Swarm

For Mandolin and Computer

Benjamin R. Fuhrman

Circa Five Minutes.

Performance Notes

To perform *Swarm*, you will need a laptop computer with the latest version of Max/MSP installed (check www.cycling74.com for the latest version), a high quality condenser microphone, and 2 speakers. Attach the speakers and the microphone to the computer, making sure to position the microphone so that it's not in a position to cause feedback, then start the patch labeled "Swarm."

To use the patch, first select your preferred audio driver from the "Audio Driver" menu. Windows users should use ASIO drivers if at all possible. Next select the channel your microphone is connected to using the "Input Channel" menu. Volume is automatically set, but you will need to use spacebar to trigger the cues as you play, or purchase a foot pedal from the composer to activate cues.

You can also use the "Jump to Rehearsal Number" buttons to jump to rehearsal points in the score. Keep in mind that they will not trigger any cues – they just prepare the computer for your next cue – right on that particular rehearsal number.

A Note on Accords

An extremely difficult extended technique to properly execute; accords are a surprisingly ancient part of the mandolin repertoire, going back at least as far as the method books of the 18th Century. While exceedingly complicated to execute rapidly on a modern, steel-string mandolin, they can be accomplished at a slower tempo. To perform them, start from a unison pitch, using both strings of a single course. Then using another finger, fret the treble-side string of the course, pulling it slightly apart from the other string with your fingernail. This slight separation allows for double stops ranging from a minor second to a perfect fifth on a single course, providing a drastically different timbre than double stops played on multiple courses. Fingerings for all accord passages have been provided and tested by the composer.

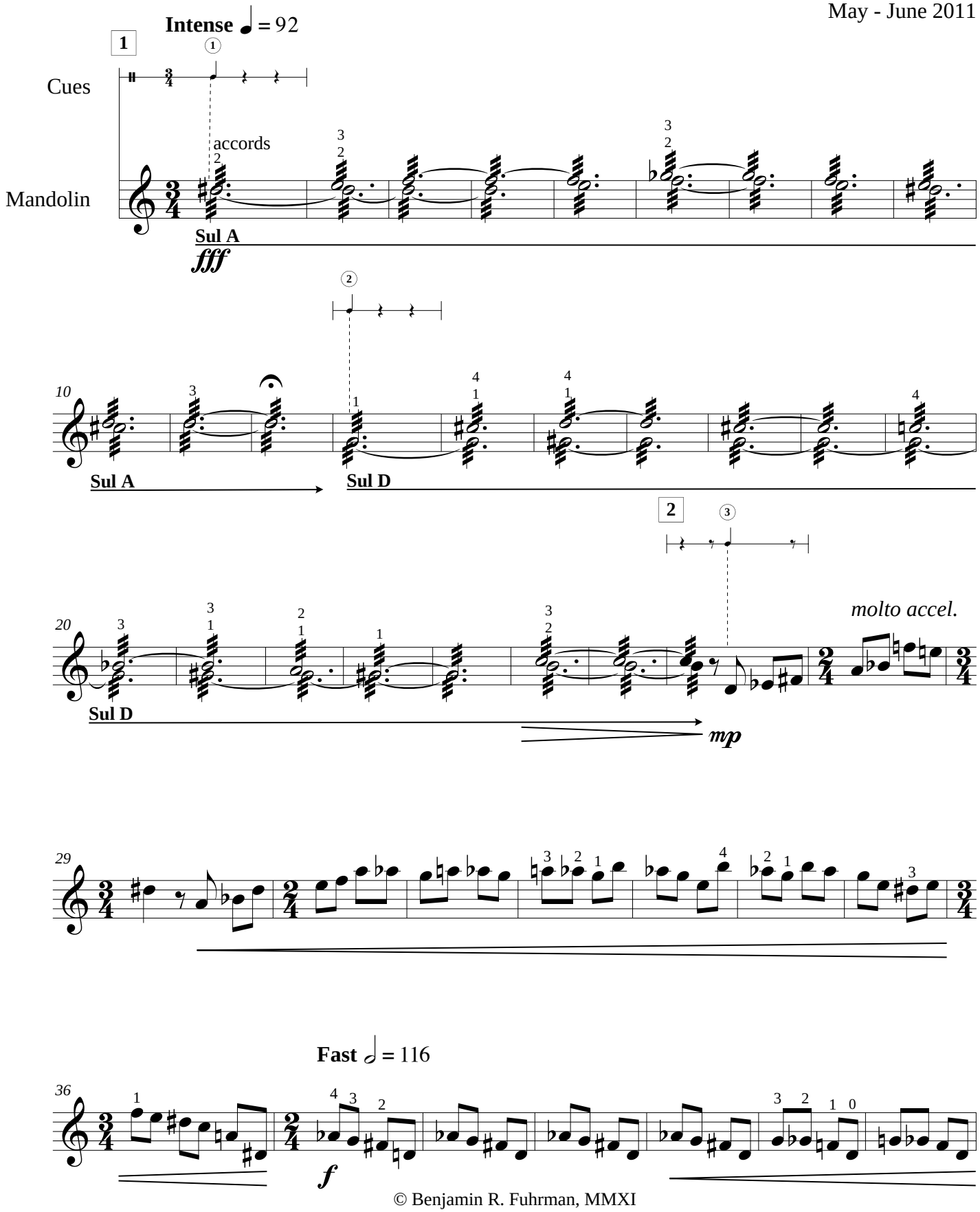
Program Notes

While driving home one day, I heard a report on NPR's *Science Friday* on the emergence of the Brood XIX Cicada. The rapid sequence of chirps in the cicadas' song reminded me of a previously unfinished granulation project I had been working on, and subsequently provided the inspiration to complete the project.

Mixing live mandolin, pre-recorded synthesizers, and live processing of both components, *Swarm* is a sonic depiction the cicadas' emergence, flights, swarming, mating songs, and deaths over the course of their brief adult lives.

Swarm

Benjamin R. Fuhrman
May - June 2011



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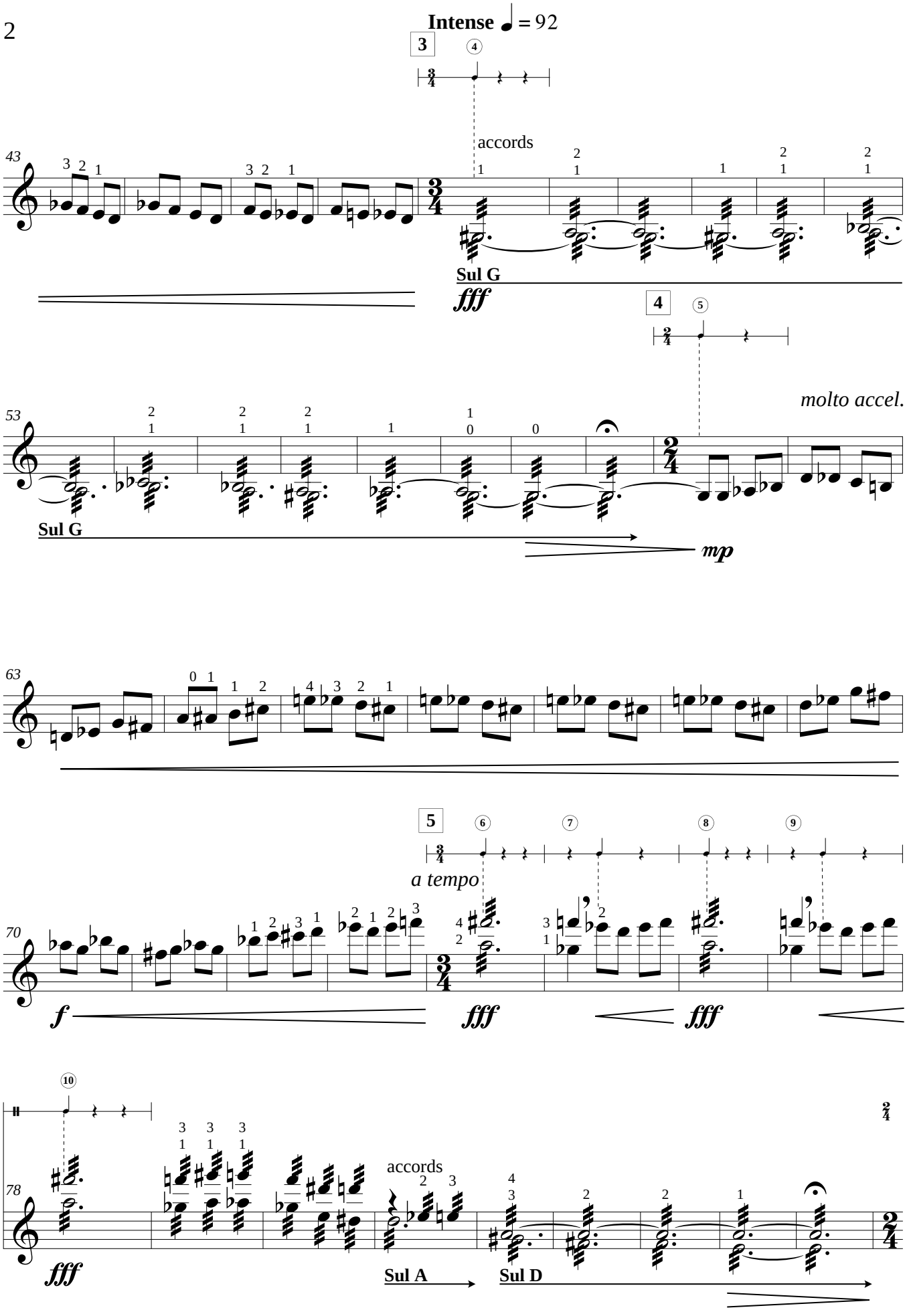
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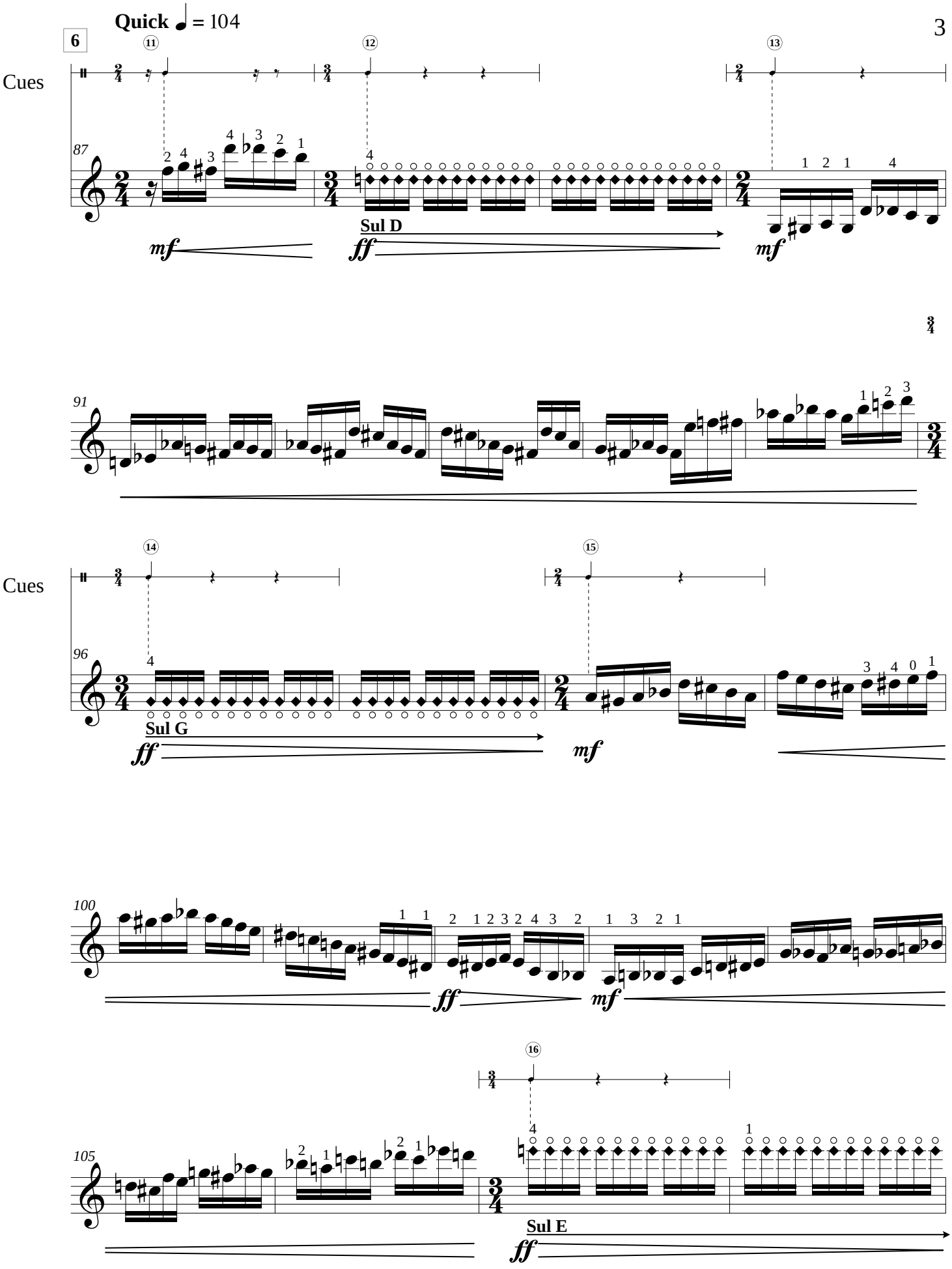
3
4
accords
43
Sul G
fff
4
5
molto accel.
53
Sul G
mp
63
5
6
7
8
9
a tempo
70
f
fff
fff
10
Cues
78
fff
accords
Sul A
Sul D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Cues
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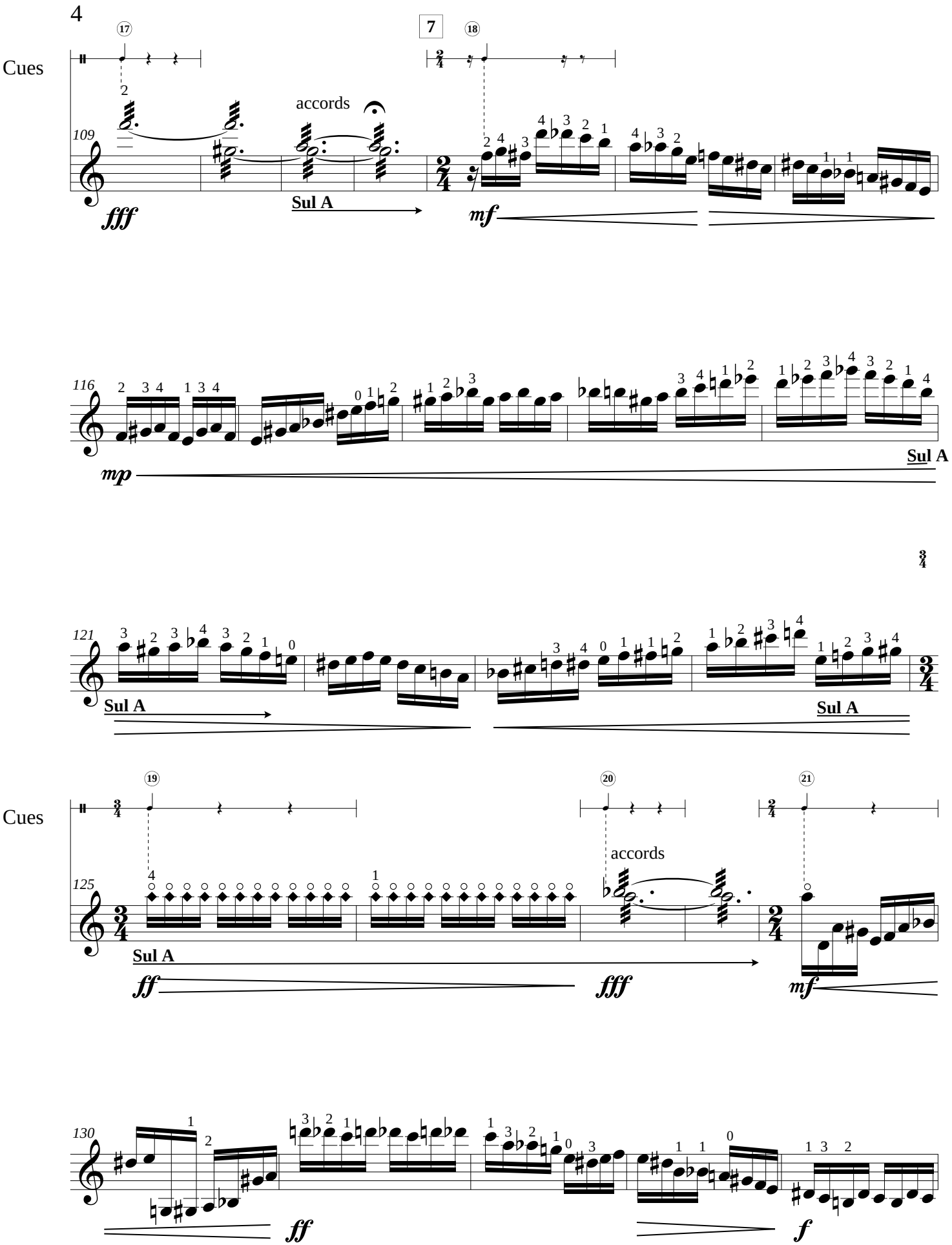
Sul D
91
Cues
96
Sul G
100
105
Sul E


Cues
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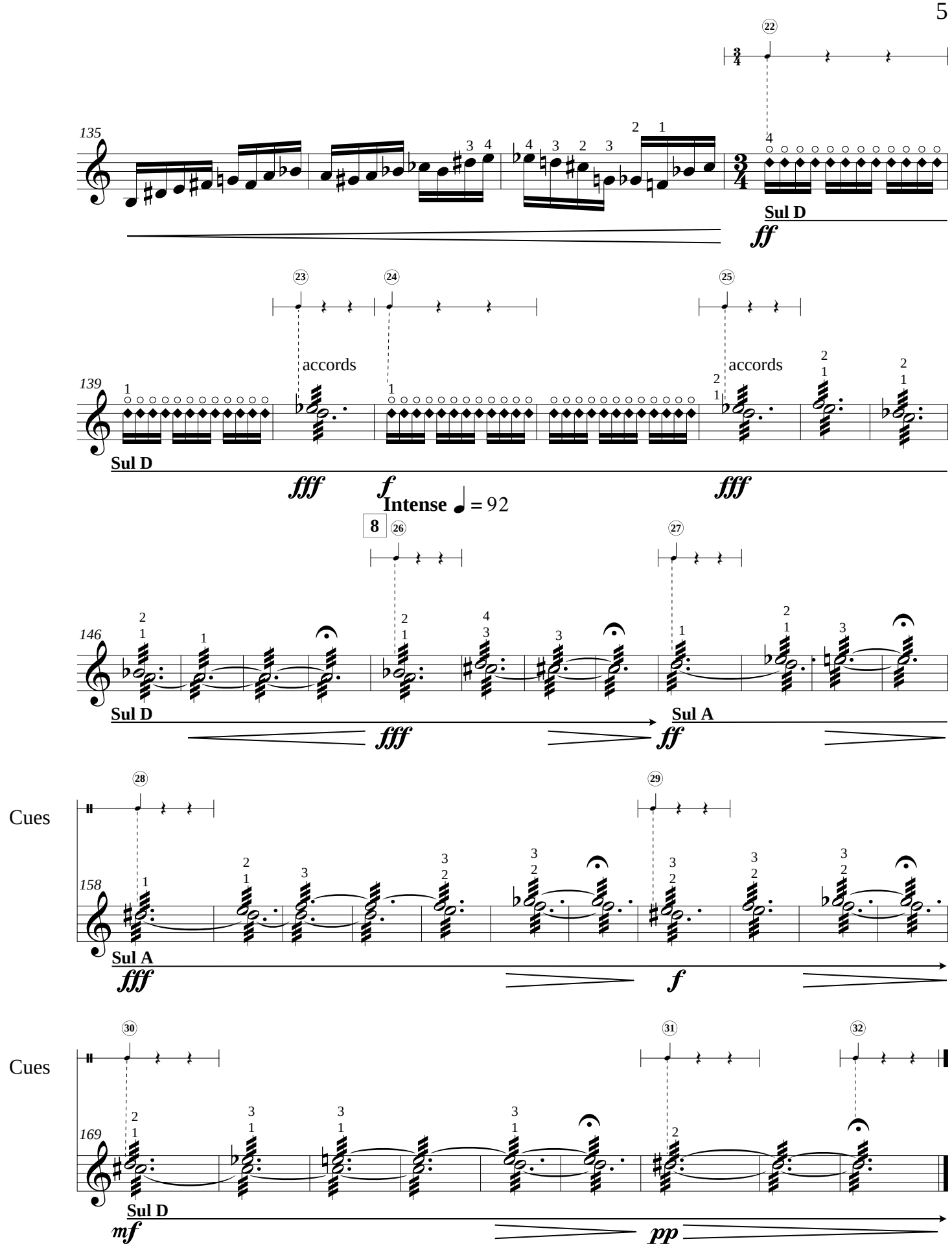
18
7
109
accords
fff
Sul A
mf
116
mp
Sul A
121
Sul A
Sul A
Cues
19
20
21
125
accords
Sul A
ff
fff
mf
130
ff
f


135
Sul D
ff
139
accords
accords
Sul D
fff
f
fff
Intense ♩ = 92
8
146
Sul D
Sul A
fff
ff
Cues
158
Sul A
fff
f
Cues
169
Sul D
mf
pp