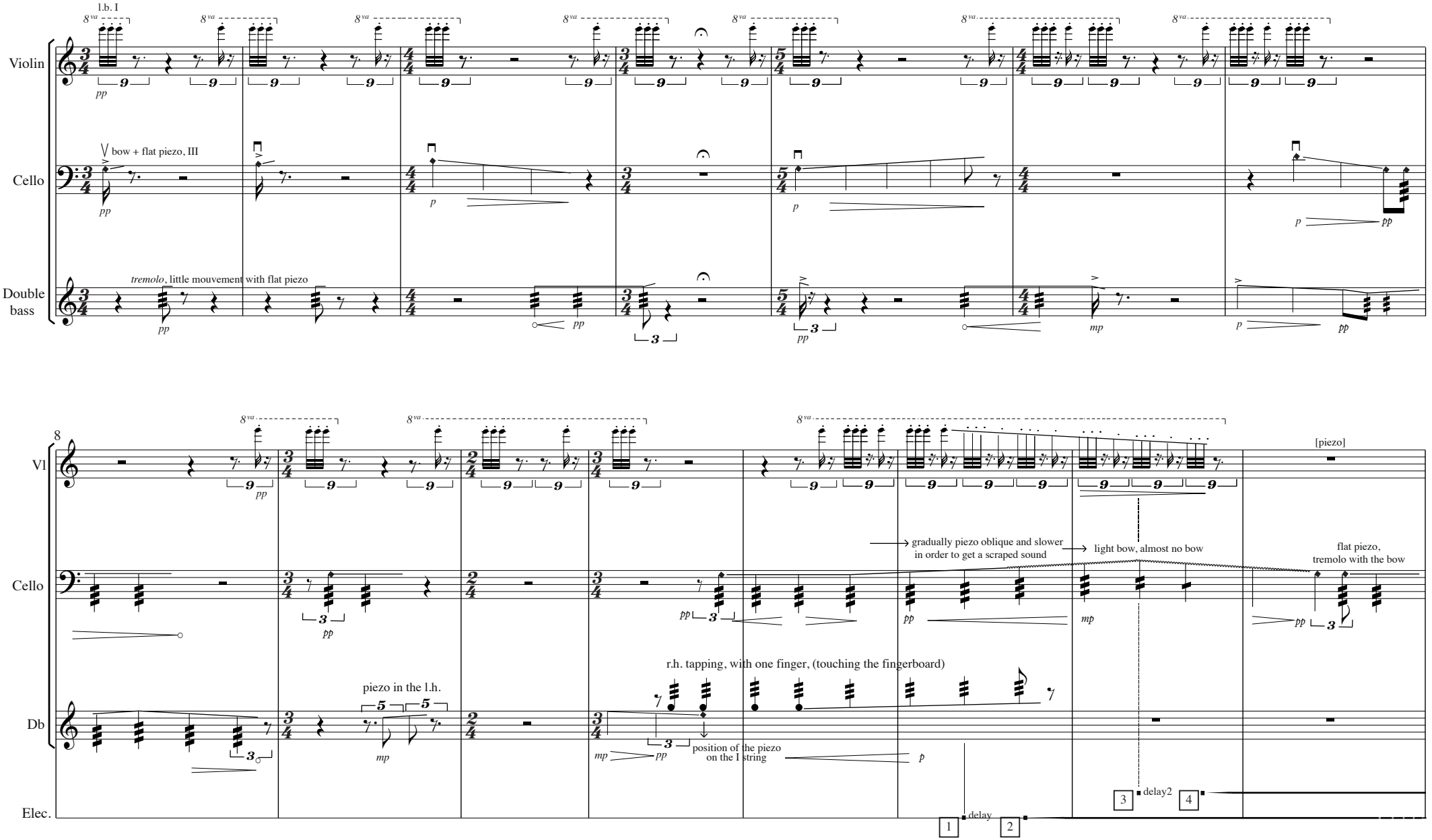

r.h. move the bow vertically on III
between fingerboard and bridge
81
(bow with piezo)
(bow with piezo)
(tremolo with bow)
p l.h. on the III
just flat piezo
pp
"mp"
"mp"
"mf"
pp
pp
20
rec (~cellobuf4)
21
player (~cellobuf4)
[standard envelope]
89
(no bow)
(bow with piezo)
gradually no bow, just piezo oblique
(tremolo with bow)
(no bow)
(bow)
"mf"
pp
pp
mp
"mp"
(bow / no bow)
(player)
grain2
grain1
Più mosso
98
(solo piezo, no bow)
(bow)
(no bow / bow)
"mp"
"mf"
"mp"
"mf"
22
player (~cellobuf0)
(grain1)
(grain1)
(grain1)
(grain1)
(grain2)

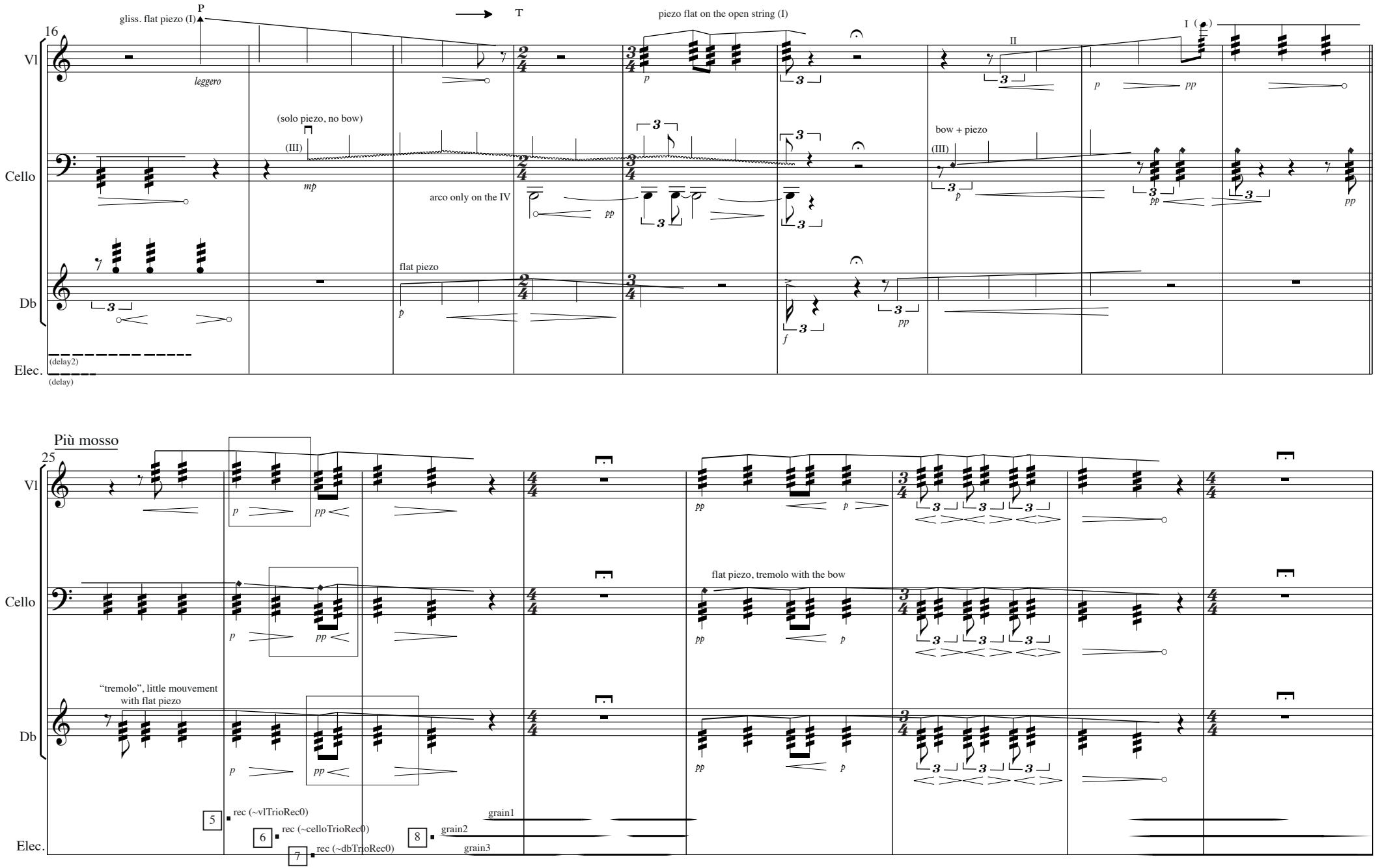

107
(no bow / bow)
"mp"
(no bow / bow)
"mf"
no rall...
dim. molto
Tempo primo
single stop
on the IV.
lento, misterioso
23
player2 (~cellobuf0
114
III. very slow gliss. only piezo, oblique
presente
gradually to double stop (III+IV)
120
(single stop - just III)
slowly turn to flat piezo
molto flautato, airy sound
126
l.b. sudden closing of the
gliss. without accents
"mp"
legno, leggero
(choose any high point between fingerboard and bridge to place the piezo
and keep it as steady as possible, looking for an airy, not too pitched sound)
I, legno, sim.
pp, omogeneo
24
rec (~cellobuf5)

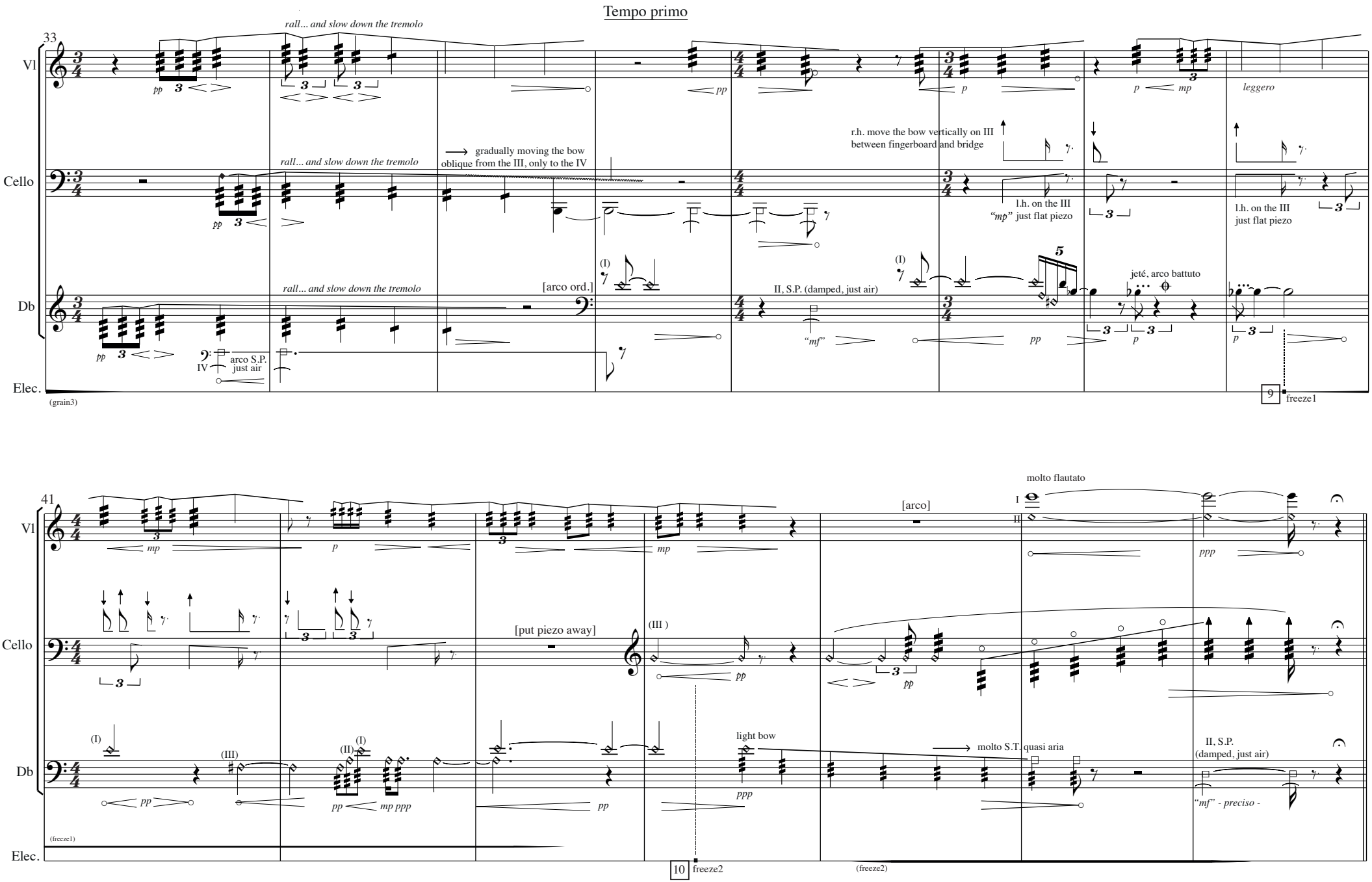

I, legno, sim.
133
pp, omogeneo
"mp"
25
player (~cellobuf5)
140
pp
26
rec (~cellobuf6)
27
grain1 (~cellobuf6)
grain2 (~cellobuf6)
grainHigh (~cellobuf6)
player (~cellobuf5)
146
pp
player
grain1 (~cellobuf6)
grainHigh (~cellobuf6)
(grain1)
(grainHigh)
155
rip. ad libitum
pp
pp
(player)
(grain1)
(grainHigh)
grain2

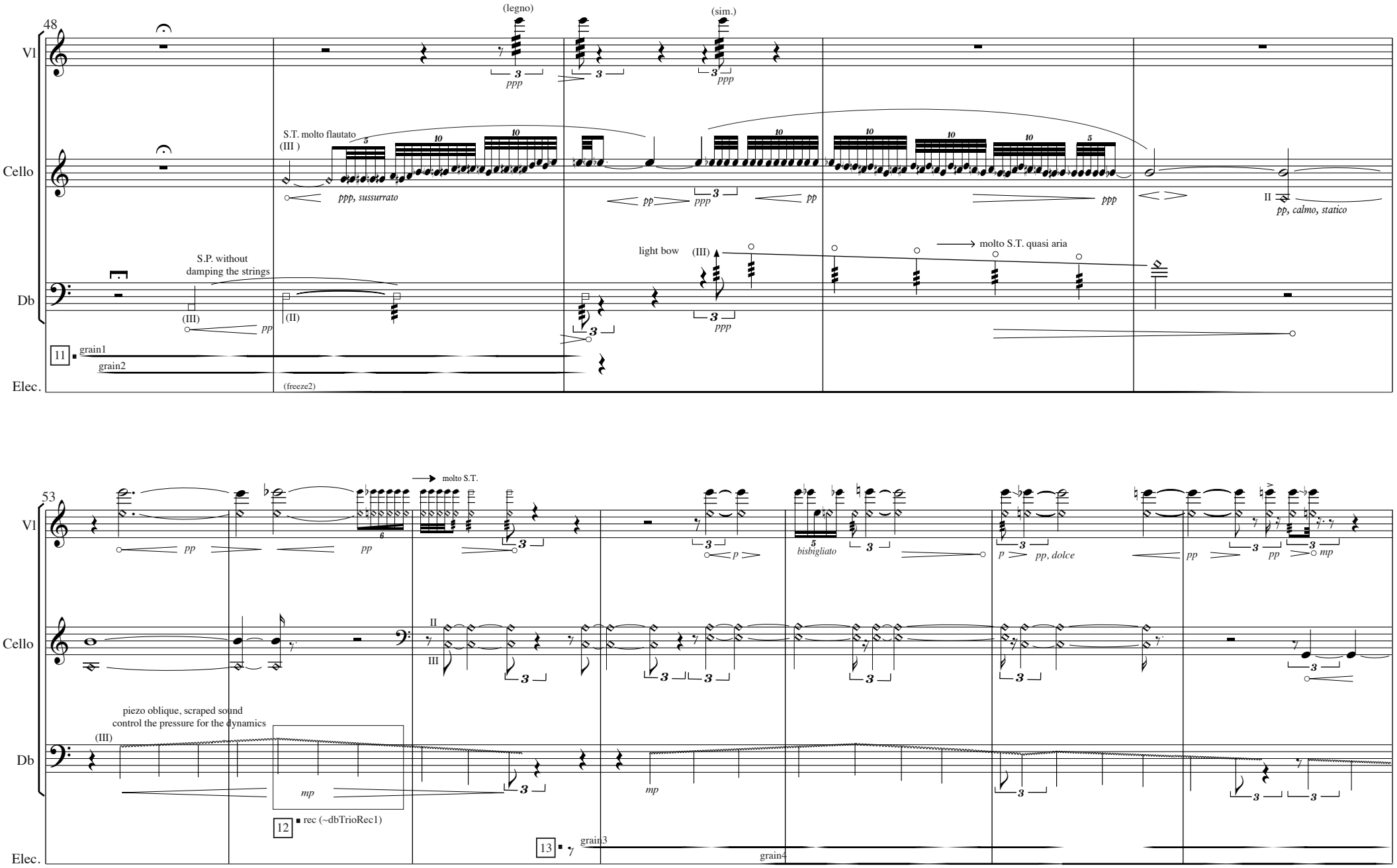
Sistema di Prossimità

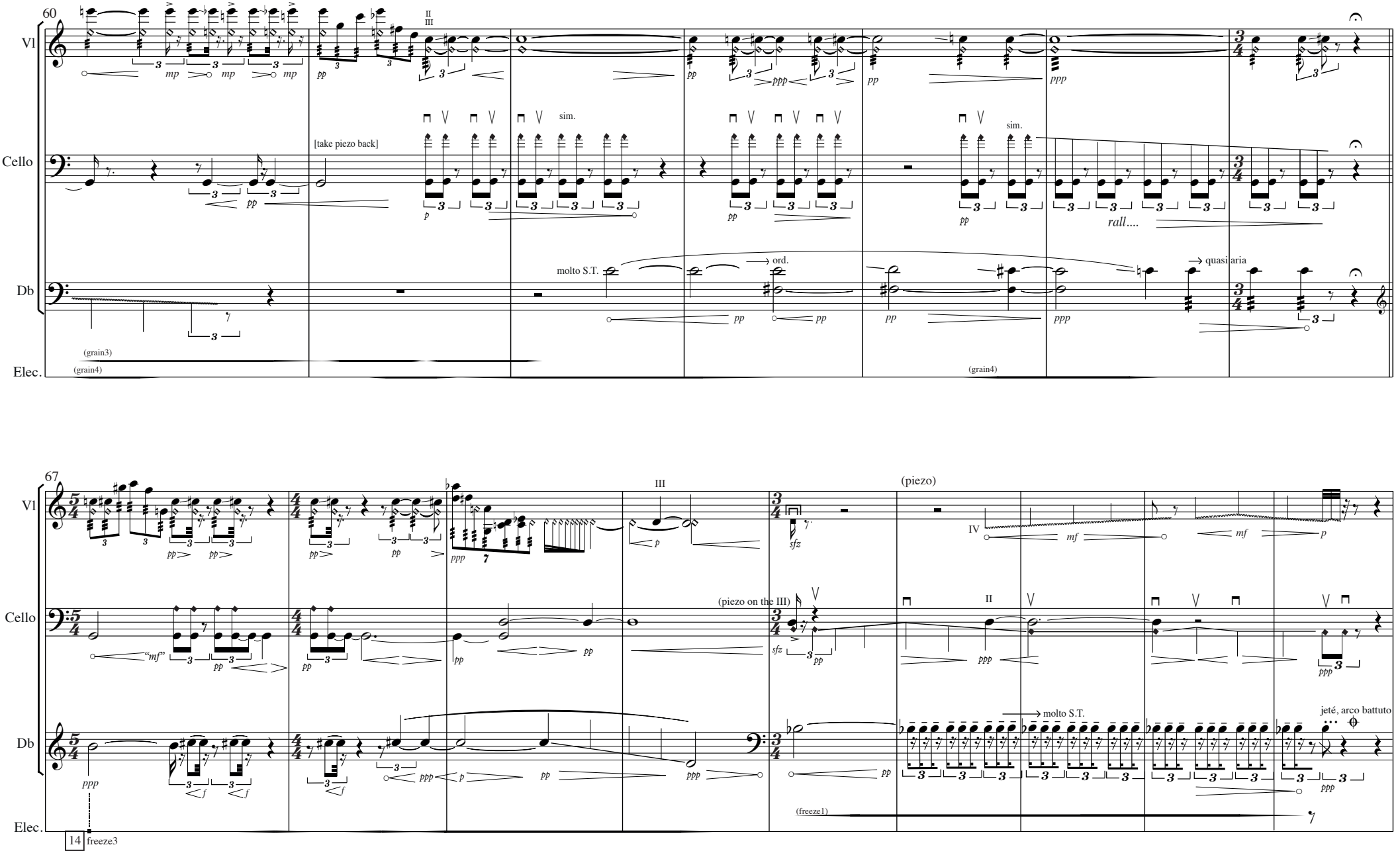
♩ = 54/56

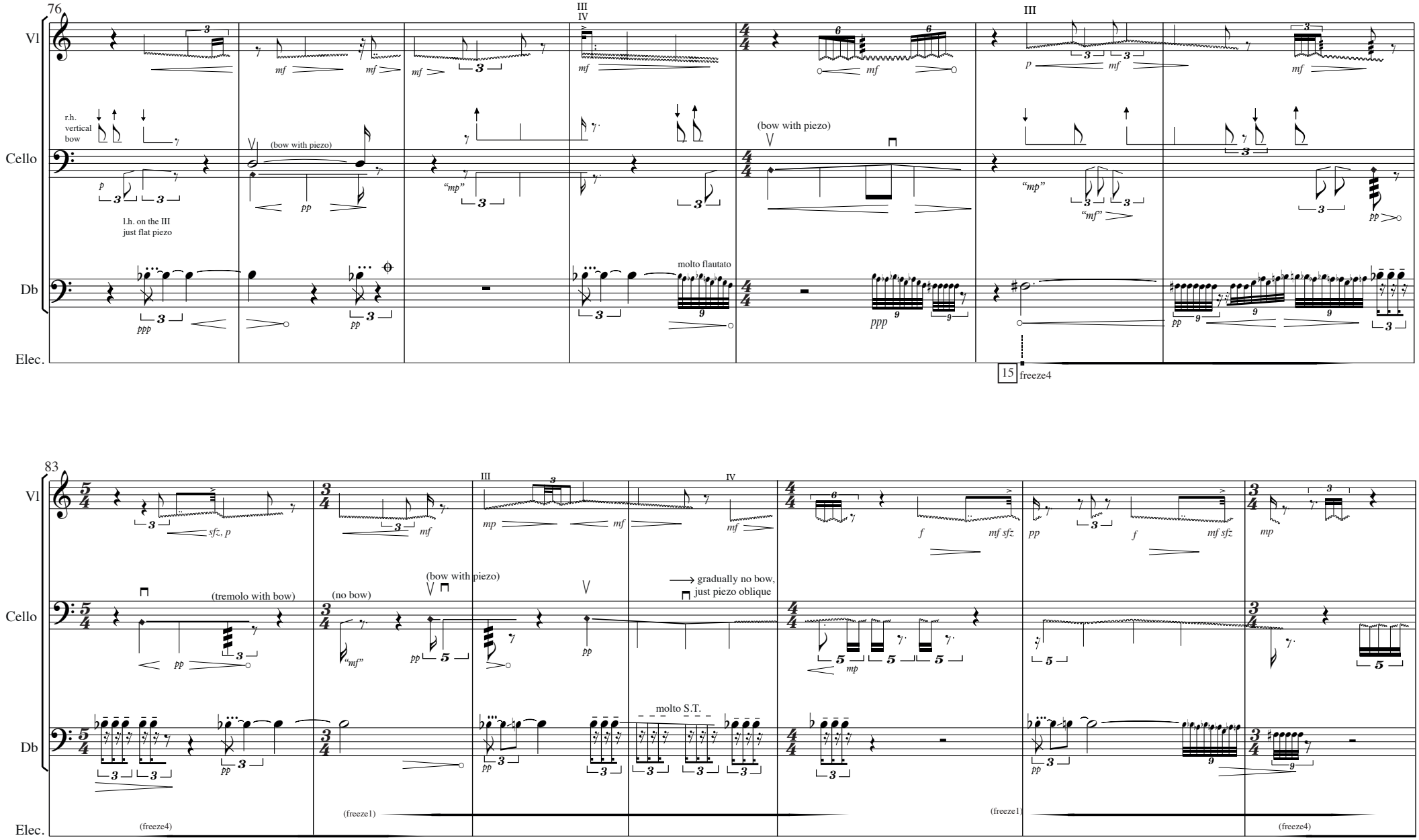


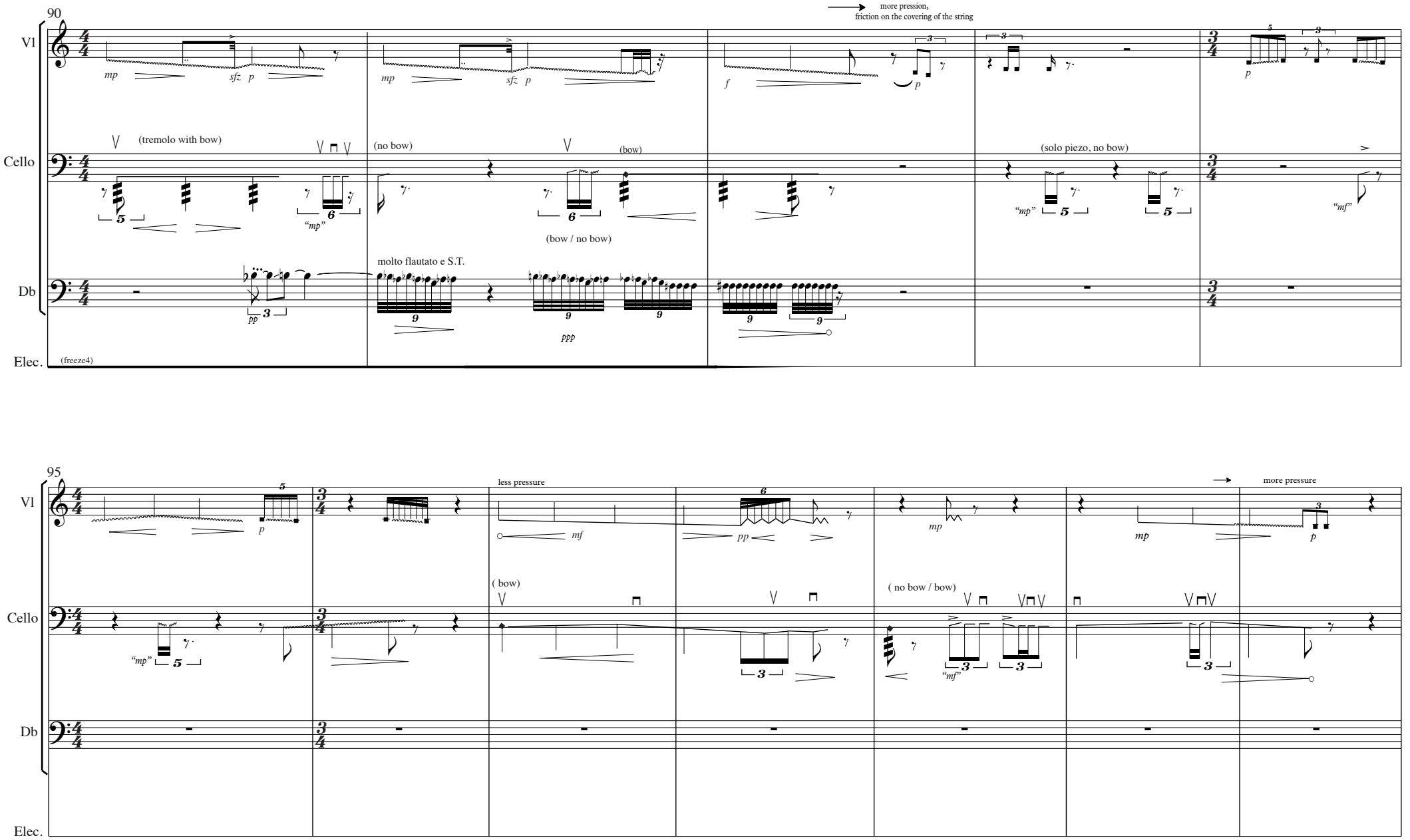

16
Vl
Cello
Db
Elec.
gliss. flat piezo (I)
P
T
leggero
(solo piezo, no bow)
(III)
mp
arco only on the IV
flat piezo
piezo flat on the open string (I)
II
I
bow + piezo
(delay2)
(delay)
Più mosso
25
flat piezo, tremolo with the bow
"tremolo", little mouvement
with flat piezo
5
rec (~vlTrioRec0)
6
rec (~celloTrioRec0)
7
rec (~dbTrioRec0)
8
grain1
grain2
grain3

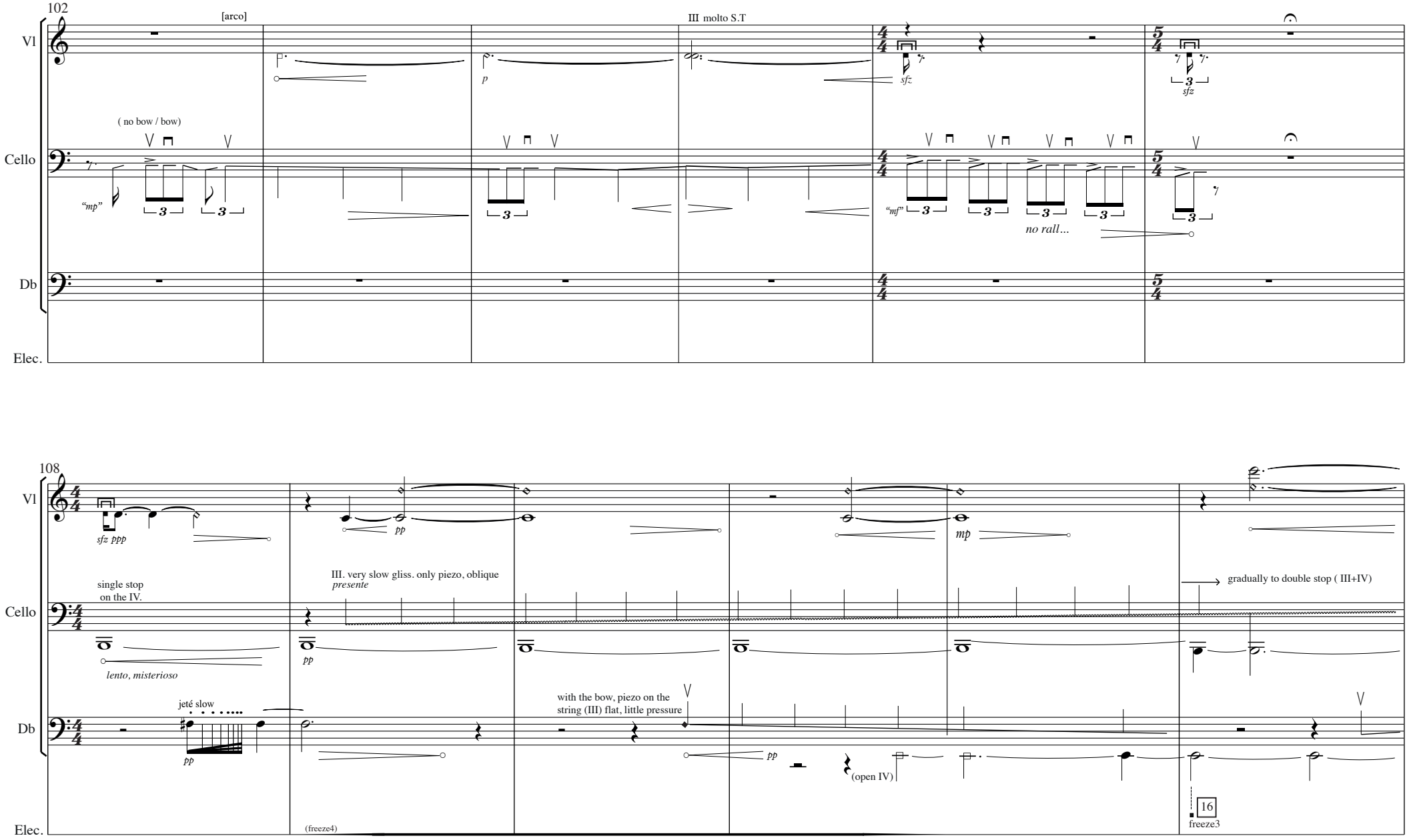

Tempo primo
33
Vl
Cello
Db
Elec.
(grain3)
rall... and slow down the tremolo
rall... and slow down the tremolo
rall... and slow down the tremolo
→ gradually moving the bow oblique from the III, only to the IV
[arco ord.]
arco S.P. just air
IV
r.h. move the bow vertically on III between fingerboard and bridge
l.h. on the III "mp" just flat piezo
l.h. on the III just flat piezo
leggero
II, S.P. (damped, just air)
jeté, arco battuto
9
freeze1
41
[put piezo away]
[arco]
molto flautato
light bow
molto S.T. quasi aria
II, S.P. (damped, just air)
"mf" - preciso -
(freeze1)
10
freeze2
(freeze2)

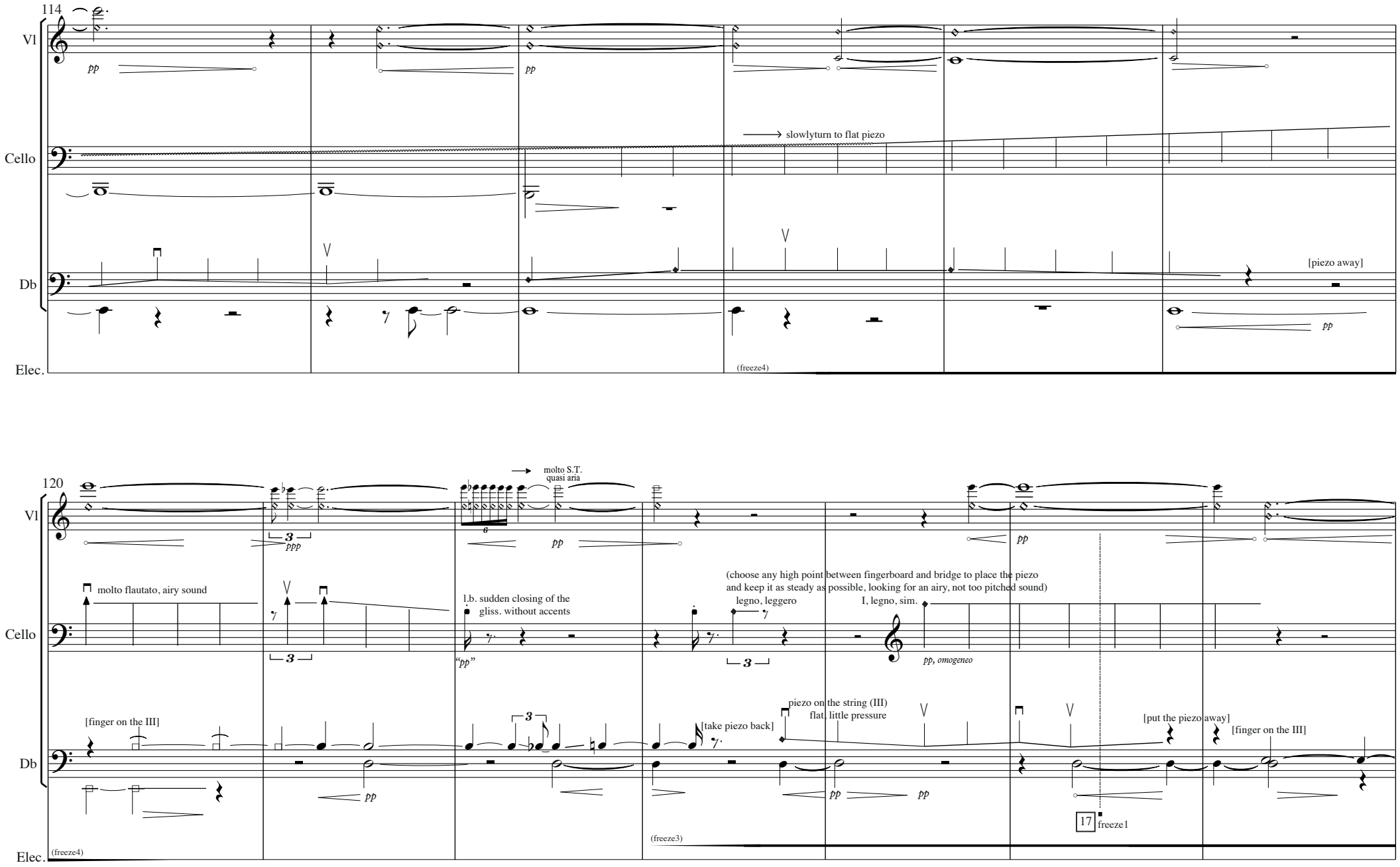

48
Vl
Cello
Db
Elec.
(legno)
(sim.)
ppp
S.T. molto flautato
(III)
ppp, sussurrato
pp
ppp
pp
ppp
II
pp, calmo, statico
S.P. without
damping the strings
(III)
pp
(II)
light bow
(III)
ppp
molto S.T. quasi aria
11
grain1
grain2
(freeze2)
53
molto S.T.
pp
pp
p
5
bisbigliato
p
pp, dolce
pp
pp
mp
II
III
piezo oblique, scraped sound
control the pressure for the dynamics
(III)
mp
mp
12
rec (~dbTrioRec1)
13
grain3
grain4

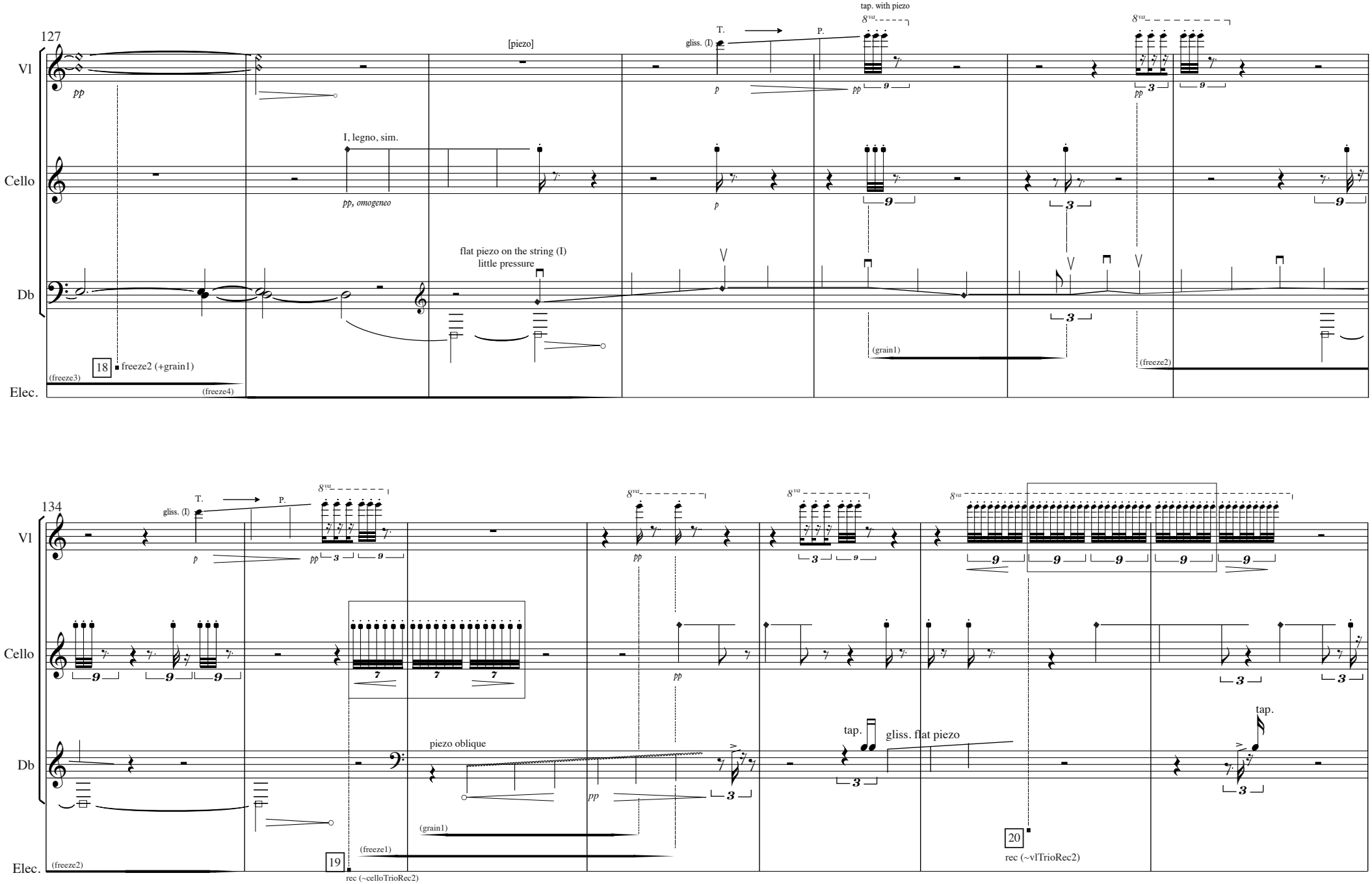

60
Vl
Cello
Db
Elec.
II
III
sim.
[take piezo back]
molto S.T.
ord.
quasi aria
rall....
(grain3)
(grain4)
67
(piezo)
IV
(piezo on the III)
molto S.T.
jeté, arco battuto
(freeze1)
14 freeze3

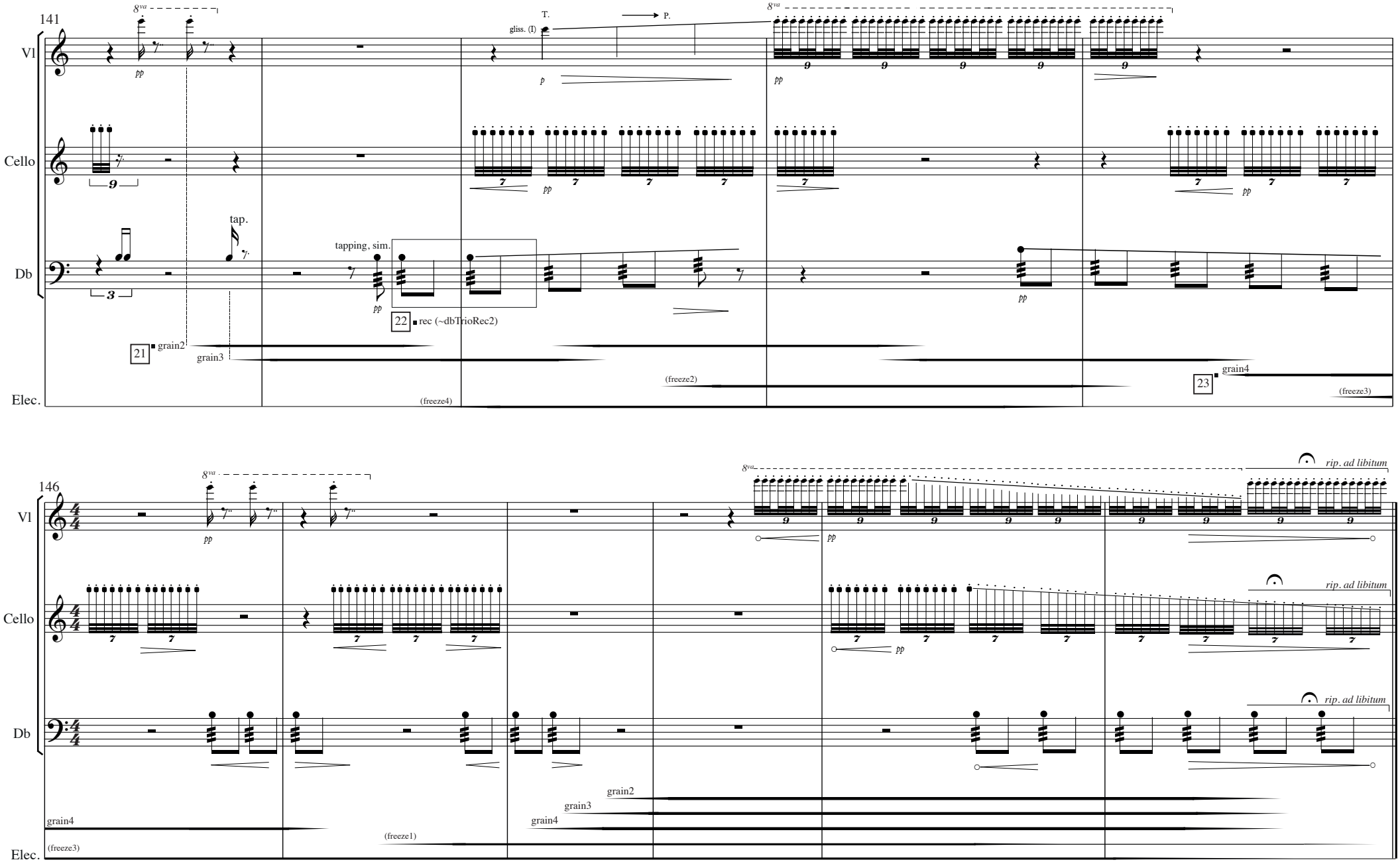

76
Vl
Cello
Db
Elec.
III
IV
III
r.h.
vertical
bow
(bow with piezo)
(bow with piezo)
l.h. on the III
just flat piezo
molto flautato
15
freeze4
83
III
IV
(tremolo with bow)
(no bow)
(bow with piezo)
gradually no bow,
just piezo oblique
molto S.T.
(freeze4)
(freeze1)
(freeze1)
(freeze4)


90
Vl
Cello
Db
Elec.
more pression,
friction on the covering of the string
(tremolo with bow)
(no bow)
(bow)
(bow / no bow)
(solo piezo, no bow)
molto flautato e S.T.
(freeze4)
95
less pressure
more pressure
(bow)
(no bow / bow)


102
[arco]
III molto S.T
Vl
Cello
Db
Elec.
(no bow / bow)
"mp"
p
sfz
sfz
"mf"
no rall...
108
sfz ppp
pp
mp
single stop
on the IV.
III. very slow gliss. only piezo, oblique
presente
gradually to double stop (III+IV)
lento, misterioso
pp
jeté slow
pp
with the bow, piezo on the
string (III) flat, little pressure
pp
(open IV)
(freeze4)
16
freeze3


114
Vl
Cello
Db
Elec.
pp
pp
slowlyturn to flat piezo
[piezo away]
pp
(freeze4)
120
molto S.T.
quasi aria
ppp
pp
molto flautato, airy sound
l.b. sudden closing of the
gliss. without accents
"pp"
(choose any high point between fingerboard and bridge to place the piezo
and keep it as steady as possible, looking for an airy, not too pitched sound)
legno, leggero
I, legno, sim.
pp, omogeneo
[finger on the III]
pp
[take piezo back]
piezo on the string (III)
flat, little pressure
pp
pp
[put the piezo away]
[finger on the III]
(freeze4)
(freeze3)
17
freeze1


127
Vl
Cello
Db
Elec.
pp
I, legno, sim.
pp, omogeneo
[piezo]
gliss. (I)
T.
P.
p
tap. with piezo
8va
flat piezo on the string (I)
little pressure
18
freeze2 (+grain1)
(freeze3)
(freeze4)
(grain1)
(freeze2)
134
piezo oblique
tap.
gliss. flat piezo
19
rec (~celloTrioRec2)
(freeze1)
20
rec (~vlTrioRec2)


141
Vl
Cello
Db
Elec.
8va
pp
T.
P.
gliss. (I)
p
tap.
tapping, sim.
22 rec (~dbTrioRec2)
21 grain2
grain3
(freeze4)
(freeze2)
23 grain4
(freeze3)
146
rip. ad libitum
grain2
grain3
grain4
(freeze1)