Gilberto Agostinho

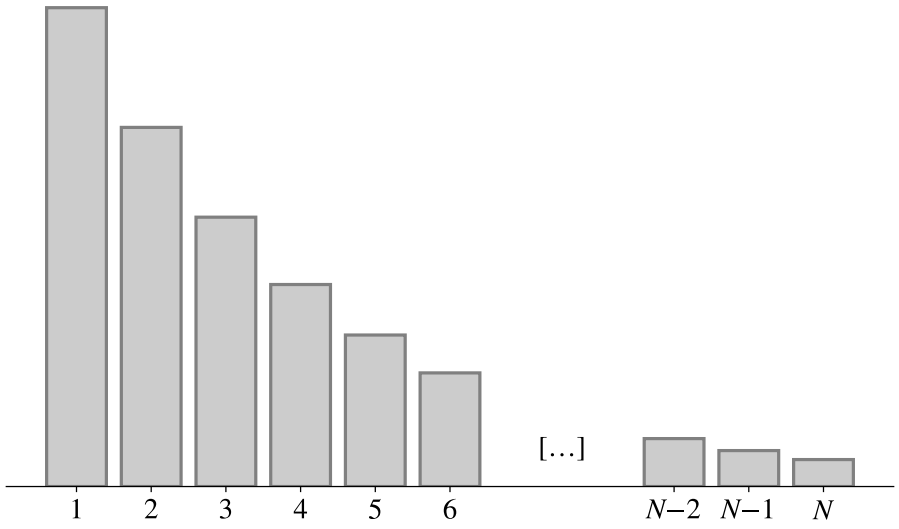
Cartography #1

for piano and vibraphone

2017

Full Score

All pieces in this series were composed using the following distribution:



$$P(n) = (3/4)^k \times P(n-k)$$

Cartography #1, for piano and vibraphone

Mapping and rules

pitches

set size	$N = 6$
transformation period	$8 \times$ ♩
transformation mechanism	$[a, b, c, d, e, f] \rightarrow [b, c, d, e, f, g]$, with uniformly randomly selected g between F3 and E5 such that $g \bmod 12 \neq x \bmod 12$, $\forall x \in [a, b, c, d, e, f]$.
initial set	[G4, D4, E♭4, A4, F4, B4]

articulations

set size	$N = 6$
transformation period	no transformation.
set	[∅, ∅, ∅, >, >, ^], where ∅ represents no articulation.
selection mechanism	accents are tied to pitches, so when a random index has been generated to select a pitch, this same index also selects an accent.

durations (vibraphone)

set size	$N = 8$
transformation period	$32 \times$ ♩
transformation mechanism	$[a, b, c, \ldots, g, h] \rightarrow [a-1, a-2, a-3, \ldots, a-7, a-8]$, where an element equals to 1 if $a-k < 1$.
initial set	$[10, 9, 8, 7, 6, 5, 4, 3]$

durations (piano)

set size	$N = 8$
transformation period	$32 \times$ ♩
transformation mechanism	$[a, b, c, \ldots, g, h] \rightarrow [a+1, a, a-1, \ldots, a-5, a-6]$, where an element equals to 1 if $a - k < 1$.
initial set	$[1, 1, 1, 1, 1, 1, 1, 1]$

constraints

- number of pitch transformations: 40.
- number of duration transformations: 10.
- the piece begins with the vibraphone and the piano playing at the same time.
- the last note of the piano will dictate the last note of the vibraphone.

General performance notes

- all notes are notated as sixteenth-notes, but the effective durations are much longer due to the use of pedalling; that is, the notes represent the attack points only.
- this piece has no dynamic marks. Loudness is solely notated using marcato and martellato signs ($>$ and $\wedge$, respectively). Notes without articulations marks should be played as softly as possible (equivalent to $\boldsymbol{pp}$), notes with a marcato sign should have a medium level of loudness (equivalent to $\boldsymbol{mf}$) and notes with a martellato sign should have a high level of loudness (equivalent to $\boldsymbol{f}$).
- the vibraphone's motor should remain off throughout the piece.
- the vibraphone's pedal should be held down throughout the piece; the performer may flush it ad libitum.
- the piano's sustain pedal should be held halfway down throughout the piece. A good reference point for this is when individual note lengths cannot be precisely perceived (that is, the sound is not cut when releasing a key). Some instruments and acoustic spaces might call for slightly different pedalling (at the discretion of the performer).
- after the last note of the piece, wait for a few seconds before raising the vibraphone's and piano's pedals.

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Cartography #1

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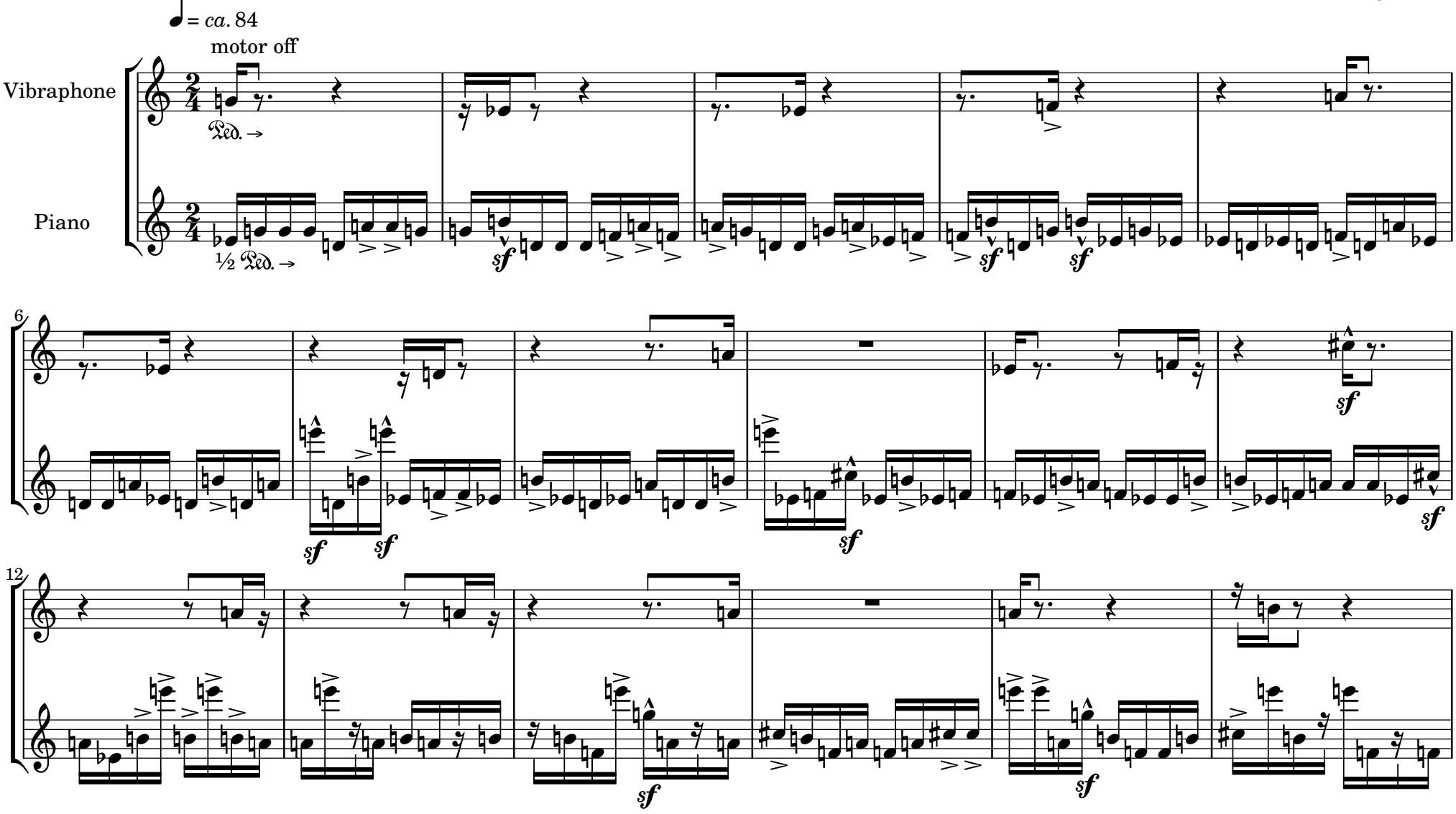

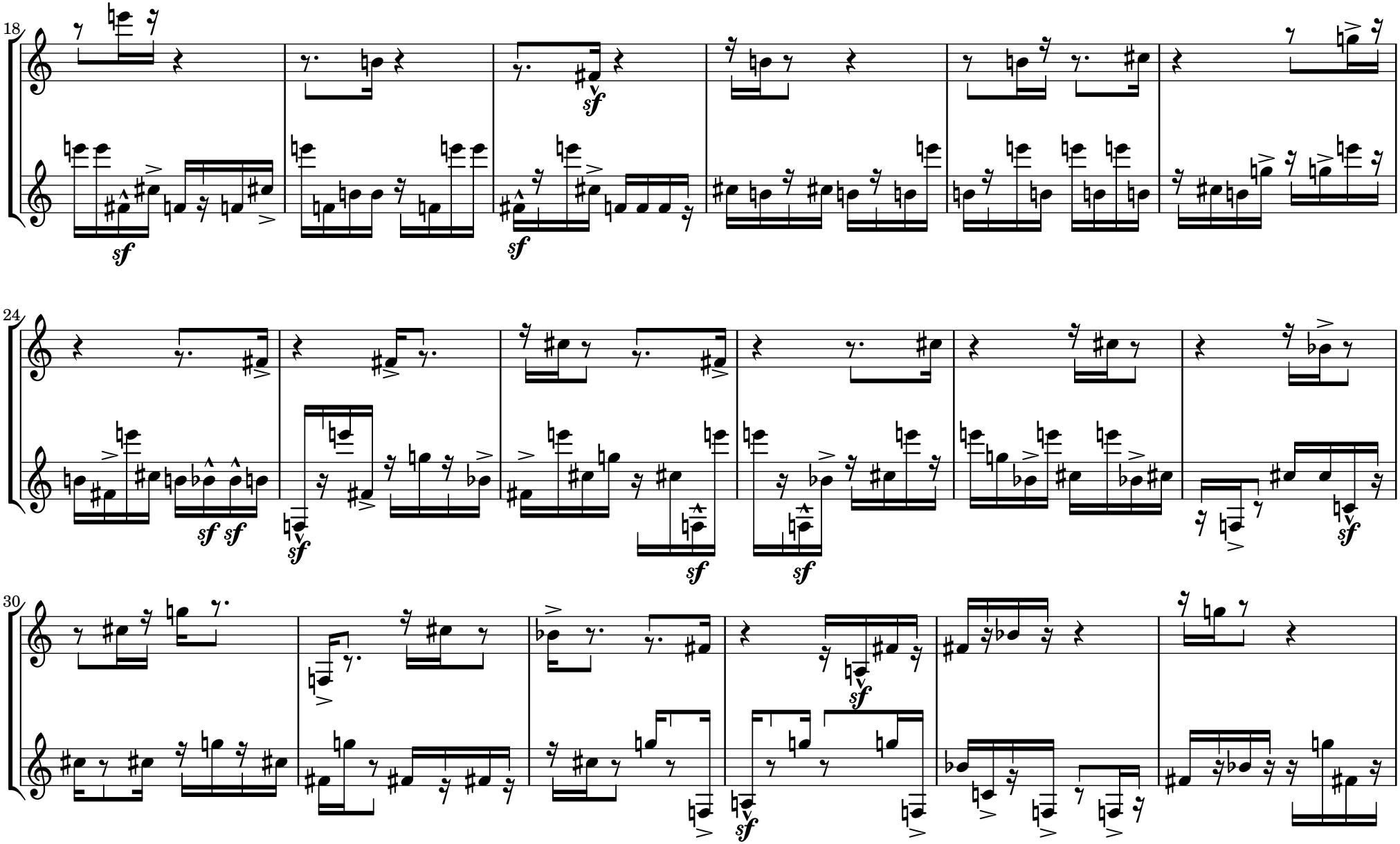
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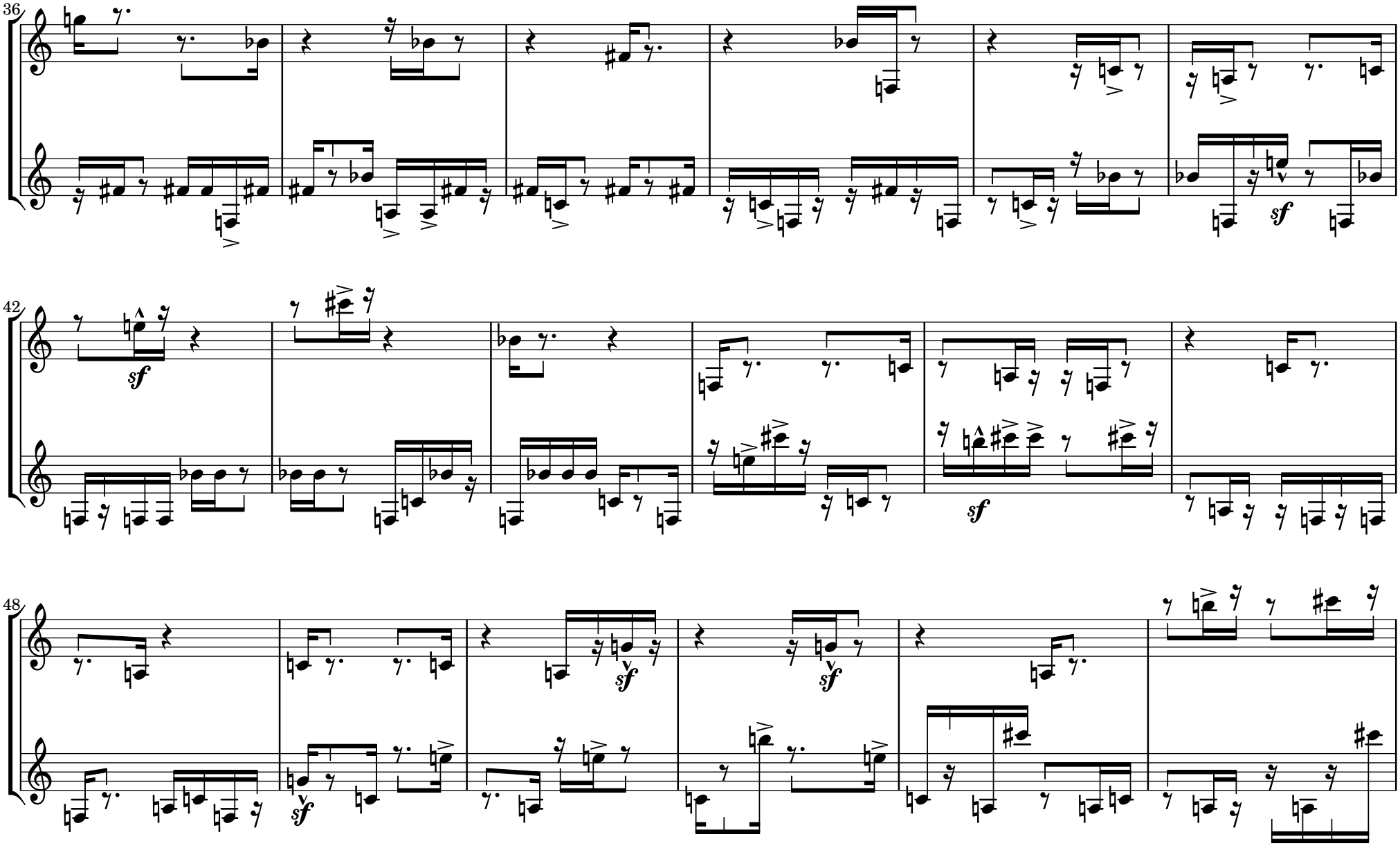
30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sf
42
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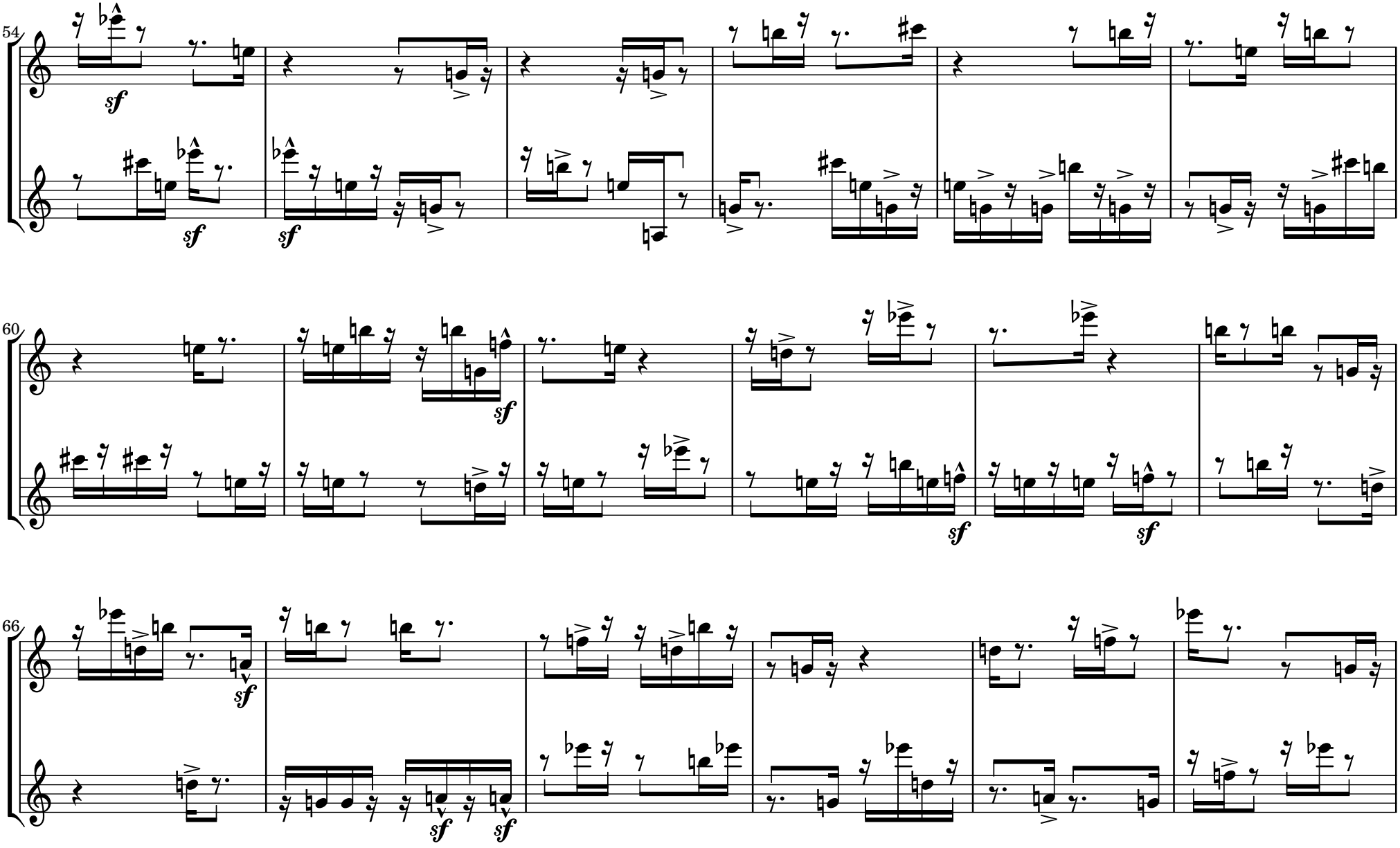
48
sf
sf
sf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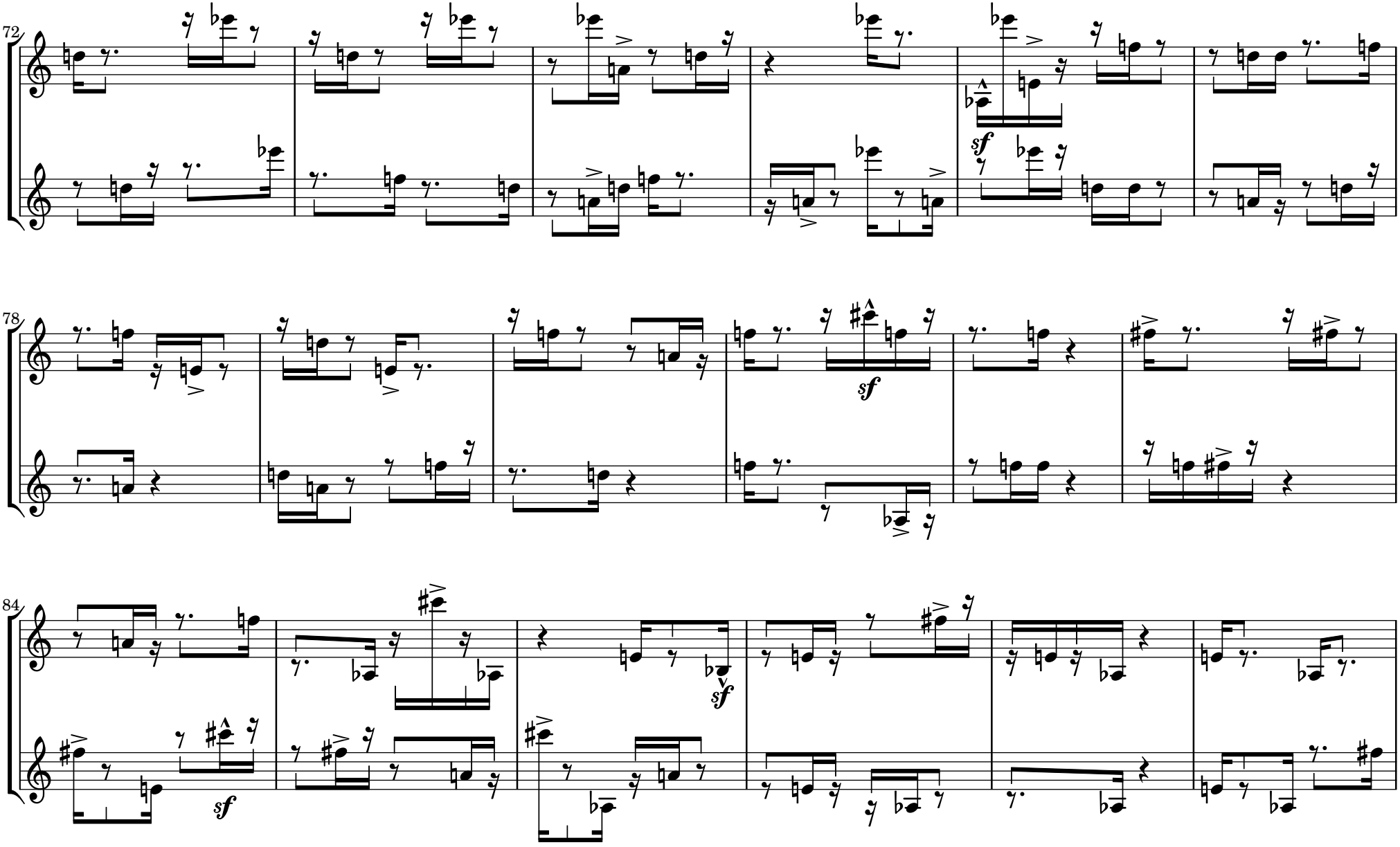
60
66
sf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sf
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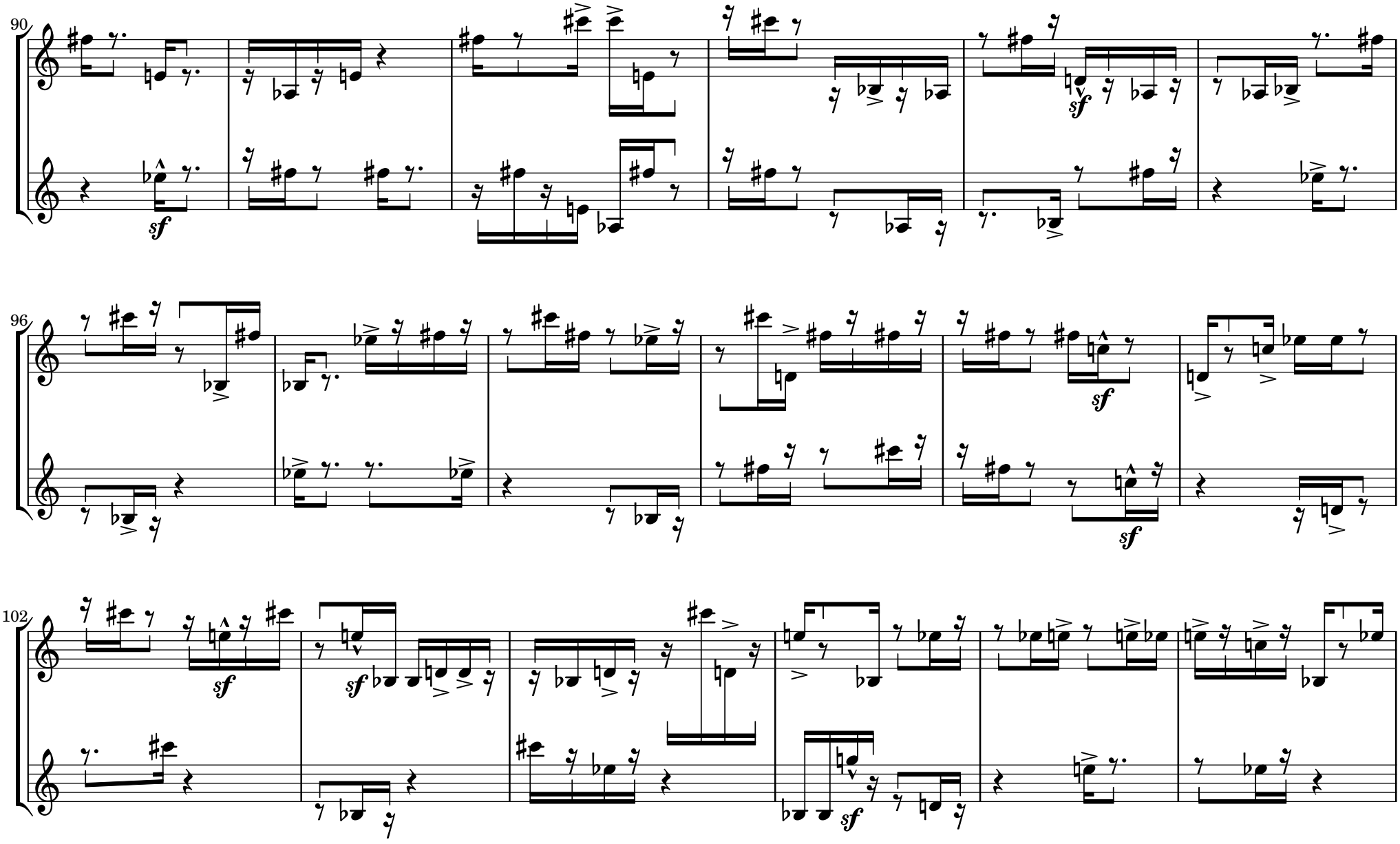
sf
84
sf
sf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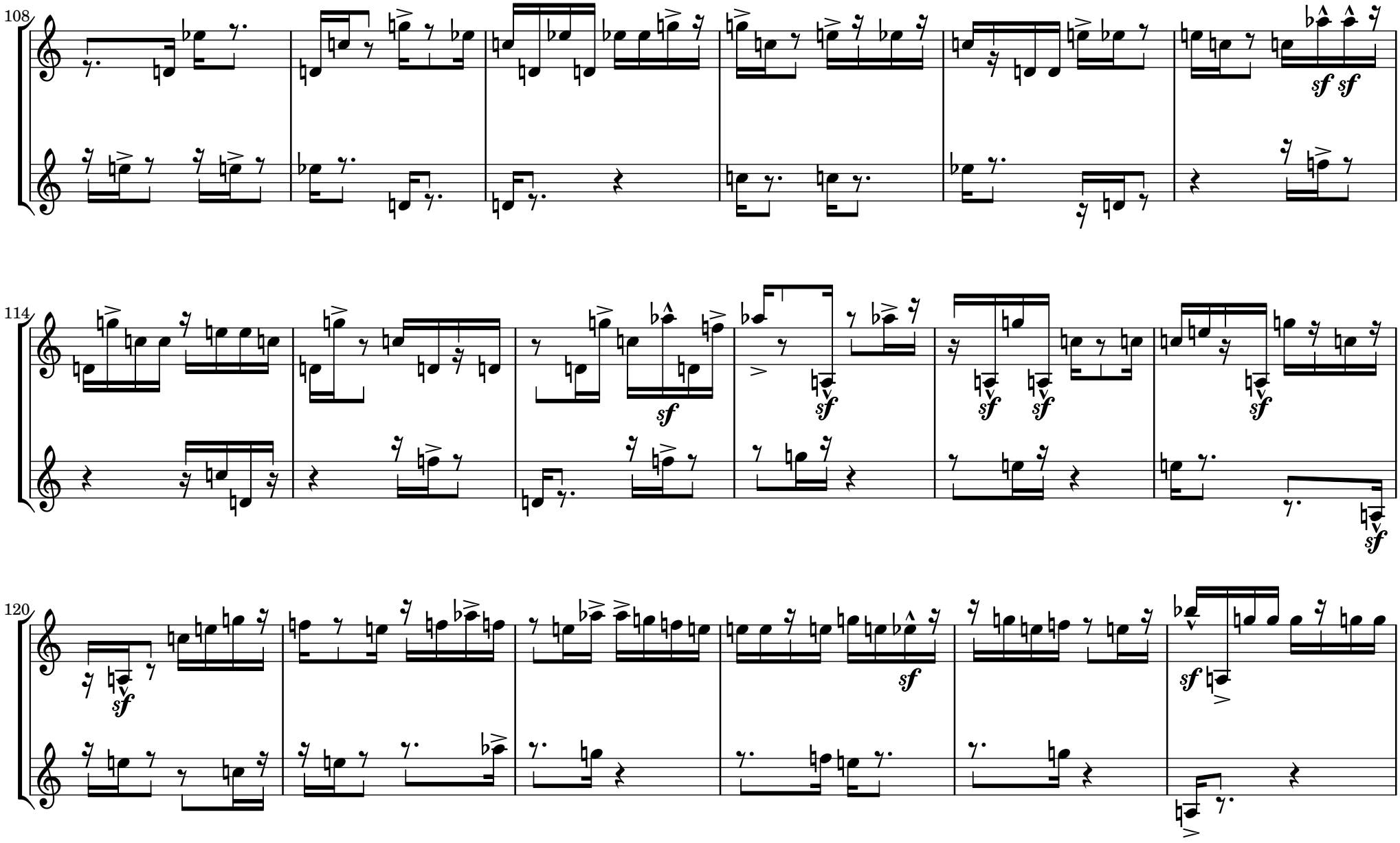
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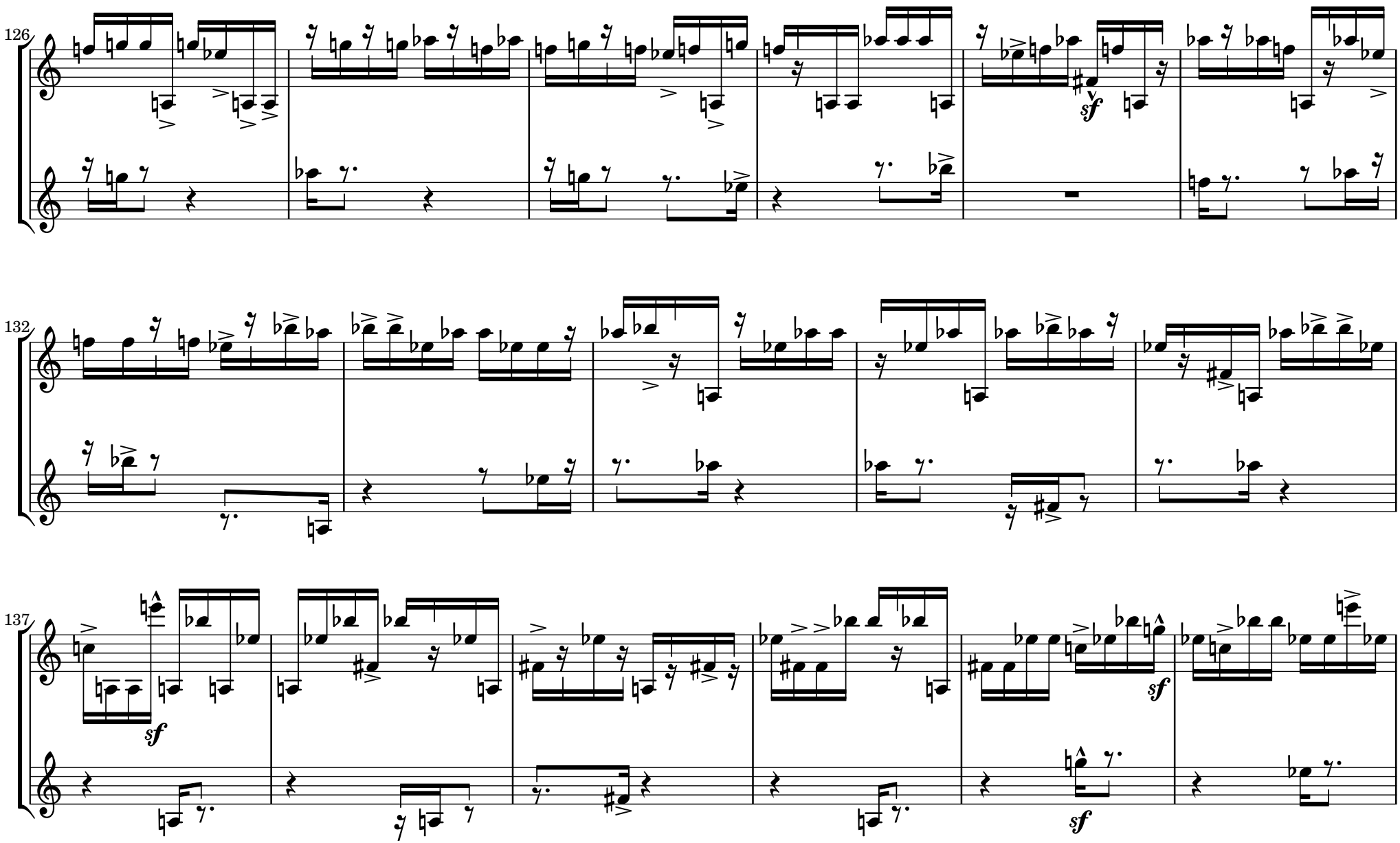
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sf
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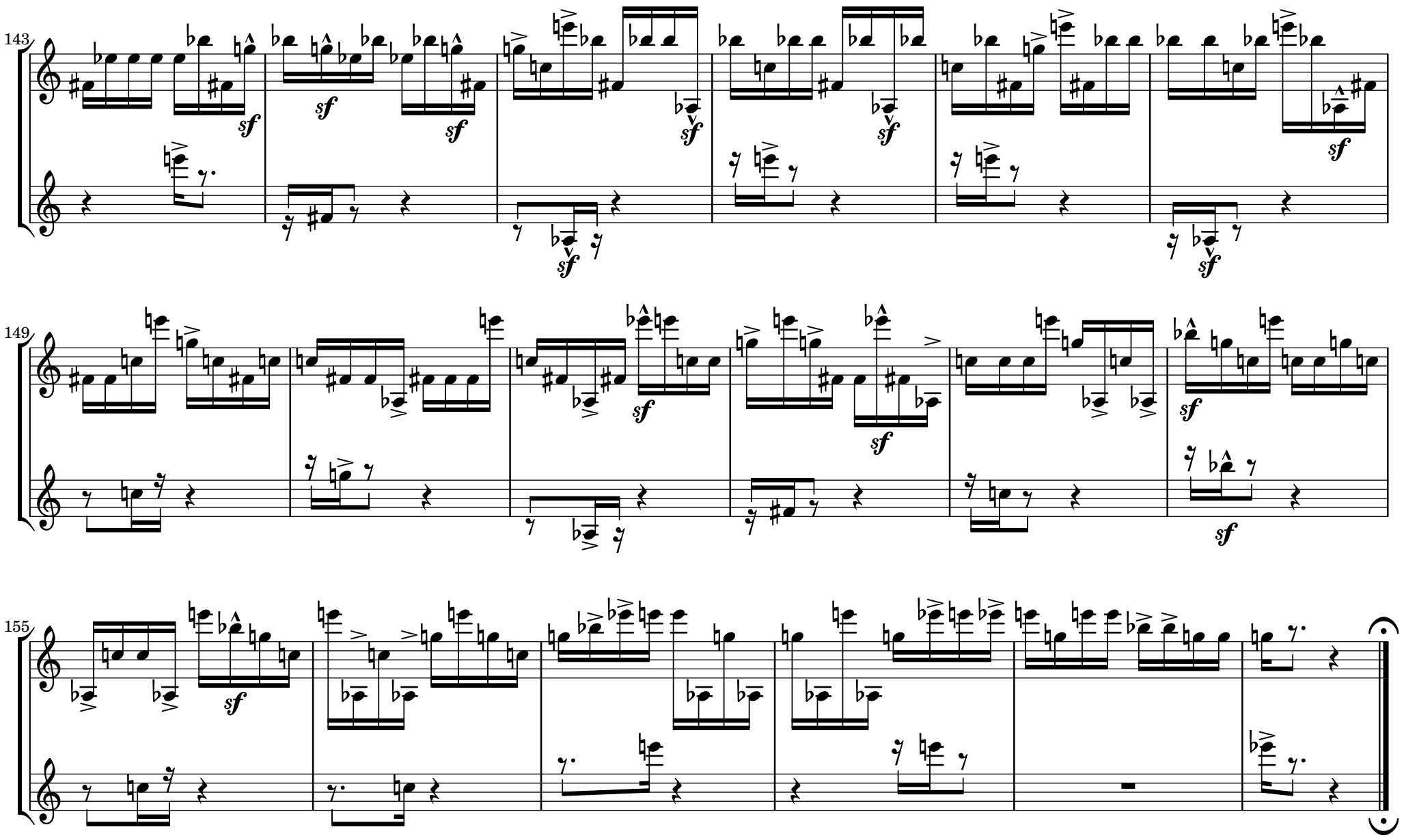
137
sf
sf
sf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