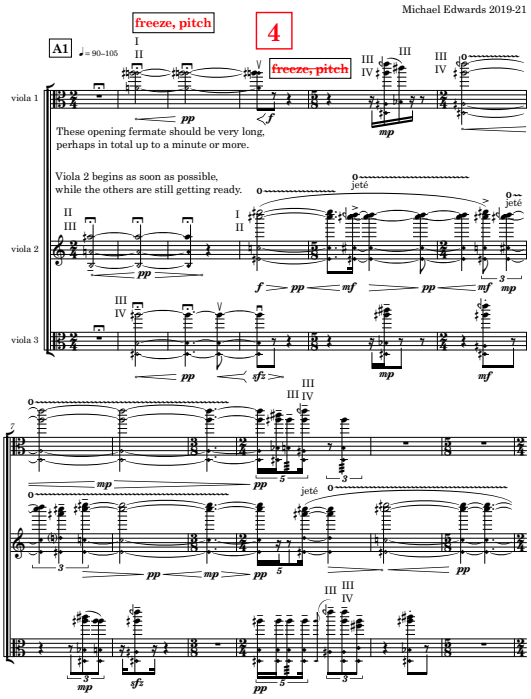
ME103

SEVEN ROTATIONS OF SEVEN FOR THREE (TRIPLE DOUBLES)

for three violas
with or without live electronics



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MICHAEL EDWARDS

SEVEN ROTATIONS OF SEVEN FOR THREE (TRIPLE DOUBLES)

for three violas
with or without live electronics

MICHAEL EDWARDS

michael edwards
seven rotations of seven for three (triple doubles)
for three violas with or without live electronics

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programme note

seven rotations of seven for three (triple doubles) was written for Emile Cantor, Gareth Lubbe, and Barbara Maurer. Though very different, it's a retrospective view of my *tramontana* which was premiered by Barbara at Darmstadt in 2004. As with that piece, the violas are tuned so that the first three strings have a harmonic in common with the seventh partial of the fourth string—a pitch which plays a central and recurring role in the piece.

seven rotations is, then, an abstract investigation of the sonic, microtonal, and dramatic potential of the viola double harmonics available using this tuning, as well as a sevenfold rotation of two sets of seven-bar rhythmic sequences. Of these, one set is quite fast and discontinuous and the other is slow in tempo but frenetic and heavy or obsessive. The piece was generated with my *slippery chicken* algorithmic composition software but extensively edited or, rather, 'interpreted' via standard pencil-and-paper techniques.

Although each of the three viola parts is equally challenging, there is a general sense of the second (middle) viola being flanked by the other two, left and right. Overall, the second viola moves from double harmonics on the first two (higher) strings to those on the lower two, whereas the flanking players have the opposite movement. Another process at play is the gradual introduction of a low microtonal 'melody' on the C string: 'normal' notes are conspicuously absent at first but come more to the fore as the piece progresses.

(I apologise if all of this sounds rather dull and/or technical, but my approach to music and especially composition is often purely formal, abstract, hermetic even, and process-based, as opposed to conceptual. To put it another way, works such as this are focused on creating and framing opportunities for perception rather than reaching for the 'extra-musical'.)

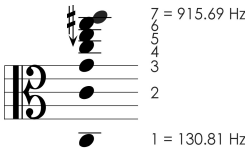
notes

duration

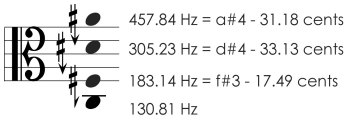
9-11 minutes

scordatura

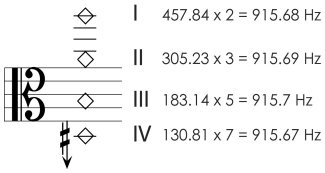
The strings of the viola are tuned so that all strings provide harmonics at the frequency of the 7th partial of the C-string:



In order to achieve this, the strings should be tuned as follows:



The following harmonics, then, all result in the same frequency, i.e. 915.69 Hz (assuming A4 at 440Hz), this being the 7th partial of C3 (all numbers rounded to 2 decimal places hence slight deviations), meaning that these can be used to tune the strings "by ear" relative to this 7th partial:



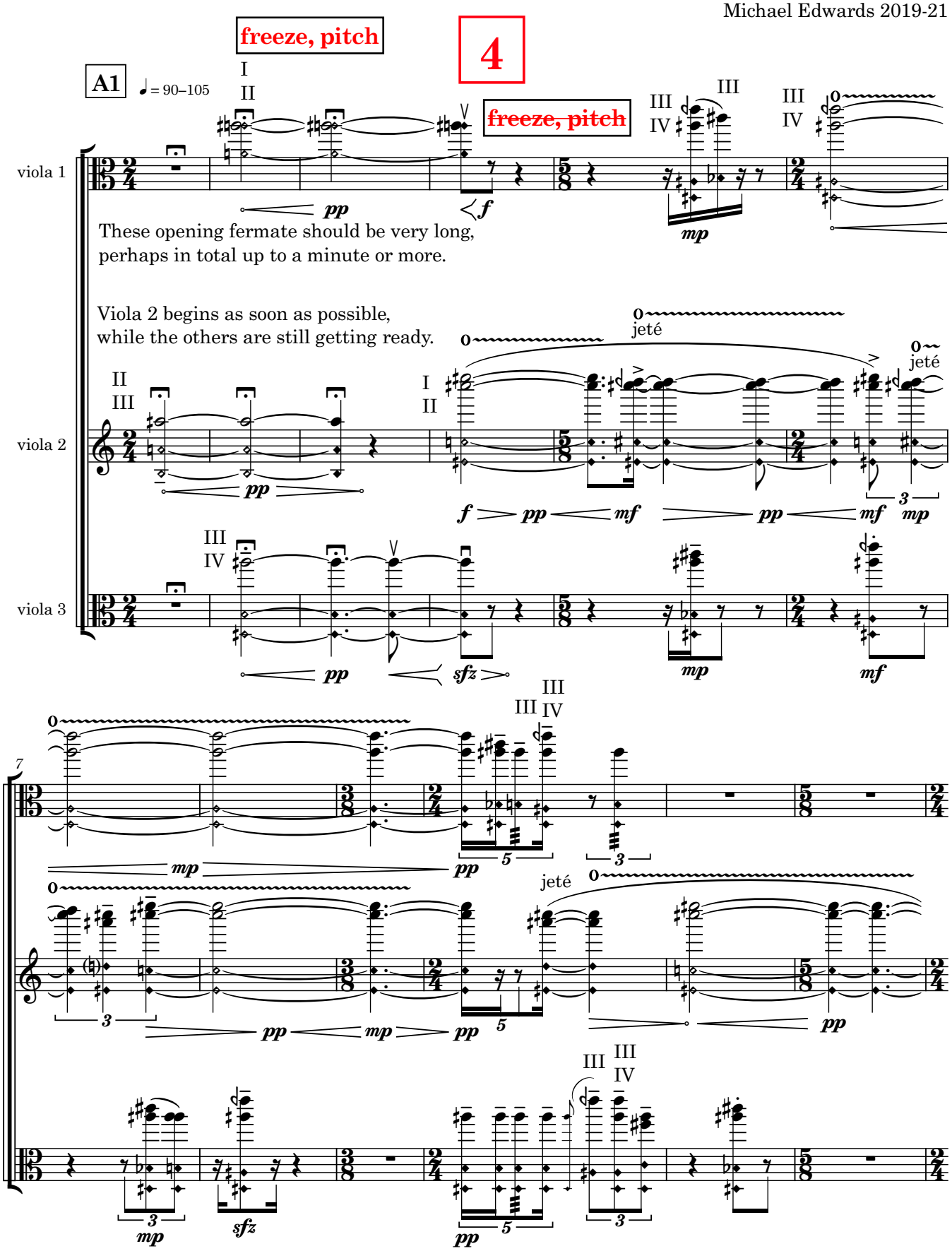
symbols

- diamond noteheads indicate the nodal (touching) points on the given strings
  - the pitches of the diamonds relate to the normally tuned string
    - so, for example, a notated B natural on the G string will produced the 5th partial
    - this is most often also the case with notated open strings although sometimes the sounding pitch (scordatura) is indicated for clarity of line: in that case a circle will be placed above the note
- notated above the diamond noteheads are the sounding pitches rounded to the nearest quarter tone
- string numbers apply to all following harmonics/notes until changed
- a wiggly trill line beginning with 0 (e.g. viola 2 bar 4) indicates a trill/tremolo between the given notes/harmonics and their open string(s)
- a wiggly trill line beginning with a reverse S squiggle (e.g. viola 1 bar 121) means bow the lower string continuously but tremolo quickly with the bow to the upper string (legato)
- where possible, play all (low) ordinario notes on the C string
- spe means *sul ponticello estremo*
- vtrem is *vertical tremolo*: very noisy but with some harmonic sound where possible; this stops as soon as the tremolo beams stop
- at pianissimo and below, all accents are *'poco'*
- half-filled harmonic circles (e.g. viola 2 bar 88) indicated a half-flageolet (dull)
- all *pizzicato* double stops are to be played with two fingers rather than one

for Barbara, Emile, and Gareth

seven rotations of seven for three
(triple doubles)

Michael Edwards 2019-21



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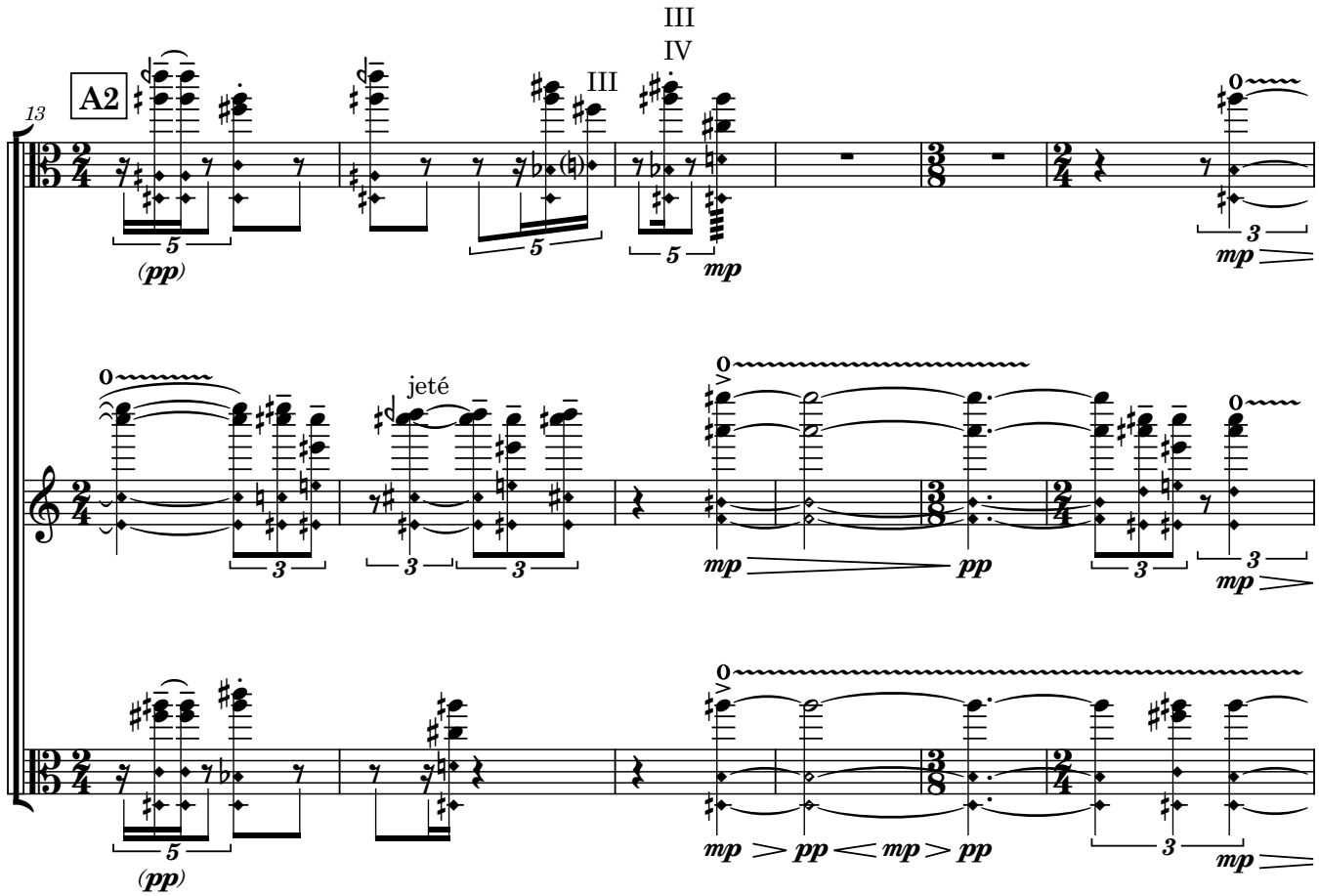
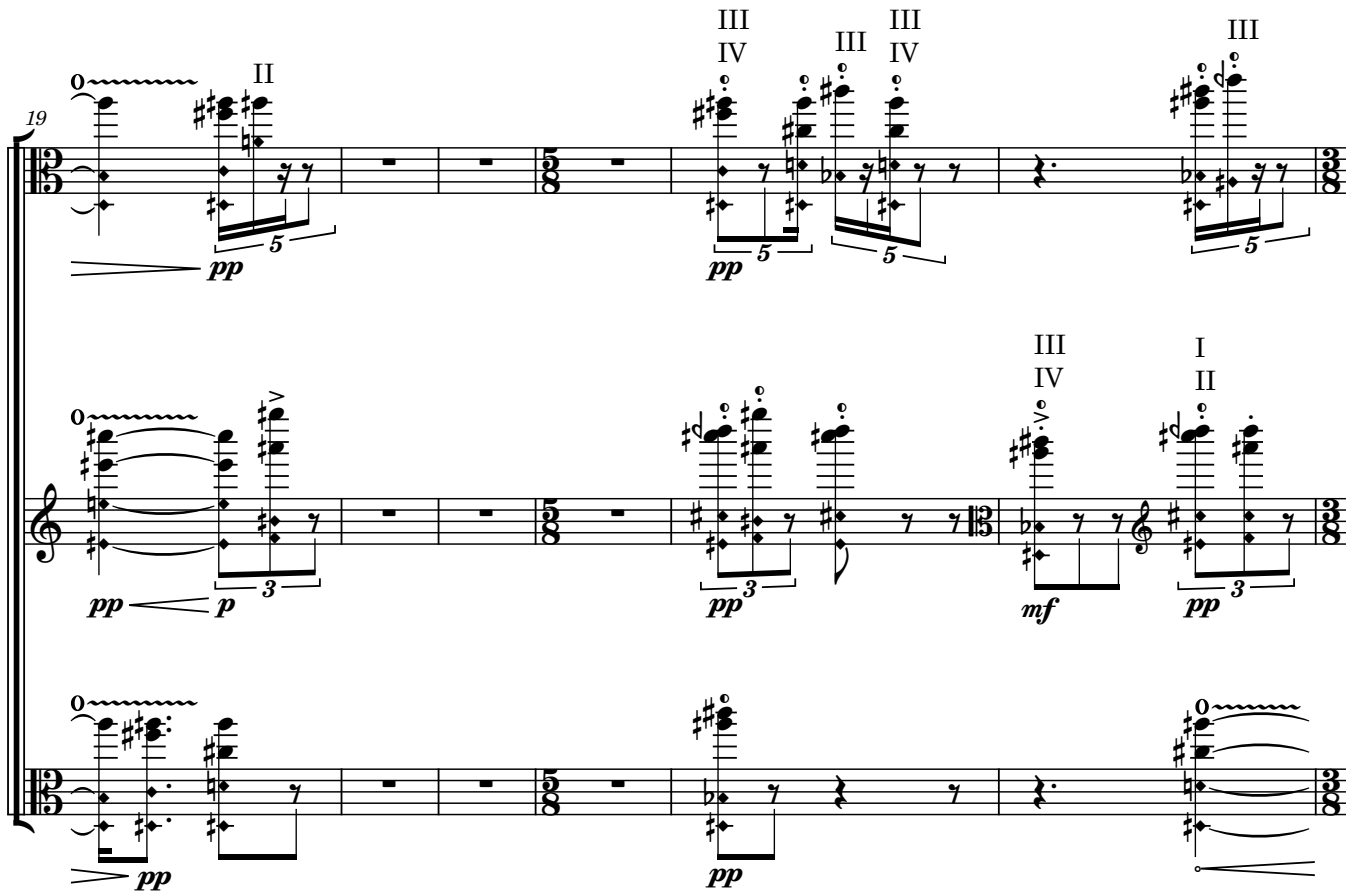
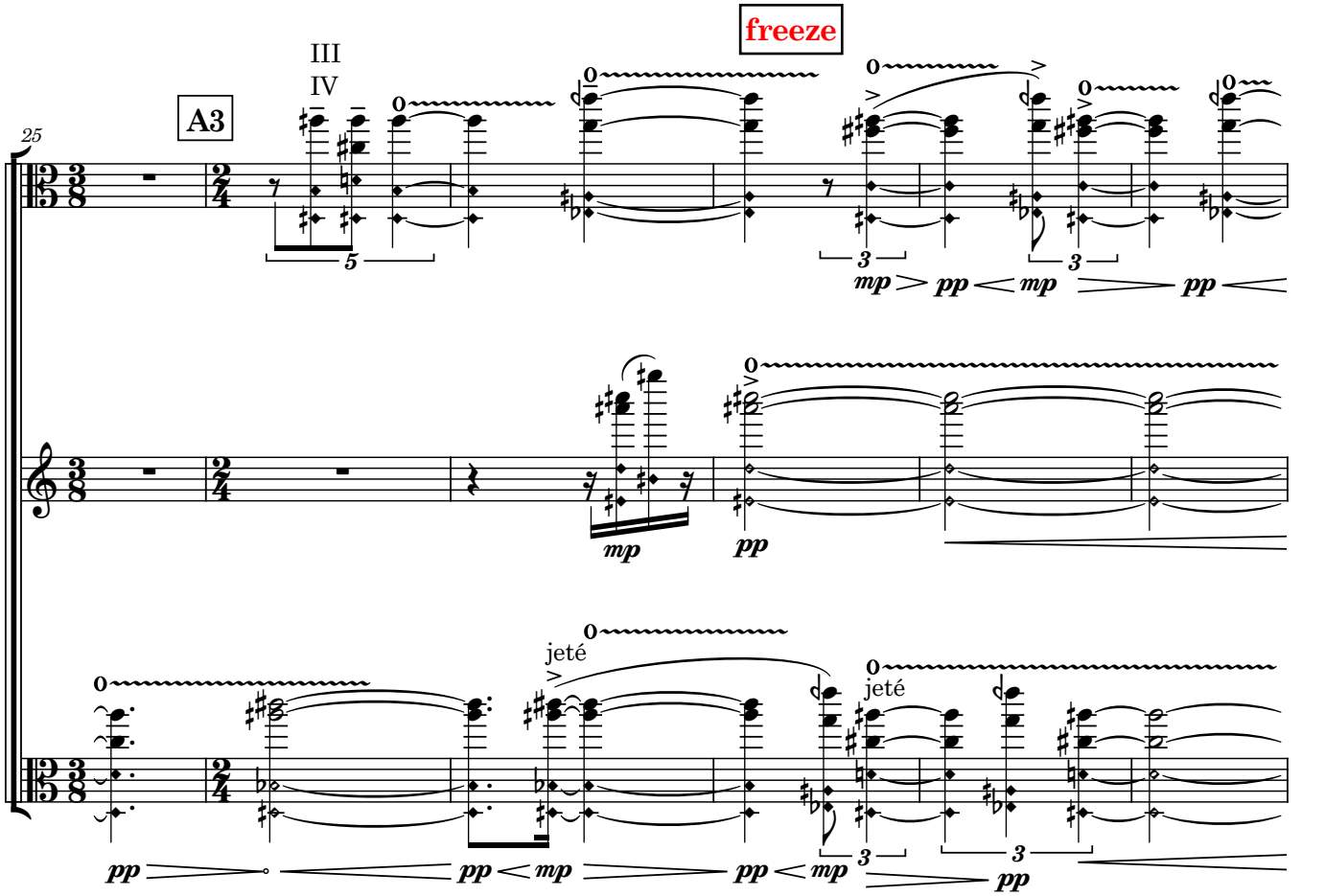
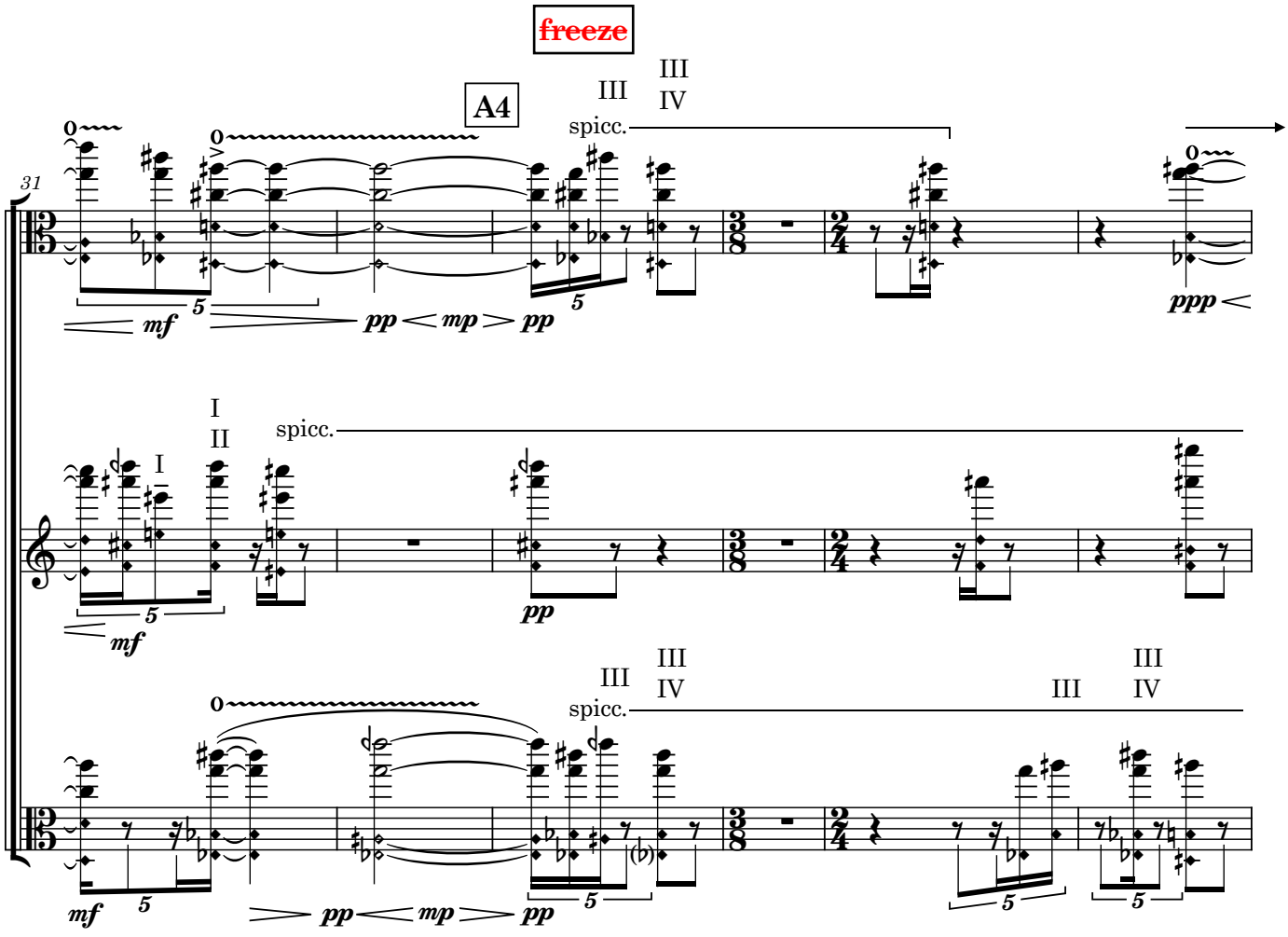
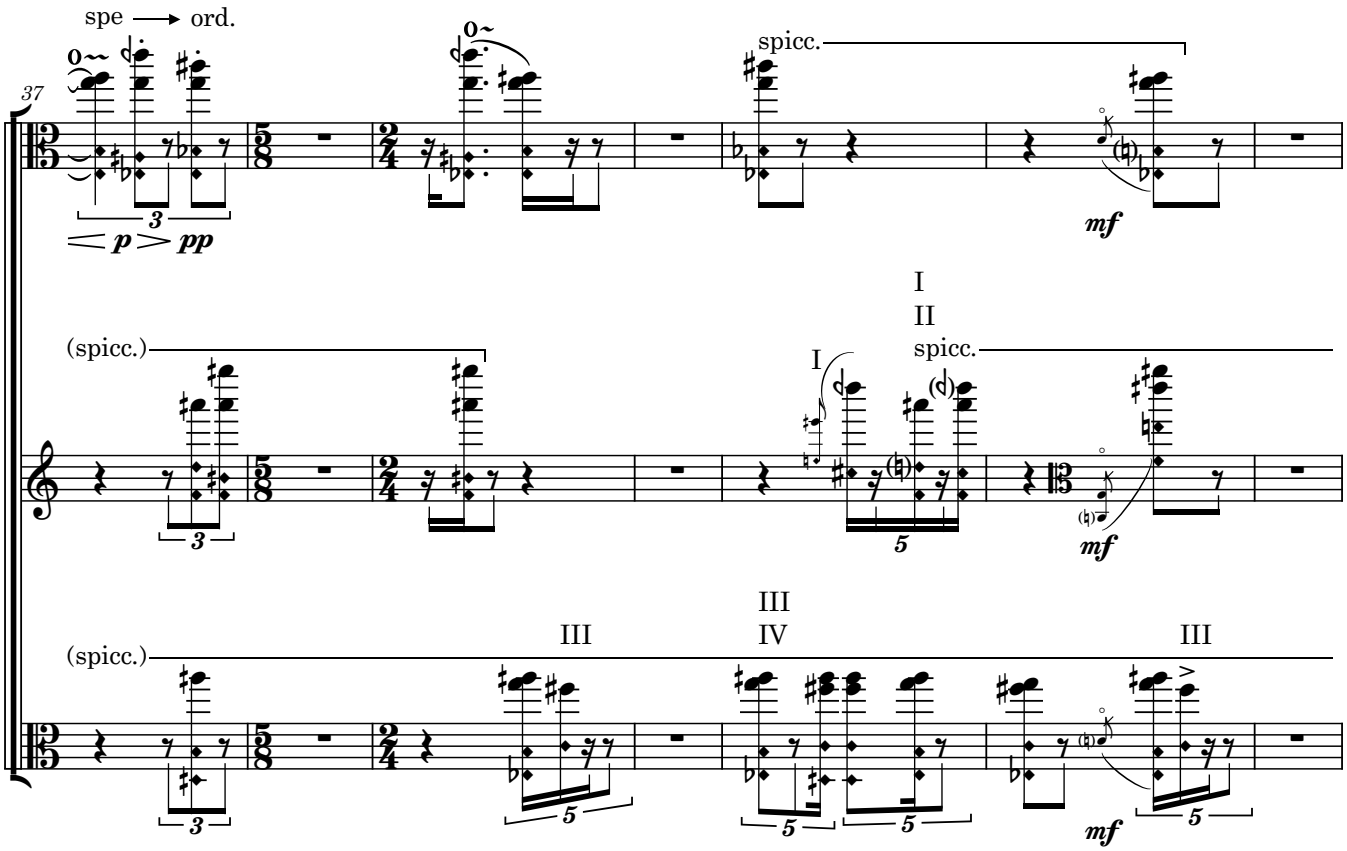

A2
13
III
IV
III
jeté
(pp)
mp
pp
mp > pp < mp > pp

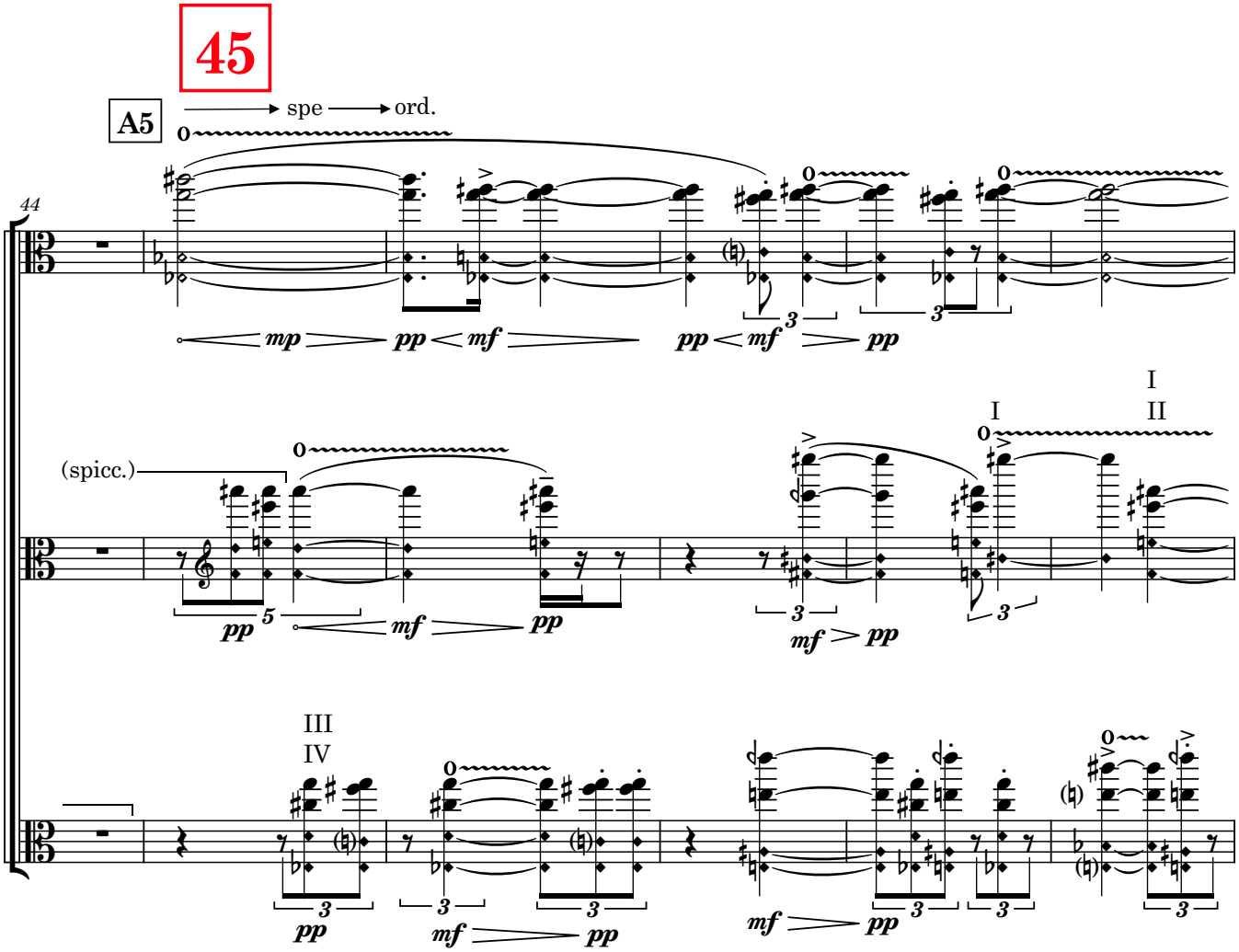
23

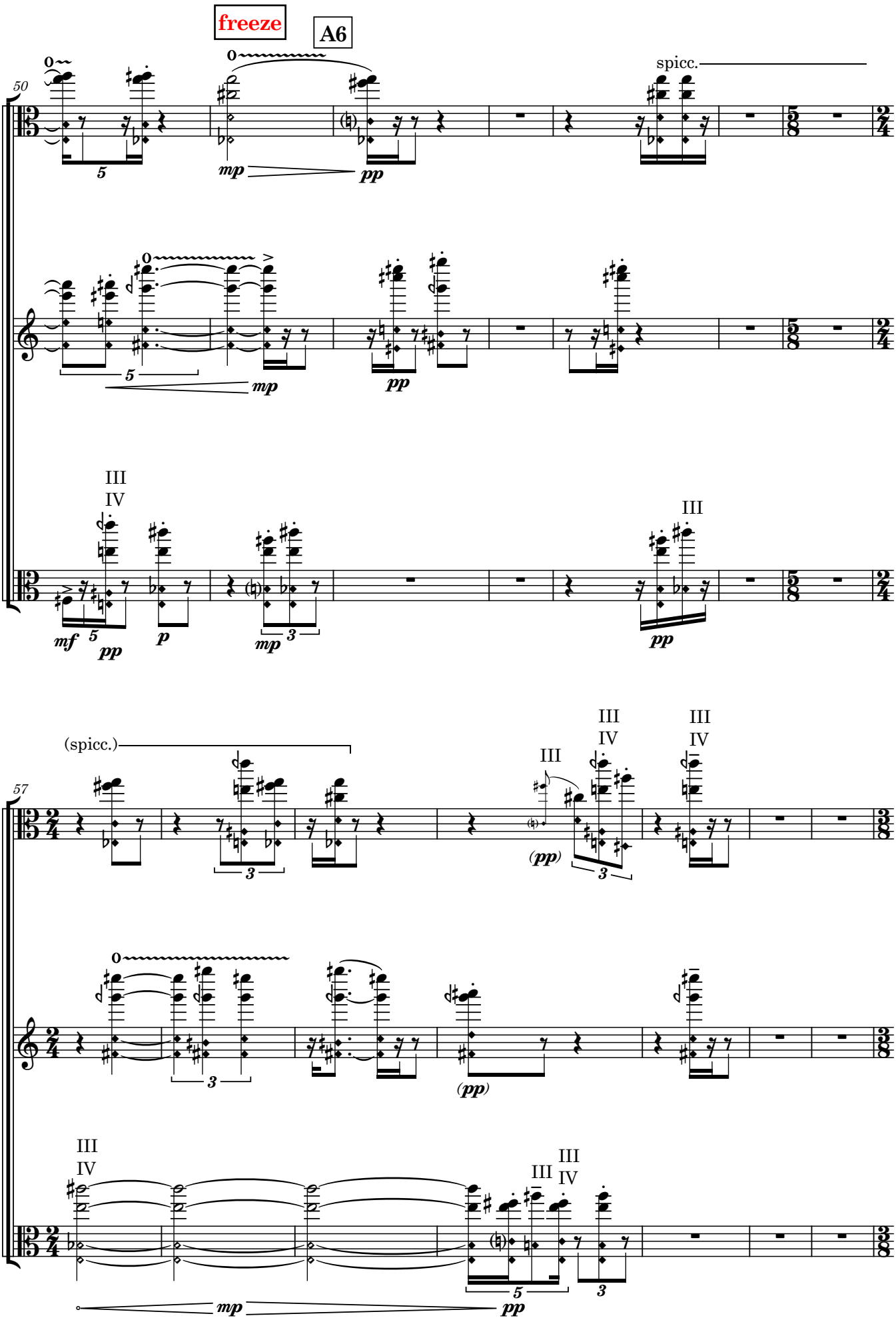

19
II
III
IV
III
III
IV
III
I
II
pp
p
mf

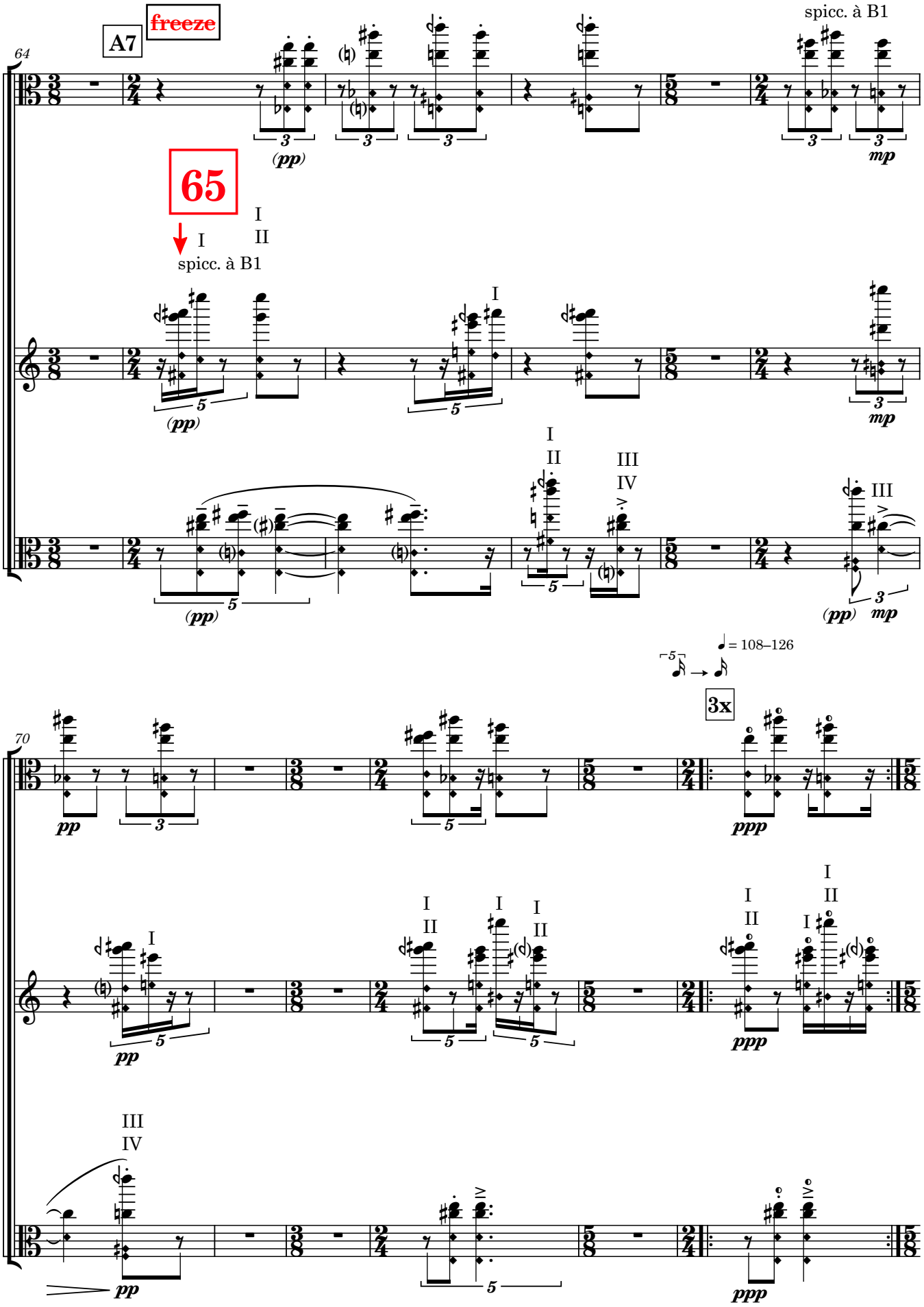

freeze
A3
III
IV
25
jeté
jeté

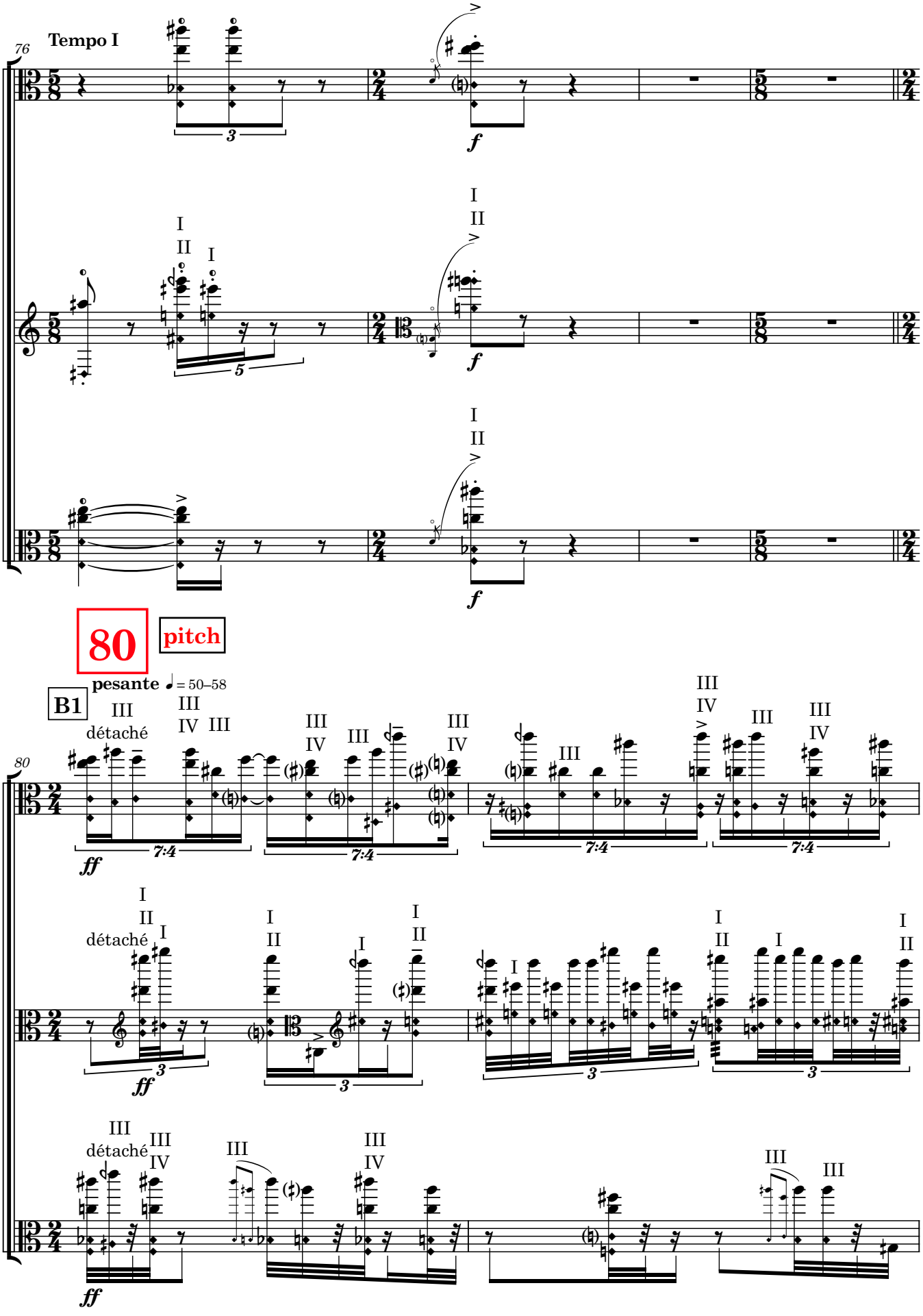

freeze
A4
III
III
IV
spicc.
31
I
II
spicc.
III
III
IV
spicc.
III
III
IV

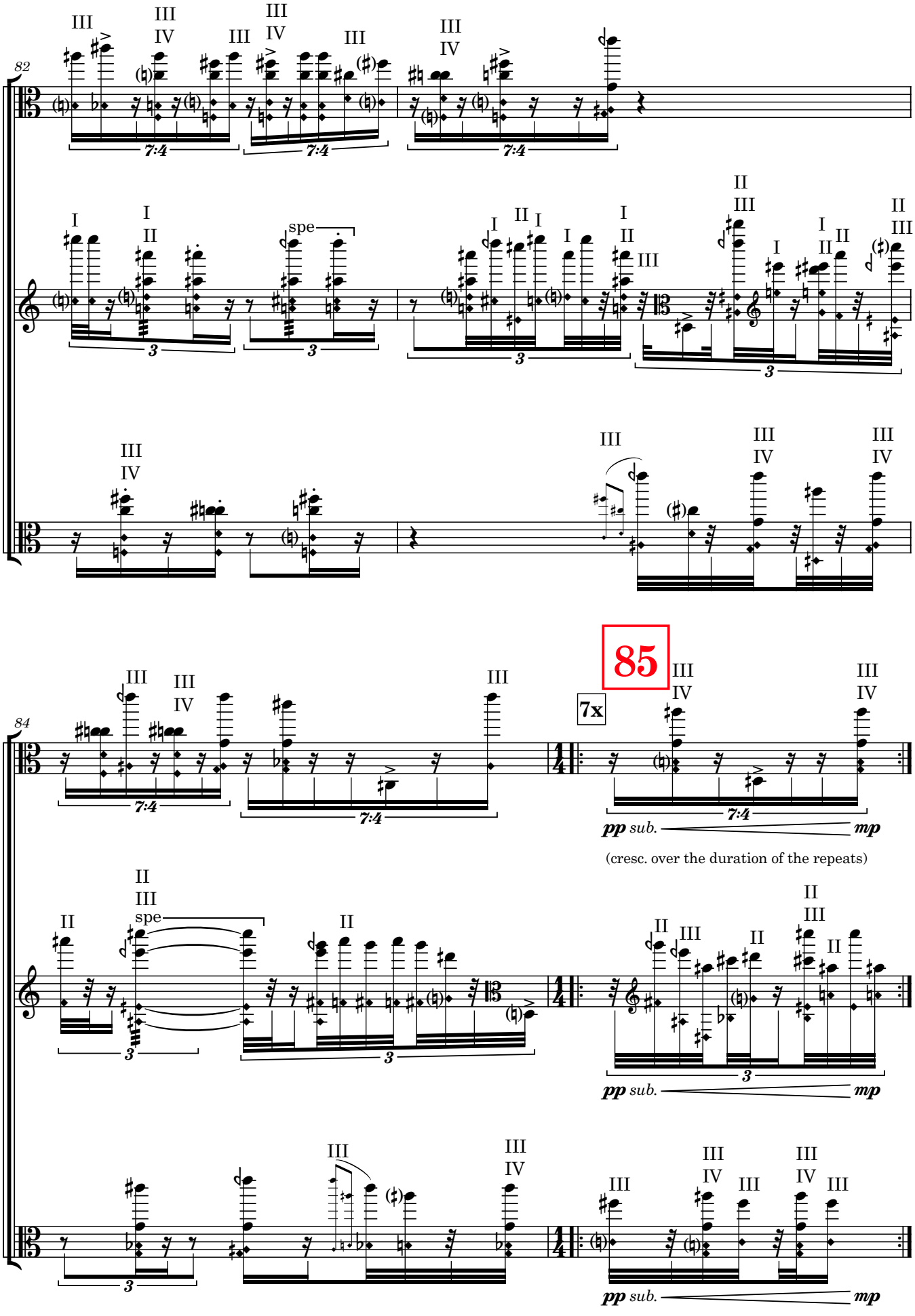

spe → ord.
37
spicc.
mf
(spicc.)
I
II
spicc.
mf
III
III
IV
III
(spicc.)
mf

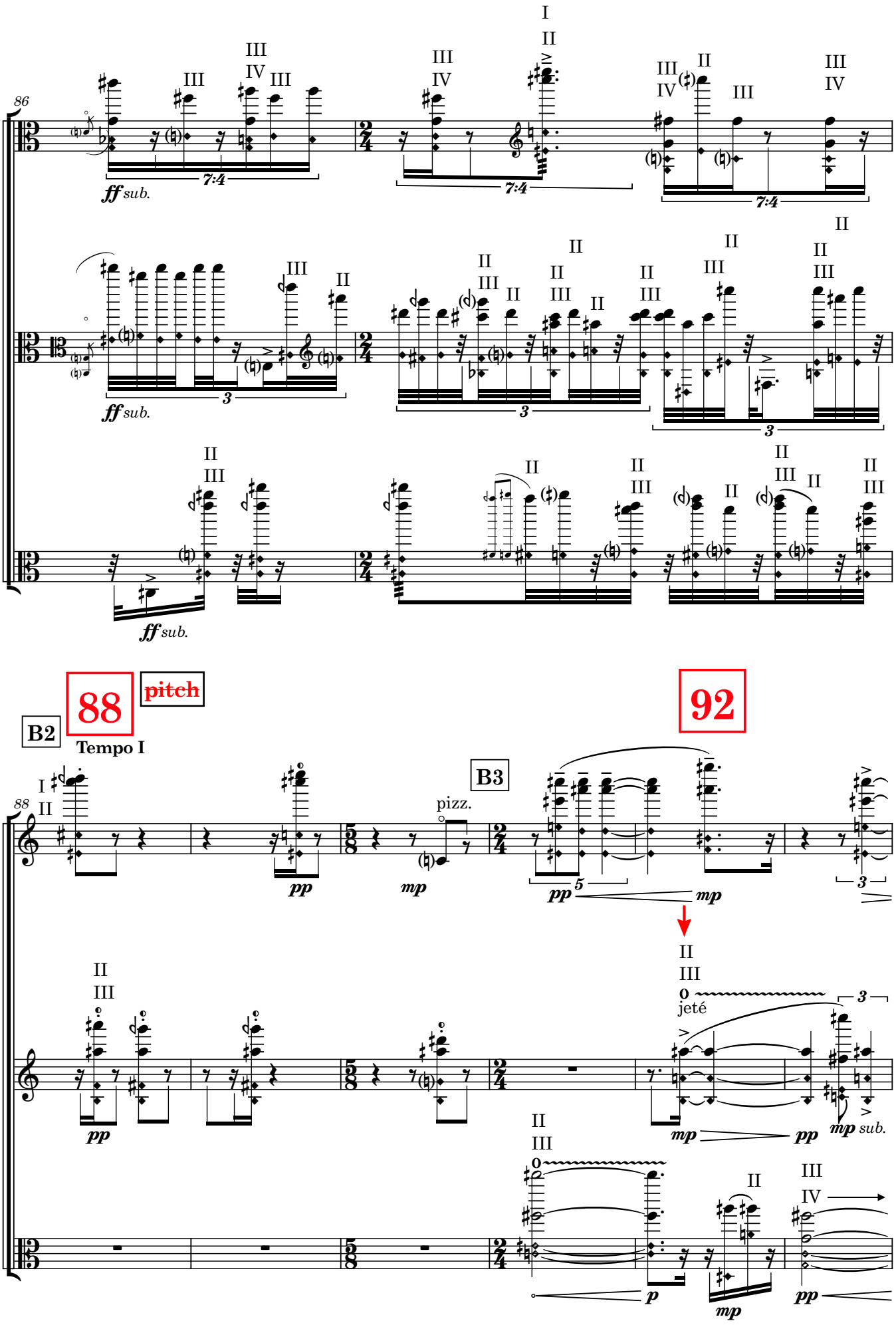

45
A5
→ spe → ord.
44
mp
pp
mf
pp
mf
pp
(spicc.)
pp
mf
pp
I
II
mf
pp
III
IV
pp
mf
pp
mf
pp

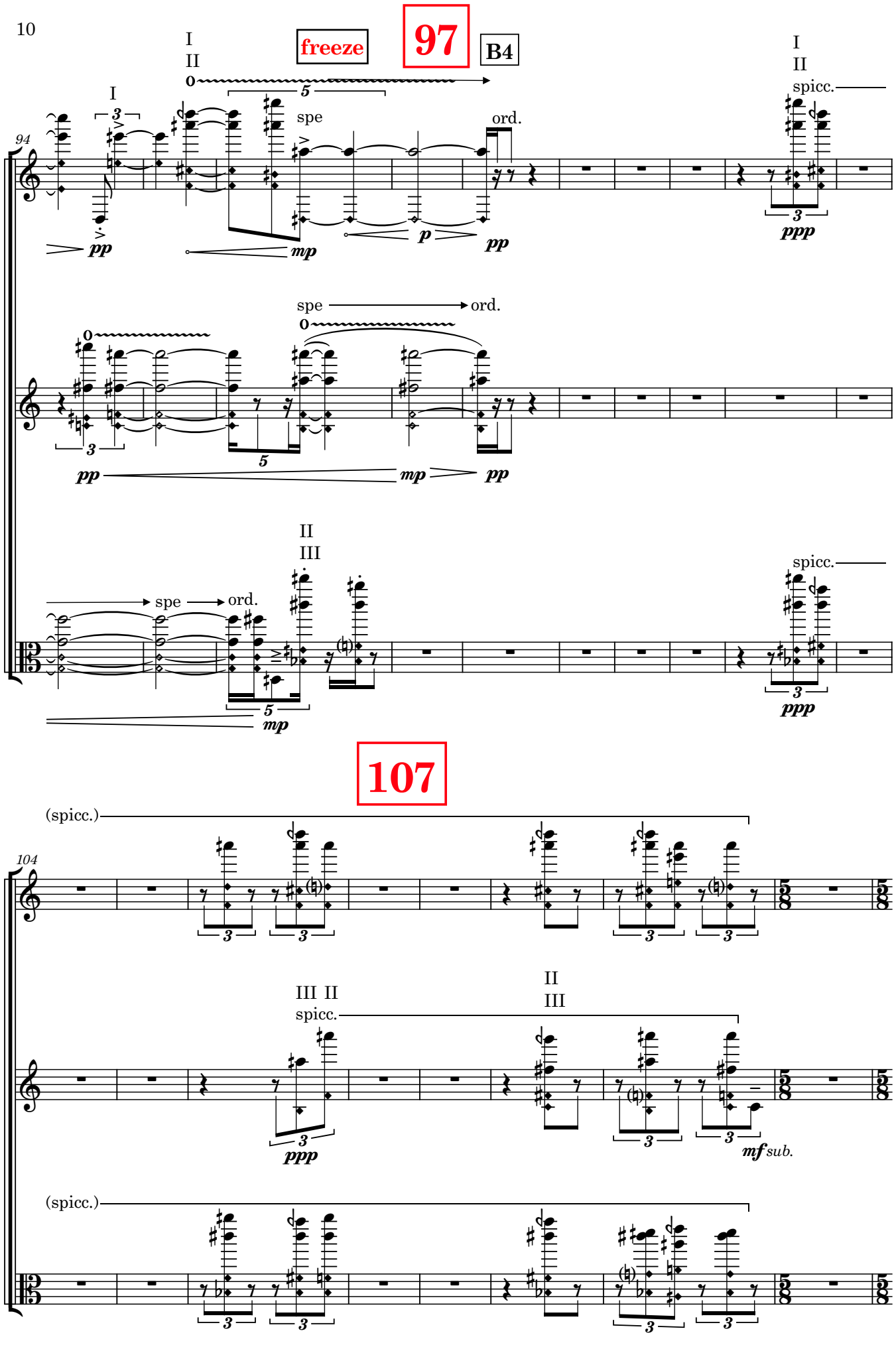

freeze
A6
50
spicc.
III
IV
III
57
(spicc.)
III
III
IV
III
IV
III
III
IV
III
IV

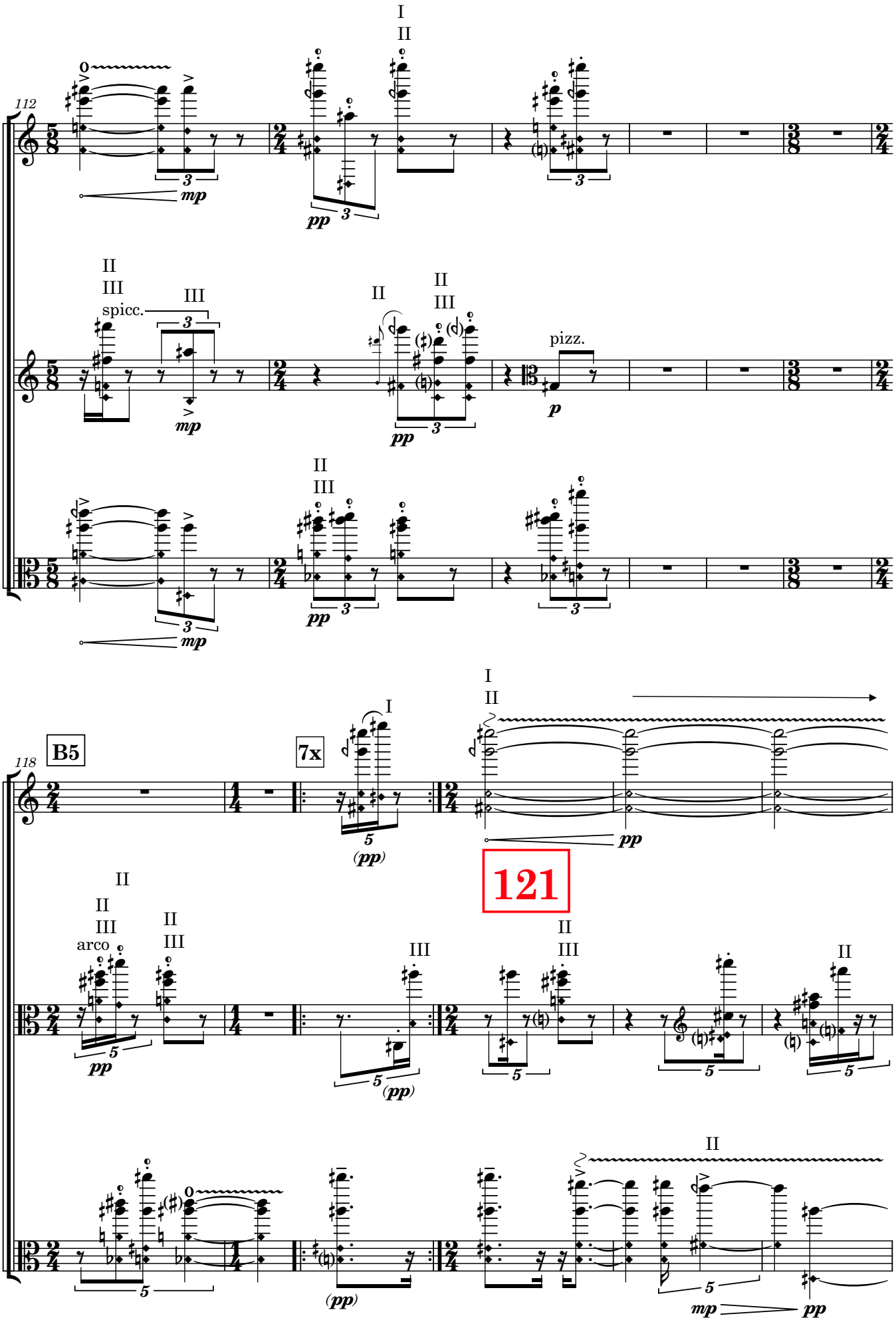

A7
freeze
64
spicc. à B1
(pp)
mp
65
I
II
spicc. à B1
III
IV
70
= 108–126
3x
pp
ppp


76
Tempo I
80
pitch
pesante ♩= 50–58
B1
détaché
détaché
détaché

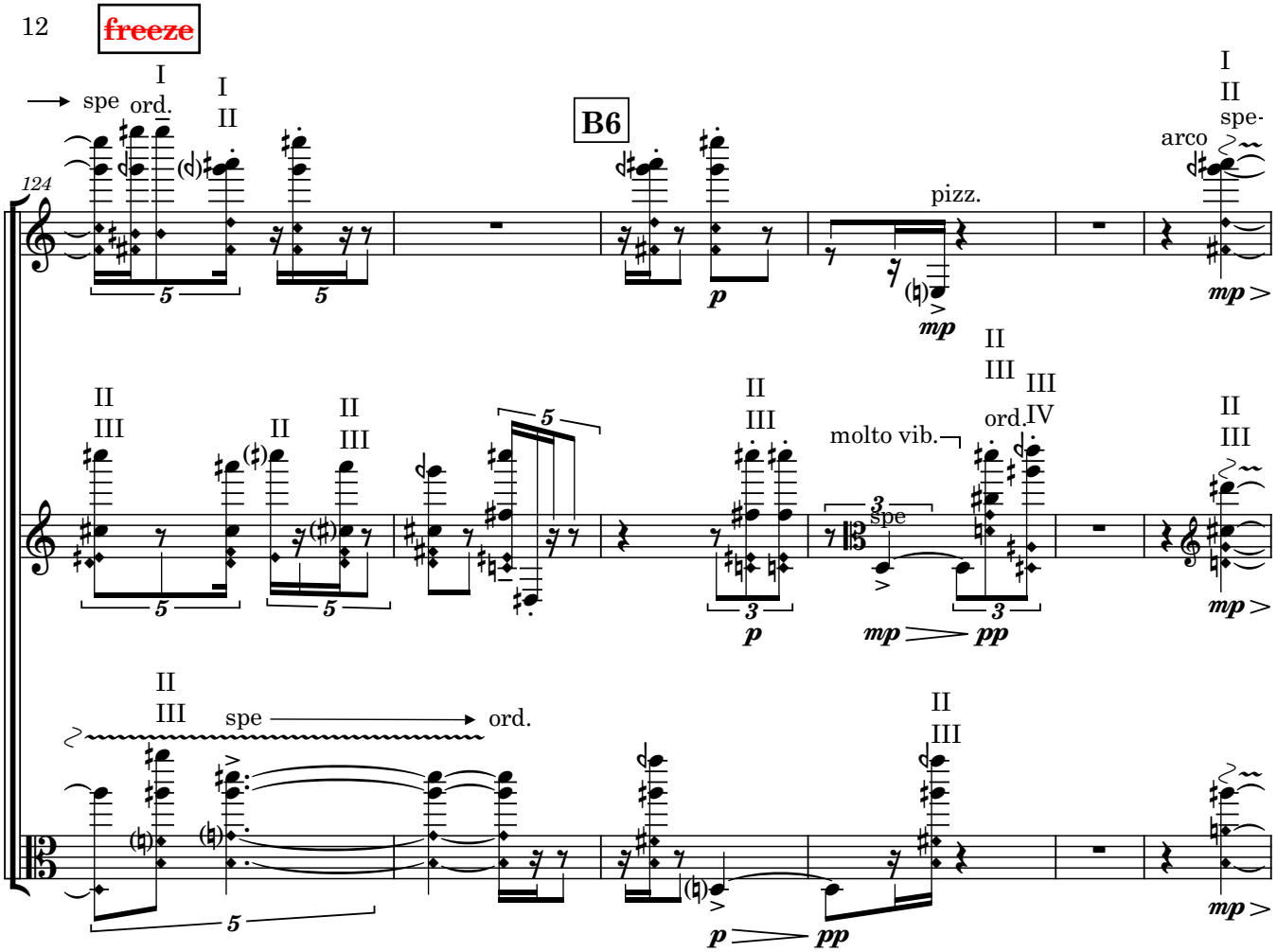

82
84
85
7x
spe
7:4
3
pp sub.
mp
(cresc. over the duration of the repeats)


86
ff sub.
7:4
3
88
pitch
92
B2
Tempo I
B3
pizz.
pp
mp
jeté
sub.
p

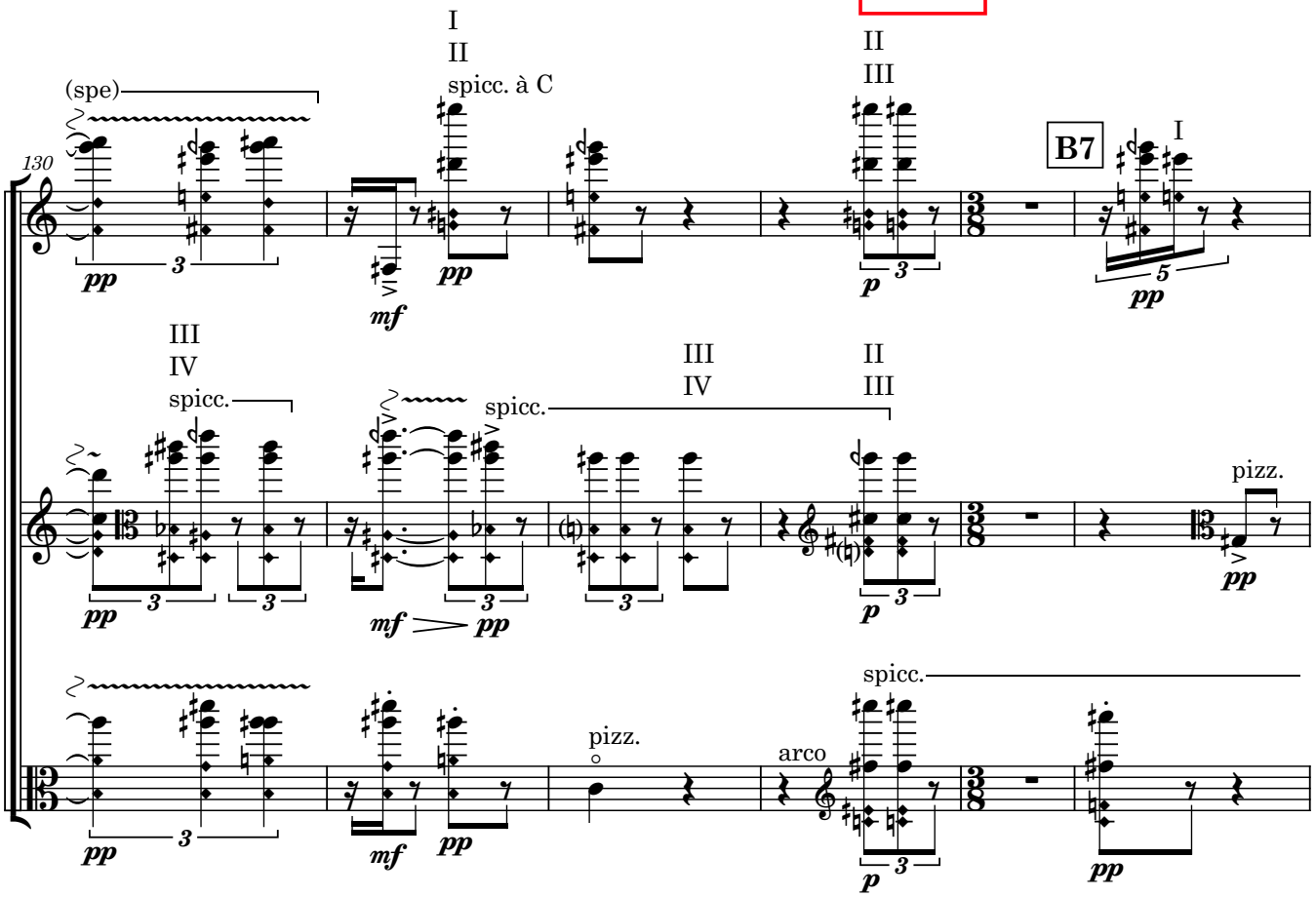

freeze
97
B4
94
I
II
spe
ord.
spicc.
pp
mp
p
ppp
III
107
104
(spicc.)
mf sub.

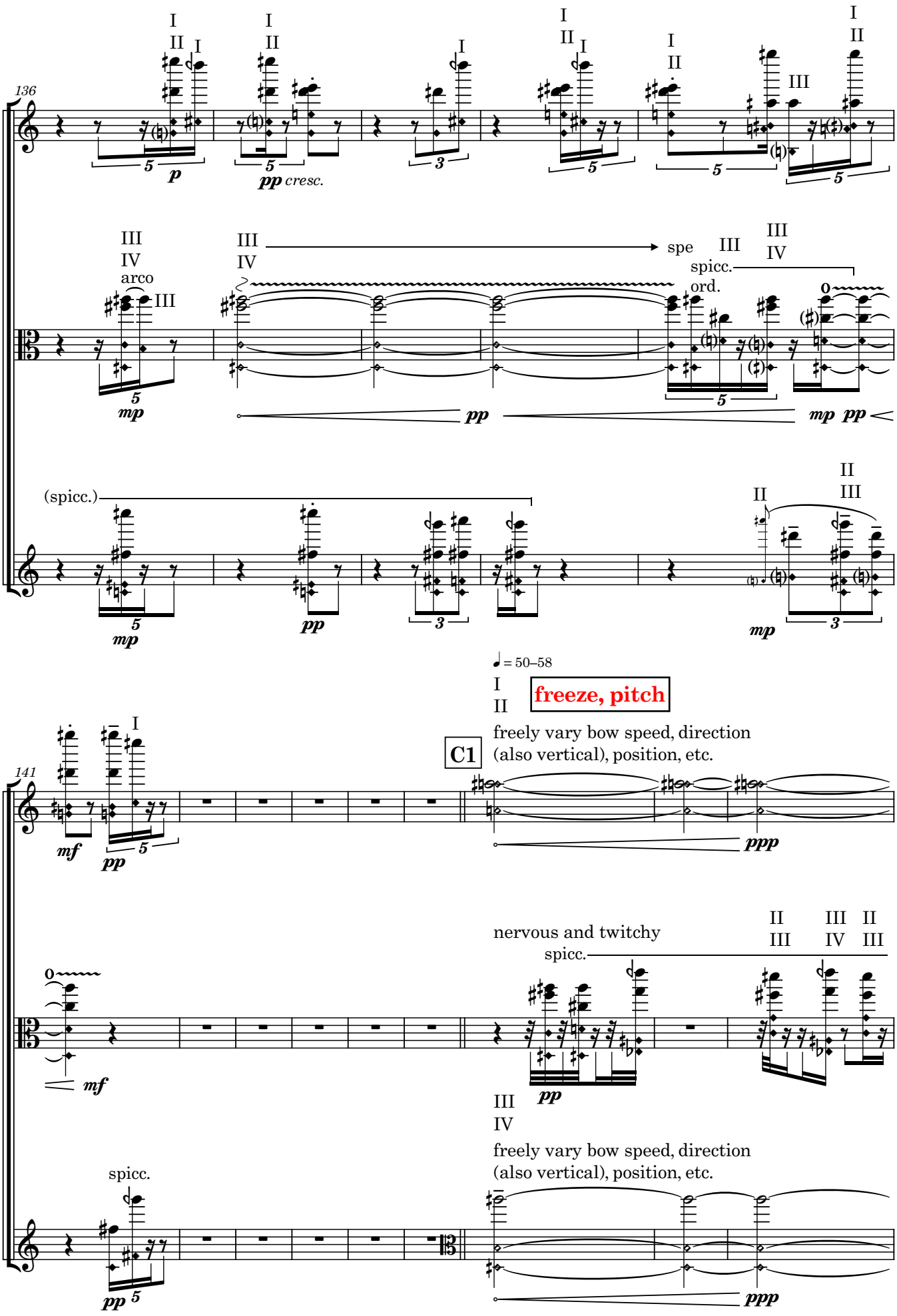

112
I
II
mp
pp
II
III
spicc.
III
mp
II
II
III
pp
pizz.
p
II
III
mp
pp
118
B5
7x
I
II
pp
(pp)
121
II
II
III
arco
pp
II
III
III
(pp)
II
III
II
mp
pp
(pp)

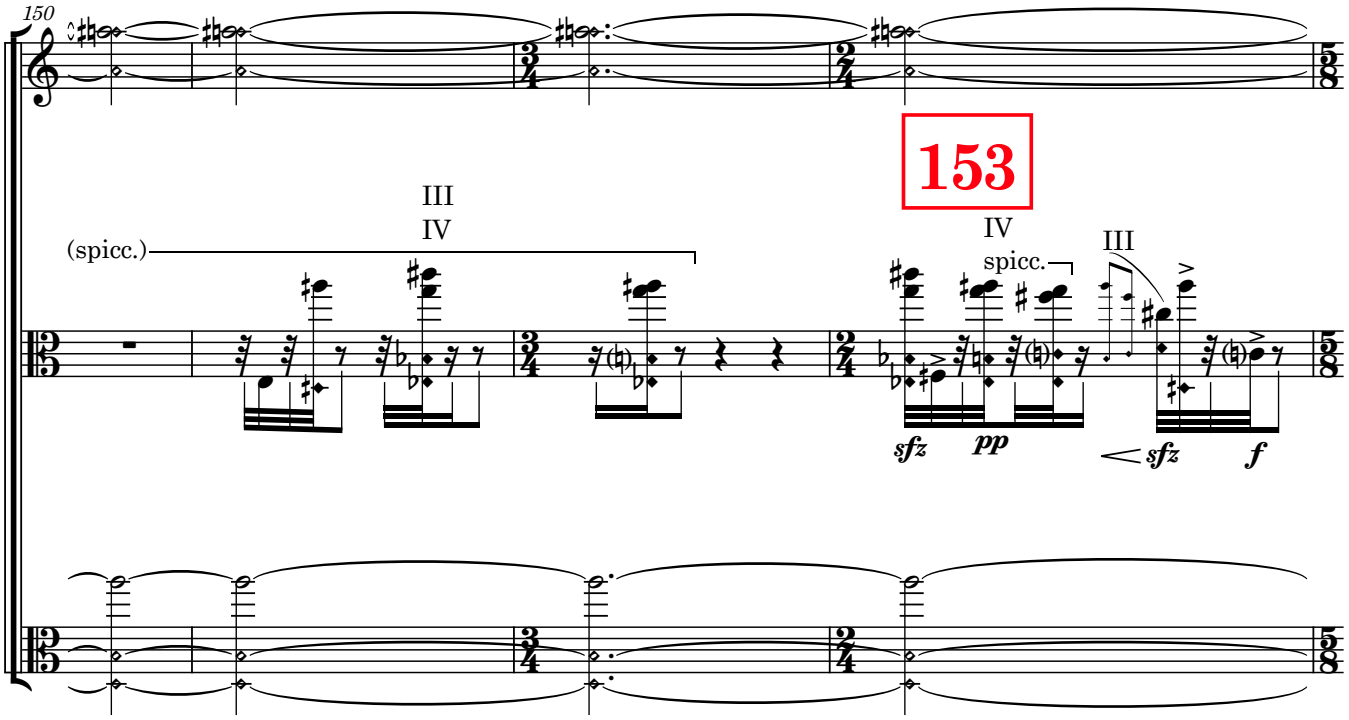
freeze

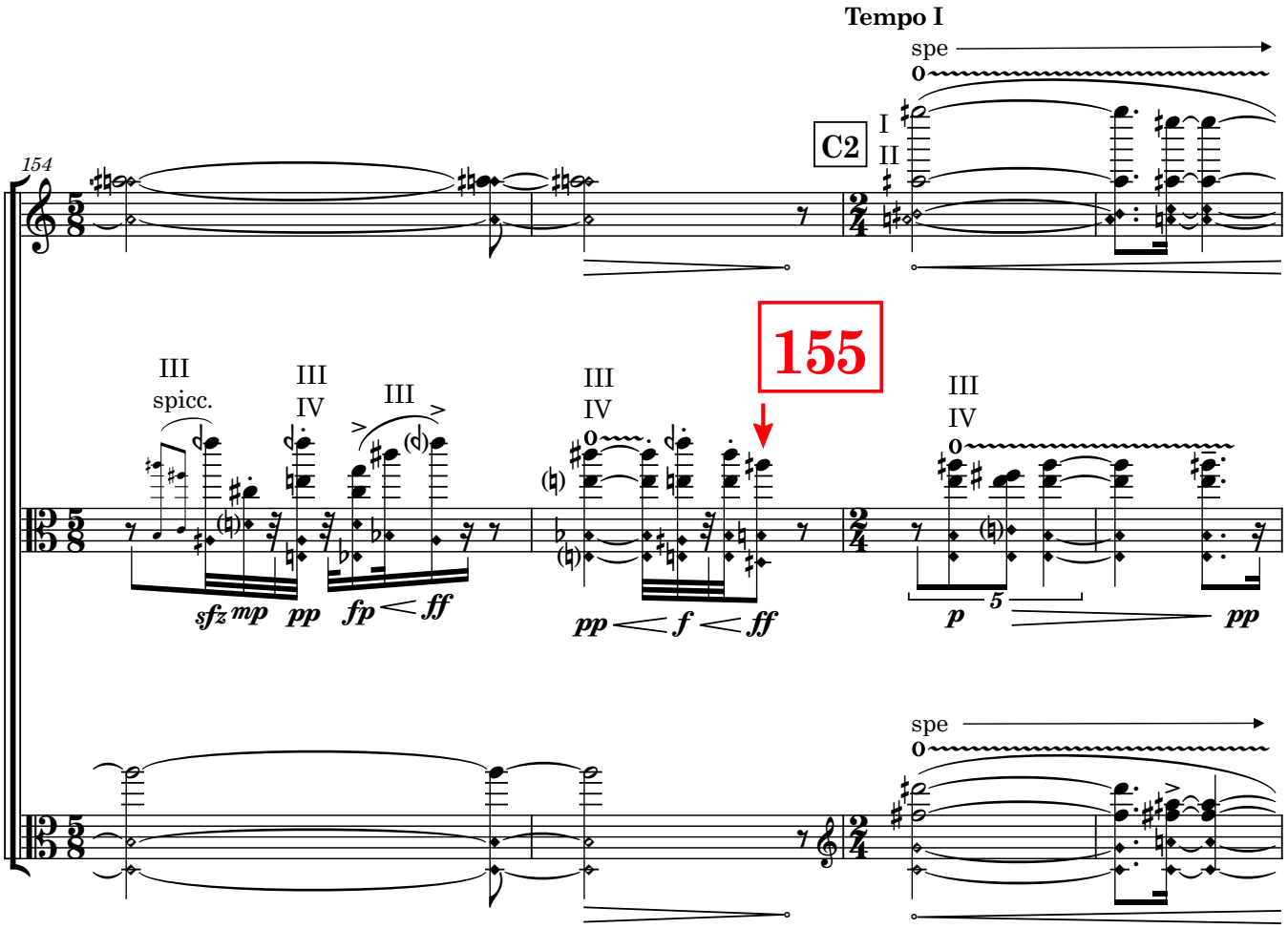

124
spe
ord.
B6
pizz.
arco
spe-
molto vib.
ord.
spe
ord.

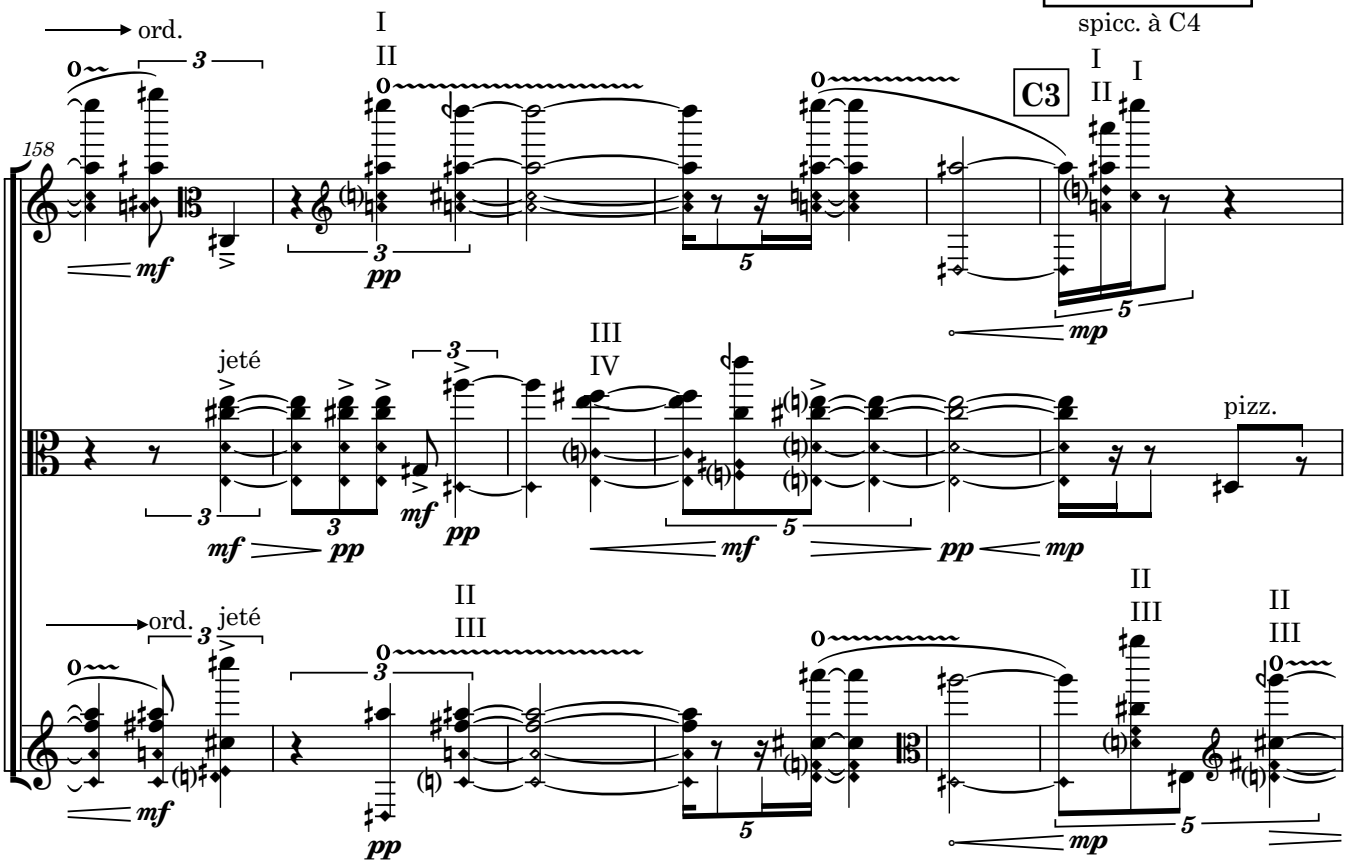
133


130
(spe)
spicc. à C
B7
spicc.
spicc.
pizz.
pizz.
arco
spicc.

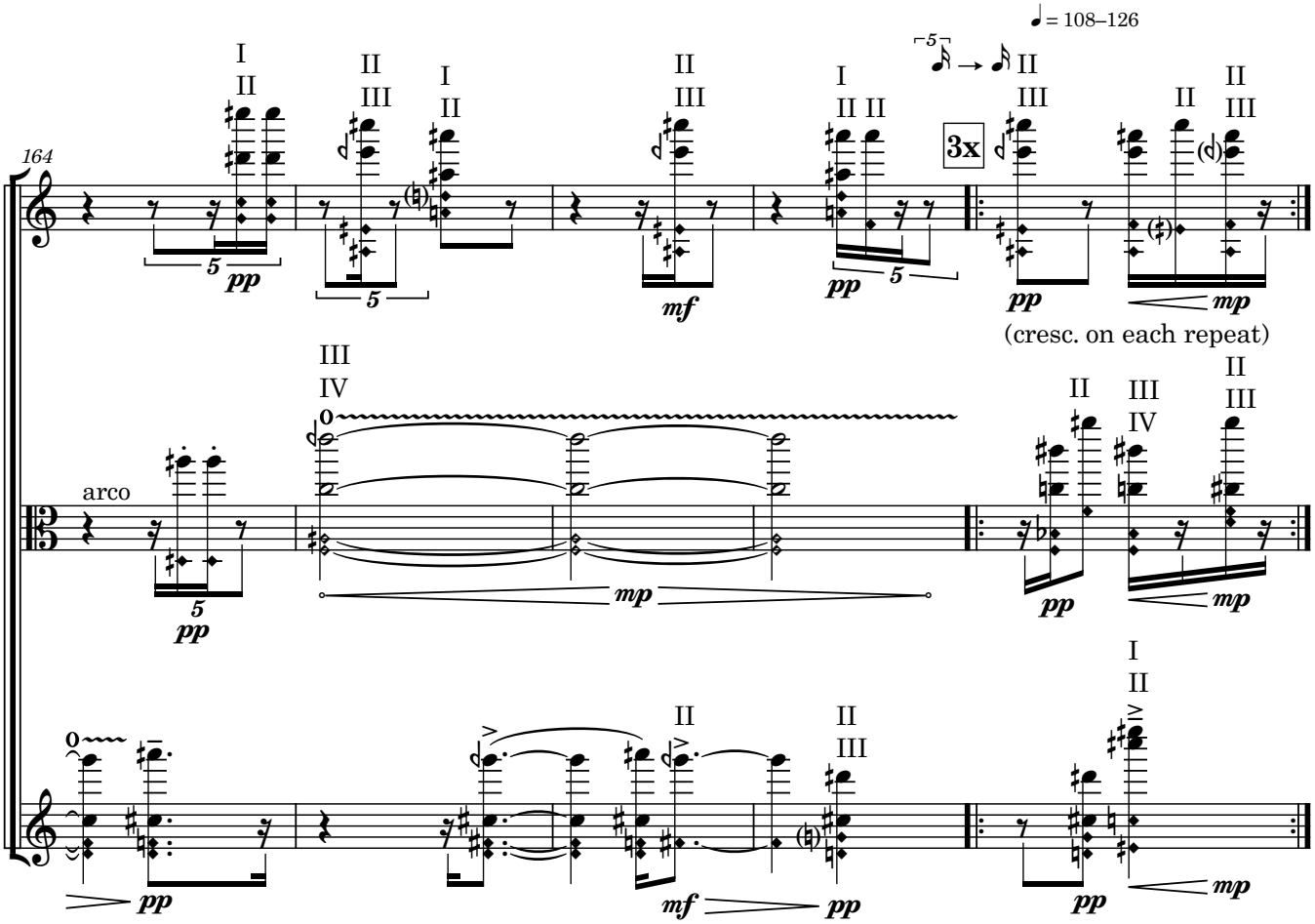

136
I
II
p
pp cresc.
III
IV
arco
mp
spe
spicc.
ord.
pp
mp pp
(spicc.)
II
III
= 50–58
freeze, pitch
C1
freely vary bow speed, direction
(also vertical), position, etc.
141
mf
ppp
nervous and twitchy
spicc.
freely vary bow speed, direction
(also vertical), position, etc.

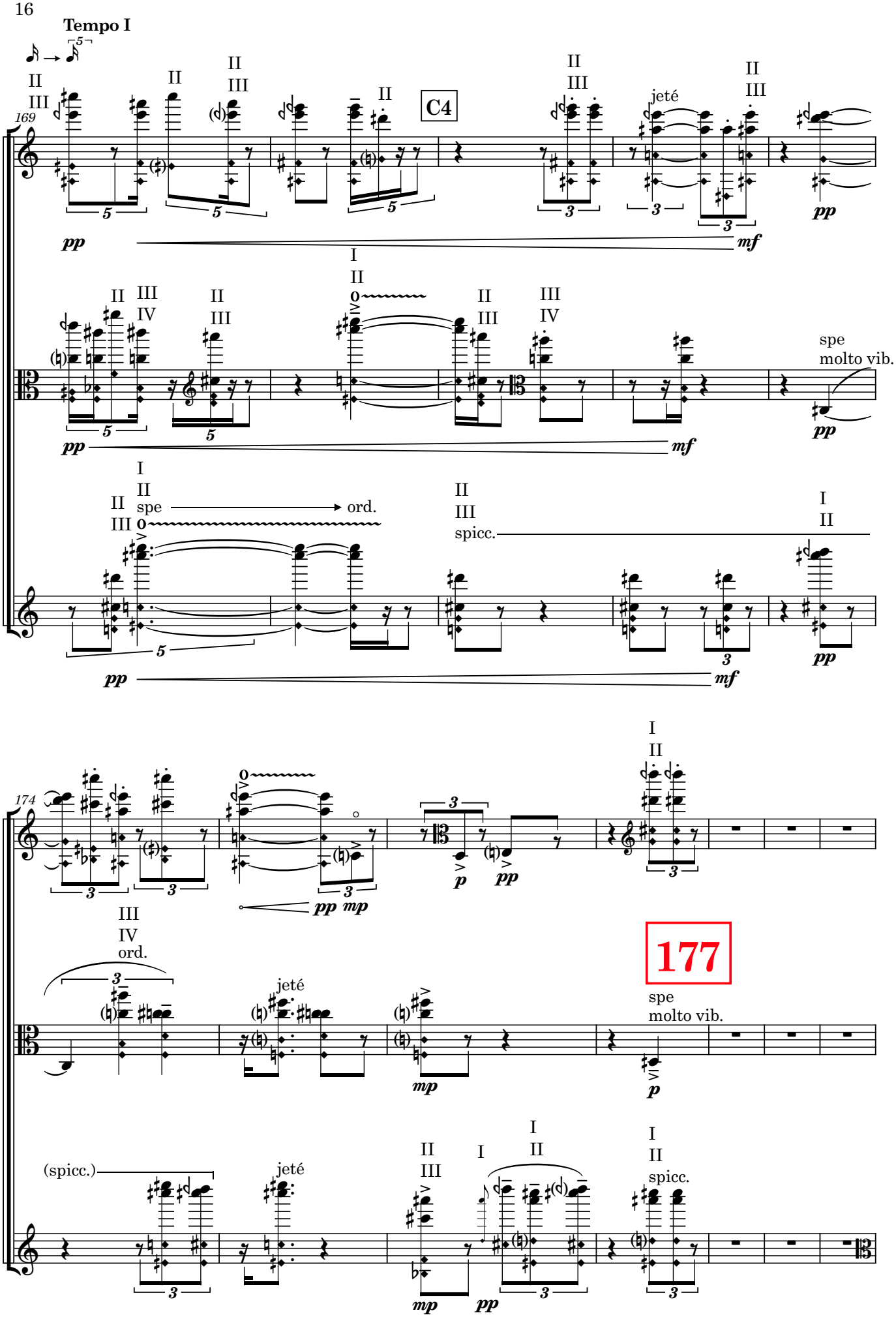

150
153
III
IV
(spicc.)
IV
spicc.
III
sfz
pp
sfz
f

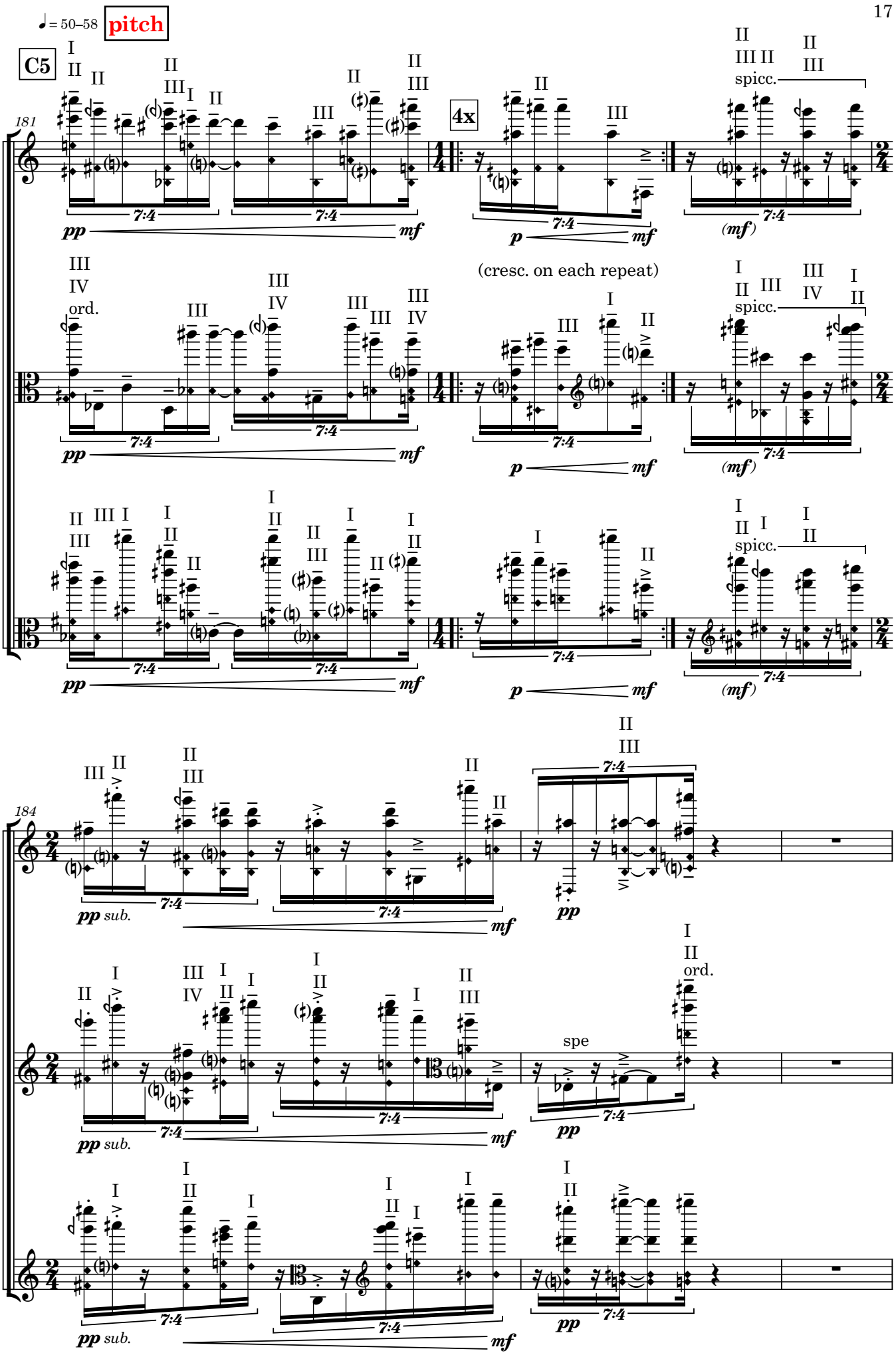

Tempo I
spe
C2
I
II
154
155
III
spicc.
III
IV
III
III
IV
III
IV
sfz mp
pp
fp
ff
pp
f
ff
p
5
pp
spe

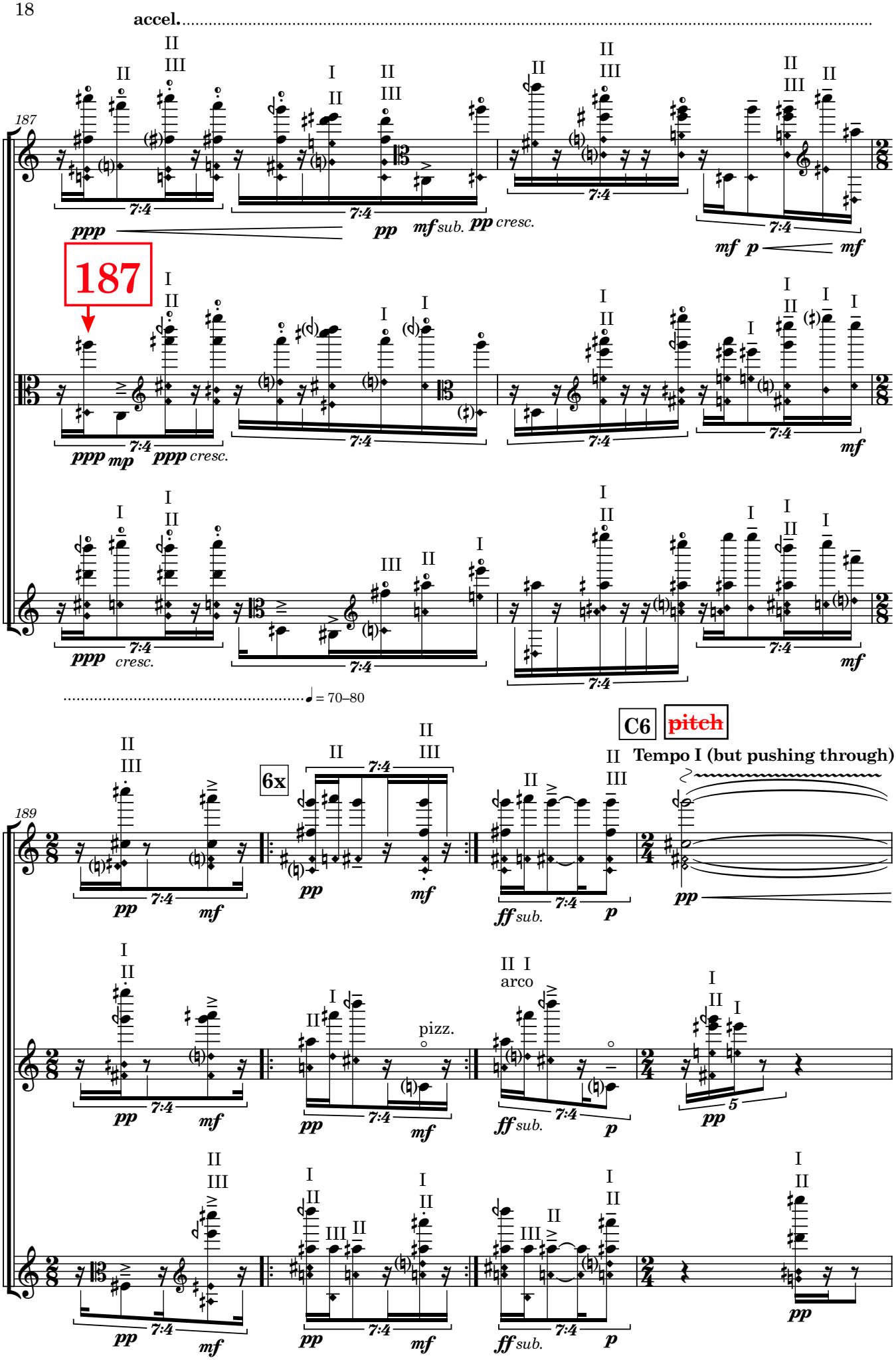

spicc. à C4
ord.
158
C3
jeté
pizz.
ord.
jeté

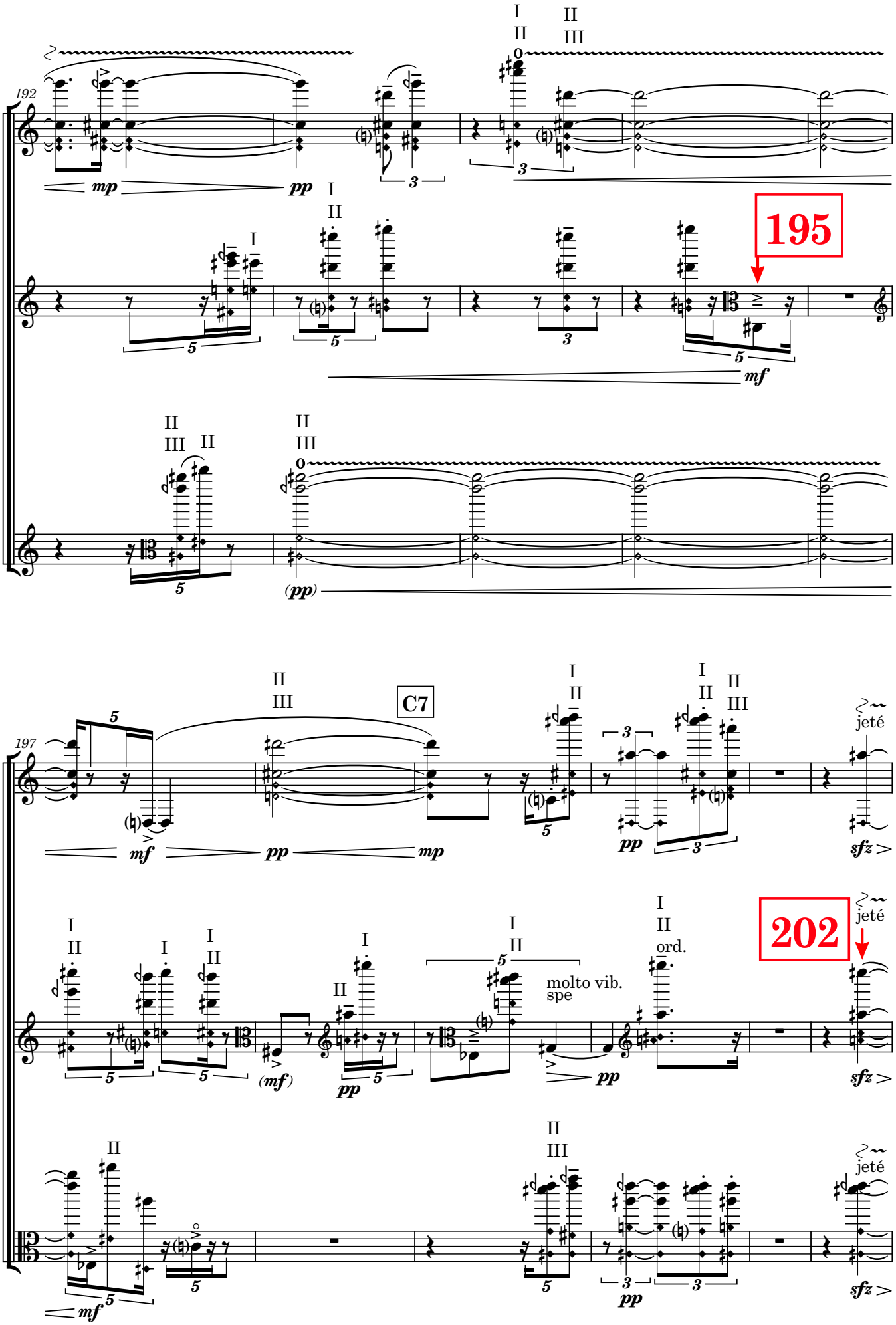
168

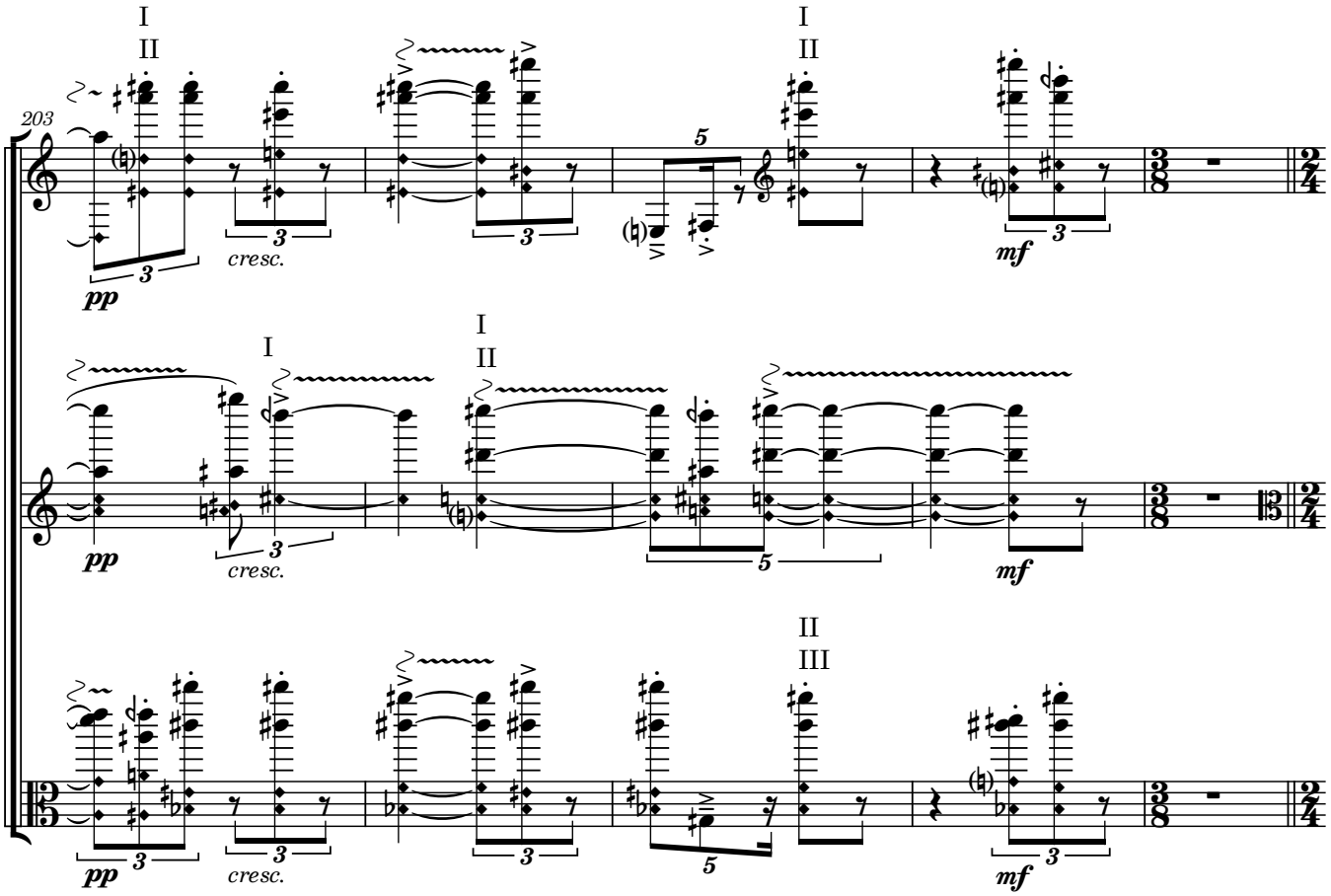

♩ = 108–126
164
3x
(cresc. on each repeat)
arco

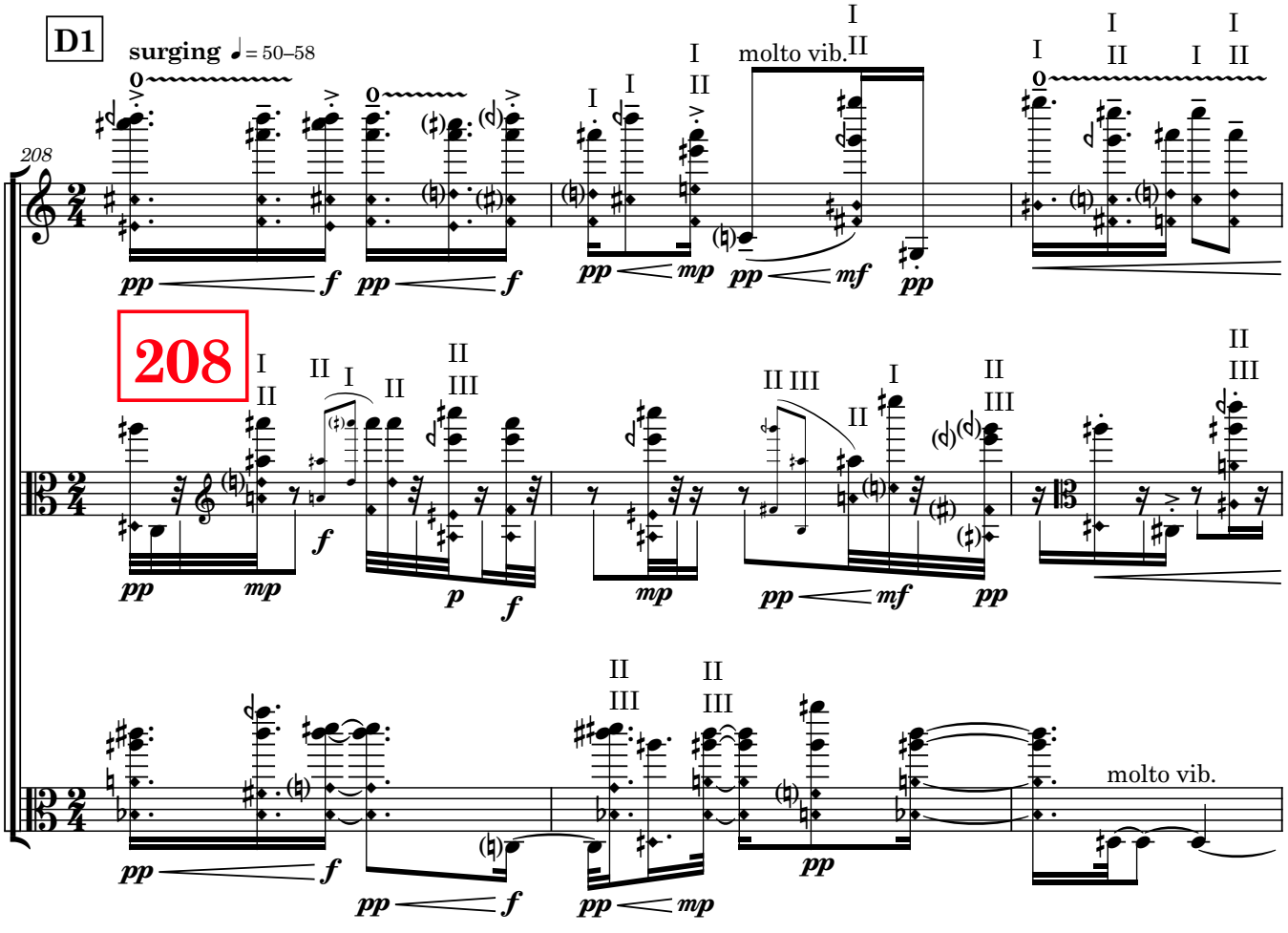

Tempo I
169
C4
jeté
spe
molto vib.
ord.
spicc.
174
177
(spicc.)

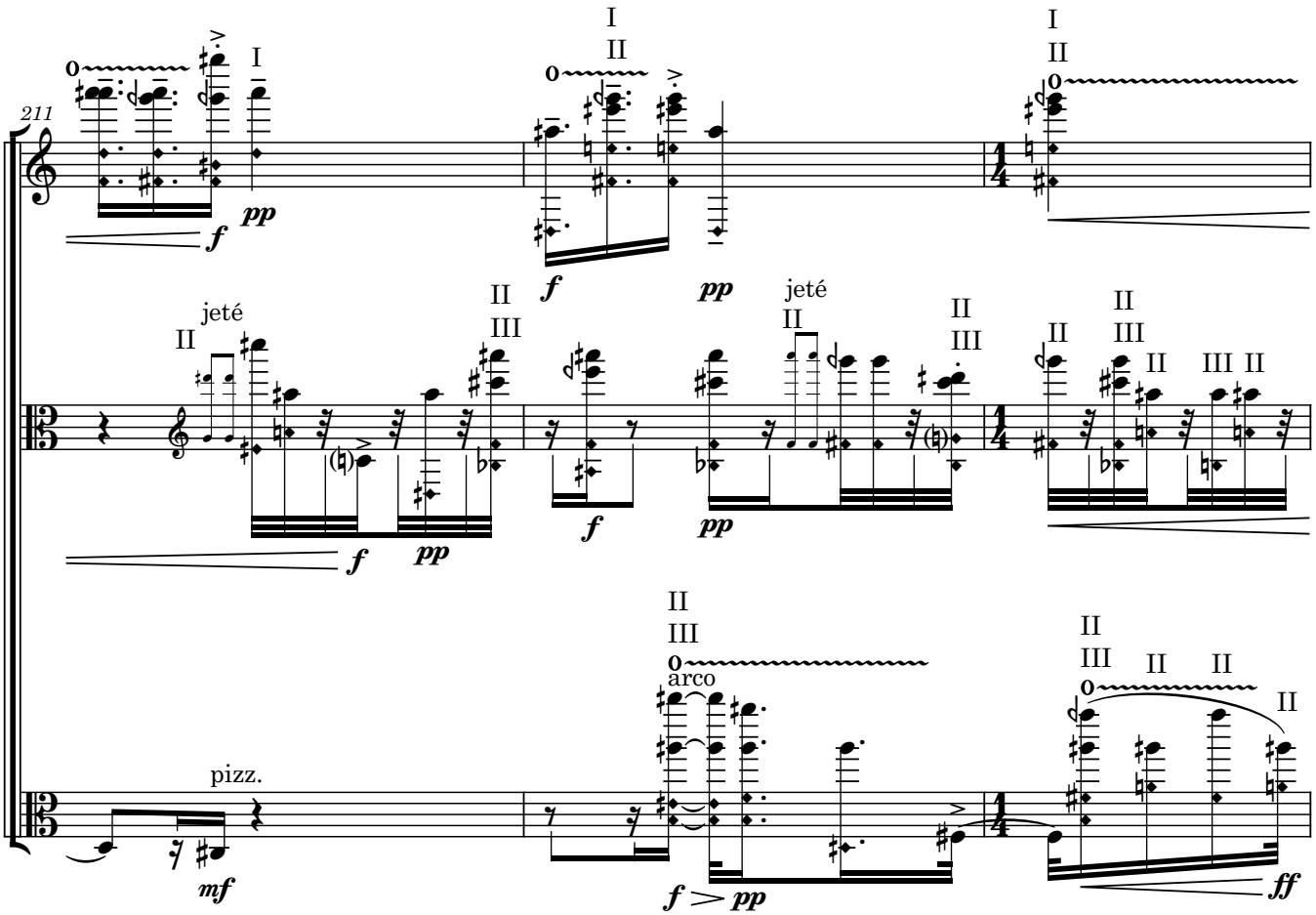

♩= 50–58
pitch
C5
181
4x
spicc.
ord.
(cresc. on each repeat)
184
pp sub.
spe
ord.

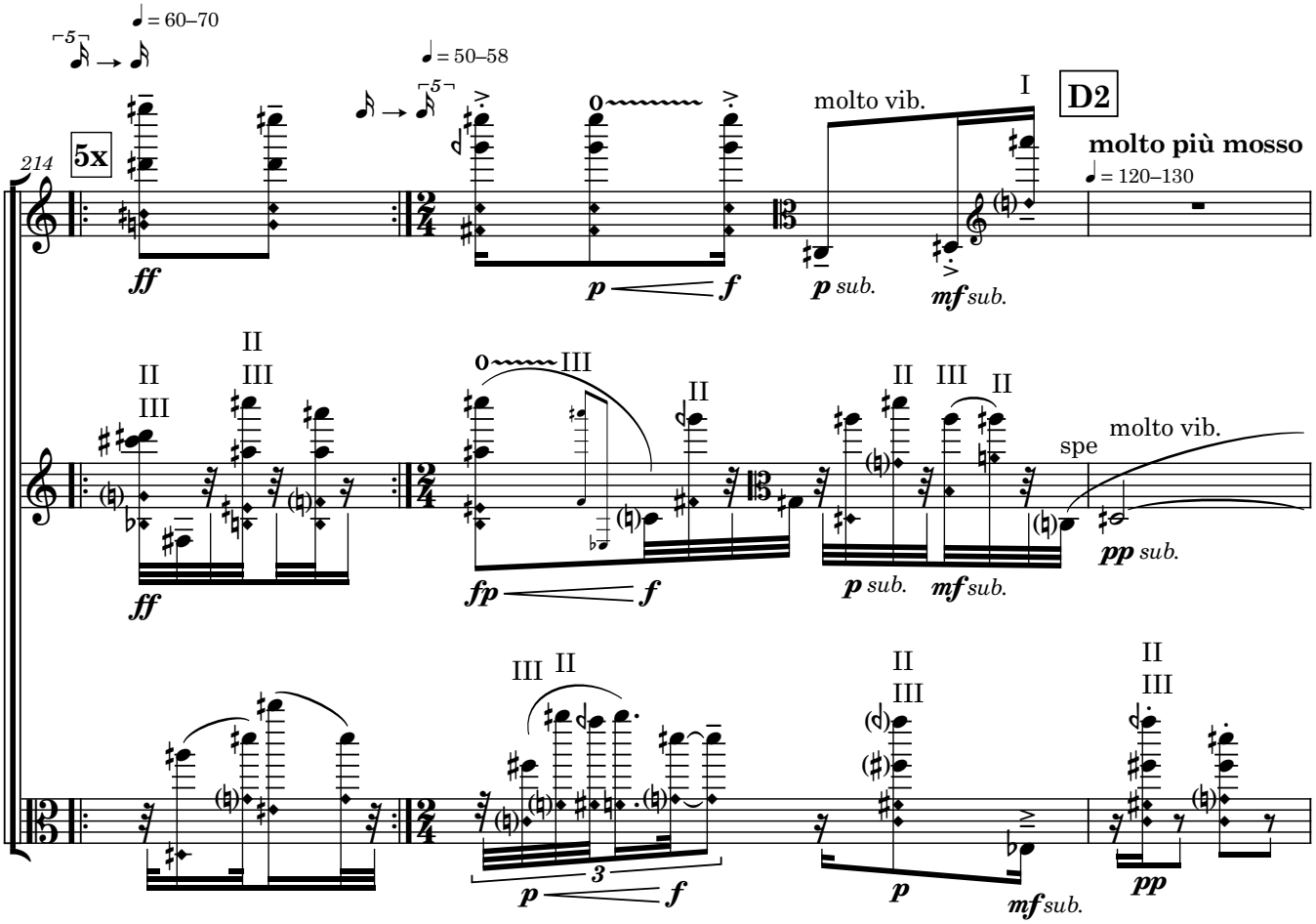

accel.
187
187
ppp
pp
mf sub.
pp cresc.
mf p mf
ppp mp ppp cresc.
mf
ppp cresc.
mf
= 70–80
C6
pitch
Tempo I (but pushing through)
189
6x
pp mf
pp mf
ff sub. p
pp
arco
pizz.
5

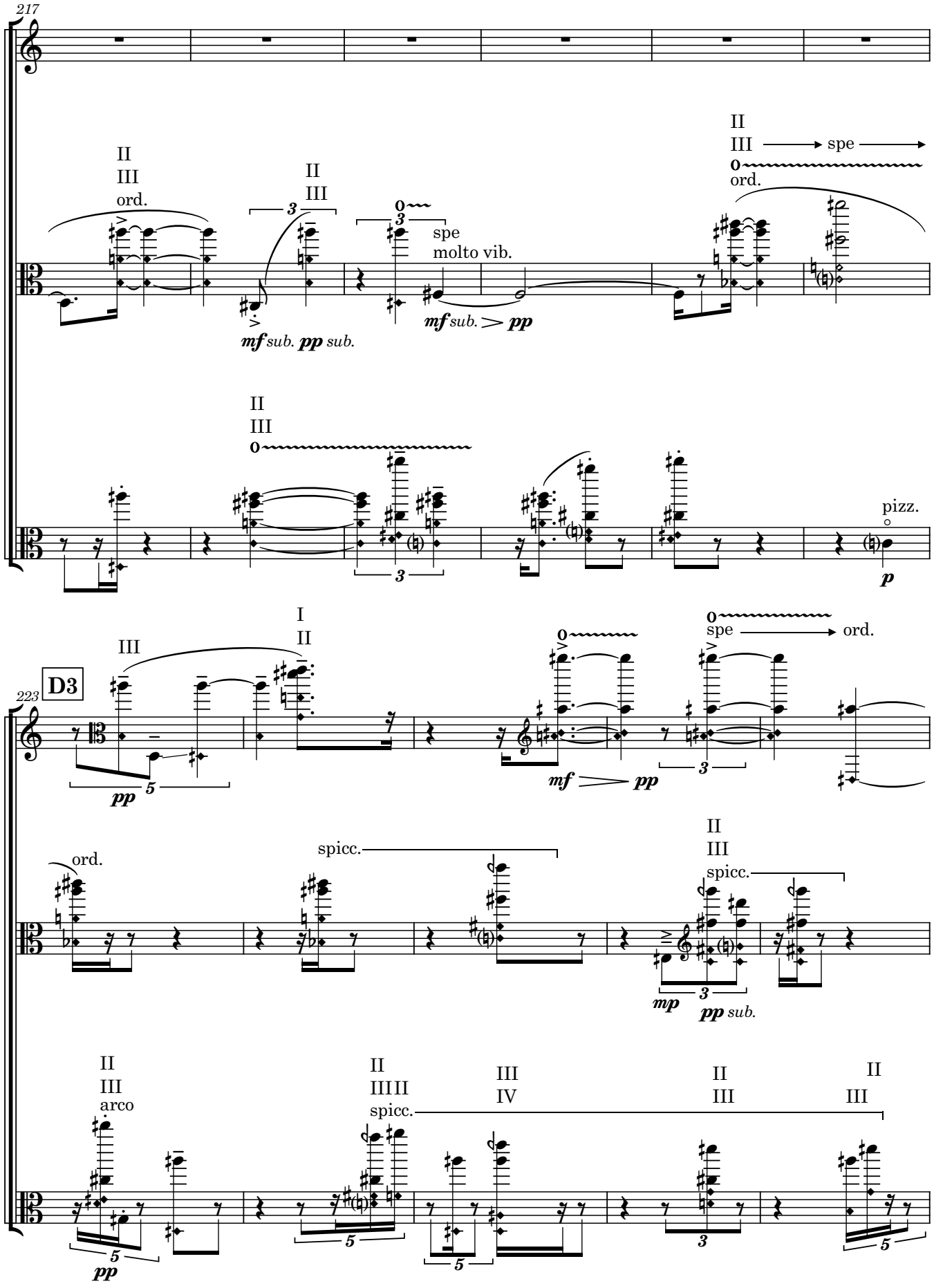

192
195
197
C7
202
jeté
molto vib.
spe
ord.

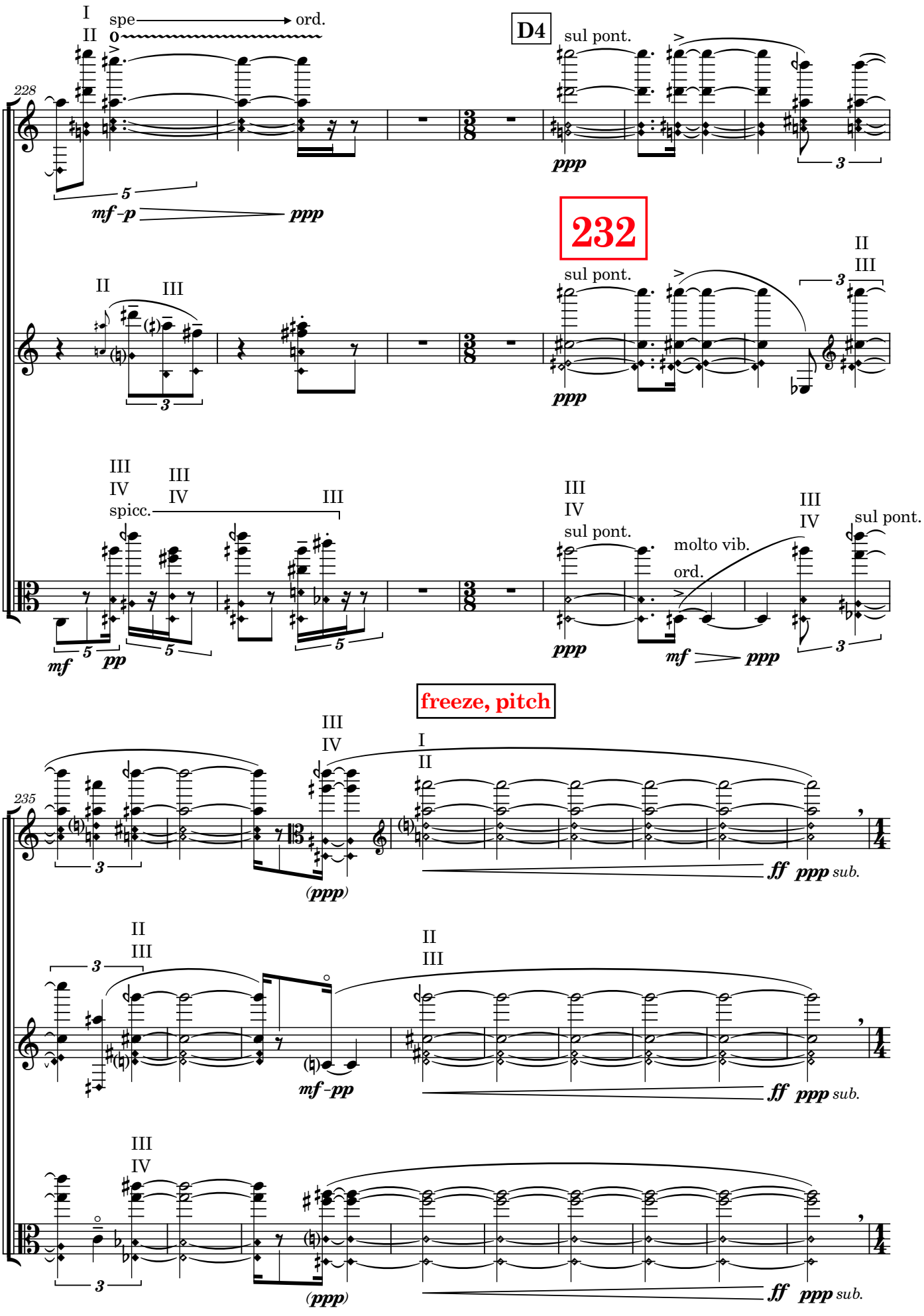

203
pp
cresc.
mf


D1
surging ♩= 50–58
208
molto vib.
molto vib.


211
jeté
pizz.
arco


214
5x
♩ = 60–70
♩ = 50–58
molto vib.
D2
molto più mosso
♩ = 120–130
spe
molto vib.

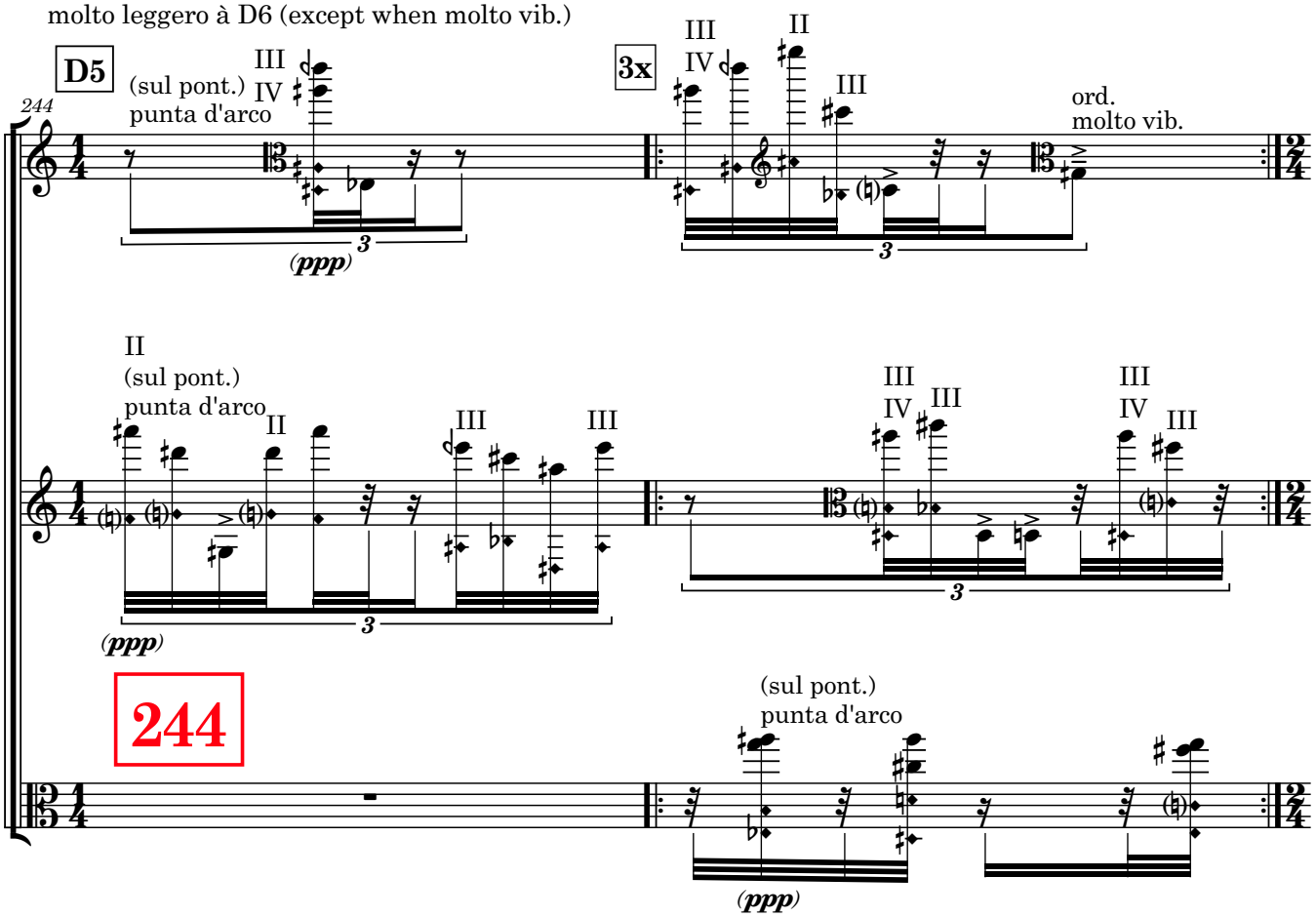

217
II
III
ord.
II
III
3
0
3
spe
molto vib.
mf sub. pp sub.
mf sub. > pp
II
III → spe →
0
ord.
II
III
0
3
pizz.
p
223
D3
III
I
II
pp
5
0
mf > pp
0
spe → ord.
3
ord.
spicc.
II
III
spicc.
mp
3
pp sub.
II
III
arco
pp
5
II
IIIII
spicc.
5
III
IV
5
II
III
3
II
III
5

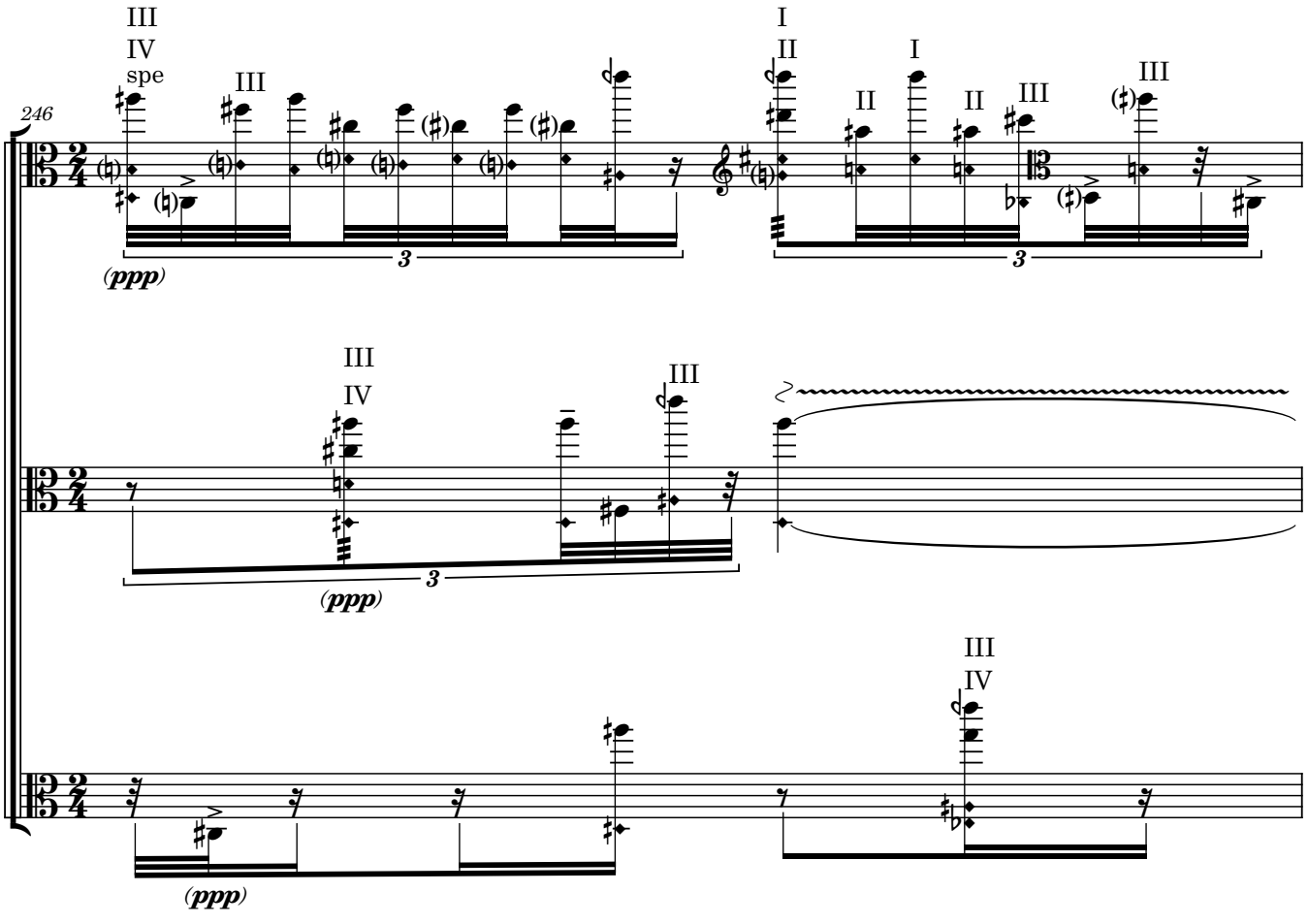

I
II
spe
ord.
D4
sul pont.
228
5
mf-p
ppp
ppp
3
232
II
III
sul pont.
ppp
II
III
3
III
IV
spicc.
III
IV
III
5
mf
pp
III
IV
sul pont.
ppp
molto vib.
ord.
III
IV
sul pont.
mf
ppp
3
freeze, pitch
III
IV
I
II
235
3
(ppp)
ff
ppp sub.
II
III
3
mf-pp
II
III
ff
ppp sub.
III
IV
3
(ppp)
ff
ppp sub.

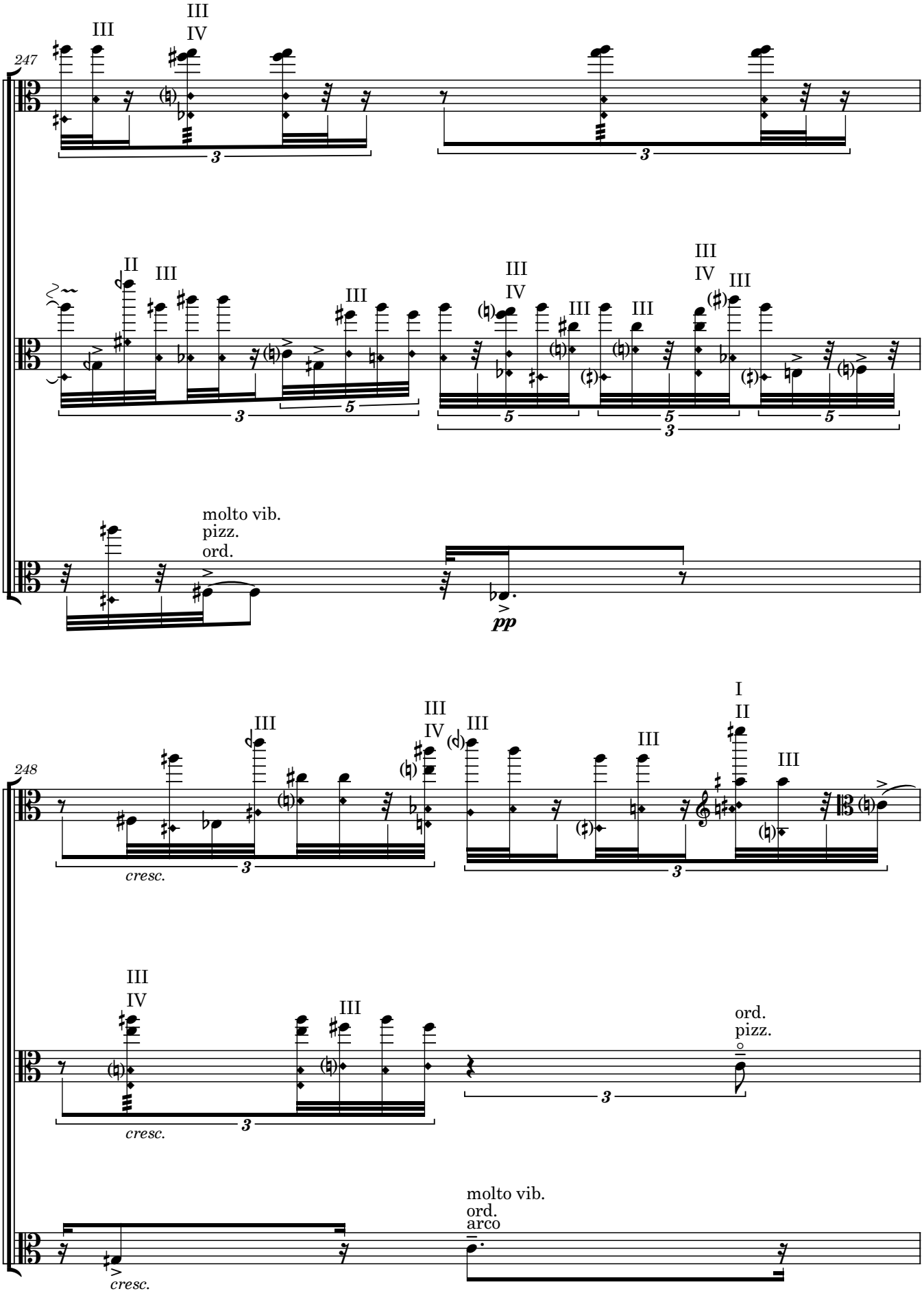
~~freeze, pitch~~

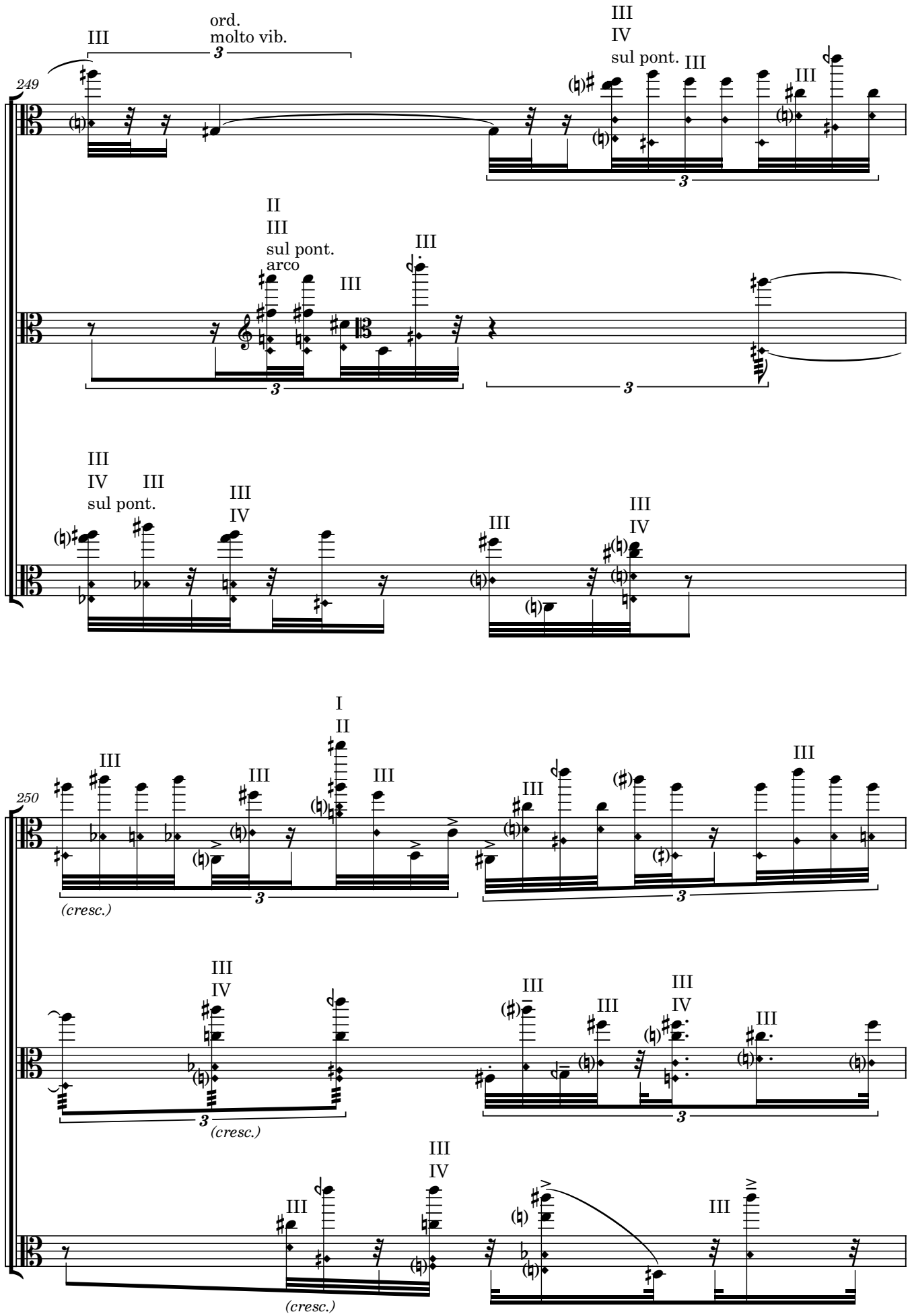
♩ = 50–58

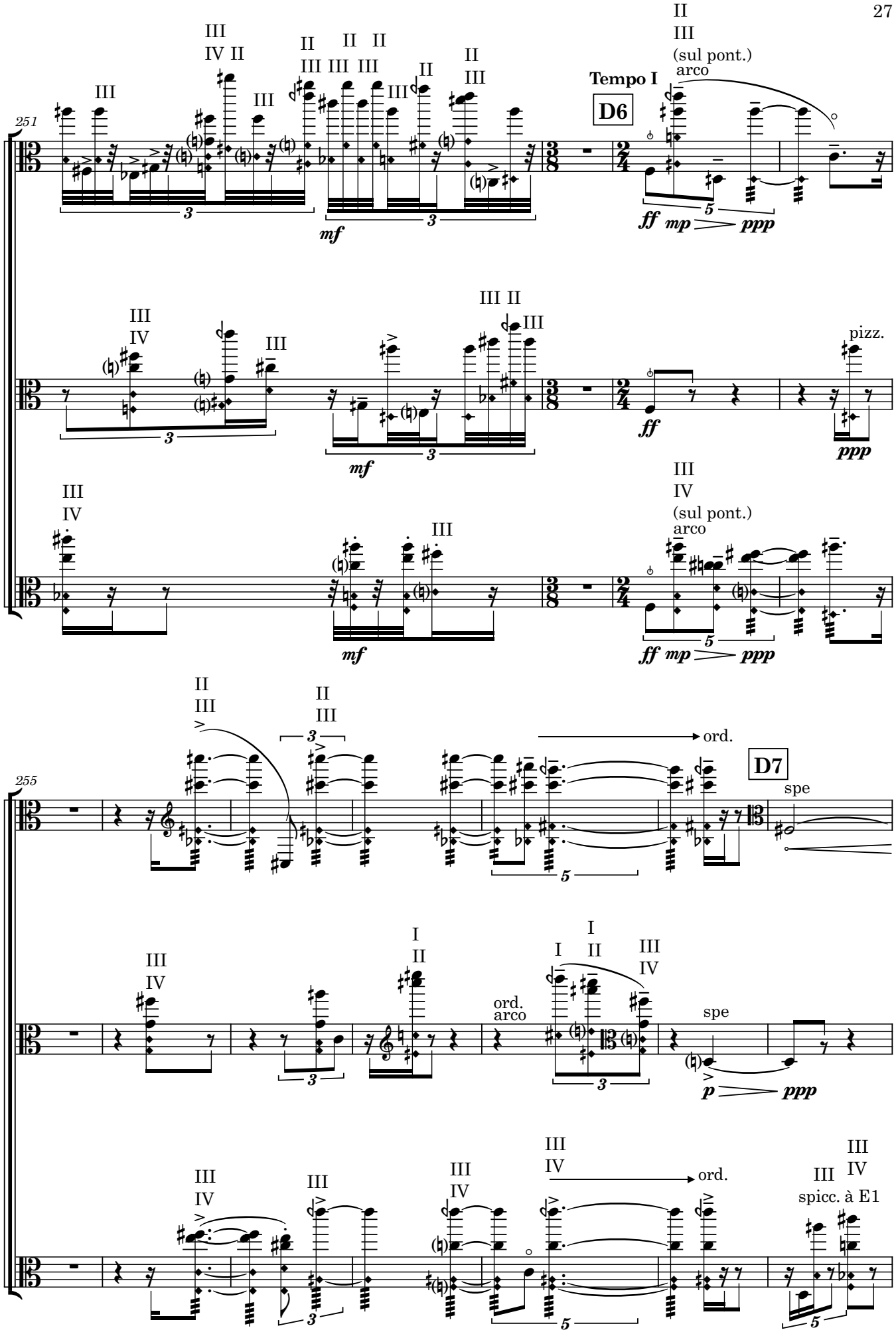
molto leggero à D6 (except when molto vib.)

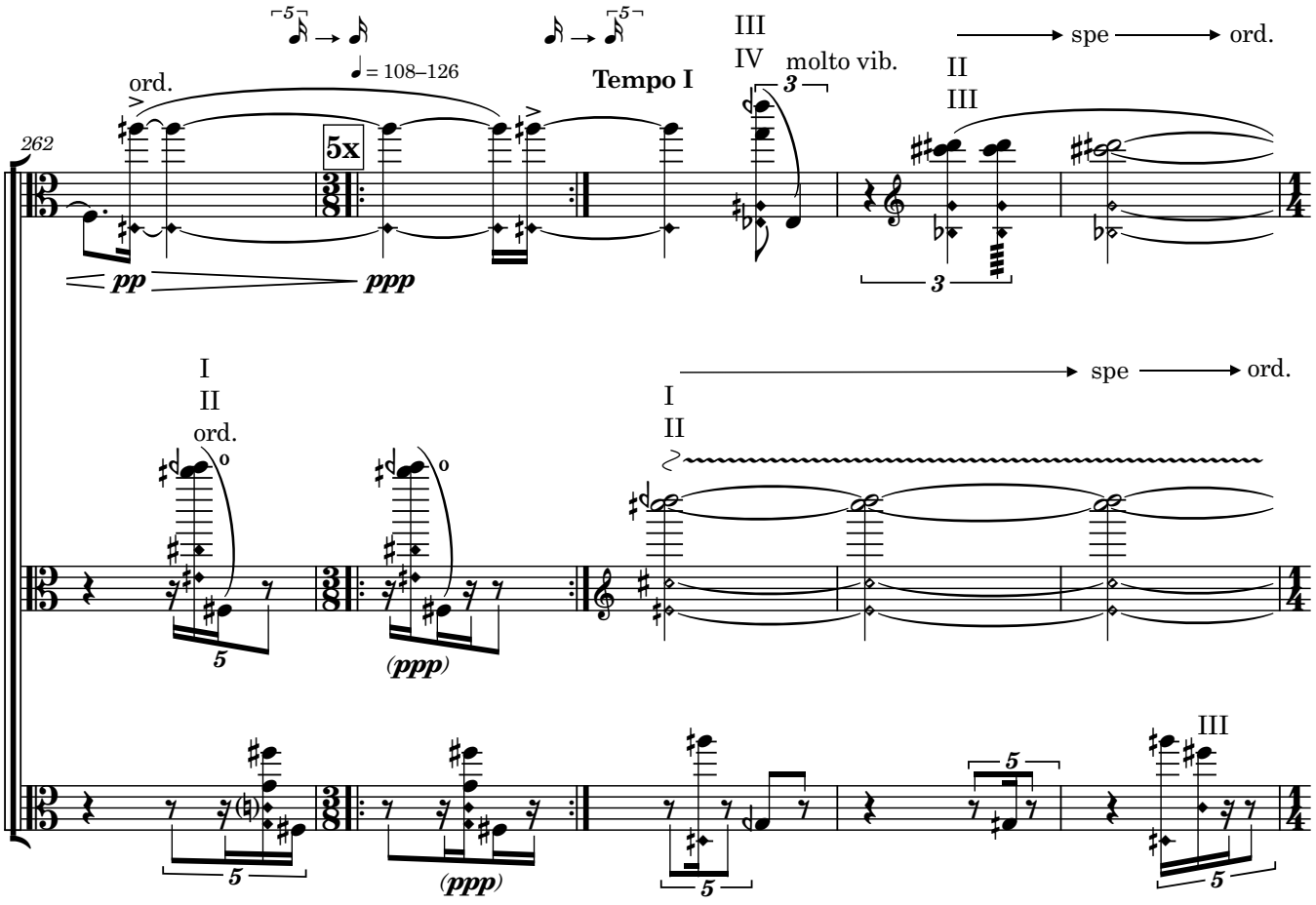


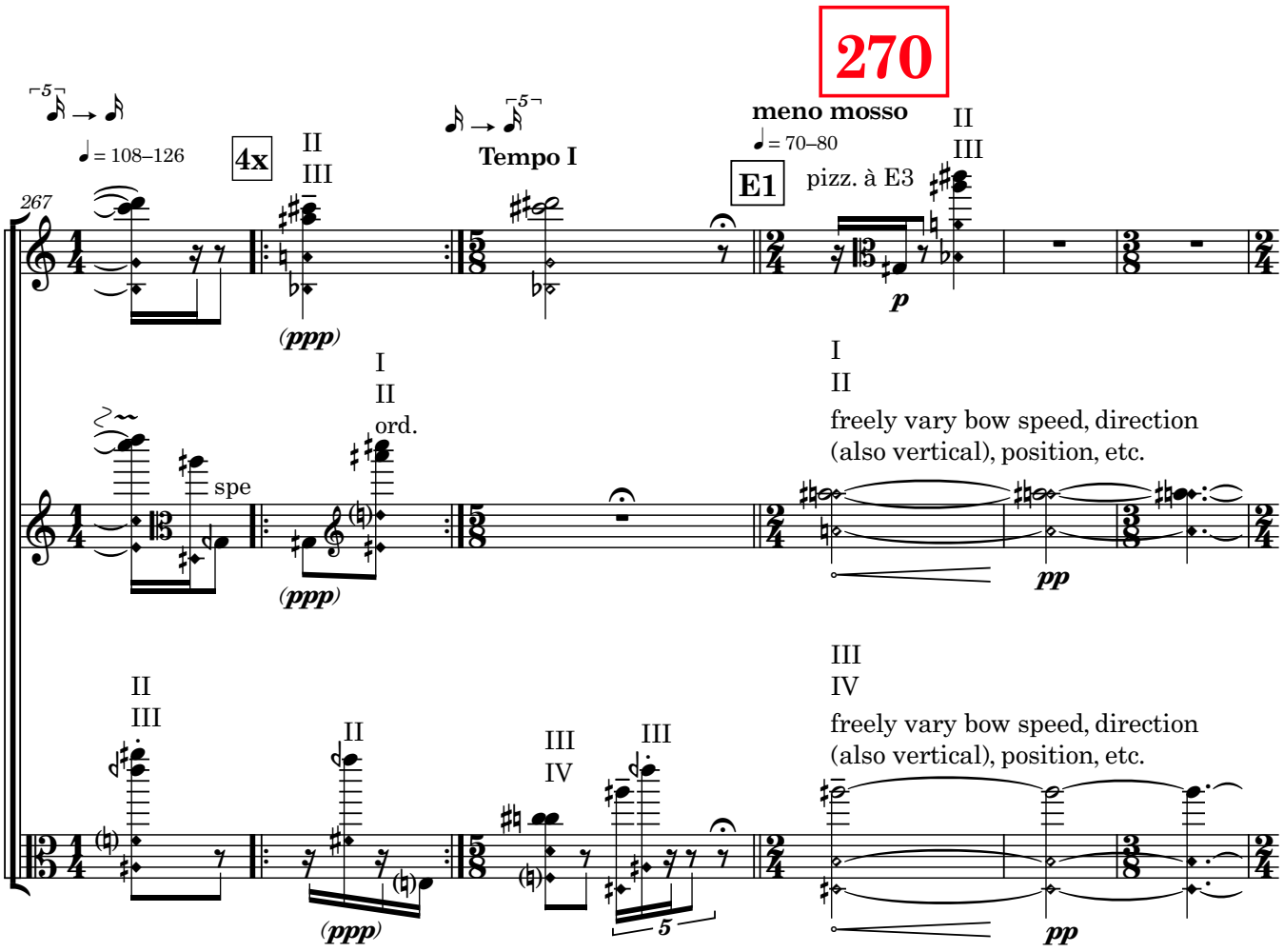


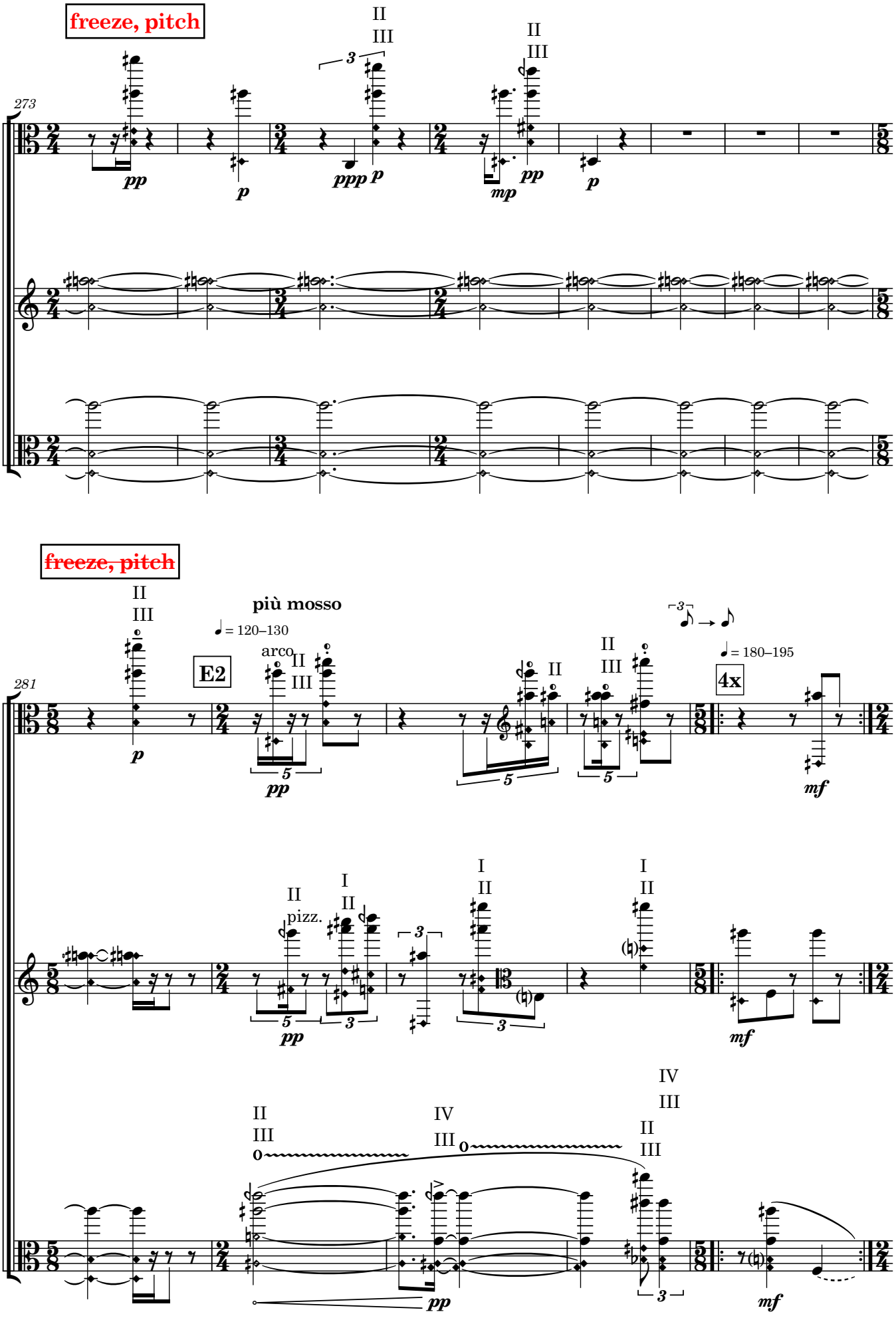

247
III
III
IV
3
3
II
III
III
III
IV
III
III
IV
III
3
5
5
5
5
3
molto vib.
pizz.
ord.
pp
248
III
III
IV
III
III
I
II
III
cresc.
3
3
III
IV
III
ord.
pizz.
cresc.
3
3
molto vib.
ord.
arco
cresc.

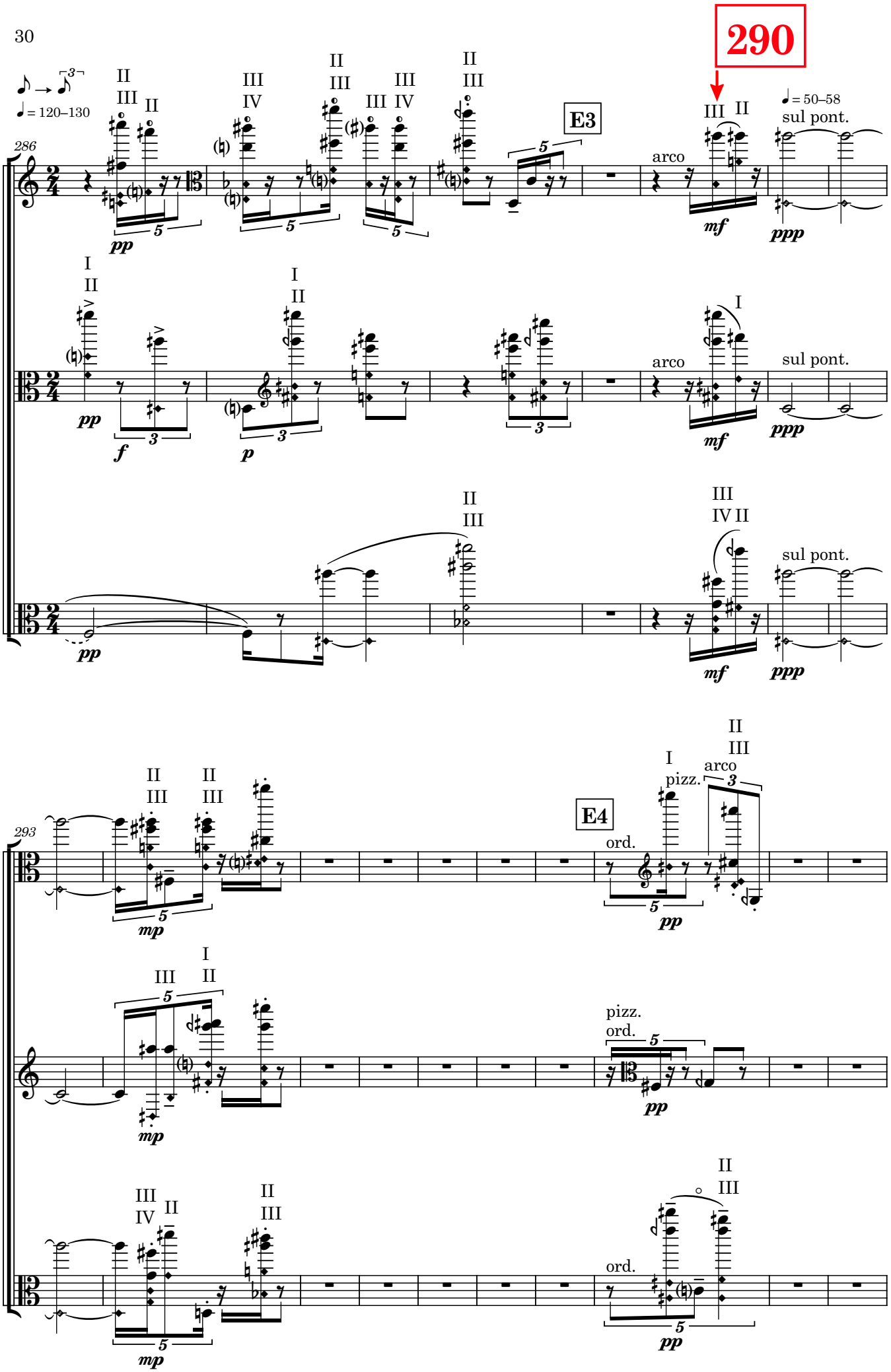

249
III
ord.
molto vib.
3
III
IV
sul pont.
III
III
3
II
III
sul pont.
arco
III
III
3
3
III
IV
sul pont.
III
III
IV
III
III
IV
250
I
II
III
III
III
III
III
III
(cresc.)
3
3
III
IV
III
III
III
IV
III
3
(cresc.)
3
III
IV
III
III
(cresc.)

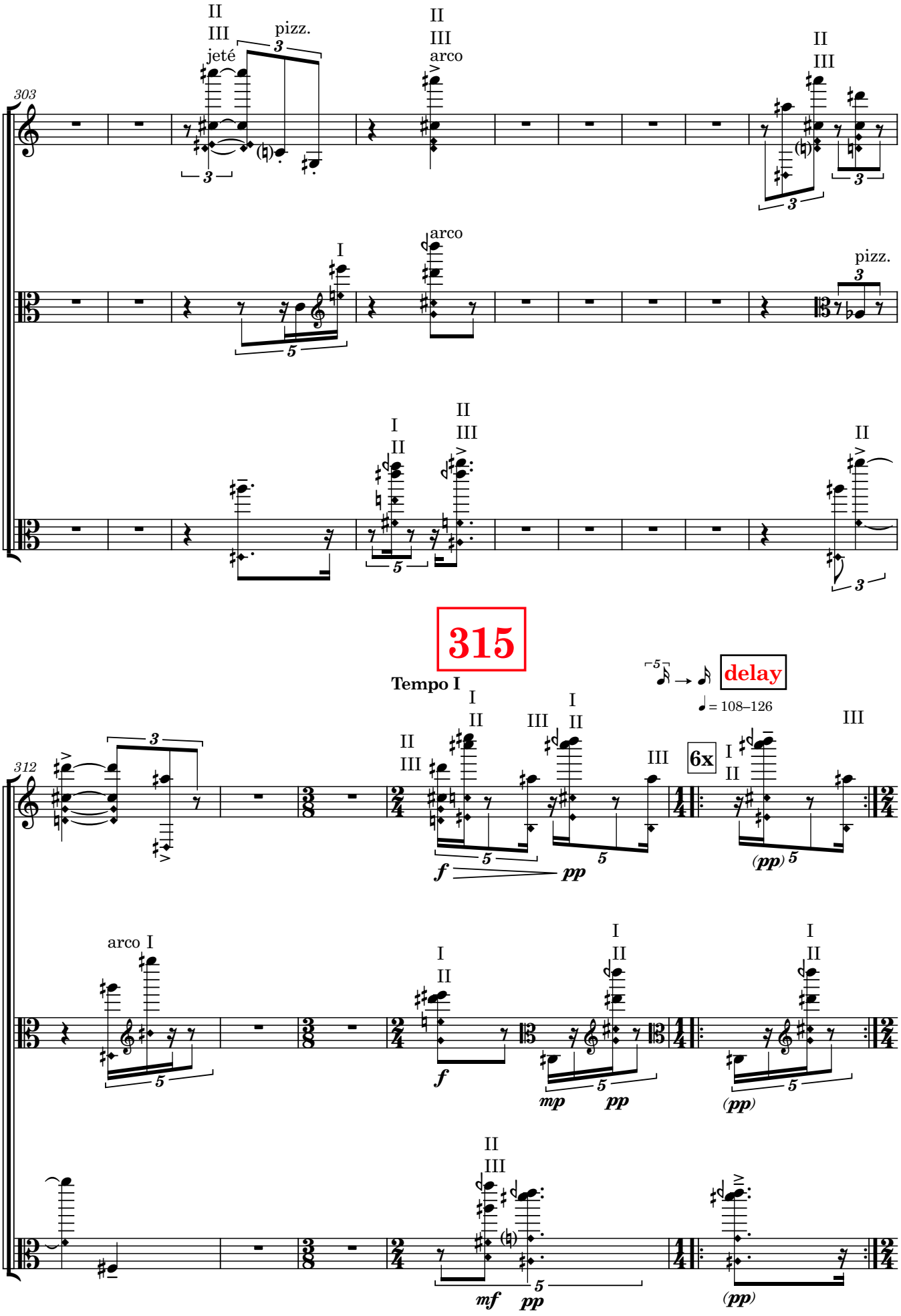

251
Tempo I
D6
(sul pont.)
arco
ff mp ppp
mf
pizz.
ff
ppp
(sul pont.)
arco
ff mp ppp
mf
255
D7
ord.
spe
ord.
arco
spe
p ppp
ord.
spicc. à E1

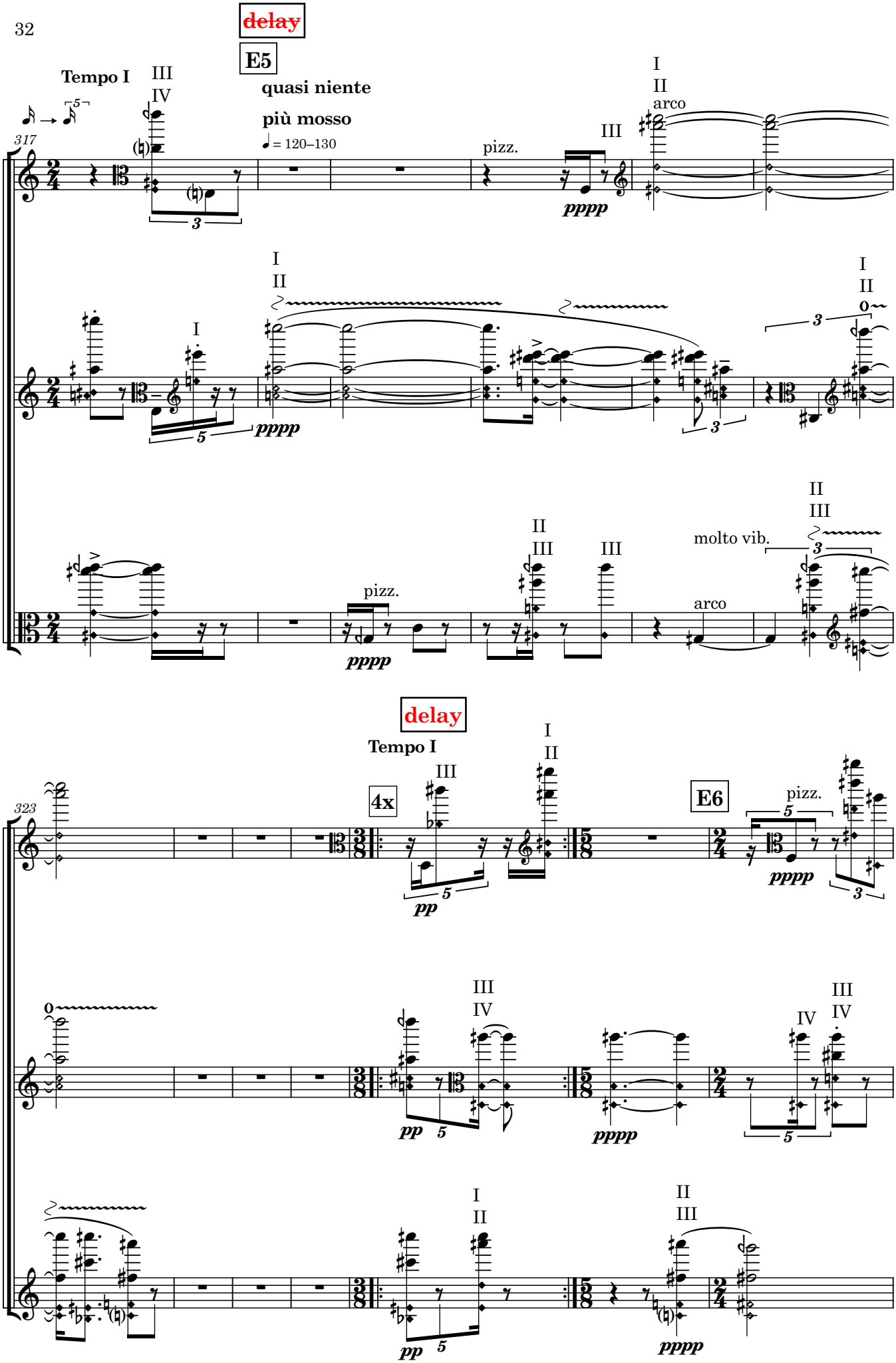

262
ord.
♩ = 108–126
5x
Tempo I
III
IV
molto vib.
II
III
spe
ord.
pp
ppp
3
I
II
ord.
(ppp)
5

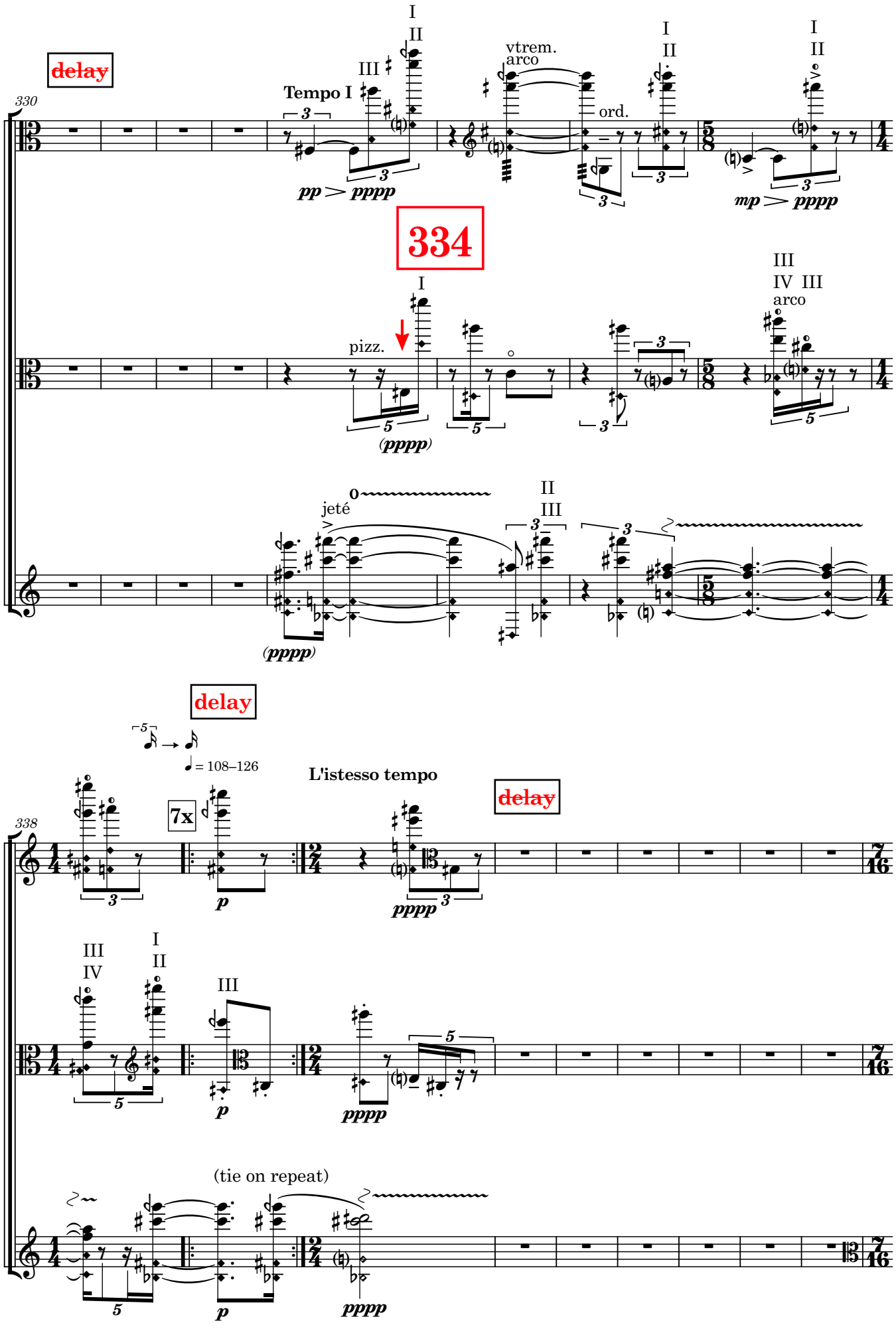

270
267
♩ = 108–126
4x
II
III
Tempo I
meno mosso
♩ = 70–80
E1
pizz. à E3
p
(ppp)
I
II
ord.
spe
freely vary bow speed, direction
(also vertical), position, etc.
pp
III
IV
5

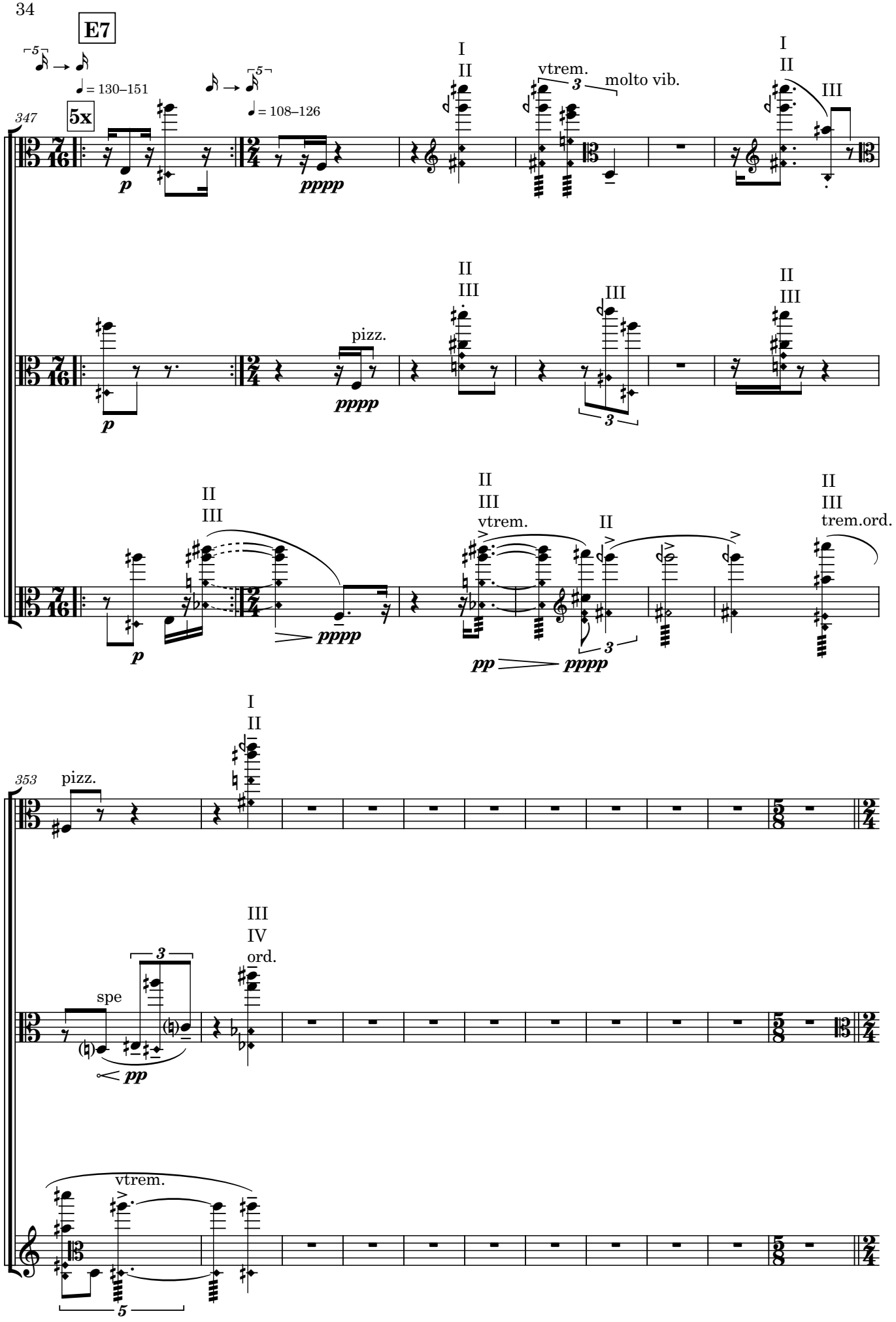

freeze, pitch
273
freeze, pitch
281
più mosso
= 120–130
arco
E2
= 180–195
4x
pizz.

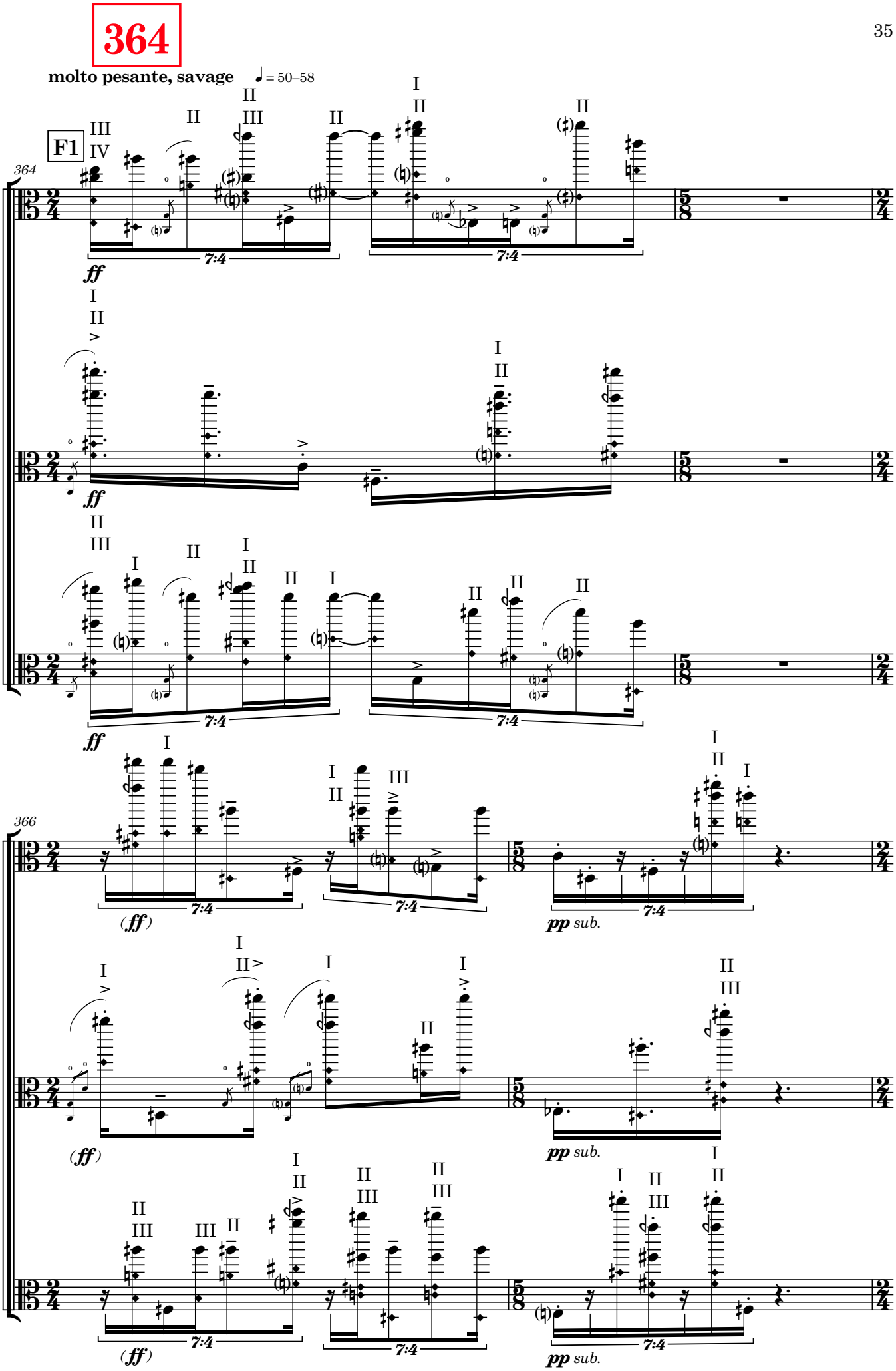

290
286
293
E3
E4
= 120–130
= 50–58
sul pont.
arco
pizz.
ord.
pp
mp
f
p
mf
ppp

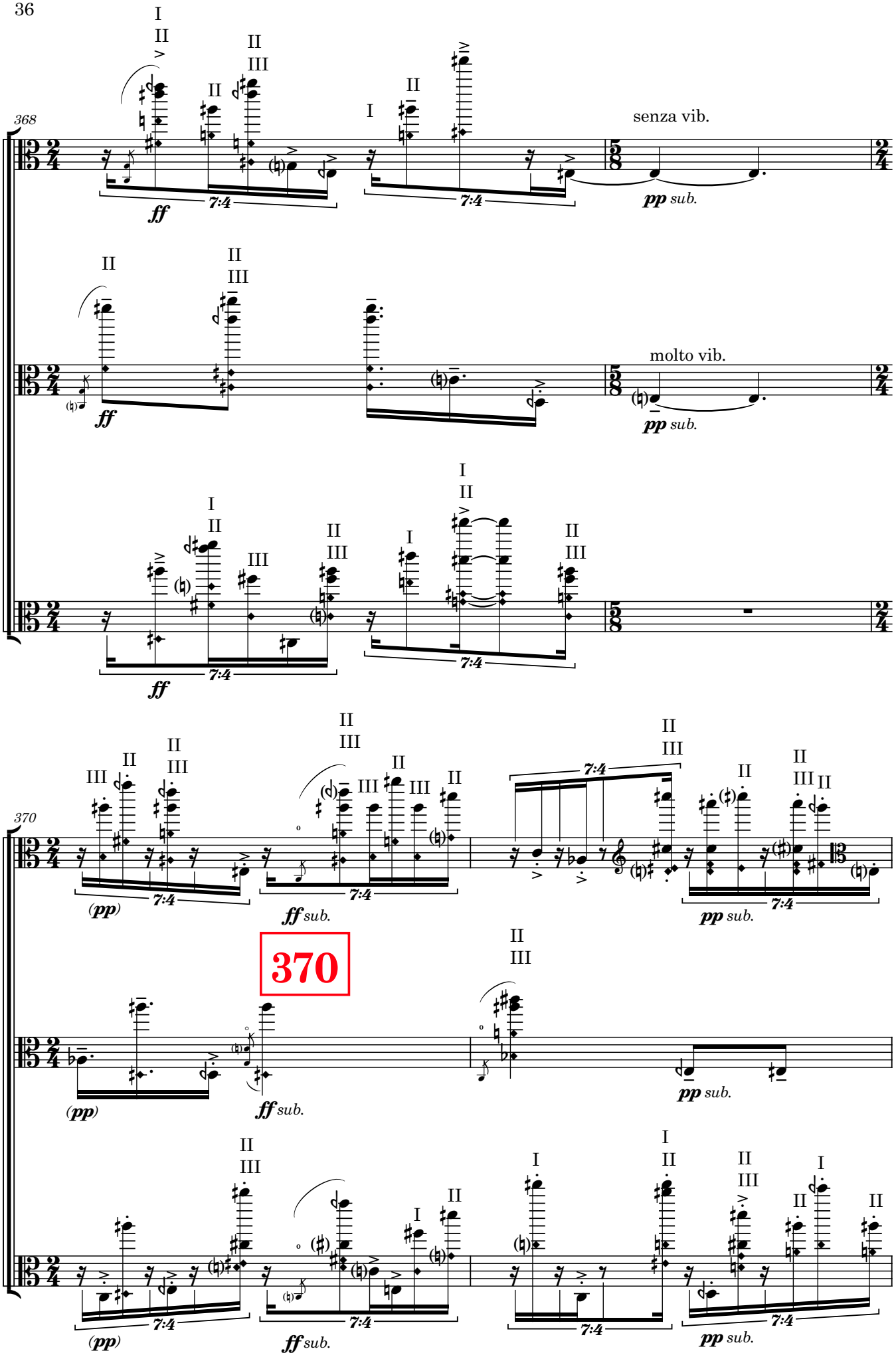

303
II
III
jeté
pizz.
II
III
arco
II
III
I
arco
pizz.
I
II
II
III
II
315
Tempo I
delay
= 108–126
312
II
III
I
II
III
I
II
III
6x
I
II
III
arco I
I
II
I
II
I
II
f
pp
mp
pp
(pp)
II
III
mf
pp
(pp)

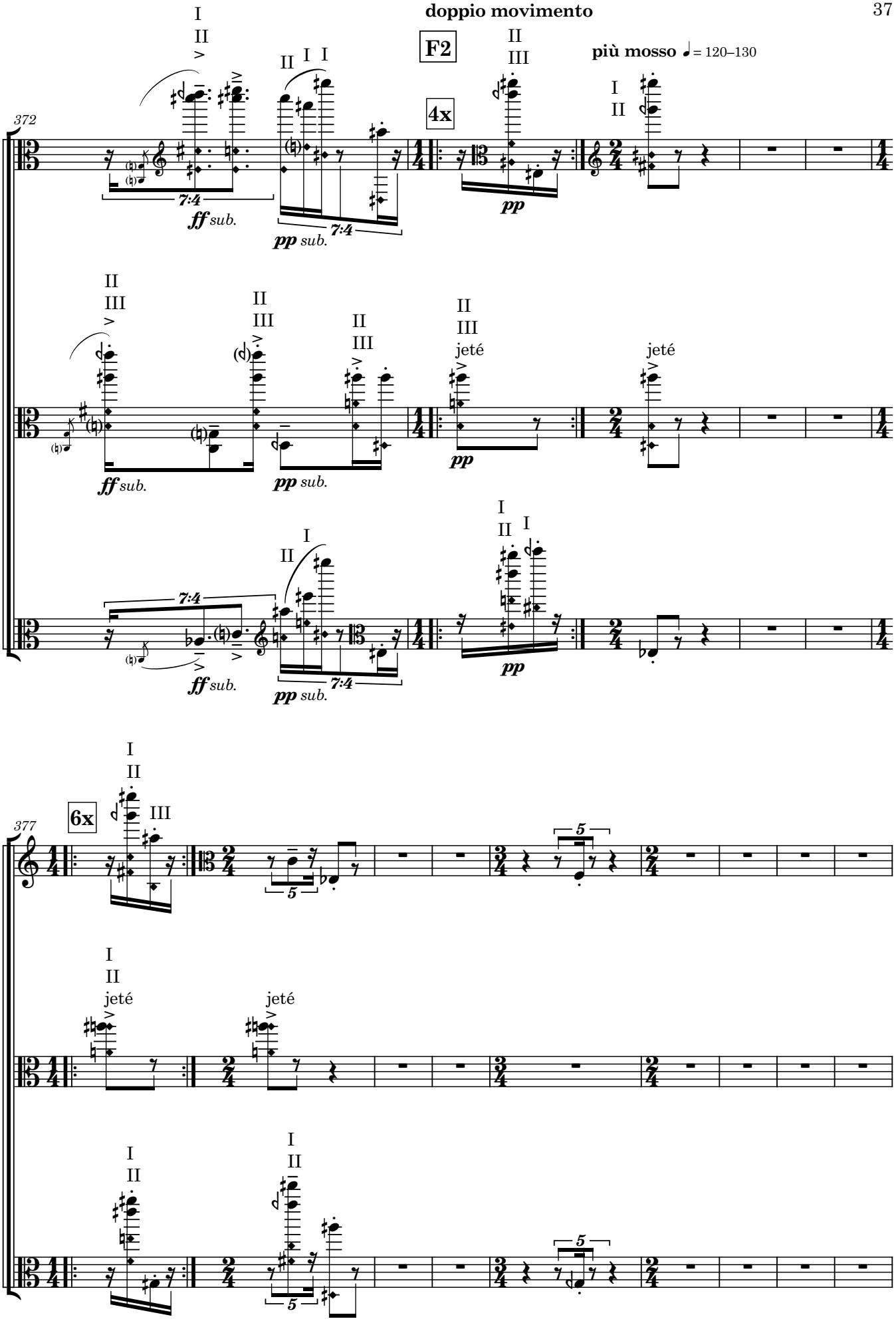

delay
E5
Tempo I
quasi niente
più mosso
♩ = 120–130
pizz.
arco
molto vib.
pizz.
arco
delay
Tempo I
4x
E6
pizz.

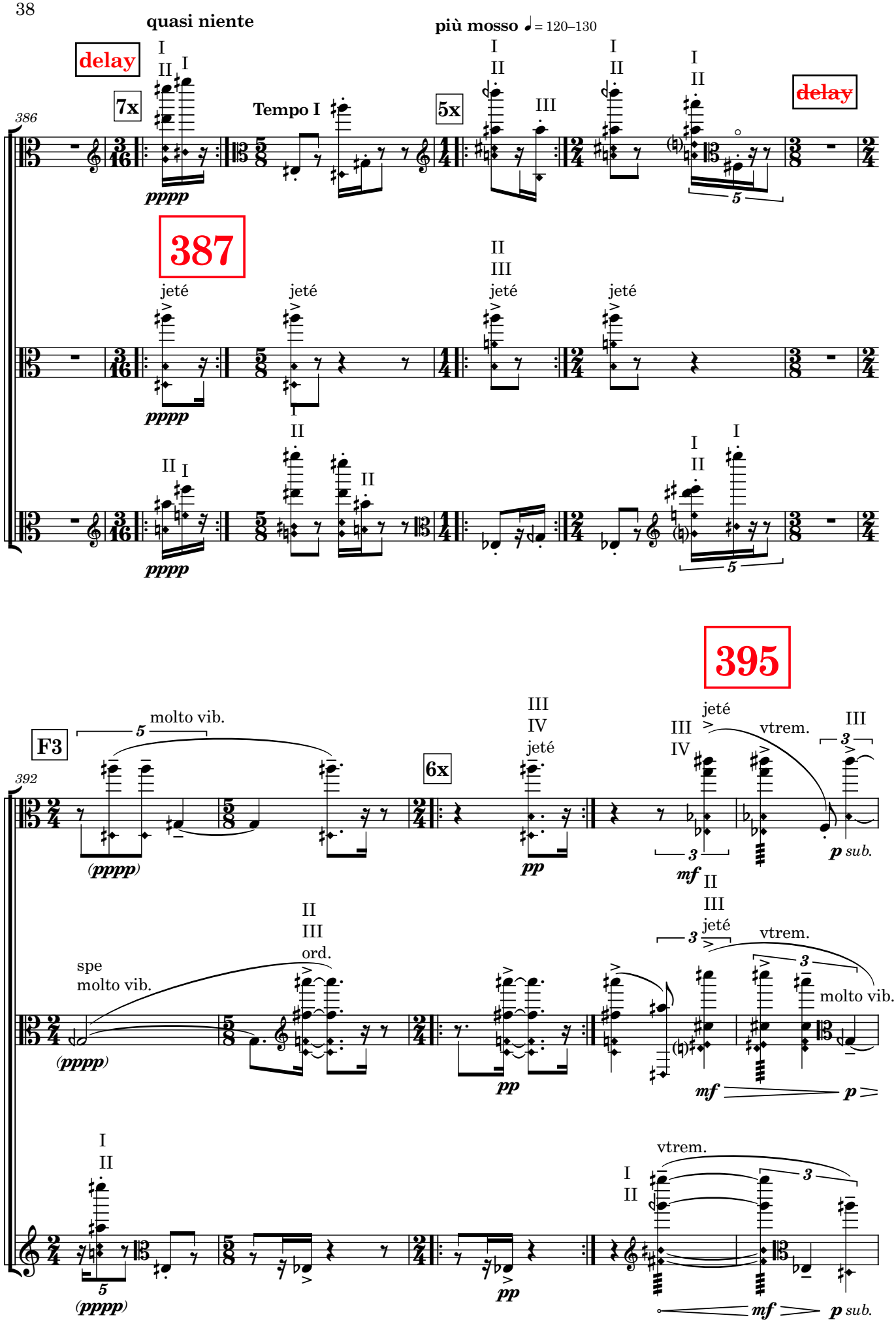

delay
330
Tempo I
I
II
III
vtrem.
arco
ord.
pp > pppp
mp > pppp
334
pizz.
(pppp)
IV
arco
jeté
delay
338
= 108–126
L'istesso tempo
7x
p
pppp
(tie on repeat)

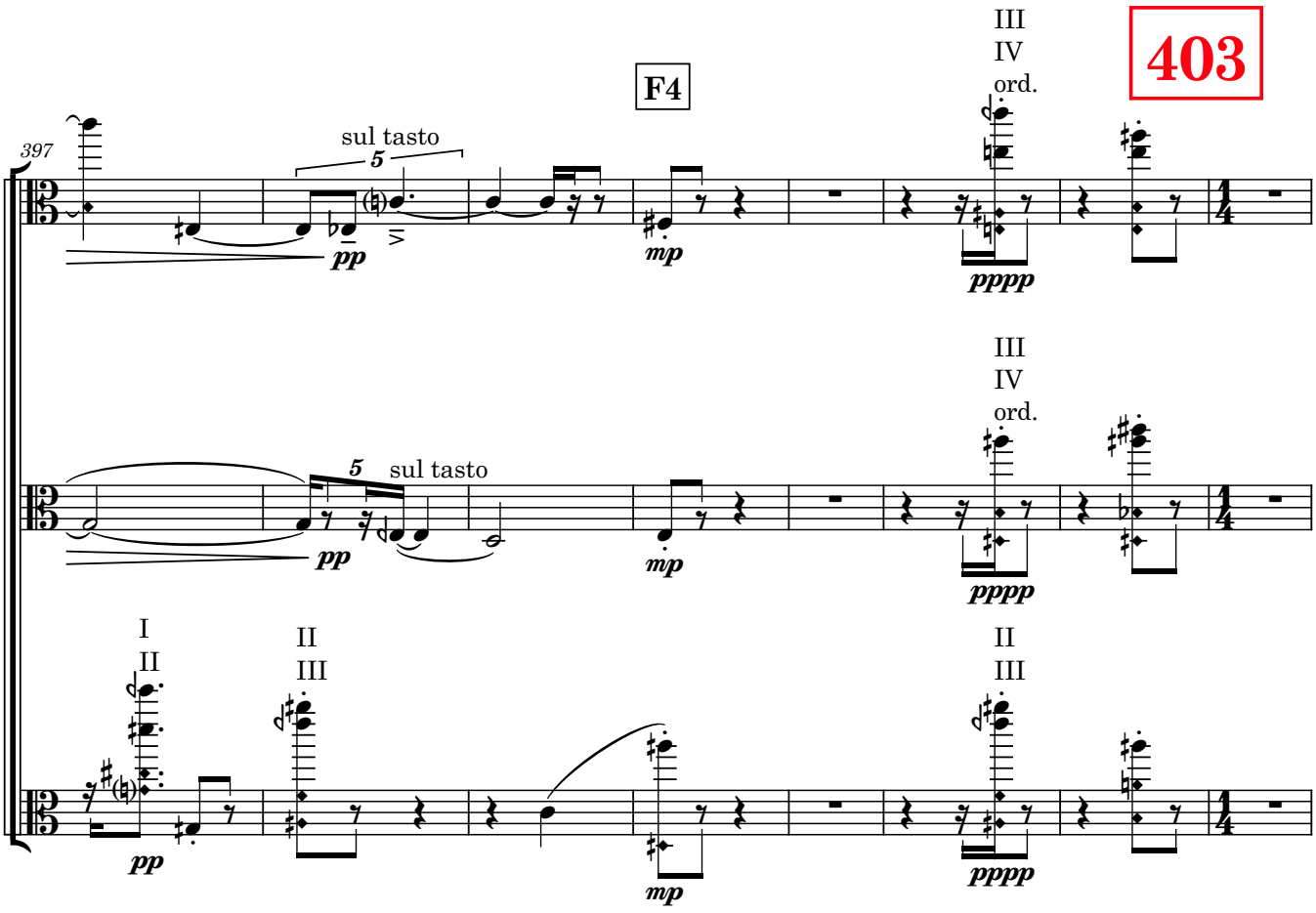

E7
5x
347
= 130–151
= 108–126
p
pppp
I
II
vtrem.
molto vib.
III
pizz.
II
III
pp
353
spe
IV
ord.
trem.ord.

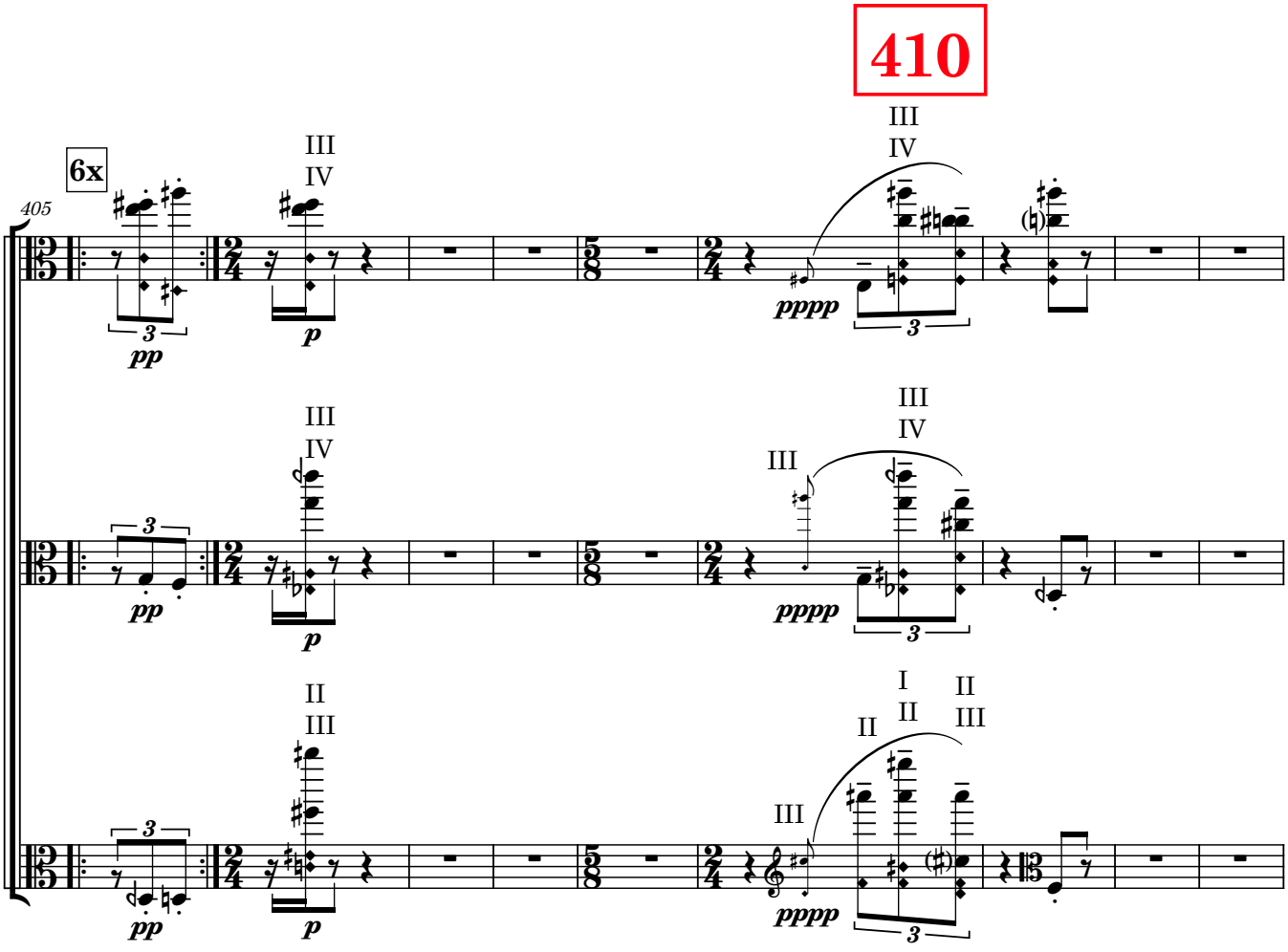

364
molto pesante, savage
♩ = 50–58
F1
364
366
7:4
ff
(ff)
pp sub.

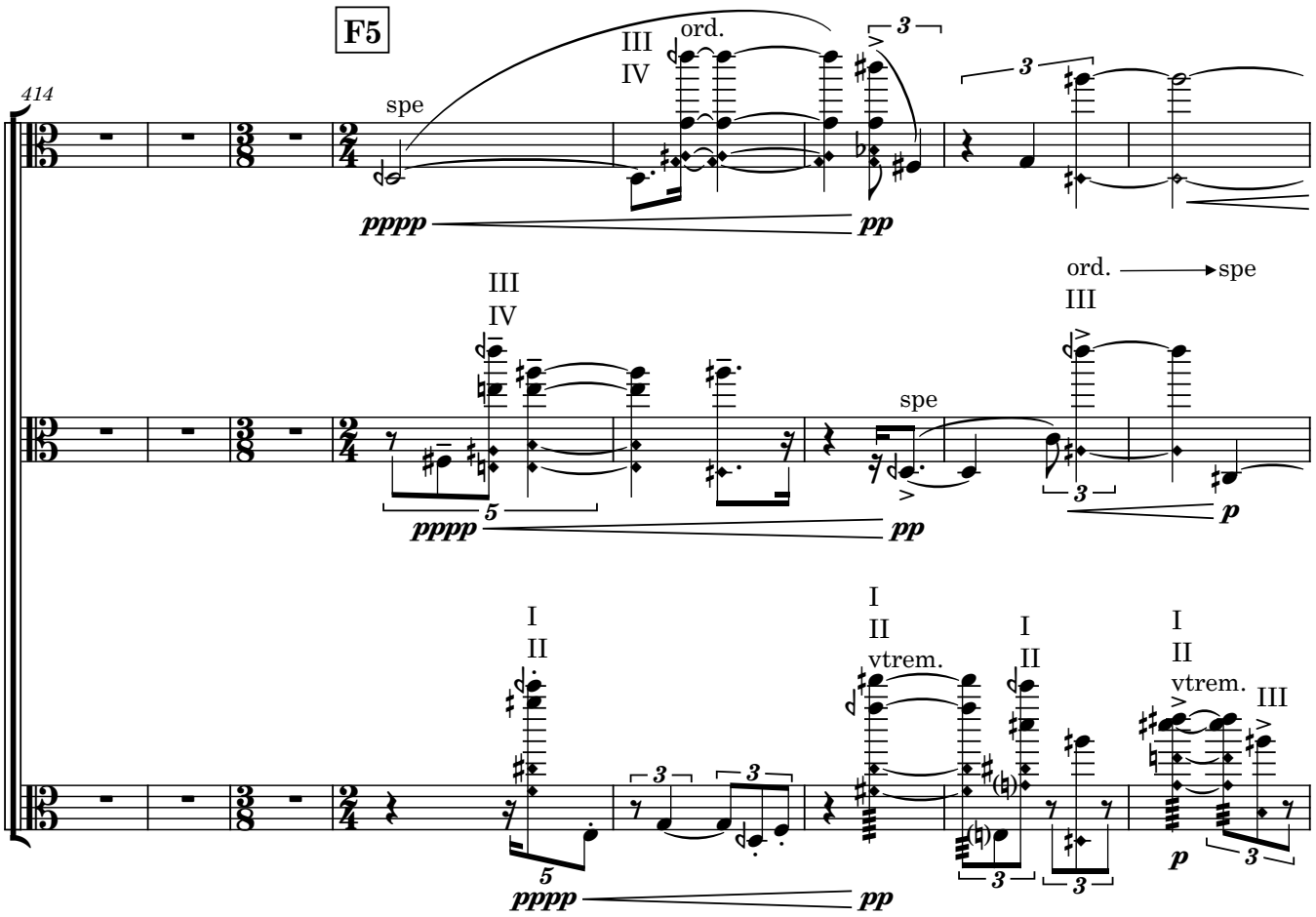

368
senza vib.
molto vib.
370
370

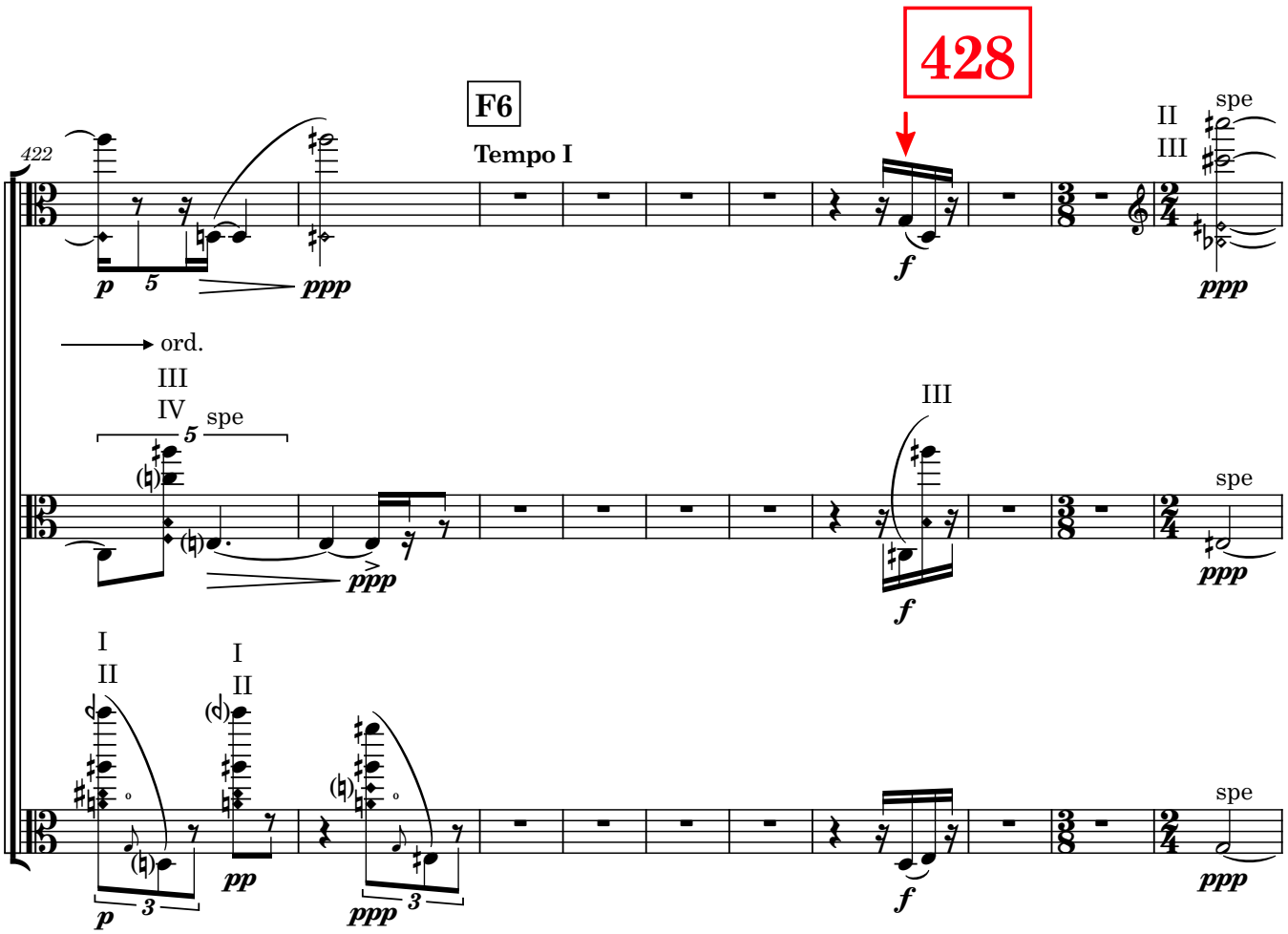

372
F2
4x
più mosso ♩= 120–130
ff sub.
pp sub.
pp
jeté
7:4
377
6x
5

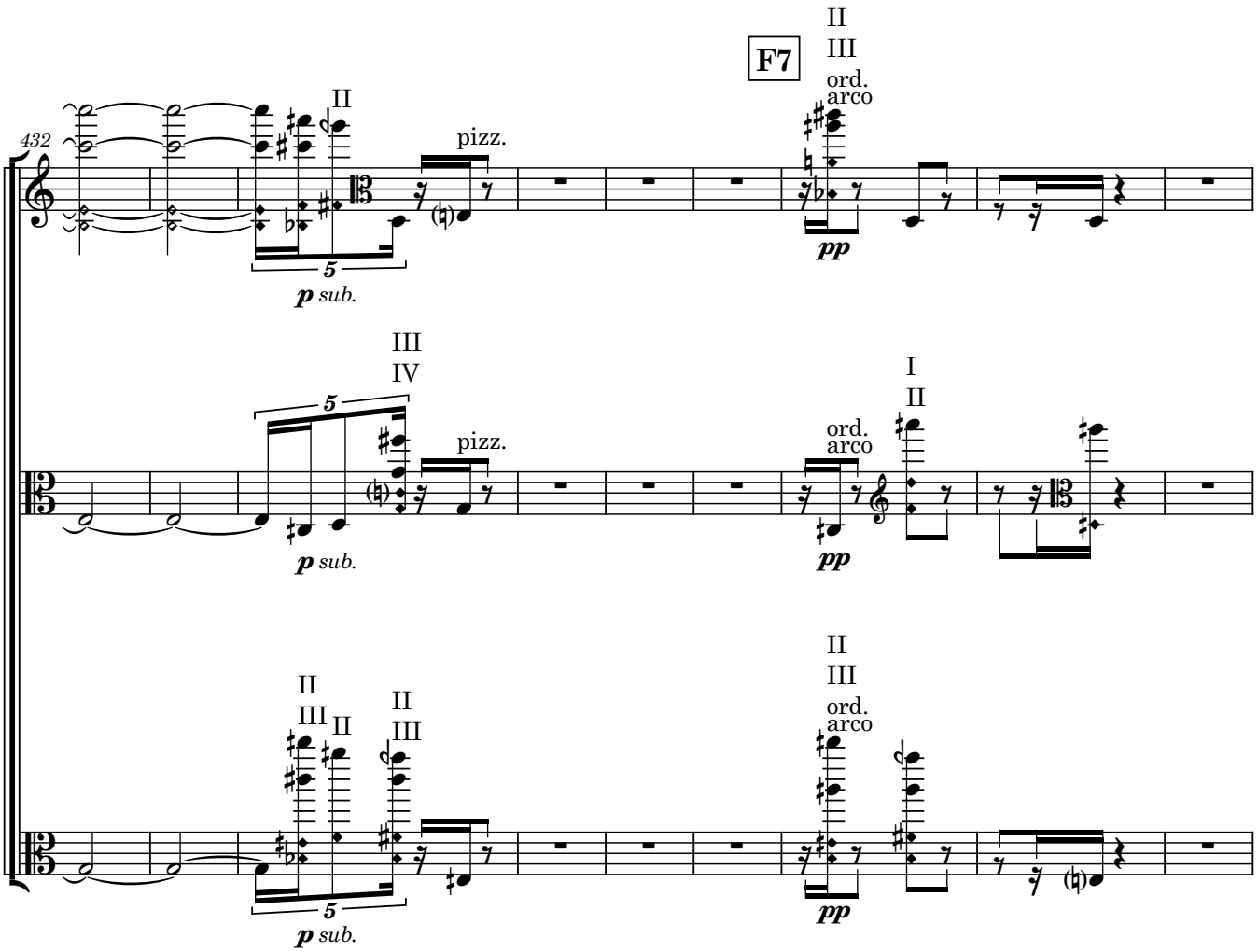

quasi niente
più mosso ♩= 120–130
delay
7x
Tempo I
5x
delay
386
387
jeté
pppp
395
F3
molto vib.
6x
jeté
vtrem.
392
(pppp)
pp
mf
p sub.
spe
molto vib.
ord.
molto vib.
vtrem.

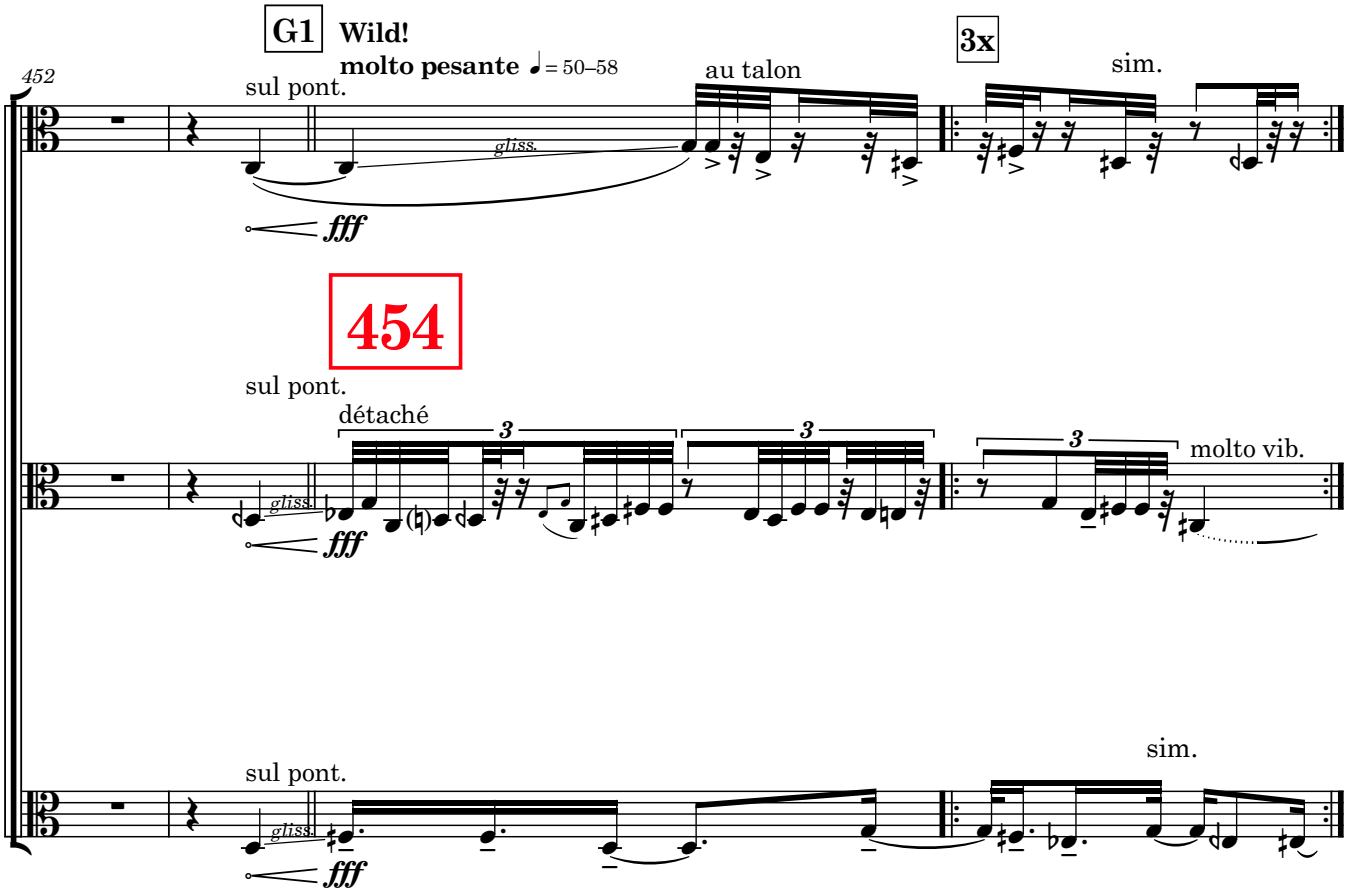

403
F4
397
sul tasto
5
III
IV
ord.
pp
mp
pppp
I
II

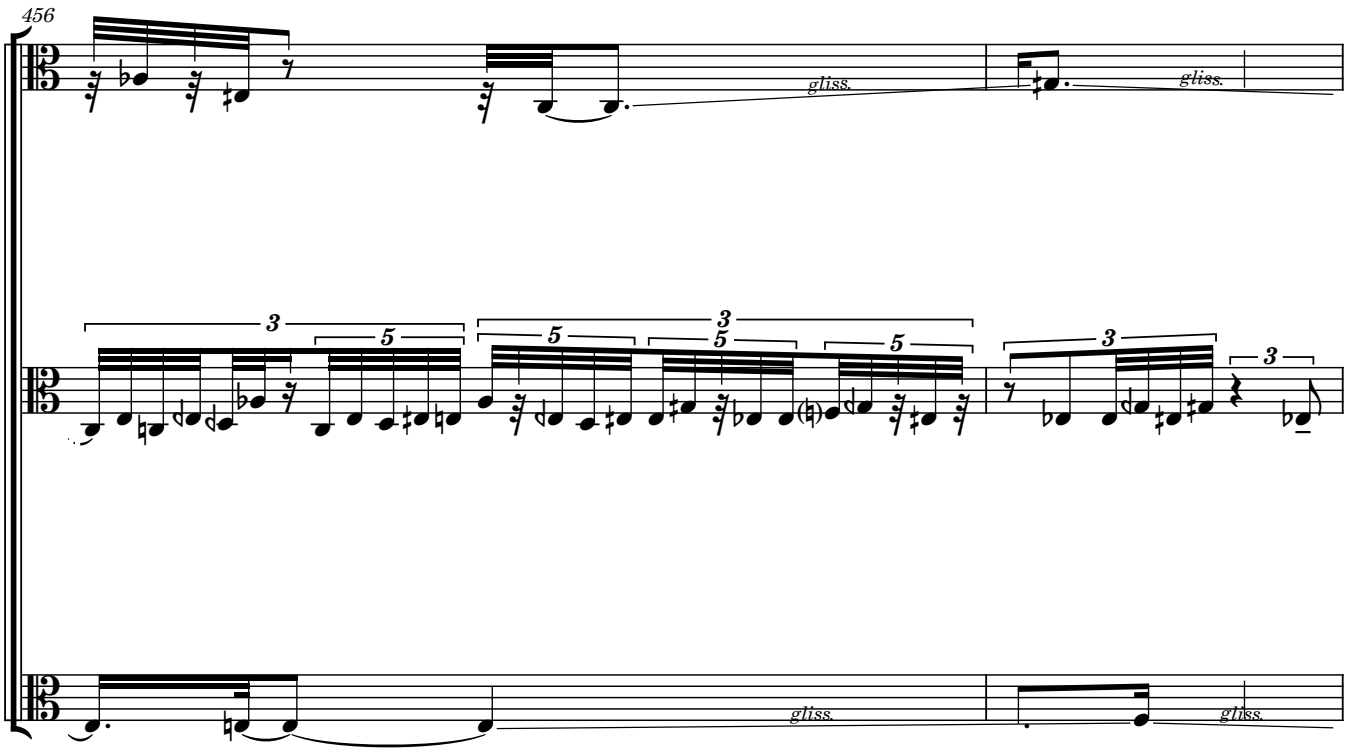

410
6x
405
III
IV
pp
p
pppp
3
II
III
I

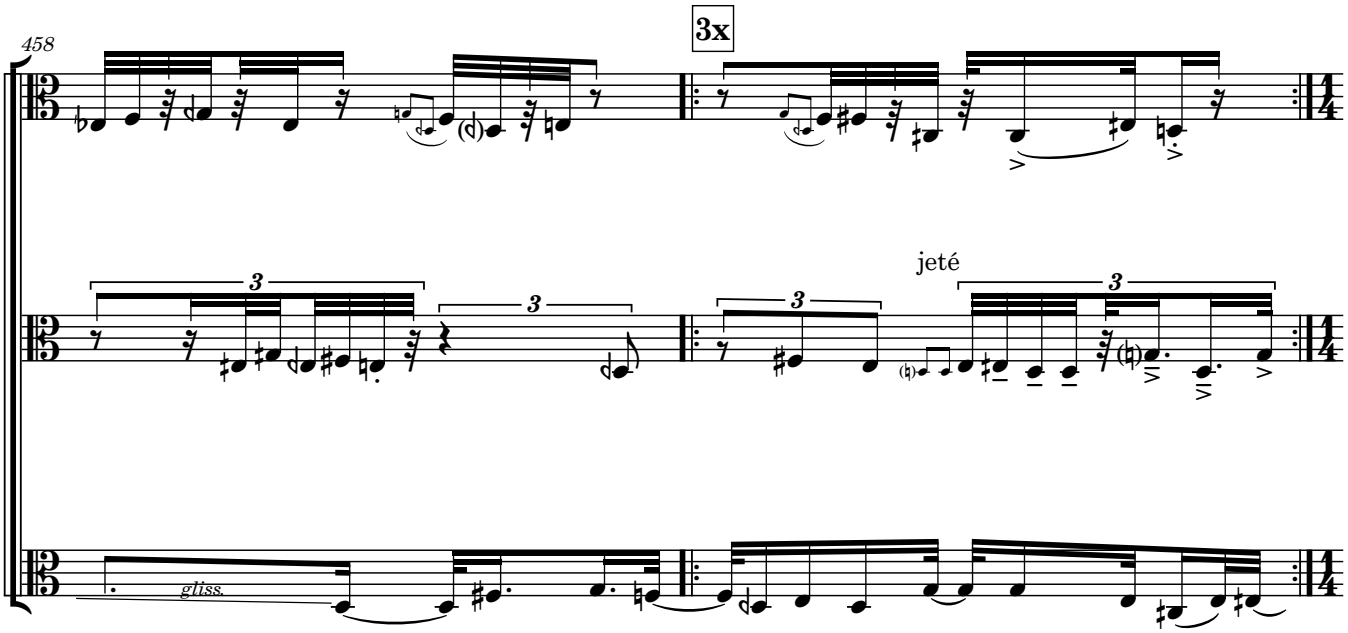

F5
414
spe
III
IV
ord.
pppp
pp
ord.
spe
p
vtrem.


428
F6
Tempo I
422
p
ppp
f
II
III
spe
ord.
pp

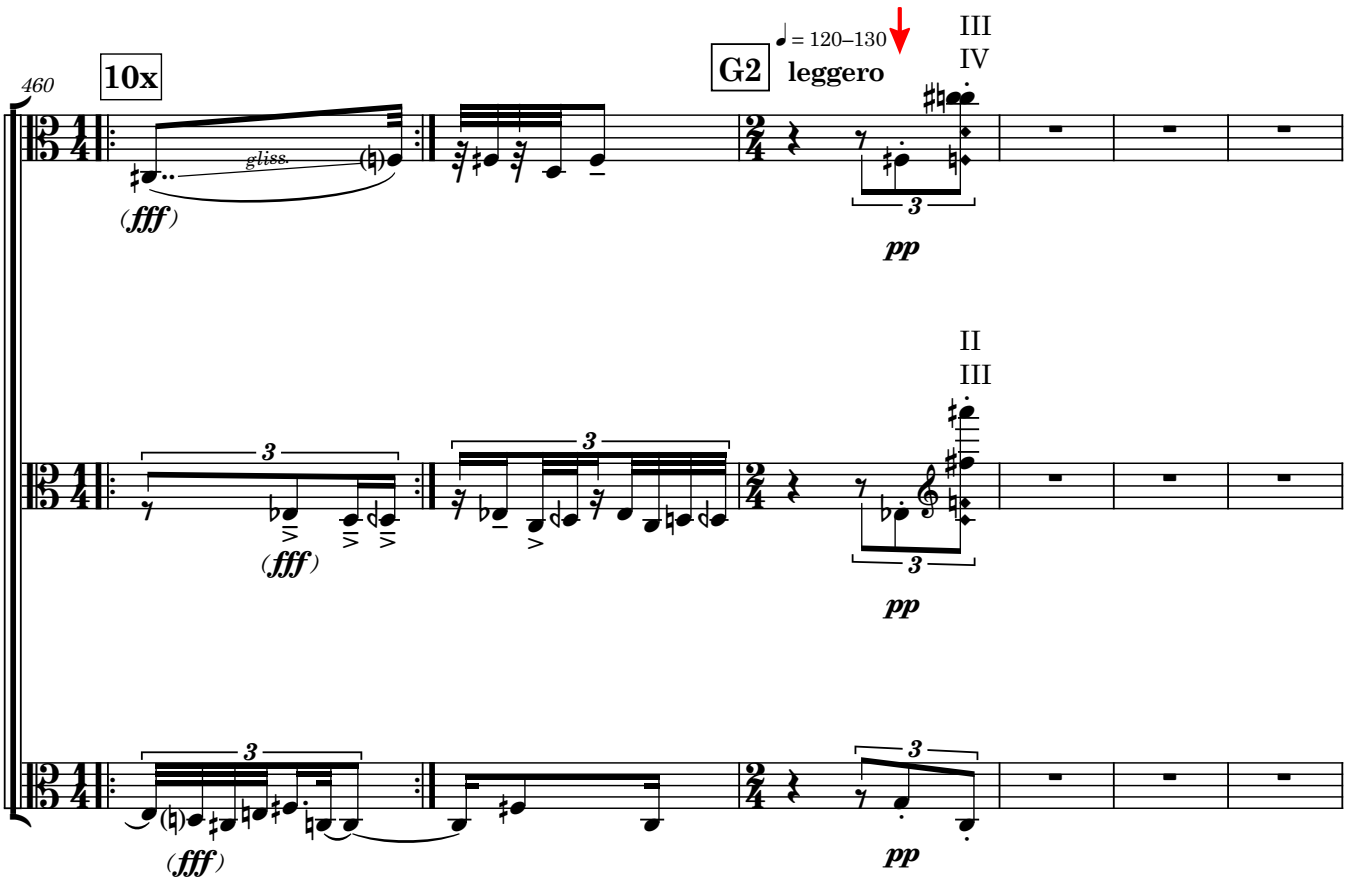

F7
II
III
ord.
arco
432
II
pizz.
5
p sub.
pp
III
IV
I
II
441
pizz.
3

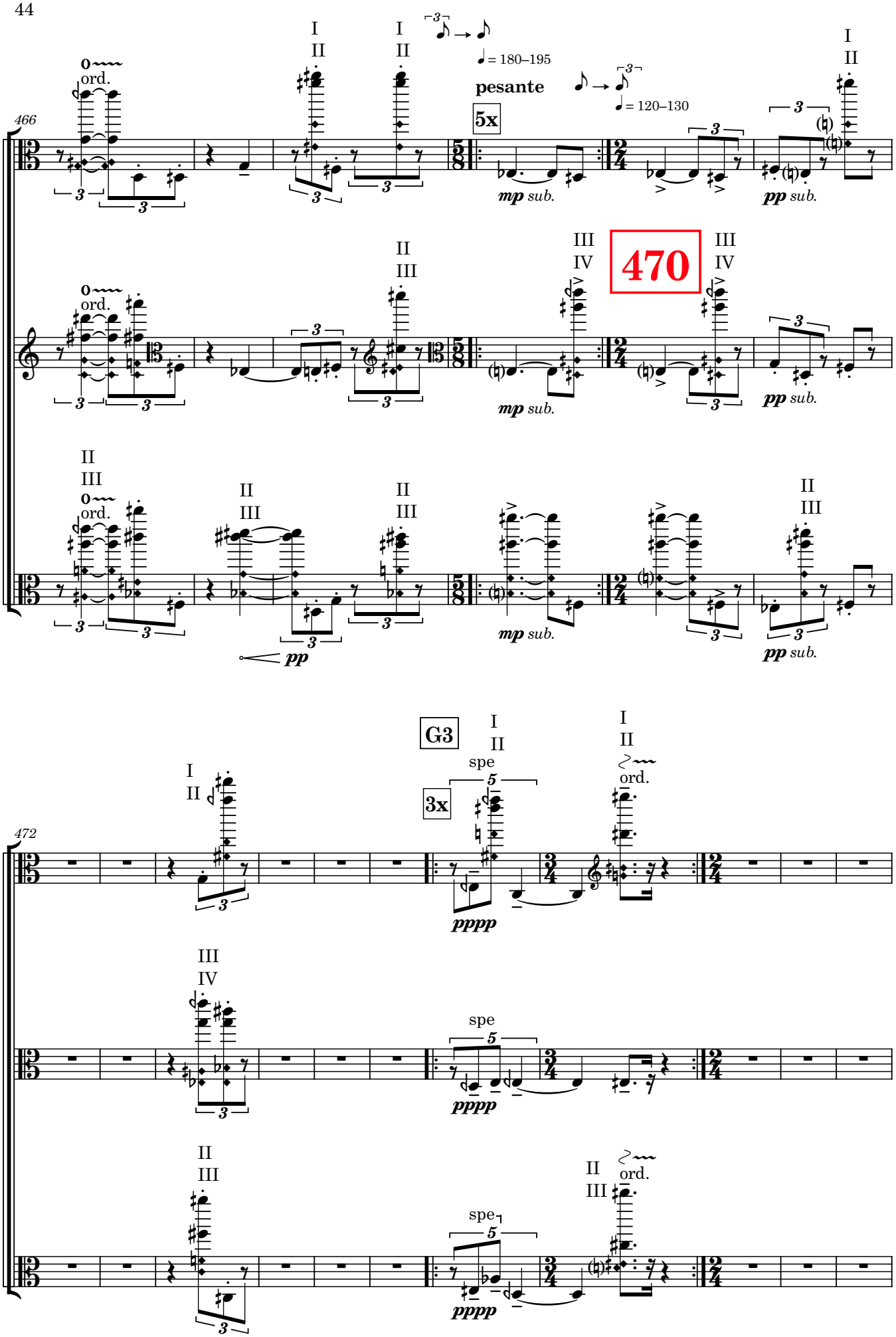

G1
Wild!
molto pesante ♩= 50–58
452
sul pont.
gliss.
fff
au talon
3x
sim.
454
sul pont.
détaché
3
molto vib.
sul pont.
sim.

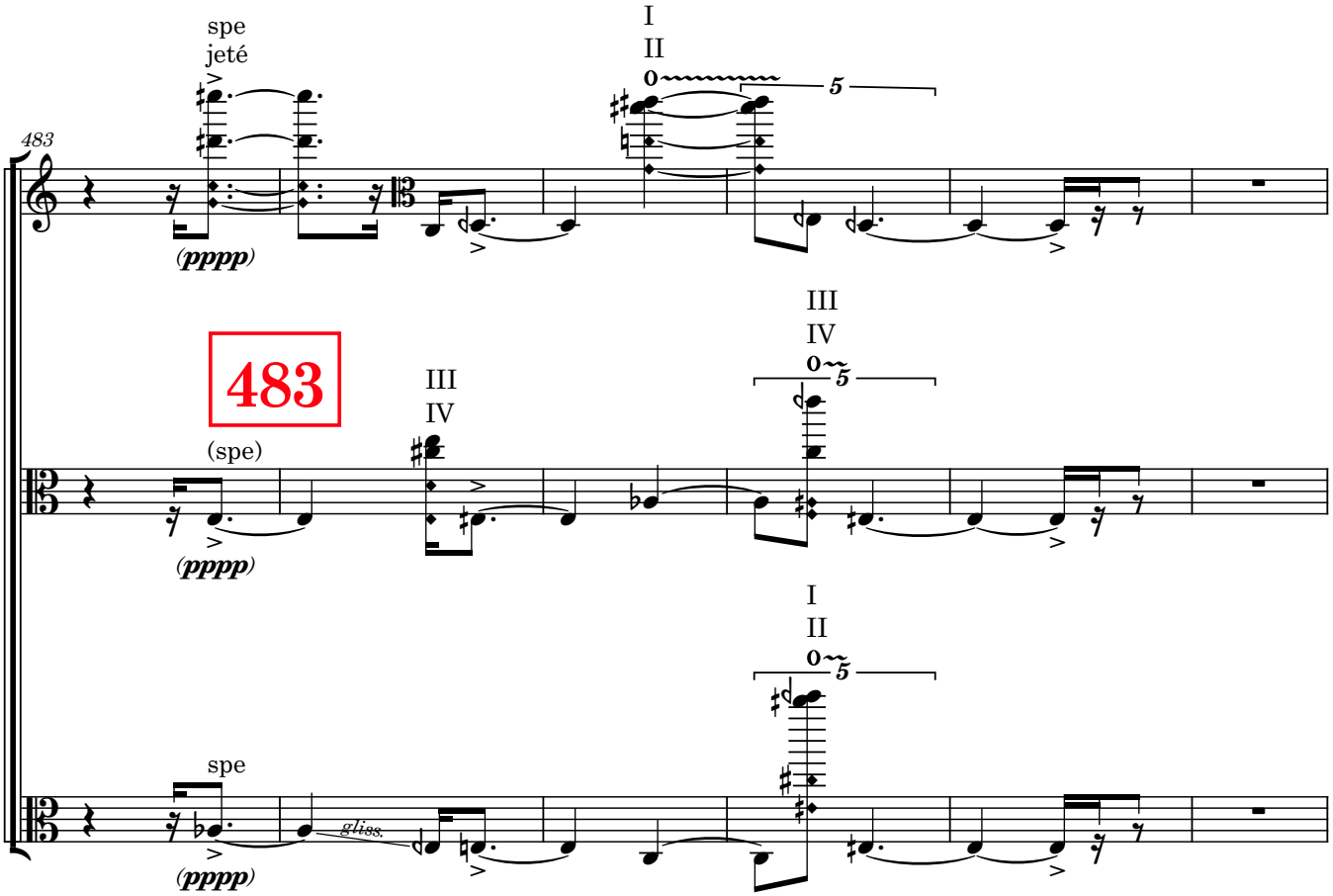

456
gliss.
3
5


458
3x
jeté
gliss.

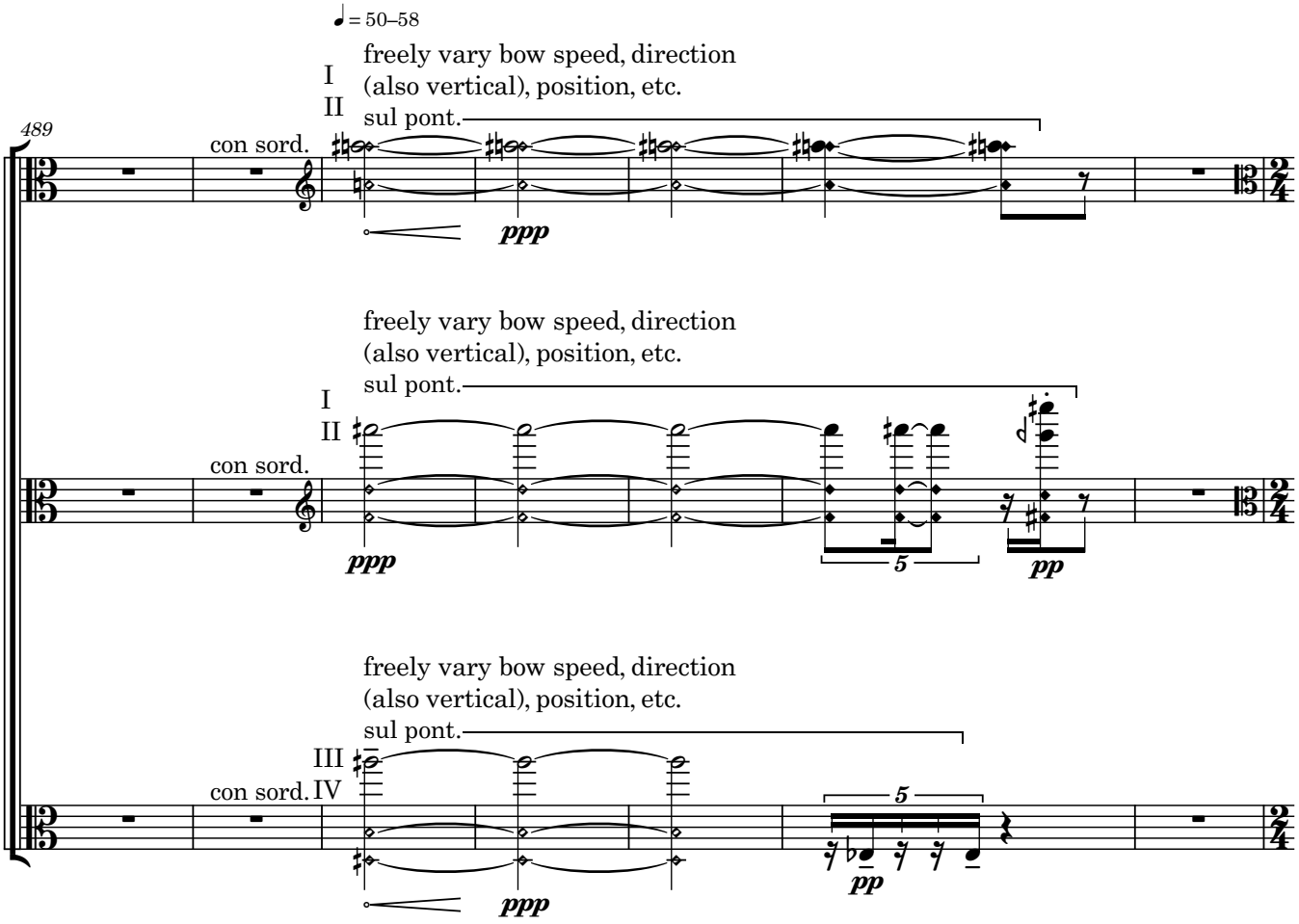
462

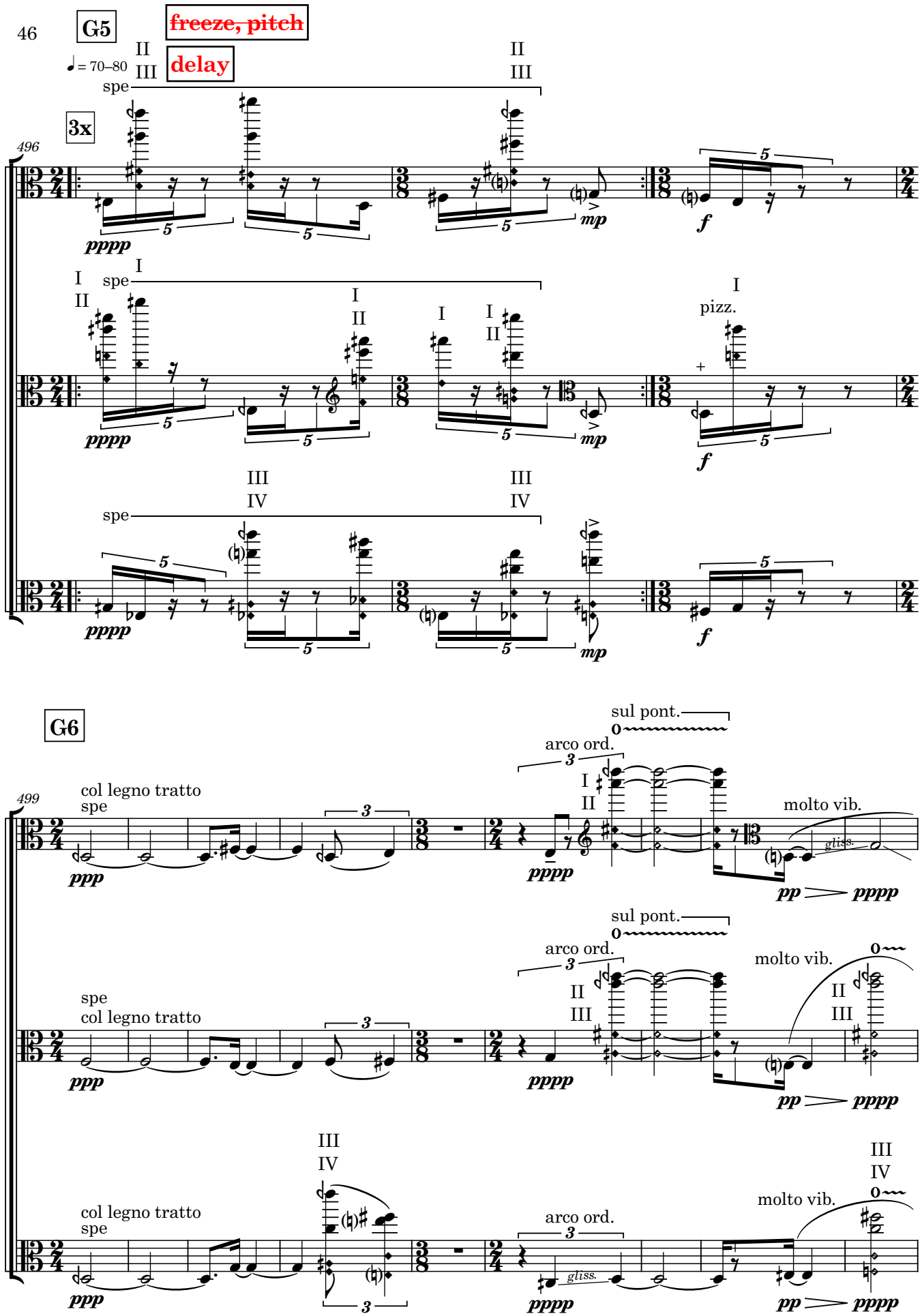

460
10x
gliss.
(fff)
G2
= 120–130
leggero
III
IV
pp
II
III
(fff)
pp
(fff)
pp

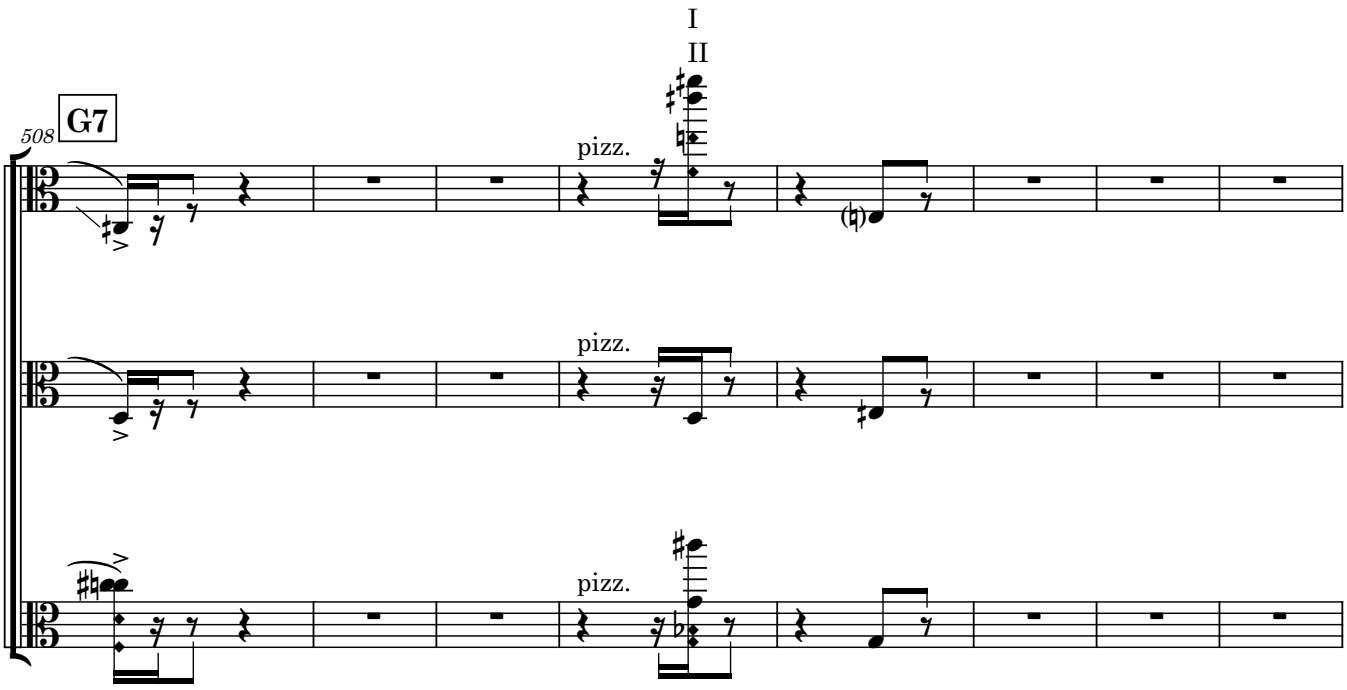

466
ord.
I
II
= 180–195
pesante
5x
= 120–130
mp sub.
pp sub.
470
III
IV
II
III
pp
G3
3x
spe
5
pppp
ord.

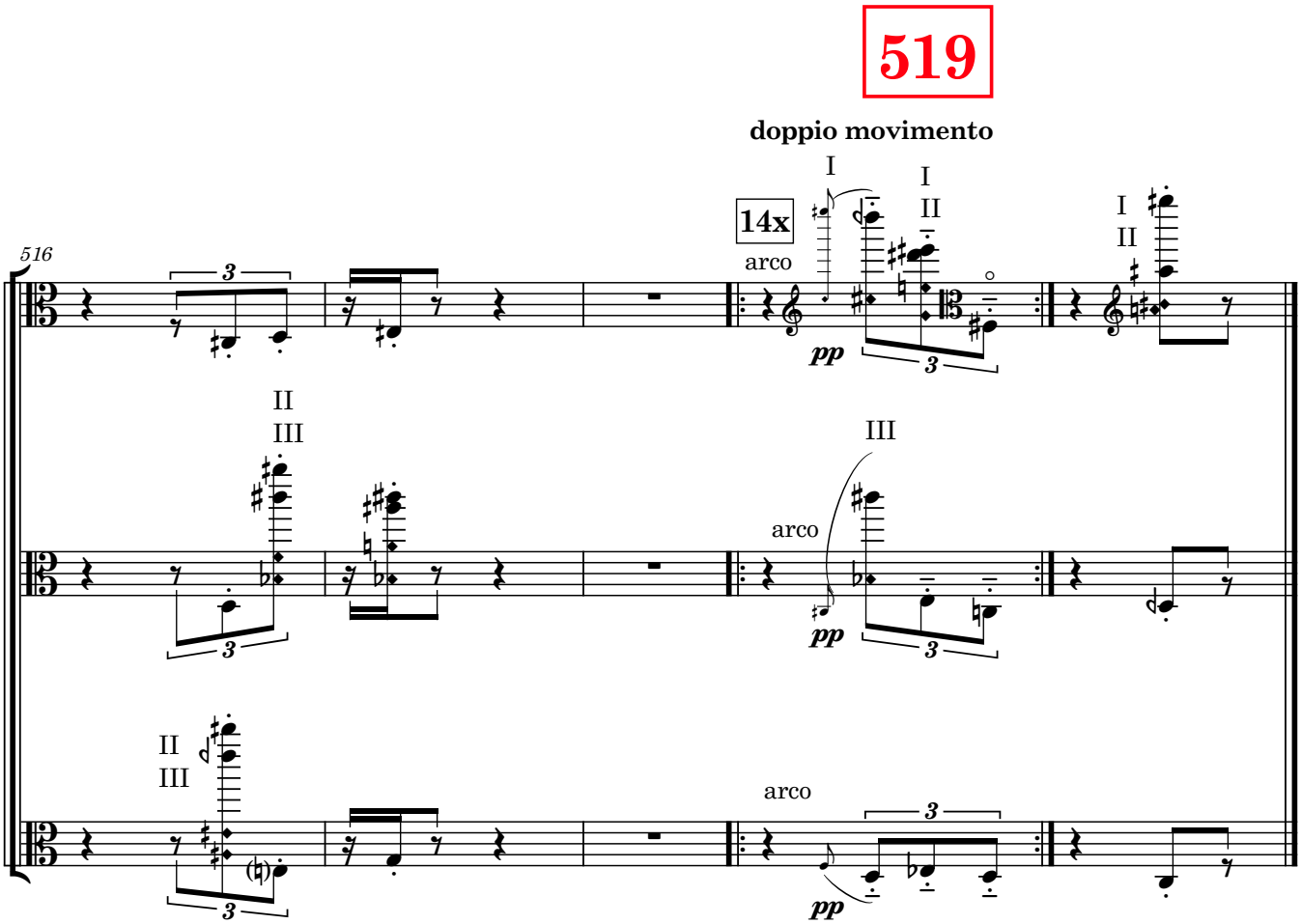


G4 **freeze, pitch**




46
G5
~~freeze, pitch~~
delay
= 70–80
3x
496
spe
pppp
mp
f
pizz.
G6
499
col legno tratto
spe
ppp
sul pont.
arco ord.
molto vib.
gliss.
pp
pppp


508
G7
I
II
pizz.
pizz.
pizz.


519
doppio movimento
516
14x
arco
I
II
III
pp
3
arco
arco