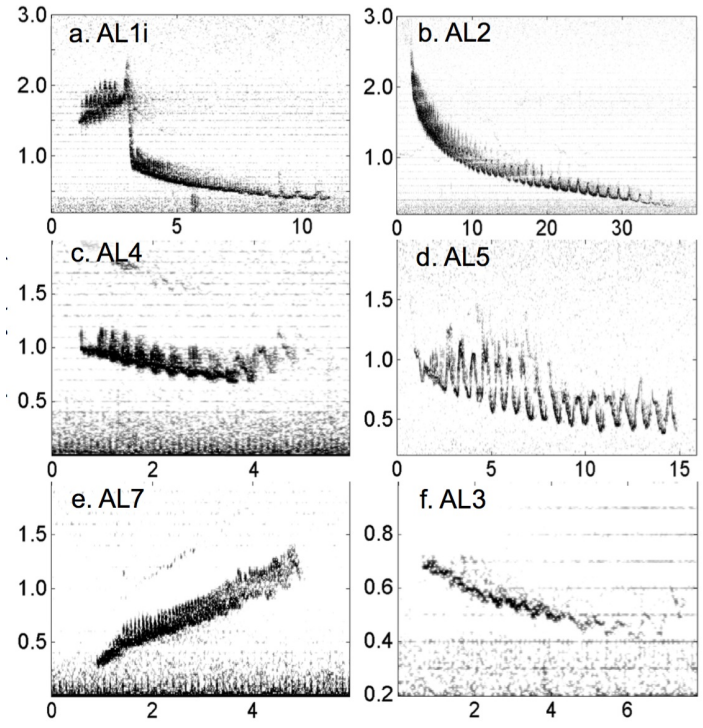
Under the sea ice

for string quartet and electronics

Meditations on the songs of the Arctic bearded seals



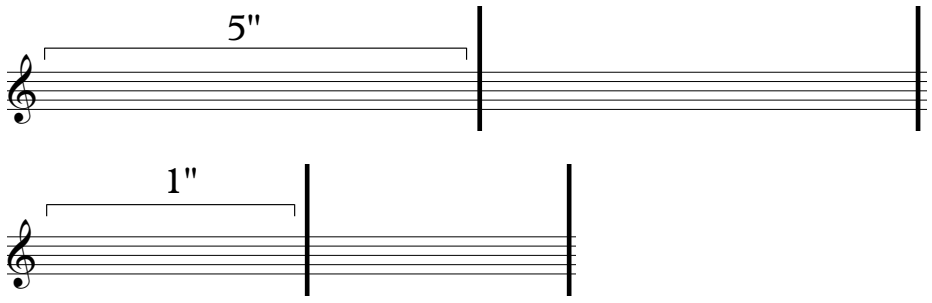
Christopher Luna-Mega

Special thanks to Joshua Jones, Staff Research Associate
at the Scripps Whale Acoustic Lab (University of California, San Diego)
for providing the recordings and information that made this piece possible

Performance Notes

Proportional Notation

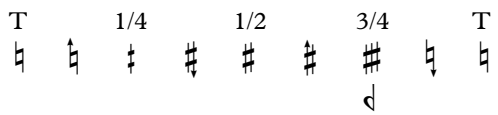
Each bar in the score is either 1” or 5” long.
Brackets announce a change in the duration of a bar, which will affect the subsequent bars until a new change occurs.



Durations / Rests

Stems do not indicate duration –their purpose is visual reference.
Sounds must be continued until followed by another sound or by a silence.

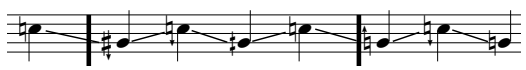
Accidentals



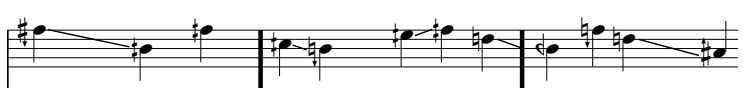
In various points of the piece, especially the fast sections, playing approximately the suggested accidental should suffice.

Pitch references in glissandi

Note heads preceded and succeeded by glissandi must not be attacked. They serve as precise pitch references.



Pitches without a preceding glissando must be attacked



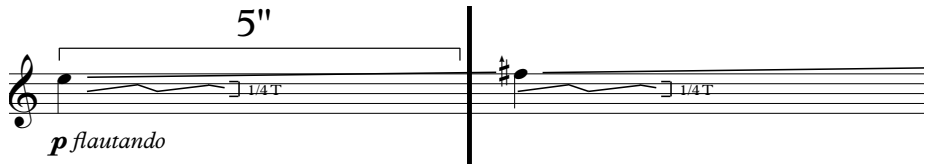
Bow pressure accents over glissando

Fast irregular increase in bow pressure while glissando

Tremolo

Tremolos should be played as fast as possible.
Occasionally perform irregular rhythms (ad. libitum).

Ad libitum glissandi



Ad libitum gradual fluctuations around the notated pitches (i.e. ¼ of a tone higher and ¼ tone lower than E) and dynamics (i.e. *pp* and *mp*). The fraction in the right side of the bracket indicates the intervallic frame for the ad lib. glissandi (i.e. ¼ of a tone or ½ of a tone around the written note).

The ad. lib. glissando figure lasts the full bar in which it is notated. The pitches in between the figure must not be attacked (they are referential).

Time cues and synchronization

Time cues are provided consistently throughout the score. Players must be synchronized to these cues due to their interaction with the fixed media. This may be achieved by one or more of these options: 1. Using individual timers on the stand; 2. Using click tracks; 3. A conductor.

Electronics

An audio file (stereo) with the tape part for the piece is provided electronically. Fade-ins and fade-outs indicated in the score have been previously set in the audio file. The track must be leveled and pre-set in dress rehearsal prior to a performance. Please e-mail ch.luna.mega@gmail.com to request the audio file.

The output devices used for playback are flexible, from 2 speakers on stage to several speakers surrounding the audience, depending on the technology available.

Supplementary material

All the musical materials performed by the string quartet derive from direct transcriptions and arrangements of underwater songs of bearded seals in the Chukchi Sea, north of Point Barrow, Alaska.

Included in the parts are the transcriptions of each of the seal songs, from which all the materials in the piece are developed.

Together with the audio file to be played back in the performance of the piece, there is a folder with audio files for each seal call, with labels that correspond to those of the transcriptions included in the parts. Please take a few moments prior to rehearsal to play these audio while looking at the corresponding transcriptions. Listening to the source material is the essence of this work.

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Christopher Luna-Mega (2015)

1

T 1/4 1/2 3/4 T

Vl. I 40"

Vl. II 40"

Vla. 40"

Vc. 40"

Elec. Sea ice 40"

mp

2

5"

(gliss to every note) (gliss simil)

p flautando 1/2 T *mp*

5"

p flautando 1/4 T *mp*

5"

8va

p flautando 1/4 T loco *mp*

5"

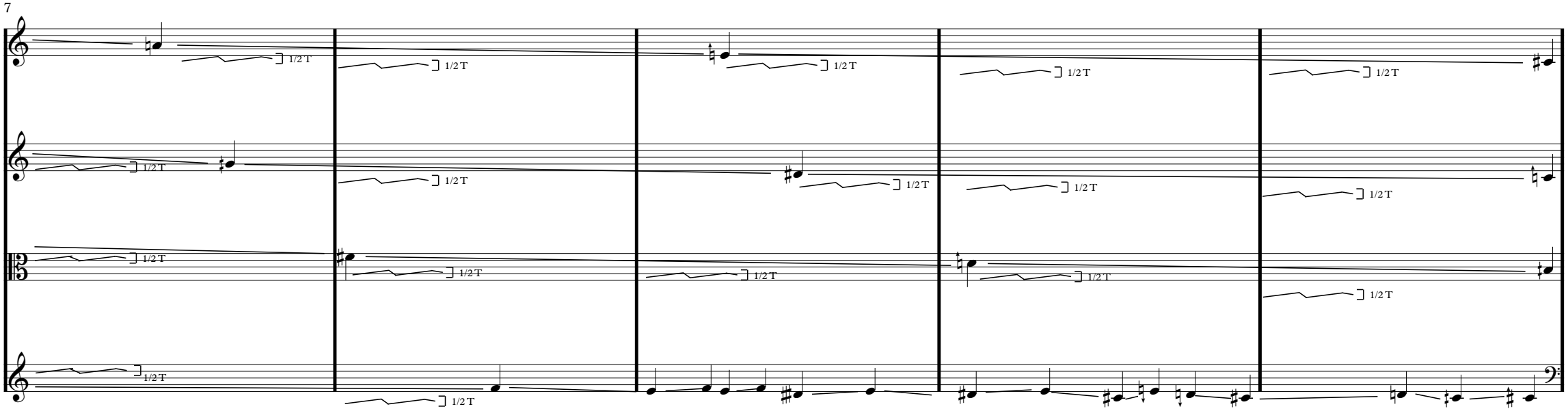
p flautando 1/4 T *mp*

Sea ice

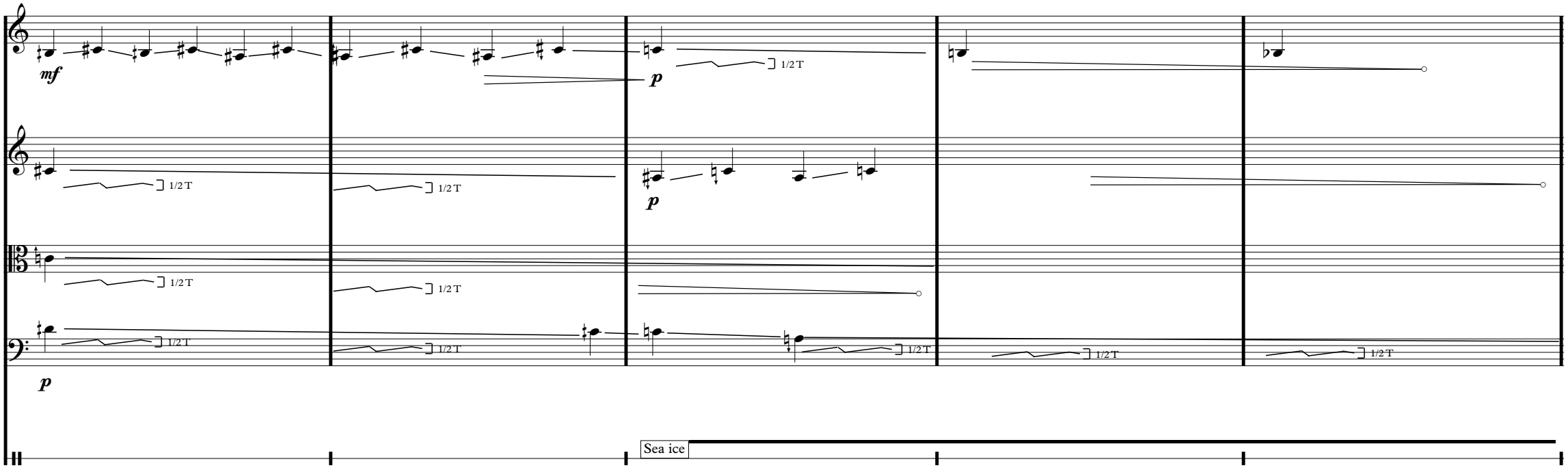
mp

0:48 gradual fade out to 1:00

7



12



gradual fade in/crescendo to ***mf*** until 2:10

17

1/2 T

1"

mf f

21

8va

p mf p f f p

29

f f f f f p f p mf p

37

8va

f *ff* *mp*

8va

f *ff* *mp*

f *ff* *mp*

8va

mp

45

53

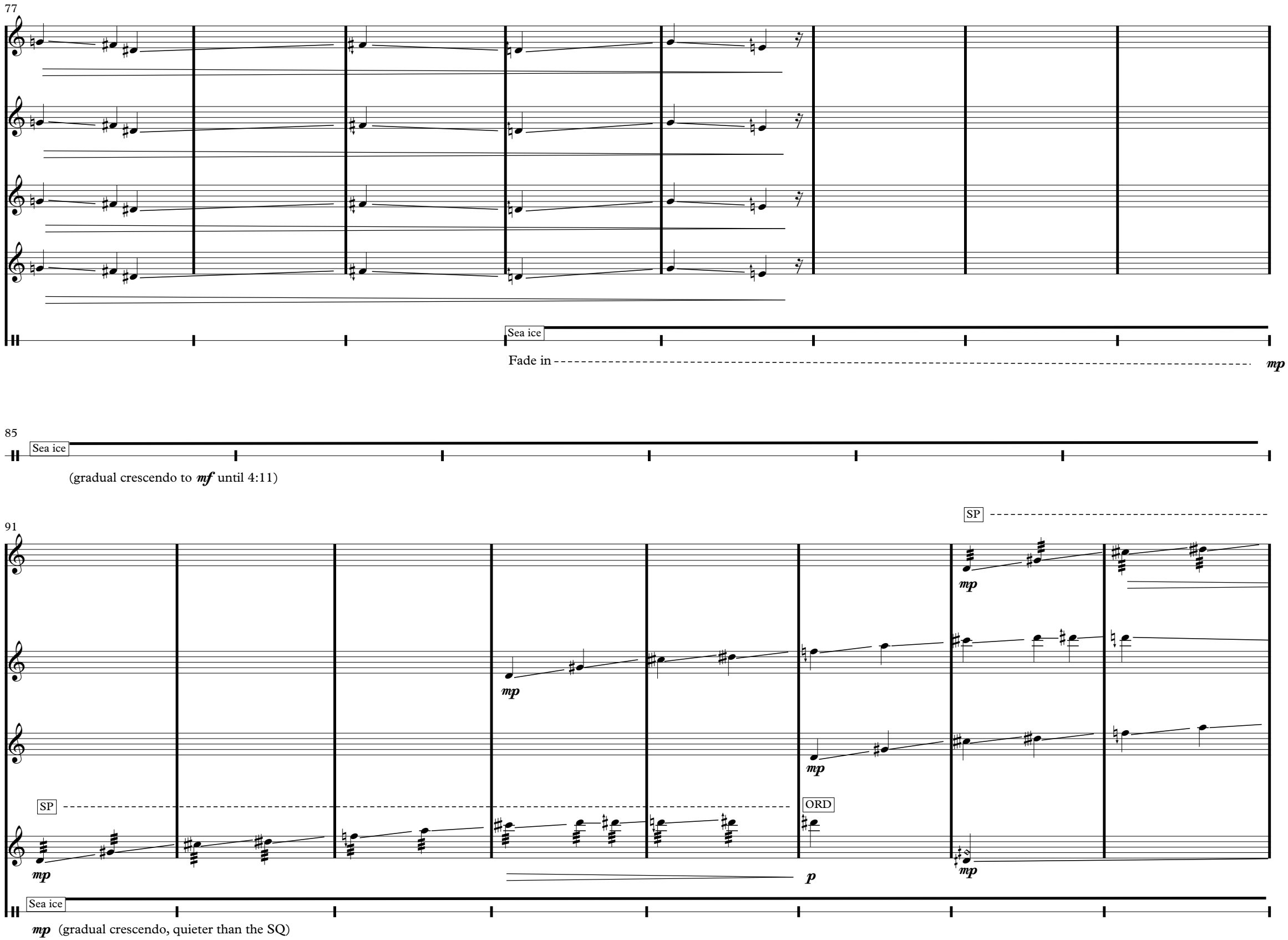
61

loco

loco

loco

69


77
Sea ice
Fade in
mp
85
Sea ice
(gradual crescendo to mf until 4:11)
91
SP
mp
mp
mp
SP
ORD
mp
p
mp
Sea ice
mp (gradual crescendo, quieter than the SQ)

99

ORD

5"

1/2 T

p

Sea ice

mp (gradual crescendo, quieter than the SQ)

103

SP ORD

(gliss.)

mf

mf (gradual crescendo, same dynamics as SQ)

107

1/2 T

Sea ice

crescendo, same dynamics as SQ

1"

110

8va

f

(gliss to every note)

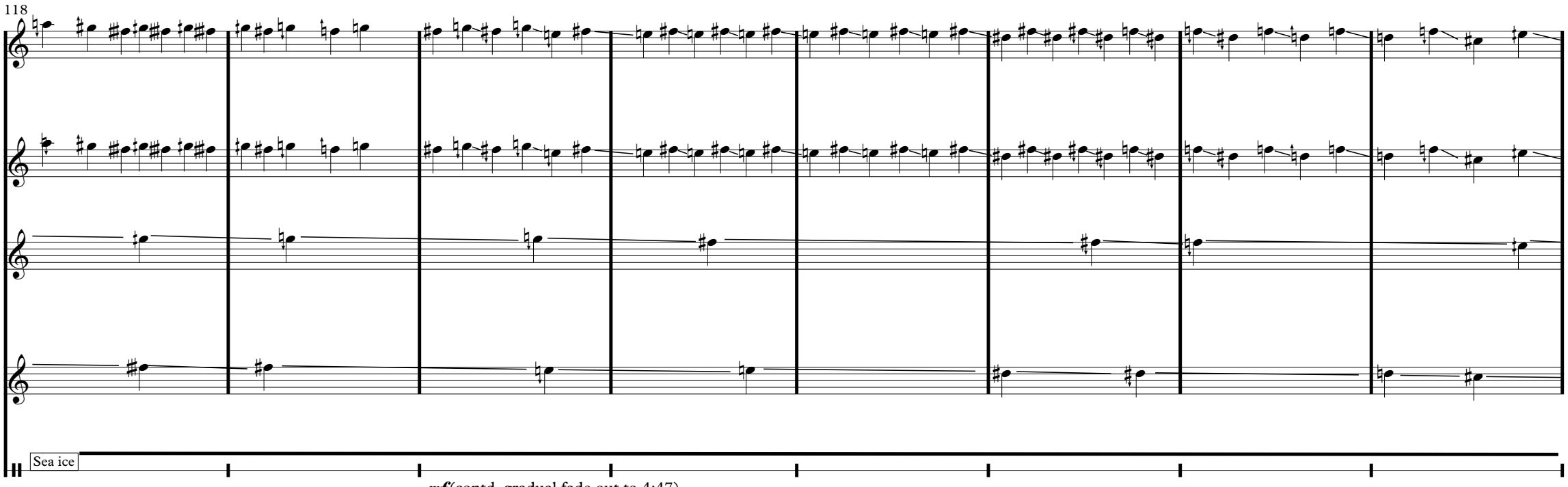
(gliss simil)

mf

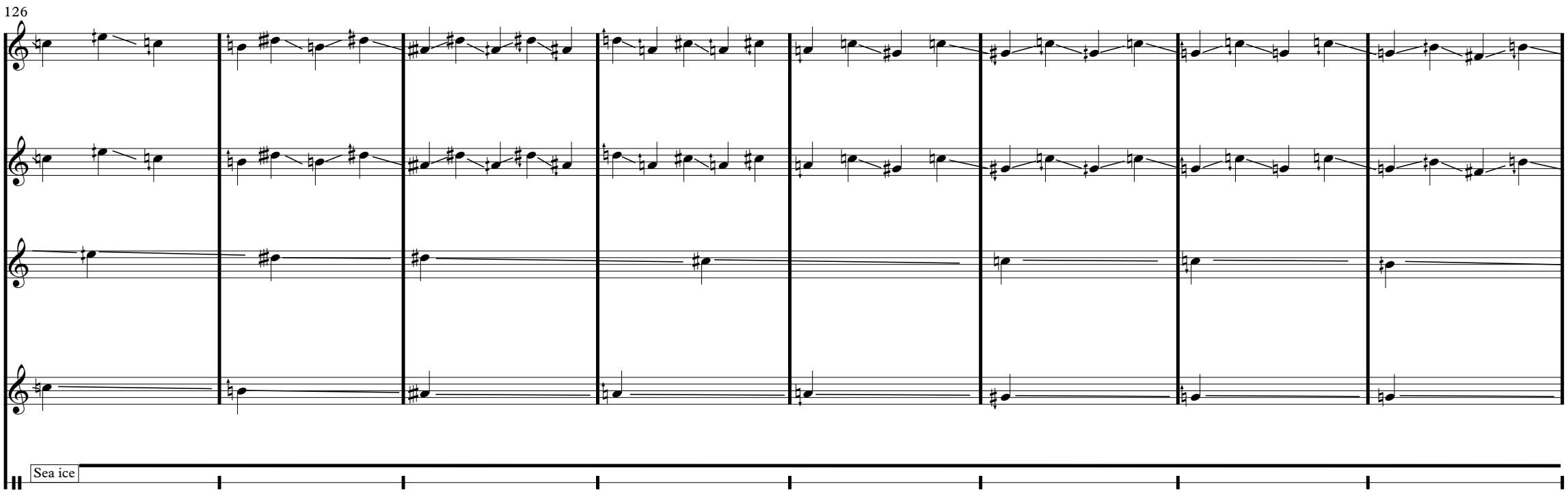
Sea ice

f gradual fade out to 4:47

118


Sea ice
mf (contd. gradual fade out to 4:47)

126


Sea ice
p (contd. gradual fade out to 4:47)

134

loco

loco

loco

mf

loco

mf

Sea ice

142

mp

mp

mp

mp

150

mf

158

mf

mp

8va

mf

mp

166

mp

loco

f

174

f

mf

mp

182

mp

mp

f

190

mp

8va

mf

mf

198

8va

f

mp

206

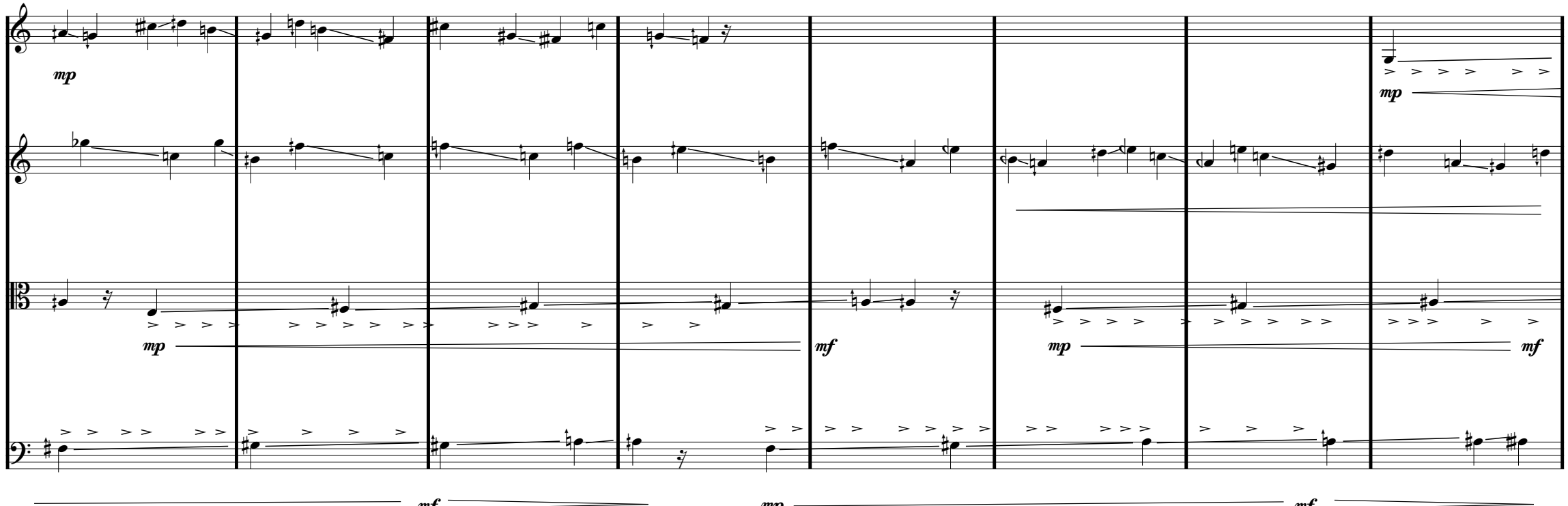
mf

mp

mf

mp

214



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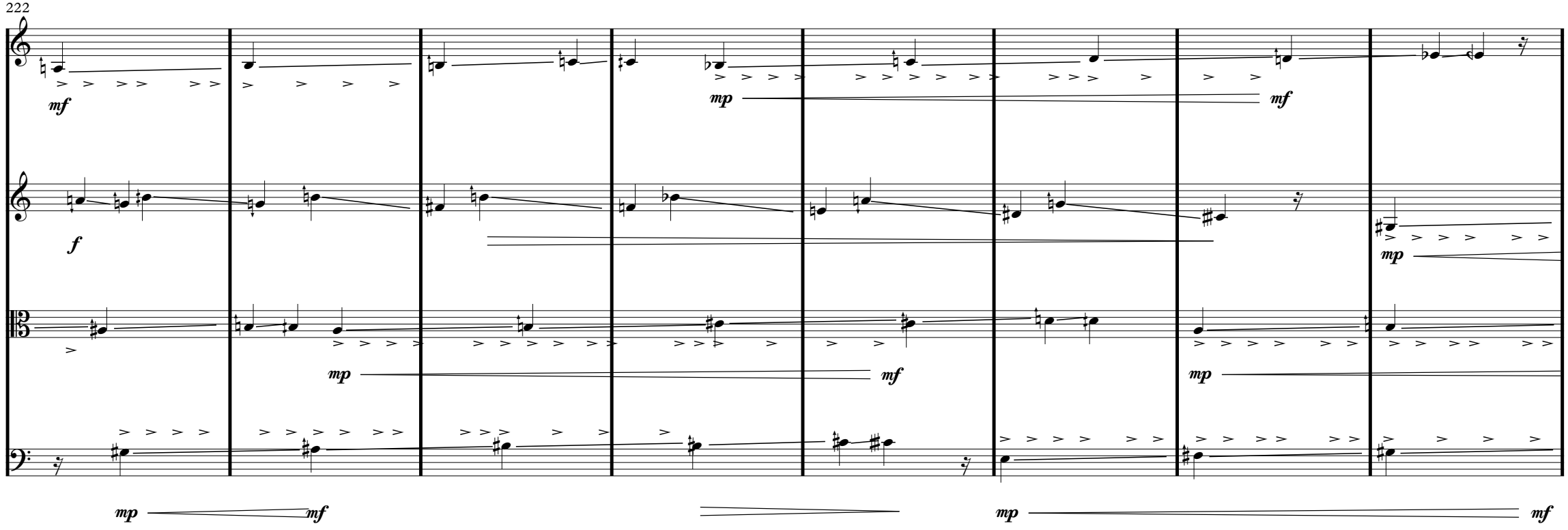
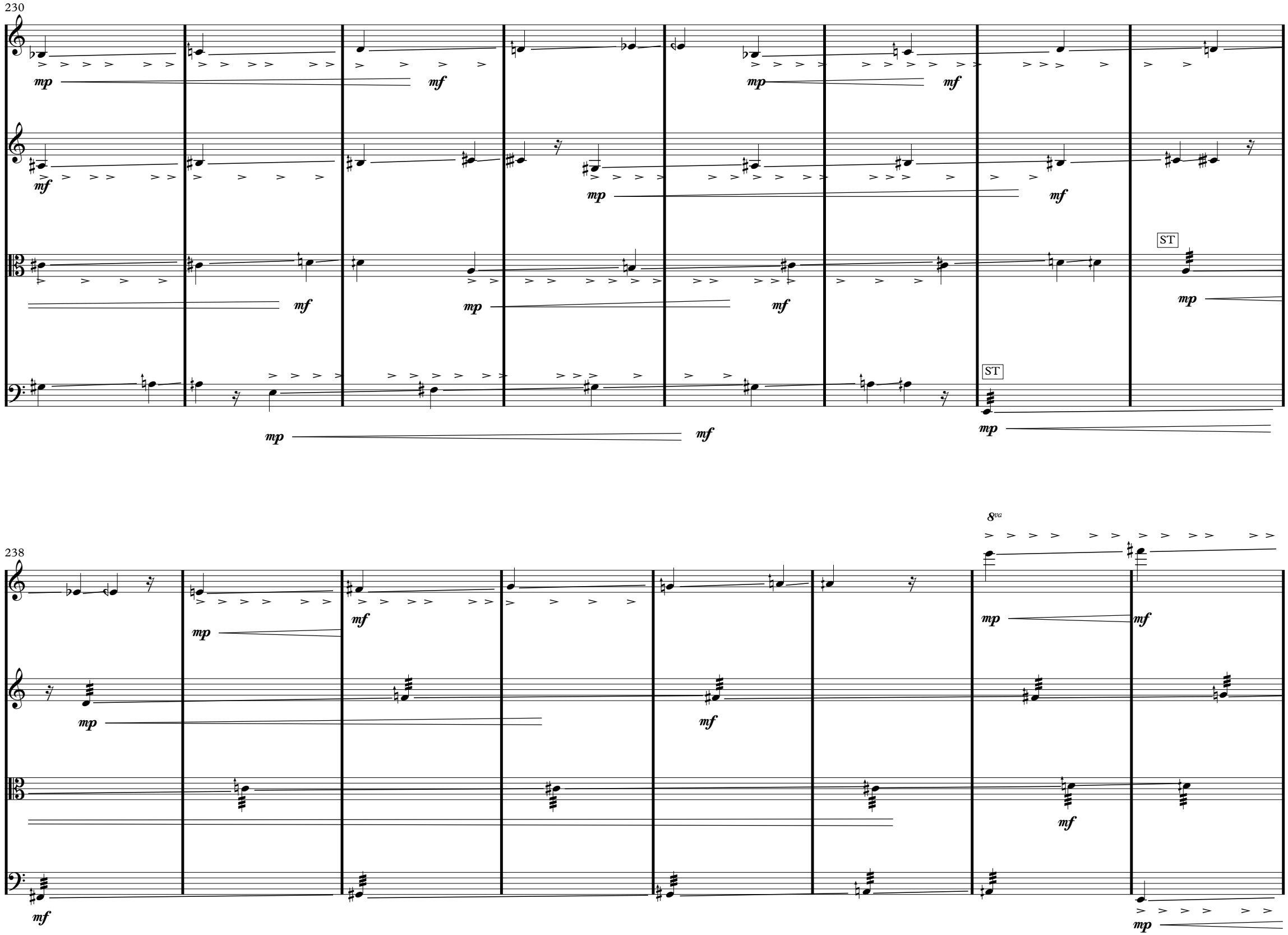



230
mp
mf
ST
238
8va

246

mf

mp

mf

f

mp

mf

mp

<mf><mf>

254

mf

f

(gliss)

(gliss)

f

mf

8va

f

p

f *f* *f* *f* *f* *f* *f* *p* *f* *p* *mf*

262

(8va)

f

8va

f

<mf><mf>

p

f

ff

mp

(gliss to every note)

(gliss simil)

mf

(II)

f

ff

mp

270

p

f

f

f

f

f

p

f

p

mf

p

loco

(8va)

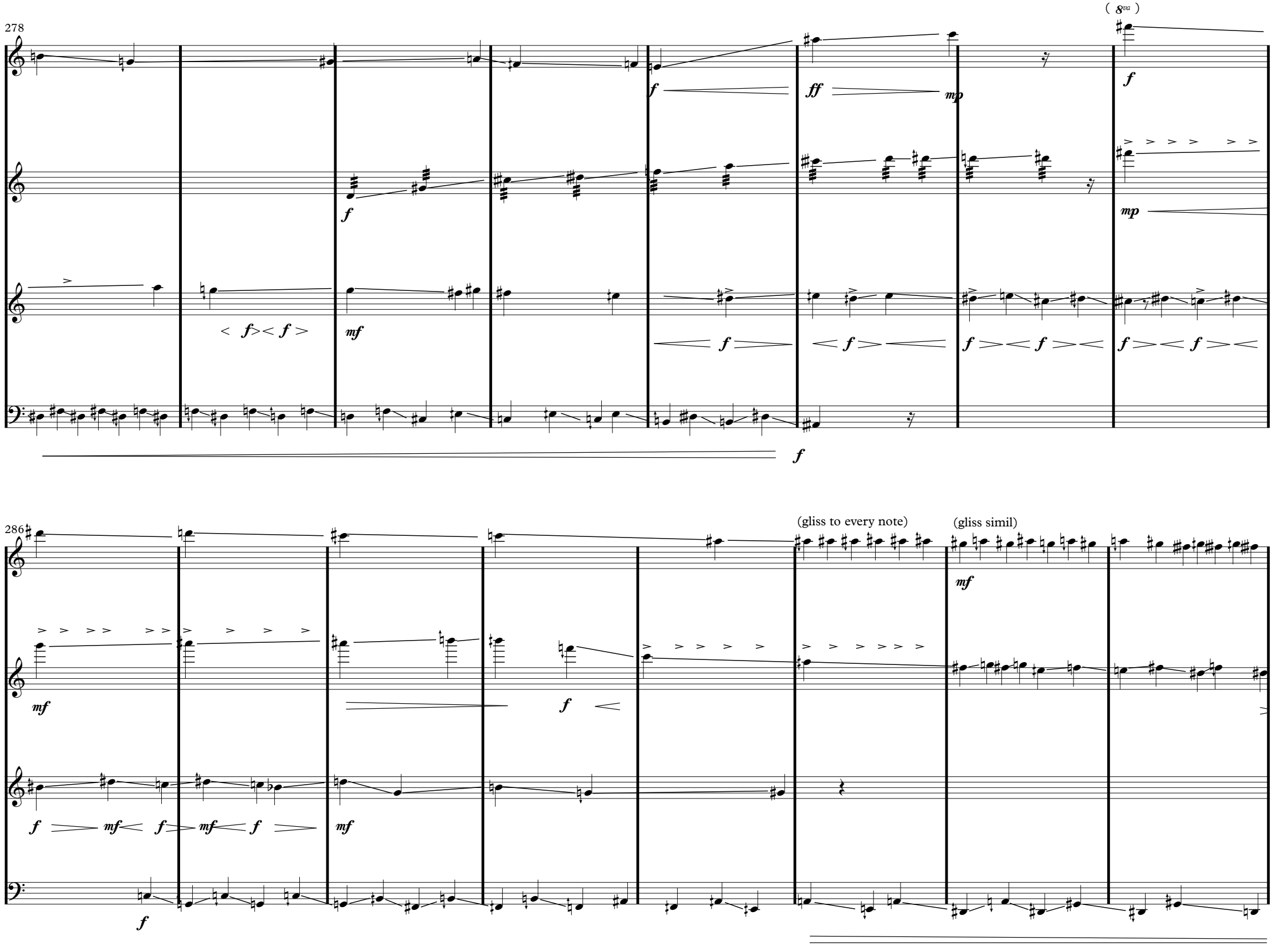
mf

(gliss to every note)

(gliss simil)

f

mf


278
(8va)
286
(gliss to every note)
(gliss simil)

294

(8va)

f

mf

(8va)

ff

mp

mf

f

ff

(gliss to every note)

f

p

SP

302

loco

f

f

mf

f

(gliss simil)

310

ff

SP

(8va)

f

f

f

ORD

f

SP

ORD

f

SP

f

318

(II)

ORD

8va

f

SP

f

loco

SP

loco

f

ORD

ff

326

ORD

8va

f

8va

SP

8va

f

ORD

f

mp

334

mp

SP

loco

f

f

ORD

8va

f

SP

342

SP
loco
f
ORD
8va
mp
mf
loco
f
ORD
loco
f
ORD
8va
f
ff
mf
SP
f
8va

350

mf
f
ORD
8va
f
ff
(8va)
f
ff
f
ff
mf
SP
f
SP
8va
f
ORD
ORD

358

8va

f

8va

f

8va

f

8va

f

ff

ff

ff

ff

I/II

366

sub ***p***

sub ***p***

sub ***p***

sub ***p***

8va

f

8va

f

8va

f

loco

f

376

(gliss to every note)

(gliss simil)

mf

(gliss to every note)

(gliss simil)

mf

(gliss to every note)

(gliss simil)

mf

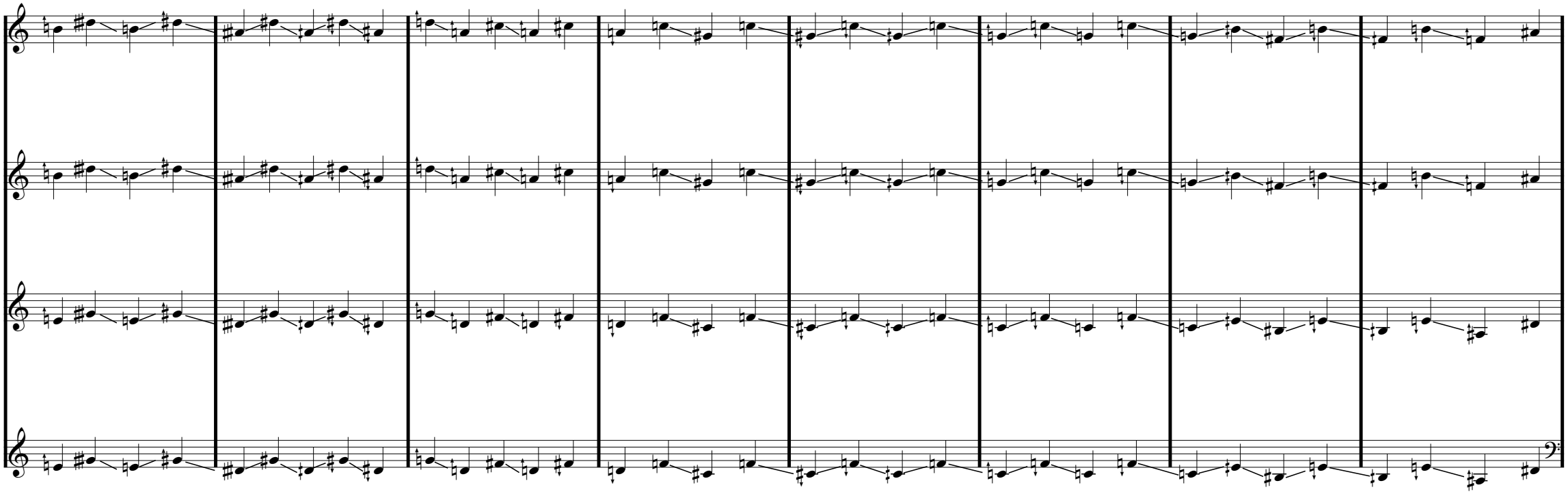
(gliss to every note)

(gliss simil)

mf

384

392



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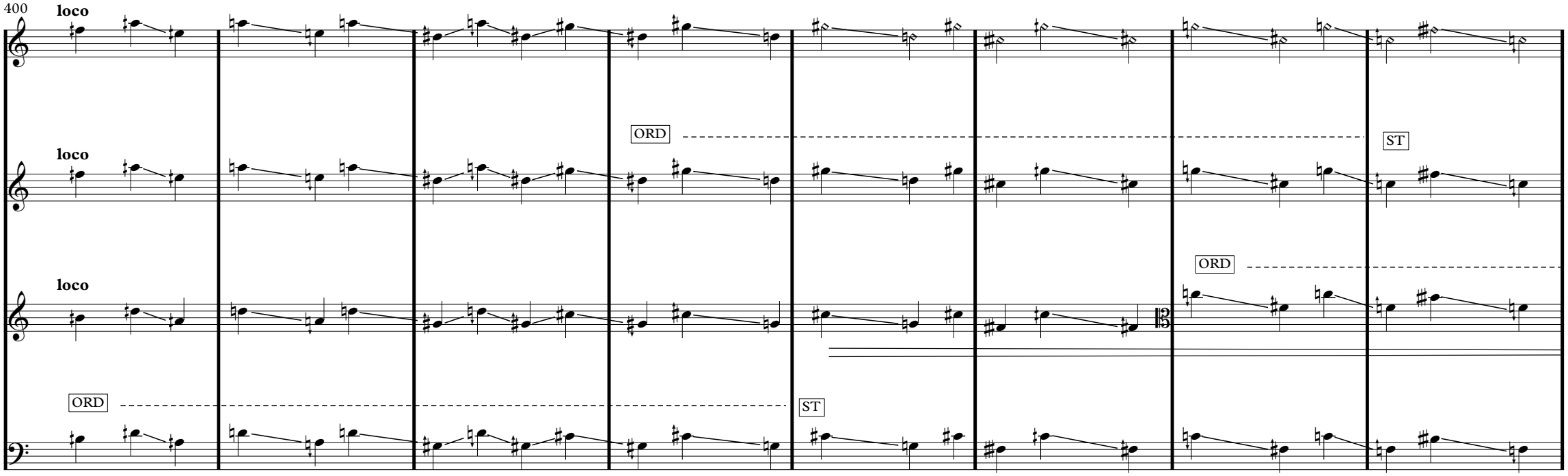

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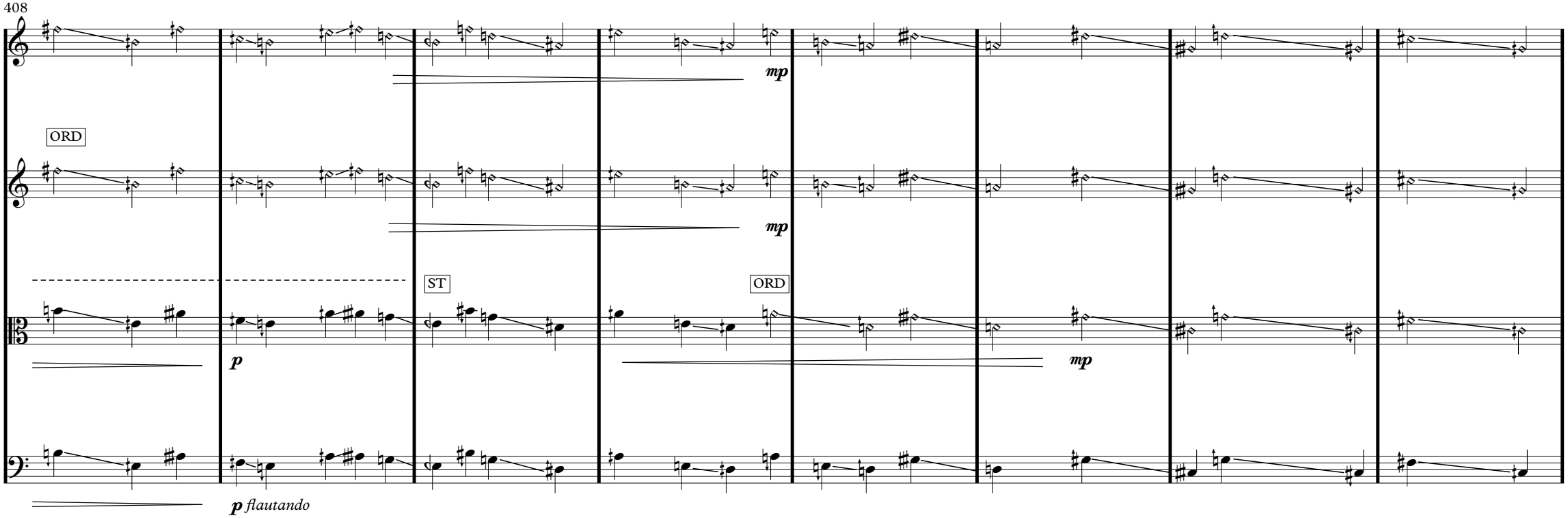

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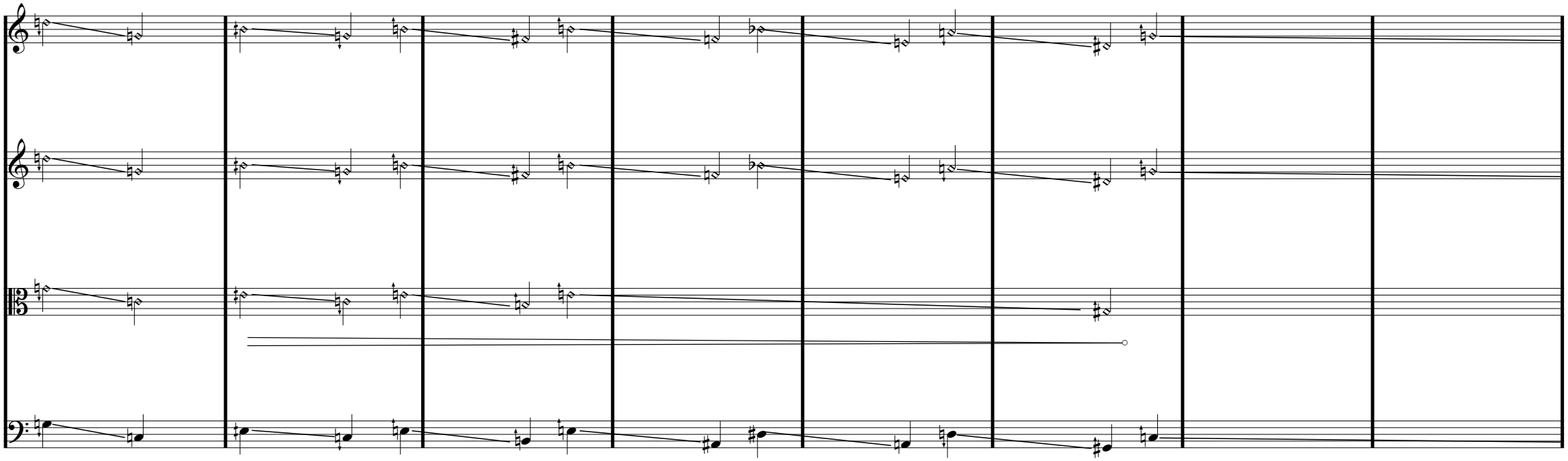

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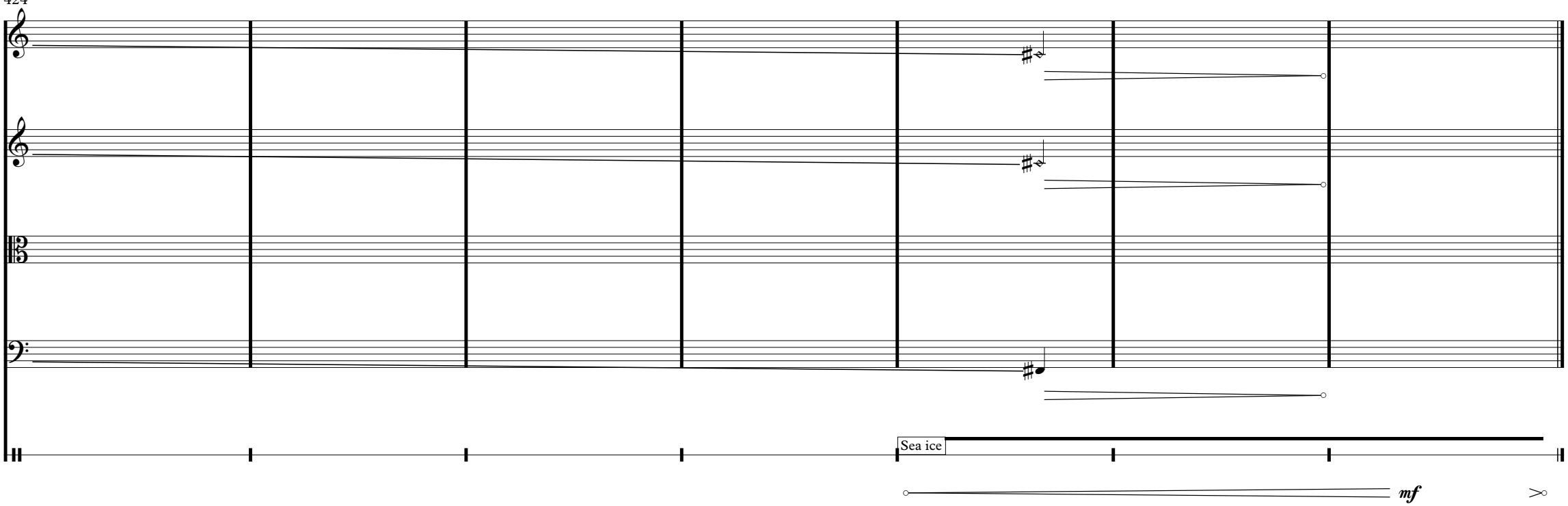
25"