Program notes

Quartet For Viola, Cello, and Digital Processor is the second in a series of pieces for acoustic instruments and digital processor, in which my object has been to make maximum use of the simplest algorithms. In Quartet, the viola is the principal voice; its output is constantly delayed and transposed (down a whole step in one channel, up a half step in the other.) When the delay pattern is overlaid with further live playing several different tempi and meters emerge from the composite, although delay times (and transpositions) are actually constant throughout the piece. The cello plays a supportive role, and its only electronic modification is a slight flanging and phasing that is most noticeable the during longer notes at the end of the piece. Quartet is lovingly dedicated to my wife and performing partner, Cynthia Fogg.

-TF

Technical notes:

Both viola and cello should be equipped with contact microphones to transfer their sound into the digital processor(s) without feedback problems.

The viola sound needs a multitap stereo delay (2 voices) and independent pitch shifting for each voice output. The delays should be panned right and left, with enough internal feedback to repeat each output 4-6 times before decaying to silence. One voice should be set at 400 ms, should feedback every 400 ms, and should be transposed down a whole step. The other should be set at 1800 ms, should also feedback every 400 ms, and should be transposed up a half step.

The cello should be processed with a phaser and/or flanger controlled by an LFO at about 1 Hz.

The composer has frequently performed the piece with the Ensoniq DP/4 processor, which can independently process both viola and cello. For the convenience of performers, the complete settings used are listed here, although some do not affect the sound appreciably, and aside from the delay times, transposition, and panning, there is certainly some flexibility possible in the technical details:

Ensoniq DP 4 settings: Configuration: 2 sources, mono in

CELLO
Unit A: Phaser-DDL
Mix = 99
Vol = 93
Phaser rate = 31
LFO Width = 48
Phaser center = +03
Phaser feedback = +90
Phaser notch depth = +62
L/R LFO= in phase
Phaser S/H rate = 100
Phaser delay time Left =369ms
Phaser delay time R =246ms
Pahser delay feedback= +05

Unit B: EQ-Flanger-DDL
Mix = 99
Vol 99
Flanger rate = 24
LFO Width = 32
Flanger center = +06
Flanger feedback = +74
Flanger notch depth = +00
L/R LFO= out of phase
Flanger S/H rate = off
Phaser delay time Left=400ms
Phaser delay time R=800ms
Pahser delay feedback= +11
Flanger echo time Left = 1200ms
Flanger echo time Right = 800ms
Flanger echo level = 44
BassFc= 129Hz
EQ gain+-06dB
TrebleFc = 05 Hz
EQ gain = 00dB
EQ input level trim = 00dB

VIOLA
Unit C:Multi-tap delay
Mix = 99
Vol = 99
Multitap 1 time = 400ms
Multitap 1 level = 99
Multitap 1 regen = 30
Multitap 1 pan = -99
Multitap 2 time = 1800ms
Multitap 2 level = 91
Multitap 2 regen = 00
Multitap 2 pan = +99
Multitap 3 time = 0ms
Multitap 3 level = 0
Multitap 3 regen = 0
Multitap 3 pan = 0
Multitap 4 time = 0ms
Multitap 4 level = 0
Multitap 4 regen = 0
Multitap 4 pan = 0
Multitap regen damping = 27

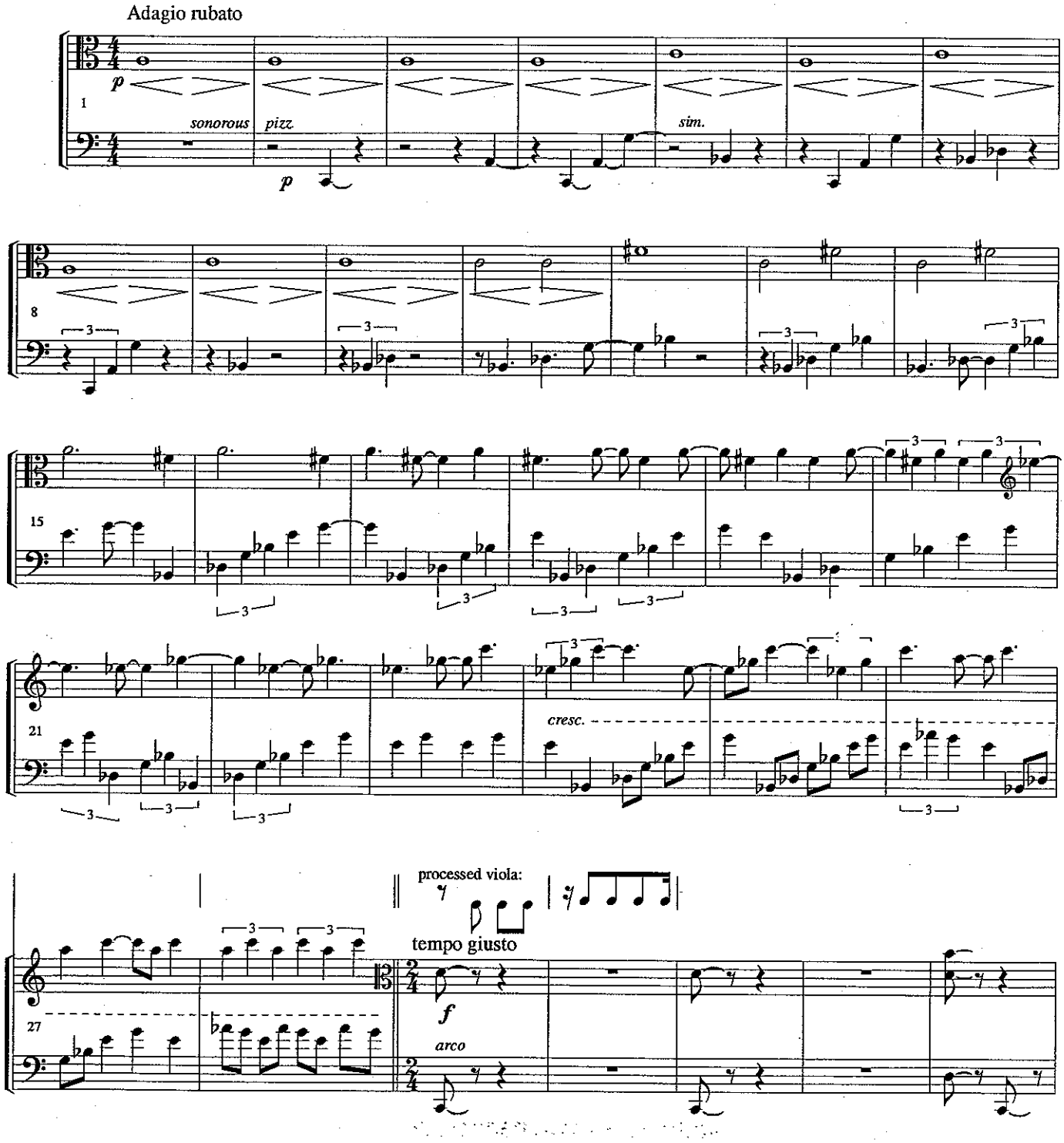
Unit D: Pitch shifter
Mix = 99
Vol = 99
Vc 1 semi= -02
Vc 1 fine = 00
Vc 1 level = 99
Vc 1 pan = -99
Vc 2 semi= +01
Vc 2 fine = 00
Vc 2 level = 99
Vc 2 pan = +99
Delay vs quality= long/smoother
Pitch shifter LFO rate = 00
Pitch shifter LFO width = 00

for Cynthia Fogg

Quartet

for Viola, Cello and Digital Processor

Tom Flaherty



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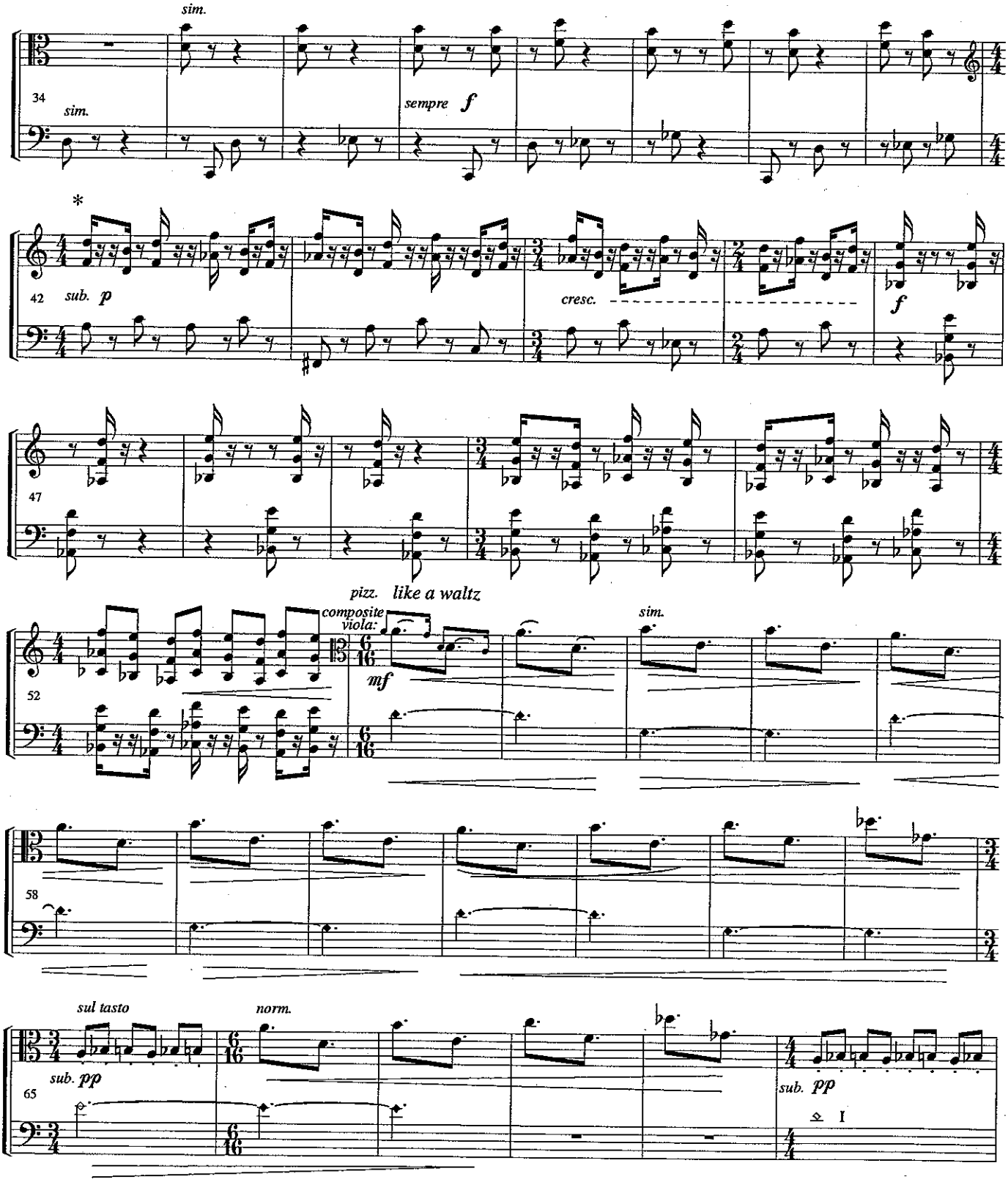
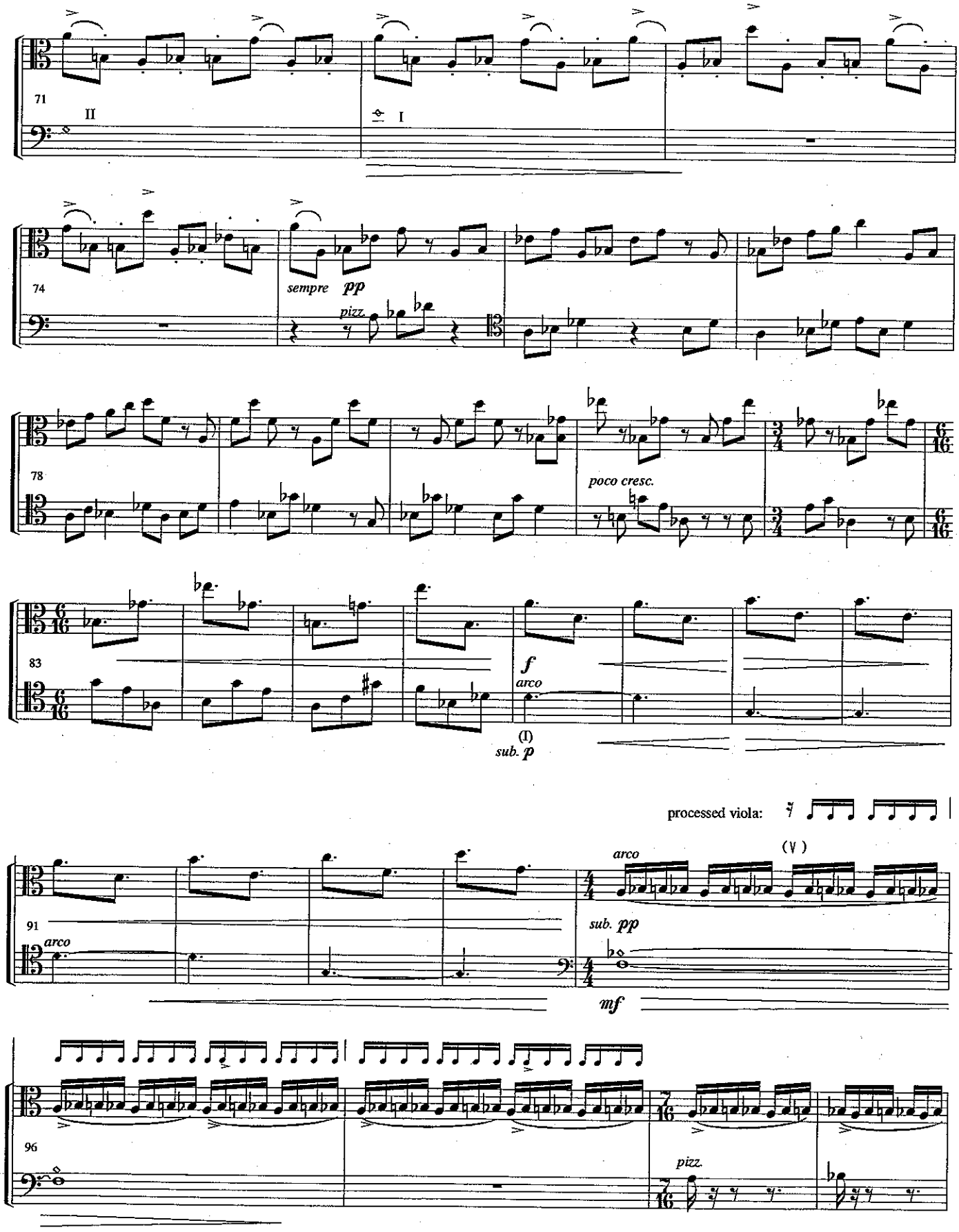
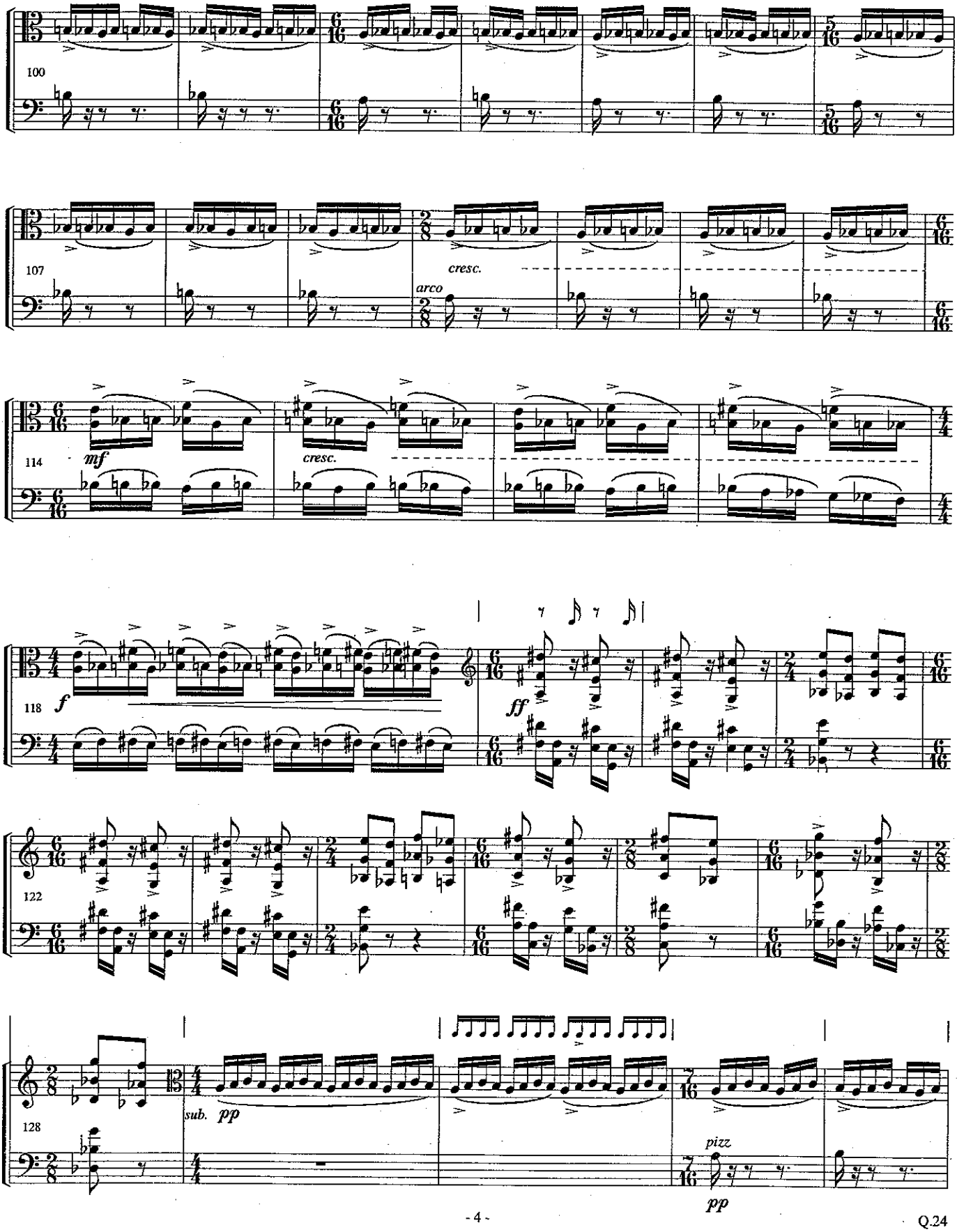
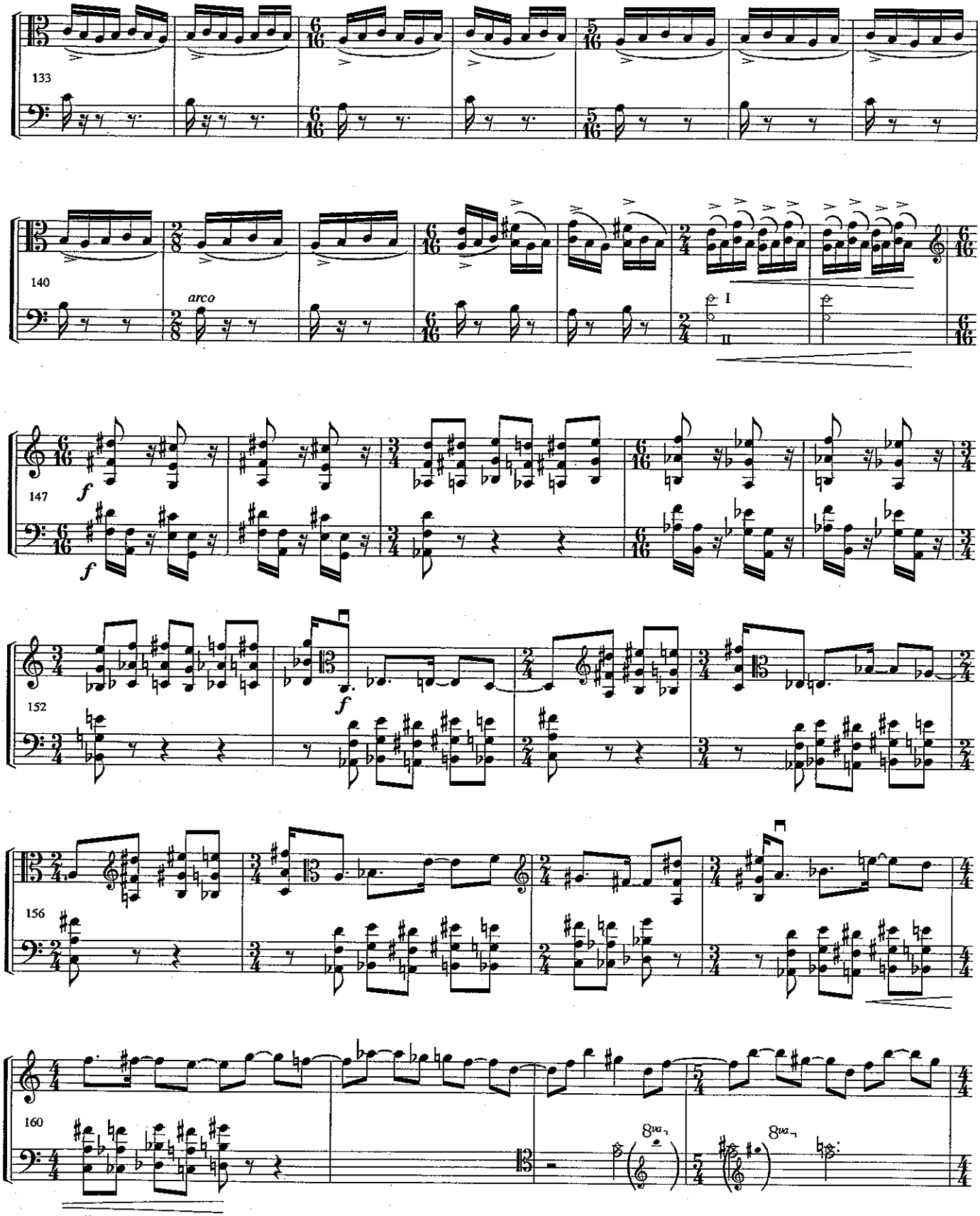


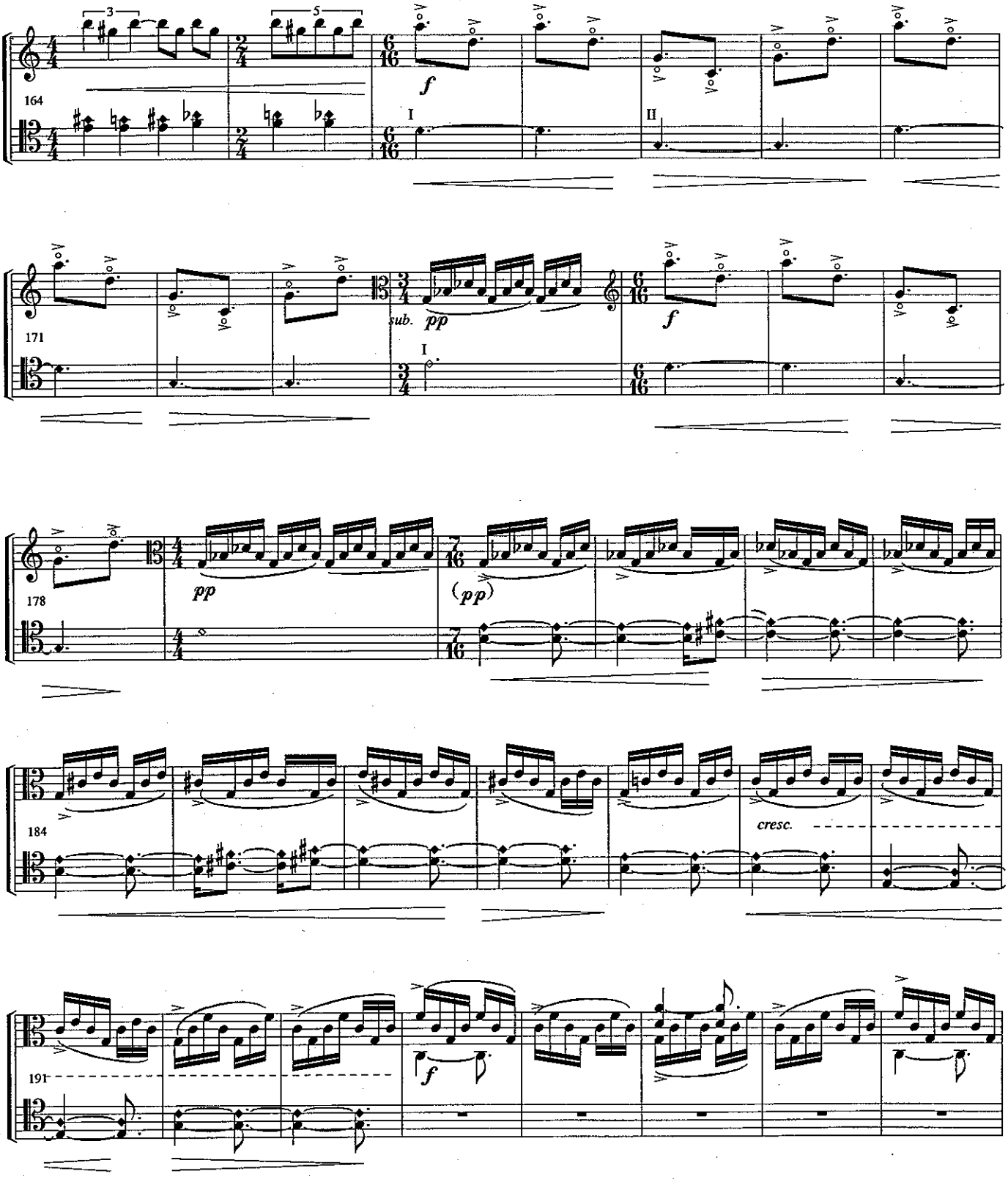
* note: in m.42-52 and similar passages, viola and cello durations are meant to be identical (nearly a full 8th, minus the necessary retake for consecutive downbows.) The difference in notation is intended to visually clarify the rhythm.

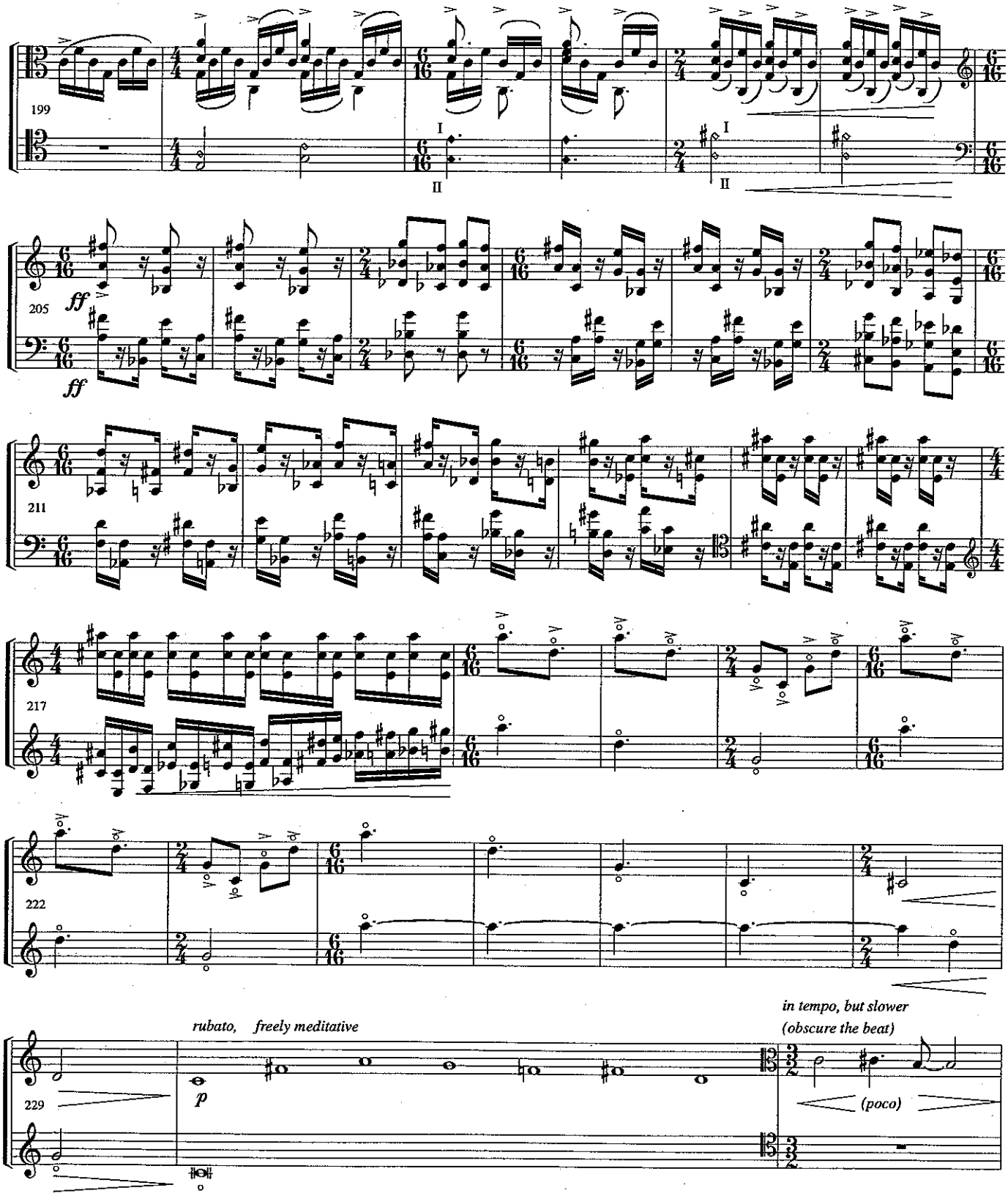

71
II
I
74
sempre pp
pizz.
78
poco cresc.
83
f
arco
(I)
sub. p
processed viola:
91
arco
arco
(V)
sub. pp
mf
96
pizz.

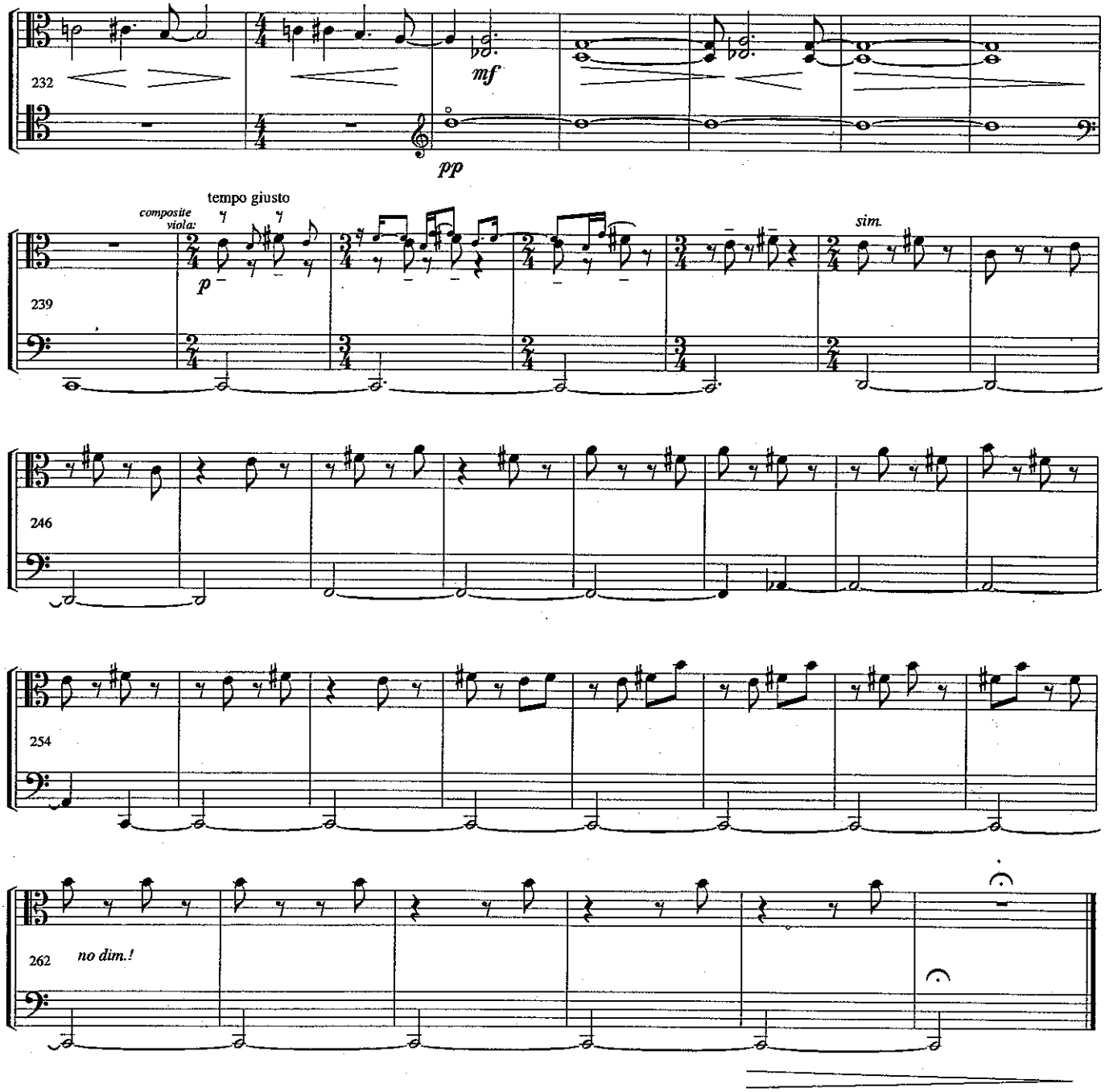


Q.24


133
140
arco
I
II
147
f
f
152
f
156
160
8va
8va


164
I
II
171
sub. pp
178
pp
(pp)
184
cresc.
191


199
I
II
I
II
205
ff
ff
211
217
222
rubato, freely meditative
in tempo, but slower
(obscure the beat)
229
p
(poco)


232
mf
pp
composite viola:
tempo giusto
p
239
sim.
246
254
262
no dim.!