Marc Sabat

AUTOMAT

music scenery for 2 violins and video with field recording

PLAINSOUND MUSIC EDITION

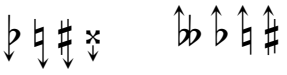
ACCIDENTALS

EXTENDED HELMHOLTZ-ELLIS JI PITCH NOTATION

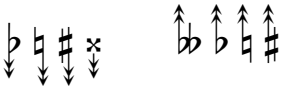
for Just Intonation
designed by Marc Sabat and Wolfgang von Schweinitz

The exact intonation of each pitch may be written out by means of the following harmonically-defined signs:

Pythagorean series of fifths – the open strings
(… c g d a e …)



lowers / raises by a syntonic comma
81 : 80 = ***circa 21.5 cents***



lowers / raises by two syntonic commas
circa 43 cents

lowers / raises by a septimal comma
64 : 63 = ***circa 27.3 cents***

lowers / raises by two septimal commas
circa 54.5 cents

raises / lowers by an 11-limit undecimal quarter-tone
33 : 32 = ***circa 53.3 cents***

lowers / raises by a 13-limit tridecimal third-tone
27 : 26 = ***circa 65.3 cents***

lowers / raises by a 17-limit schisma
256 : 255 = ***circa 6.8 cents***

raises / lowerss by a 19-limit schisma
513 : 512 = ***circa 3.4 cents***

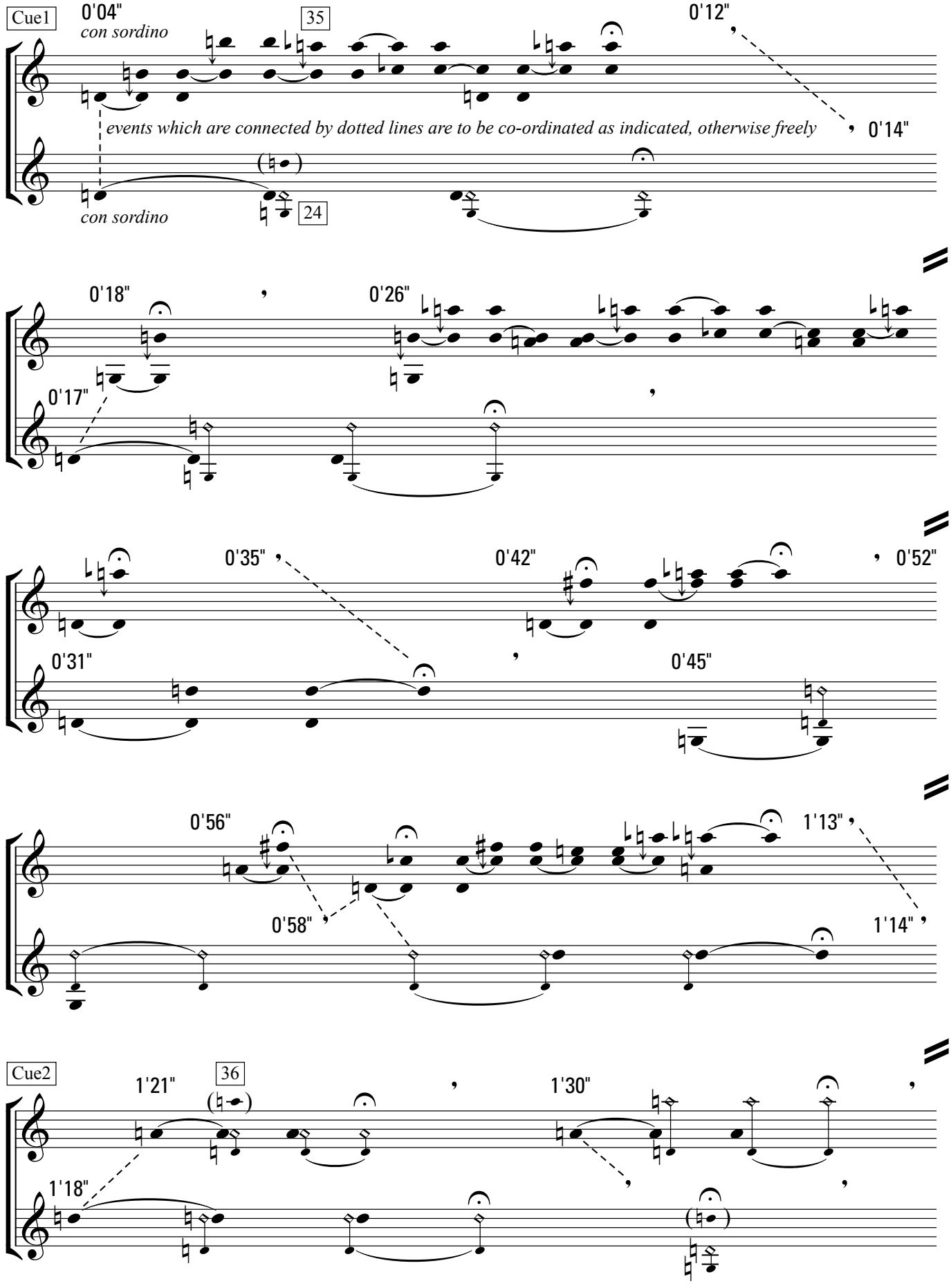
raises / lowers by a 23-limit comma
736 : 729 = ***circa 16.5 cents***

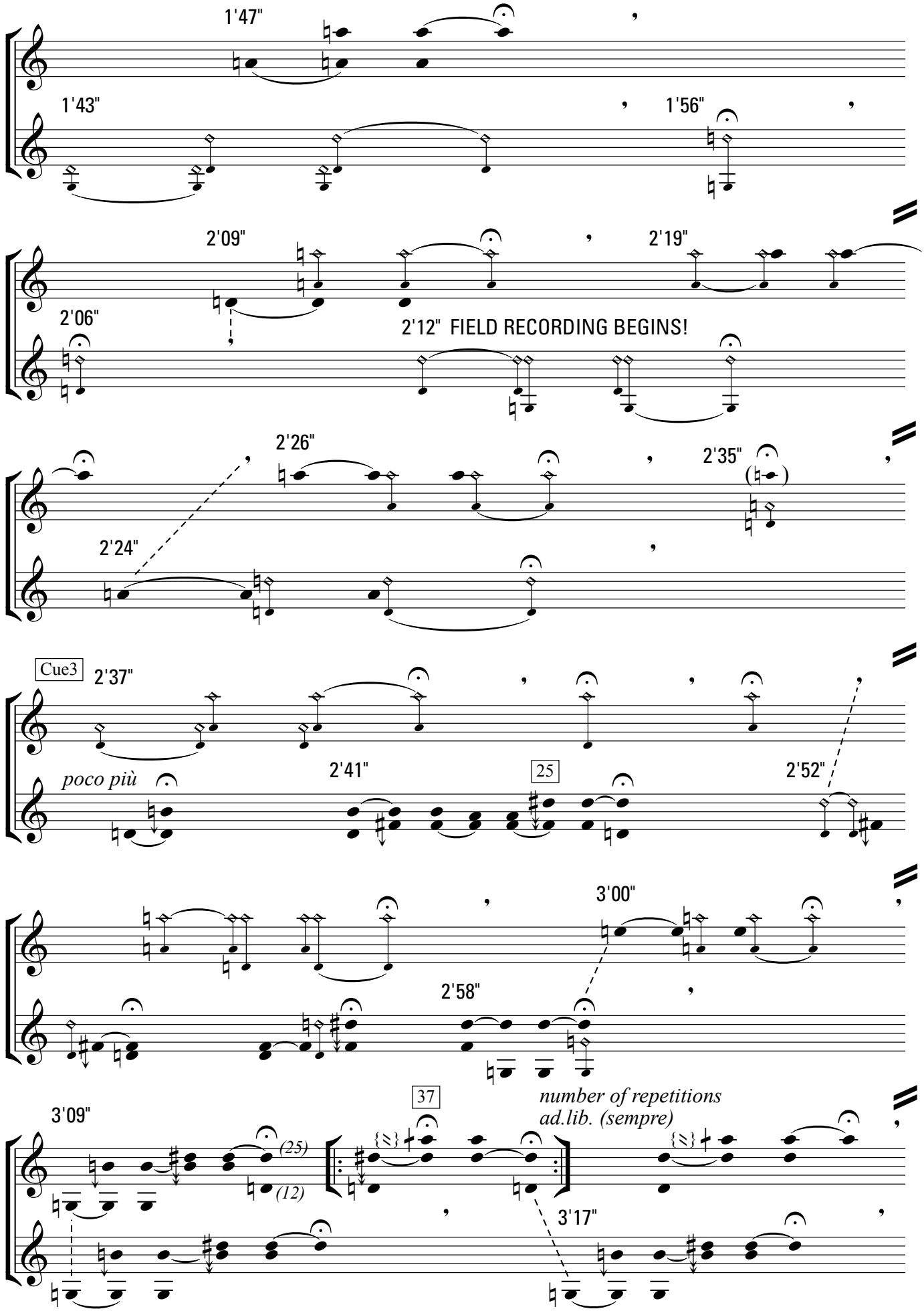
In addition to the harmonic definition of a pitch by means of its accidentals, it is also possible to indicate its absolute pitch-height as a cents-deviation from the respectively indicated chromatic pitch in the 12-tone system of Equal Temperament.

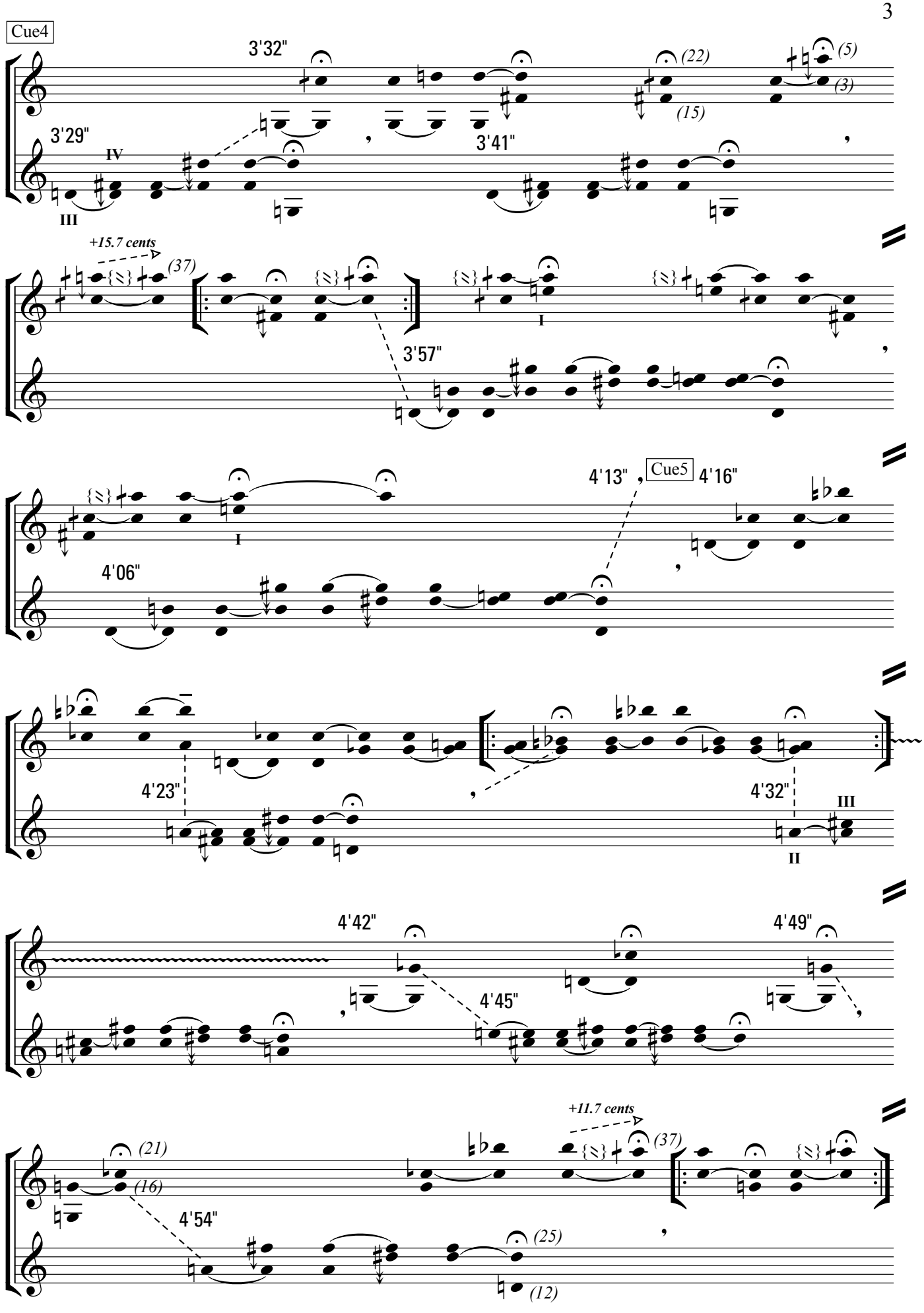
The attached arrows for alteration by a syntonic comma are transcriptions of the notation that Hermann von Helmholtz used in his book "Die Lehre von den Tonempfindungen als physiologische Grundlage für die Theorie der Musik" (1863). The annotated English translation "On the Sensations of Tone as a Physiological Basis for the Theory of Music" (1875/1885) is by Alexander J. Ellis, who refined the definition of pitch within the 12-tone system of Equal Temperament by introducing a division of the octave into 1200 cents. The sign for a septimal comma was devised by Giuseppe Tartini (1692-1770) – the composer, violinist and researcher who first studied the production of difference tones by means of double stops.

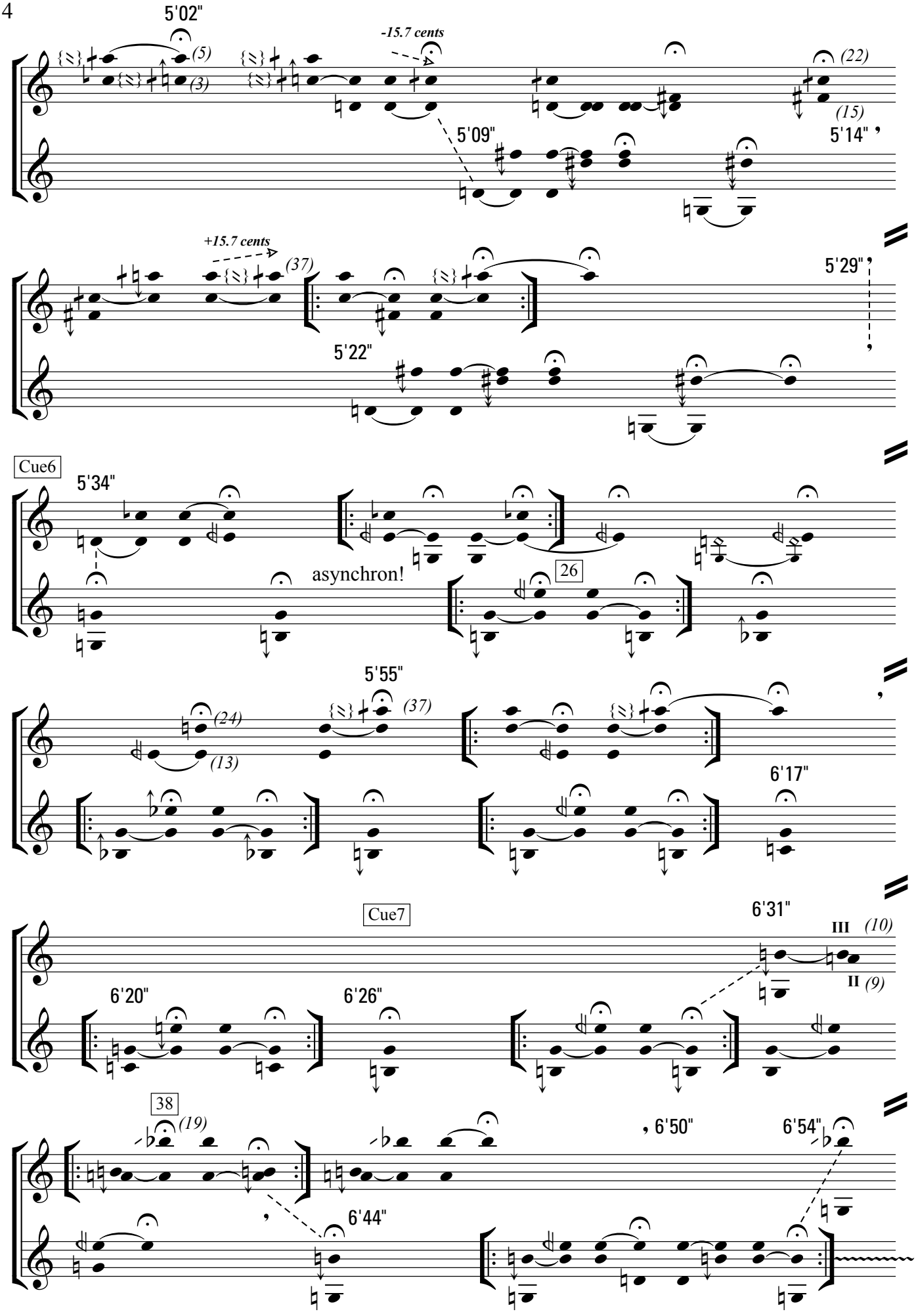
AUTOMAT *(live version for 2 violins and video with stereo field recording)*

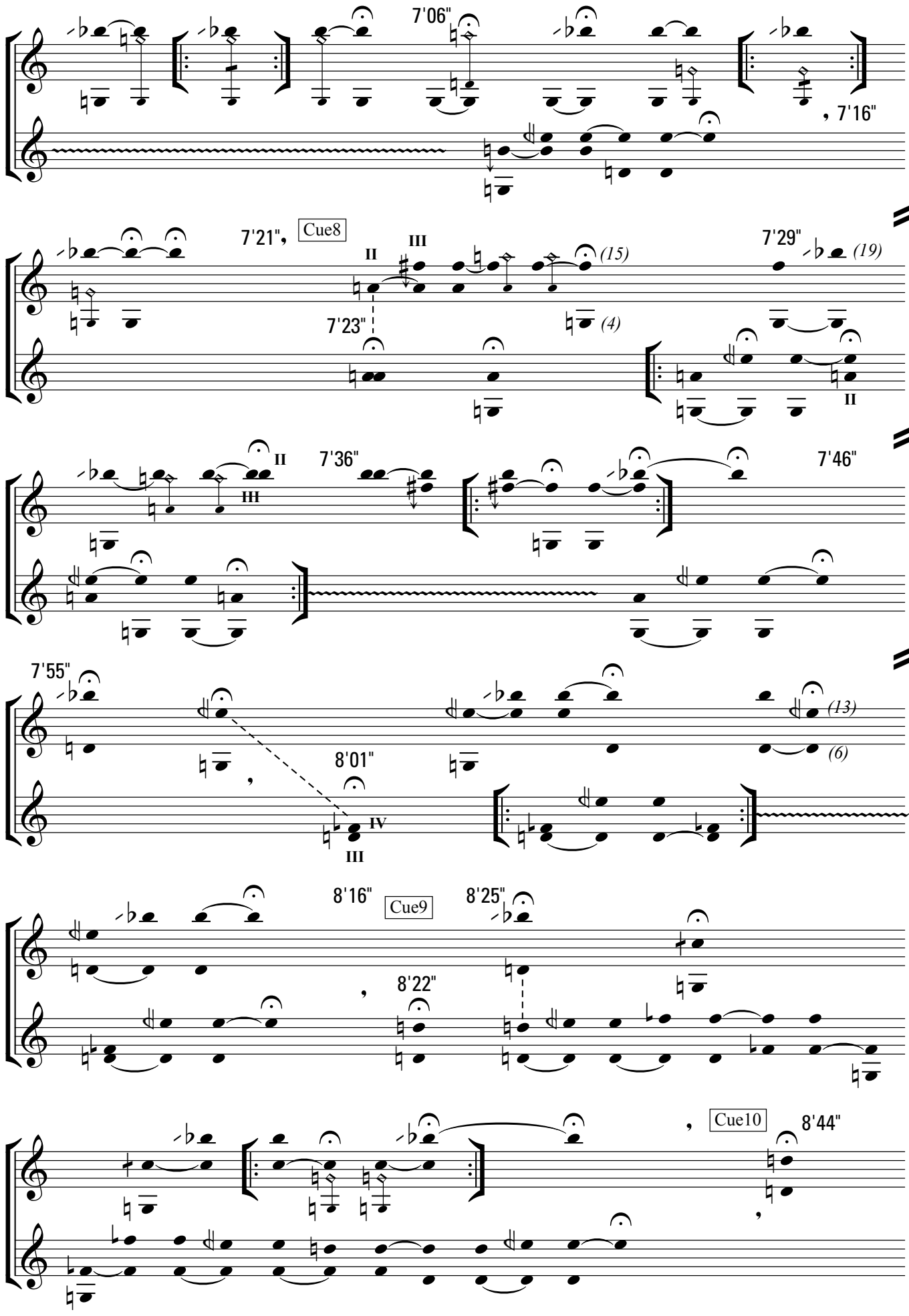
music: Marc Sabat
video : Peter Sabat

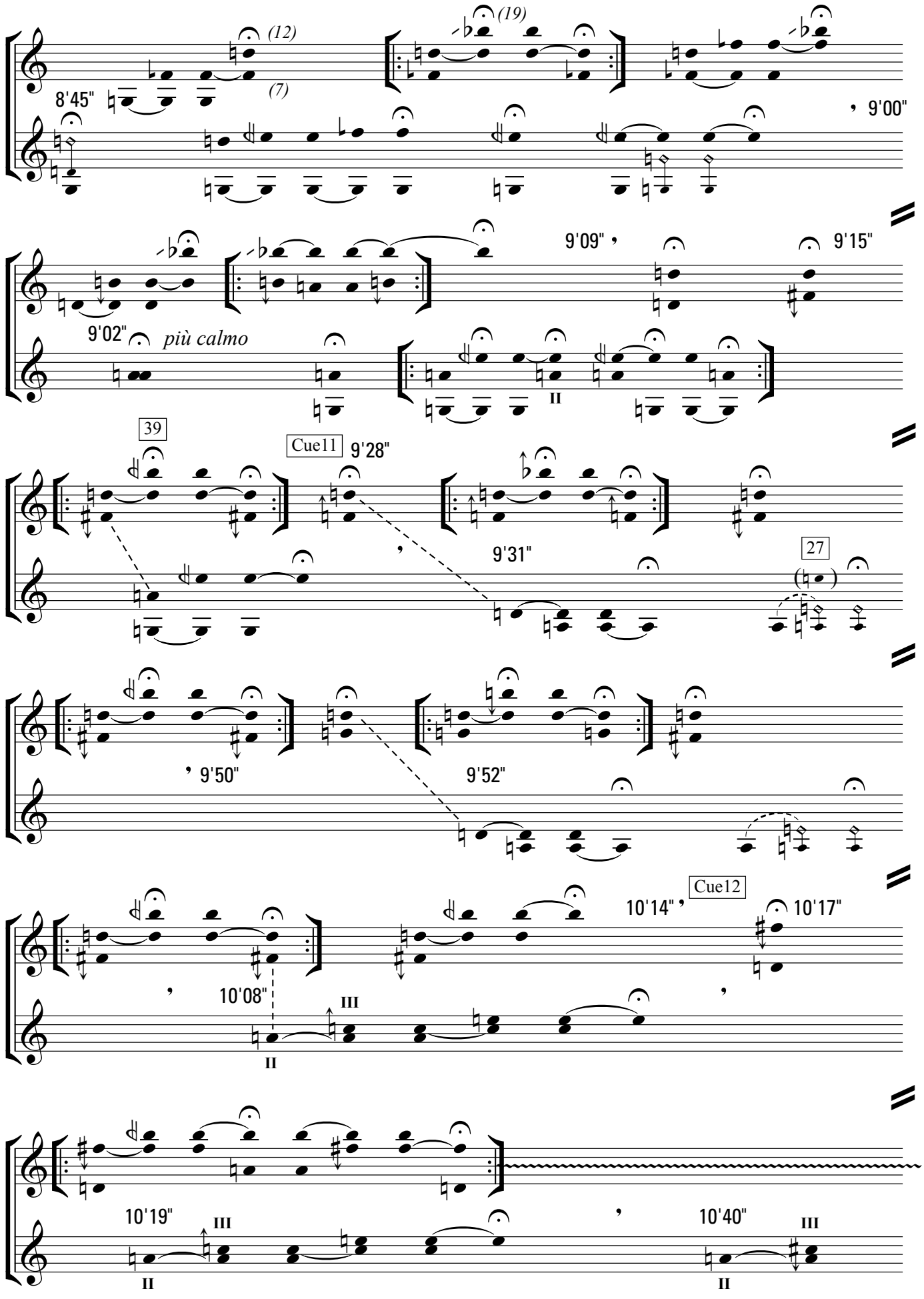


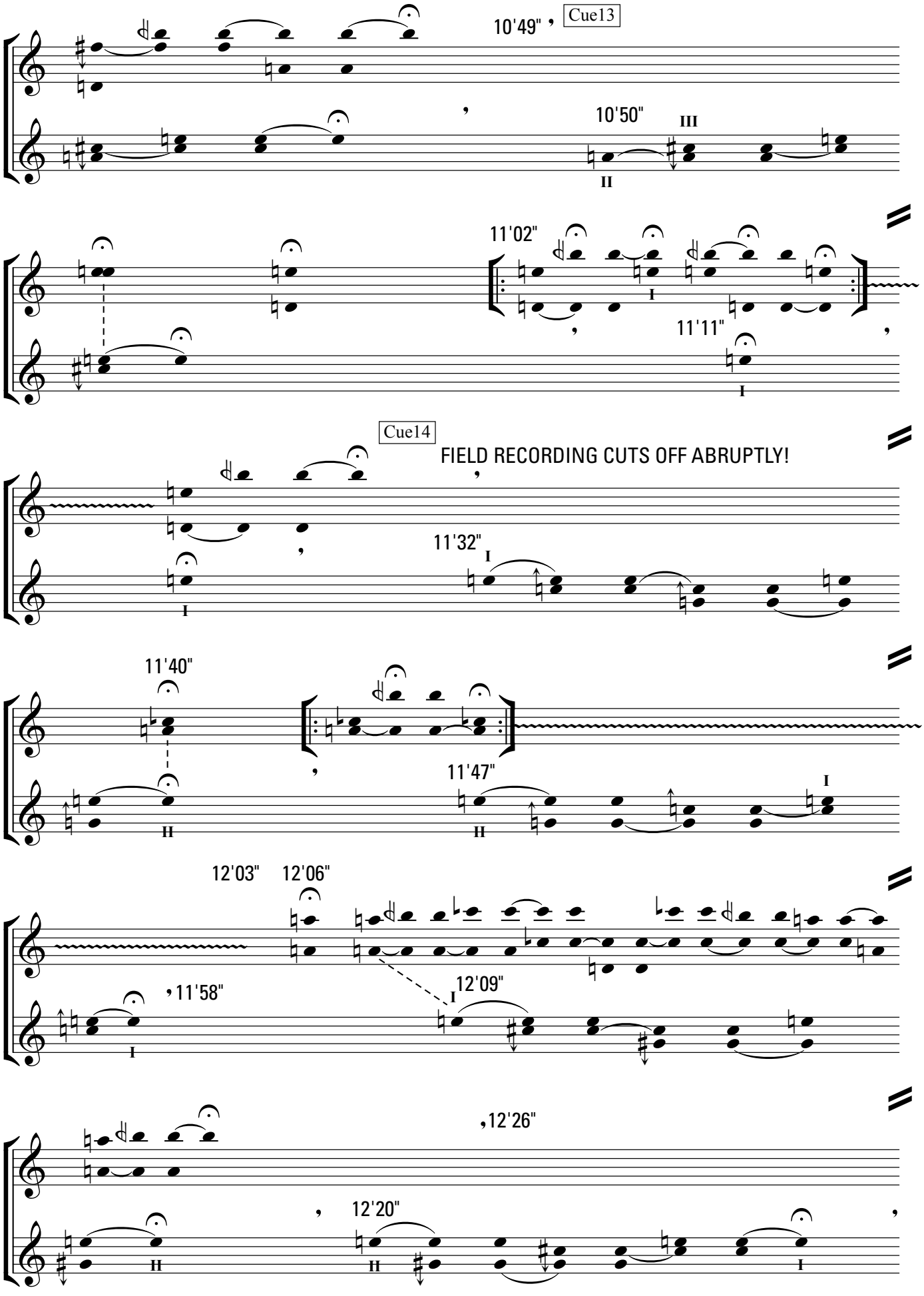

1'47"
1'43"
1'56"
2'09"
2'19"
2'06"
2'12" FIELD RECORDING BEGINS!
2'26"
2'35"
2'24"
Cue3
2'37"
poco più
2'41"
25
2'52"
3'00"
2'58"
3'09"
(25)
(12)
37
number of repetitions
ad.lib. (sempre)
3'17"

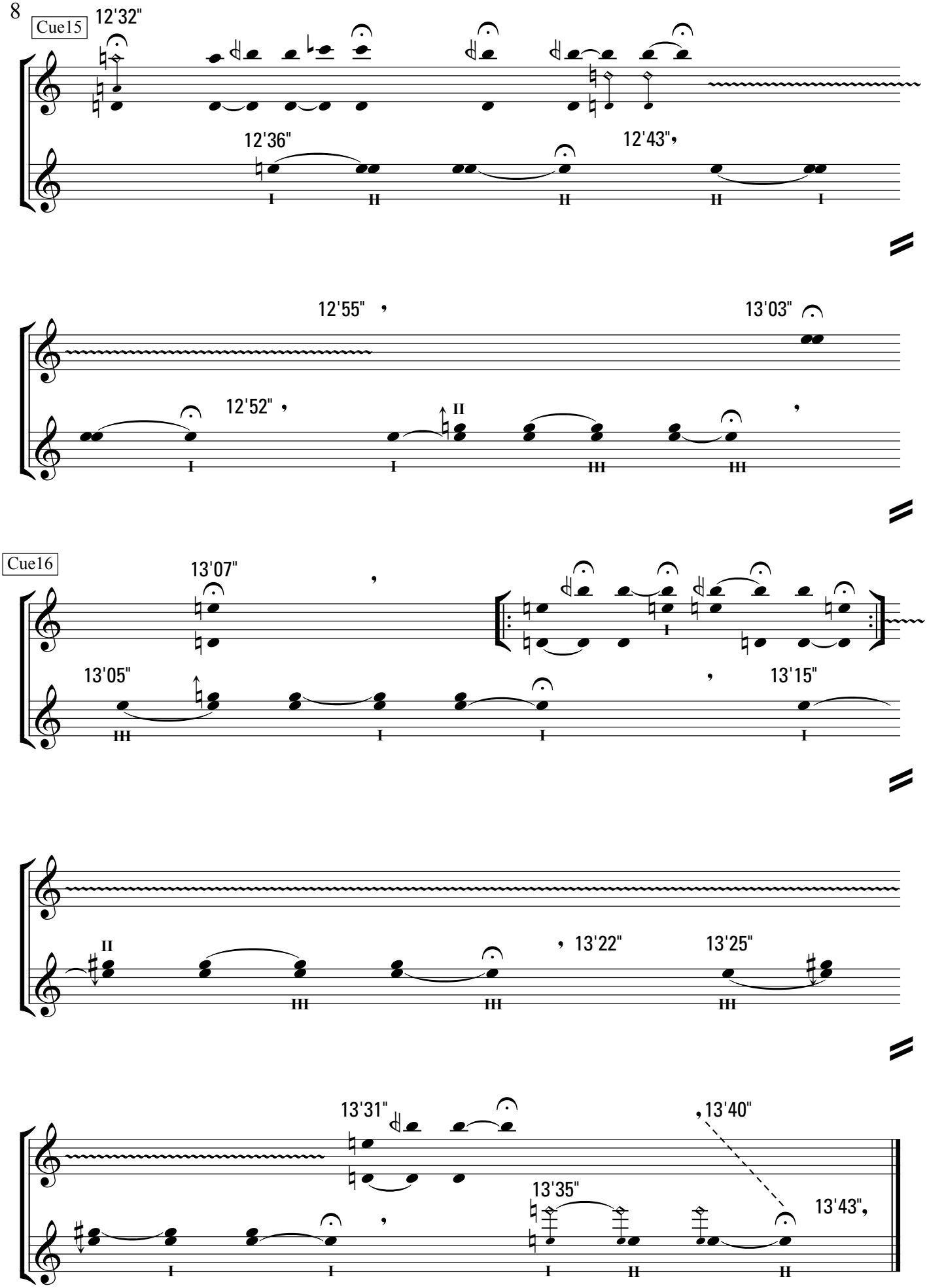

Cue4
3'32"
(22)
(5)
(3)
(15)
3'29"
IV
III
3'41"
+15.7 cents
(37)
I
3'57"
4'13"
Cue5
4'16"
4'06"
4'23"
4'32"
III
II
4'42"
4'49"
4'45"
+11.7 cents
(21)
(16)
(37)
4'54"
(25)
(12)


5'02"
-15.7 cents
(5)
(3)
(22)
(15)
5'09"
5'14"
+15.7 cents
(37)
5'29"
5'22"
Cue6
5'34"
asynchron!
26
5'55"
(24)
(13)
(37)
6'17"
Cue7
6'31"
III
(10)
II
(9)
6'20"
6'26"
38
(19)
6'44"
6'50"
6'54"


7'06"
, 7'16"
7'21", Cue8
II
III
(15)
7'23"
(4)
7'29"
(19)
II
II
III
7'36"
7'46"
7'55"
(13)
(6)
8'01"
IV
III
8'16"
Cue9
8'25"
8'22"
, Cue10
8'44"


(12)
(19)
8'45"
(7)
9'00"
9'09"
9'15"
9'02"
più calmo
II
39
Cue11
9'28"
9'31"
27
9'50"
9'52"
10'14"
Cue12
10'17"
10'08"
III
II
10'19"
III
II
10'40"
III
II


10'49"
Cue13
10'50"
III
II
11'02"
I
11'11"
I
Cue14
FIELD RECORDING CUTS OFF ABRUPTLY!
11'32"
I
I
11'40"
II
11'47"
II
I
12'03"
12'06"
11'58"
I
12'09"
I
12'26"
12'20"
II
II
I



Berlin, 13.10.2004