# SMC (’Clouds’)

for amplified piano and cello + electronics

2023

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## Notes for performance

The Small Magellanic Cloud (SMC) is among the nearest intergalactic neighbors of the Milky Way and is one of the most distant objects visible to the naked eye. SMC (Clouds) is composed as a serie of soundscapes inspired by different celestial objects present in the Small Magellanic Cloud: remnants, clouds of gas and dust, clusters of stars & nebulas — each part is morphing gradually from one into another or switch suddenly to another state, interrupting suddenly its development to focus on the next sonic image.

## Form

E0102 — the remnant of a supernova that exploded in the Small Magellanic Cloud (SMC)
NGC 299 — an open cluster of stars at the edge of SMC, weakly bound by the shackles of gravity
Magellanic Stream — a long trail of gas extending from the Large and Small Magellanic Clouds
NGC 602 — a young open cluster of stars with associated nebula N90
N90 — a star-forming cloud with massive pillars of gas and dust at the ridges
N81 — very close pair of two luminous stars, emitting copious ultraviolet radiation

## Abbreviations

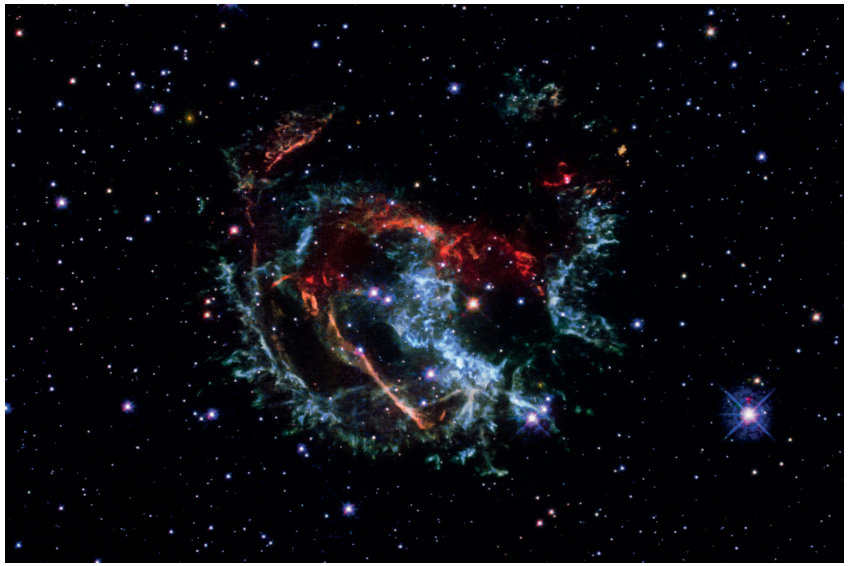
VLC = Violoncello
PNO = Piano

## General Comments

- the score must be taken as a point of departure
- notation and live electronics should stay flexible
- interact & be creative with the tape
- the piece must be played with a 4.1 sound system

## Transposition

The VLC sounds as written - despite the scordatura.



Featured in this Hubble image is an expanding, gaseous corpse — a supernova remnant — known as E0102 . It is the remnant of a star that exploded long ago in the Small Magellanic Cloud (SMC), a satellite galaxy of our Milky Way.

NGC 602 is a young and bright open star cluster surrounded by N90, a star-forming cloud of natal gas and dust of about 90 light-years across, located some 196,000 light-years away near the outskirts of the Small Magellanic Cloud (SMC)

# Tech Rider

### Violoncello

Hypercardiod Condenser Microphone

+ x1 long XLR Cable & Microphone Stand

Heavy Metal Mute

Wolftöter [on IV] (at best a used one, which sounds 'better')

### Piano

Patafix (for preparation)

Small & Large Superballs

x2 Ebows

x2 Hypercardiod Microphones

Medium-Large Glass Bowl (ø ~20 cm)

Glass Ball (ø ~5 cm)

x2 Neodynium Magnets (length ~4-6 cm)

### Electronics

Modular Synthesizer

Small Mixer [i.e. Mackie 802VLZ4]

4.1 Soundsystem

Table (ca. L 100 cm - W 60 cm - H 70 cm)

Power Strip

# Signal Chain

> VLC Hypercardiod Condenser Microphone

>> Befaco - Instrument Interface

>>> Modular Effects (DV + BBD Delay)

>>>> Befaco - Out

>>>>> Mixer (small, x2 Stereo 6,3 mm Jack Inputs) [i.e. Mackie 802 VLZ4]

> PNO Hypercardiod Condenser Microphone

>>>>>> Mixer (small, XLR Input) [i.e. Mackie 802 VLZ4]

= ALL Mixer > 4.1. Soundsystem [Subwoofer > x4 Loudspeakers]

> Tape (played from Modular Synthesizer w/ i.e. Disting Mk4)

>>>>>> Mixer (small, x2 Stereo 6,3 mm Jack Inputs) [i.e. Mackie 802 VLZ4]

# Panning

The sound system used is a double stereo system with two (2) pairs of loudspeakers.

The panning should be the following:

VLC - Loudspeaker Center RIGHT

PNO - Loudspeaker Center LEFT

Tape - Loudspeaker Far LEFT & RIGHT

# Set-Up w/ 4.1 Soundsystem

*) If the Subwoofer cannot be placed with its back against a wall to enhance its acoustic effect, please place it behind the Audience nearby the Mixer.

## Dynamic

The performers are asked to take into consideration that the written dynamics aren't absolute. Rather, it's a relative dynamic in relation to sonic events of the live electronics and/or tape. Therefore the musician is asked not only to perform the part - but to listen & react actively to the electronics in order to merge into a unitary sound-world.

## Preparation (PNO)

## Scordatura (VLC)

III: -minor 2nd
II: + minor 2nd

## Notation

### VIOLONCELLO

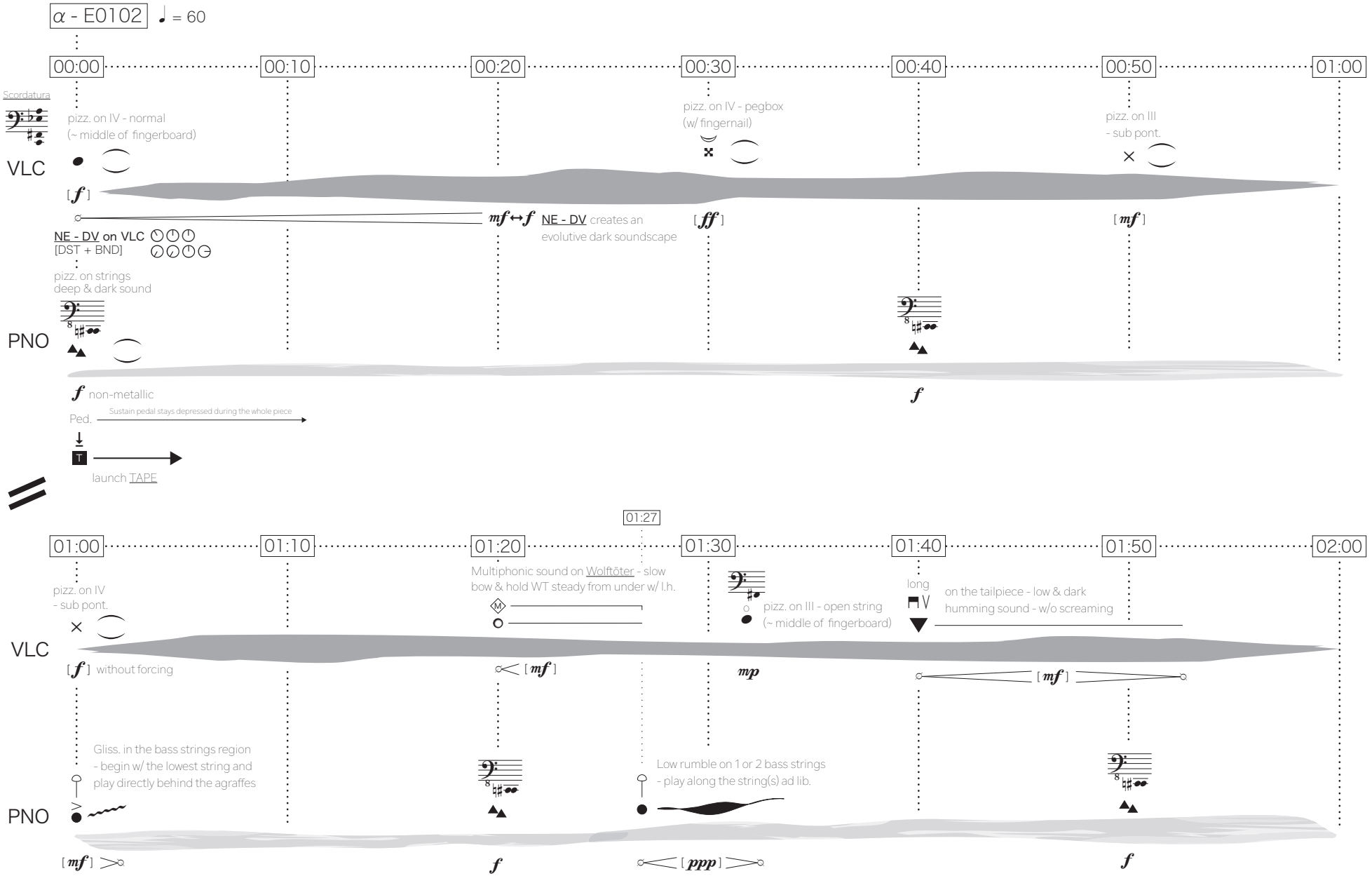
- flautando
- ordinary
- noisy
- overpressure
- natural harmonic
- air sound
- Wolftöter low sound
- Wolftöter multiphonic
- screw pizzicato
- delicate but scratchy half harmonic w/ micro-erratic vibrato and tremolo

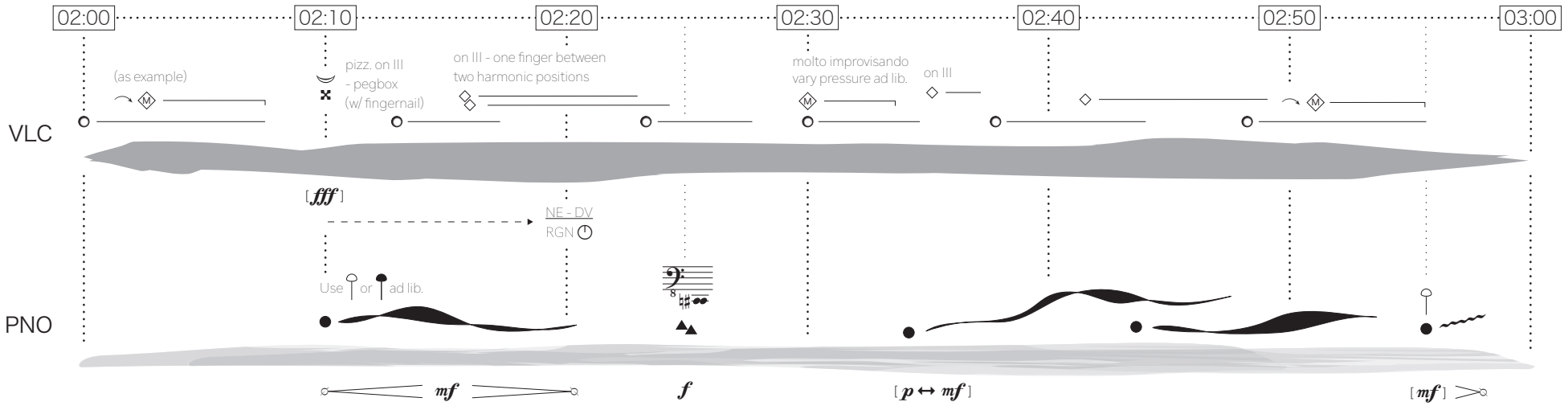
### PIANO

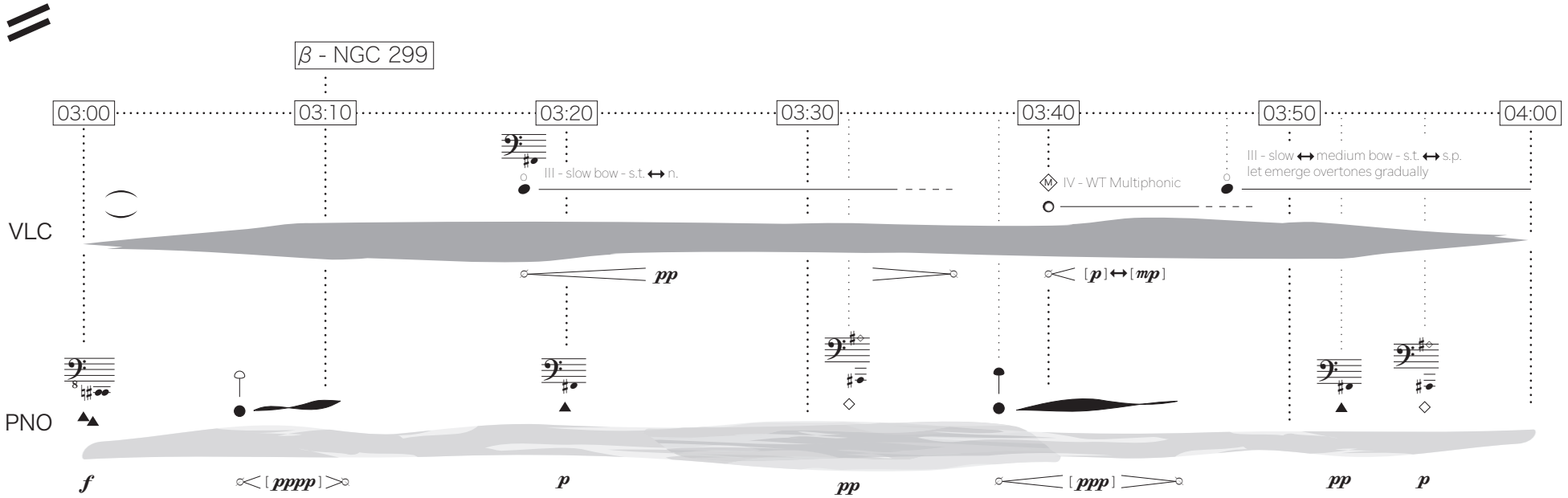
- small superball
- large superball

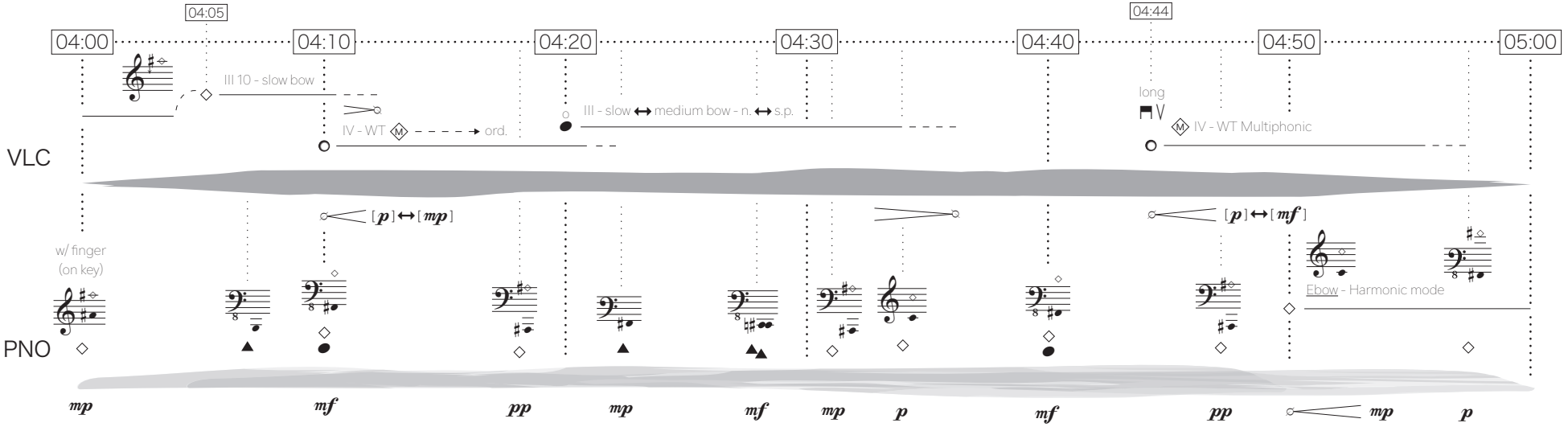
RND random pitch

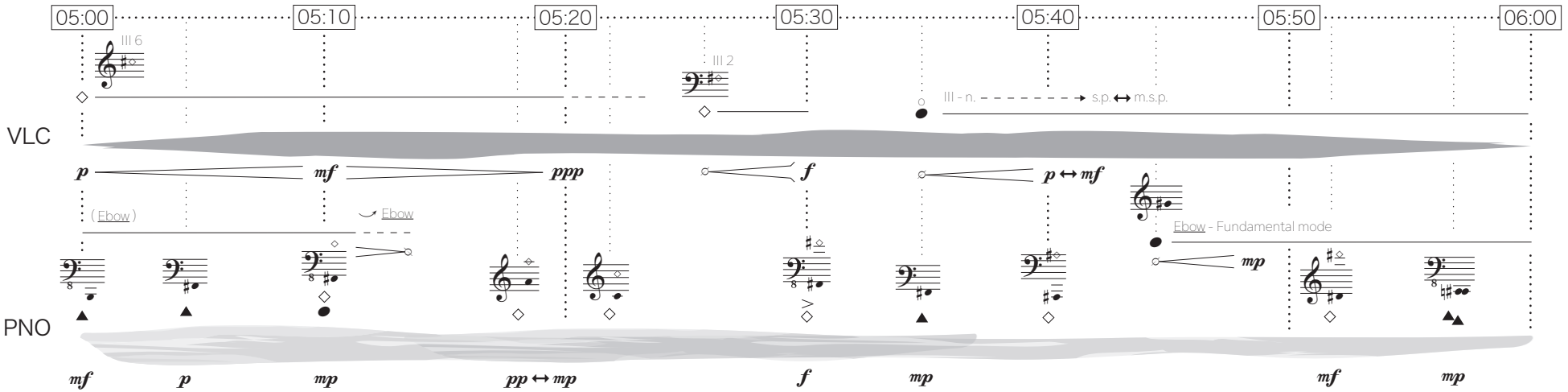
- dark percussive sound (on key - string damped at its beginning)
- harmonic pizz (finger on string - played on key)
- unpitched pizz (on string - after dampers)
- pitched pizz (on string - after dampers - with flesh or nail ad lib.)
- flicking pizz (on one string - after dampers)
- flicking pizz (on two (or more three) strings - after dampers)
- pitched pizz (tapping with nail + flesh on string - after dampers)
- glass pizz (with glass slide, tapping string from above and playing a gliss up- or downward
- jeté on treble string with small superball

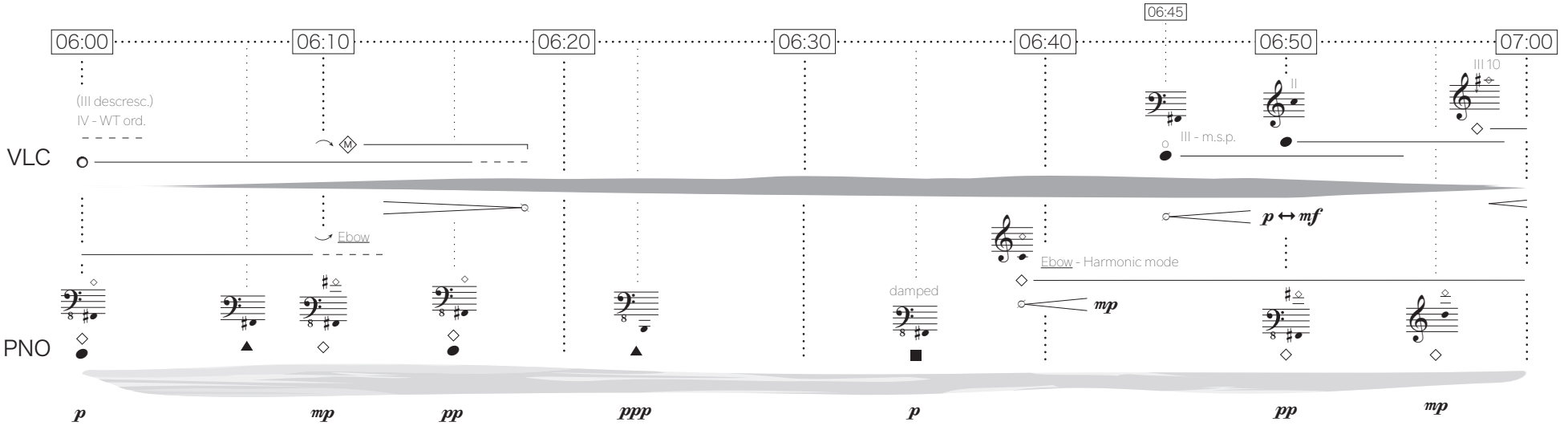

α - E0102
♩ = 60
00:00
00:10
00:20
00:30
00:40
00:50
01:00
Scordatura
VLC
pizz. on IV - normal
(~ middle of fingerboard)
[f]
mf↔f
NE - DV creates an
evolutive dark soundscape
[ff]
pizz. on IV - pegbox
(w/ fingernail)
pizz. on III
- sub pont.
[mf]
NE - DV on VLC
[DST + BND]
pizz. on strings
deep & dark sound
PNO
f non-metallic
Ped.
Sustain pedal stays depressed during the whole piece
launch TAPE
f
01:27
01:00
01:10
01:20
01:30
01:40
01:50
02:00
pizz. on IV
- sub pont.
[f] without forcing
Multiphonic sound on Wolftöter - slow
bow & hold WT steady from under w/ l.h.
[mf]
pizz. on III - open string
(~ middle of fingerboard)
mp
long
on the tailpiece - low & dark
humming sound - w/o screaming
[mf]
Gliss. in the bass strings region
- begin w/ the lowest string and
play directly behind the agraffes
Low rumble on 1 or 2 bass strings
- play along the string(s) ad lib.
PNO
[mf]
f
[ppp]
f

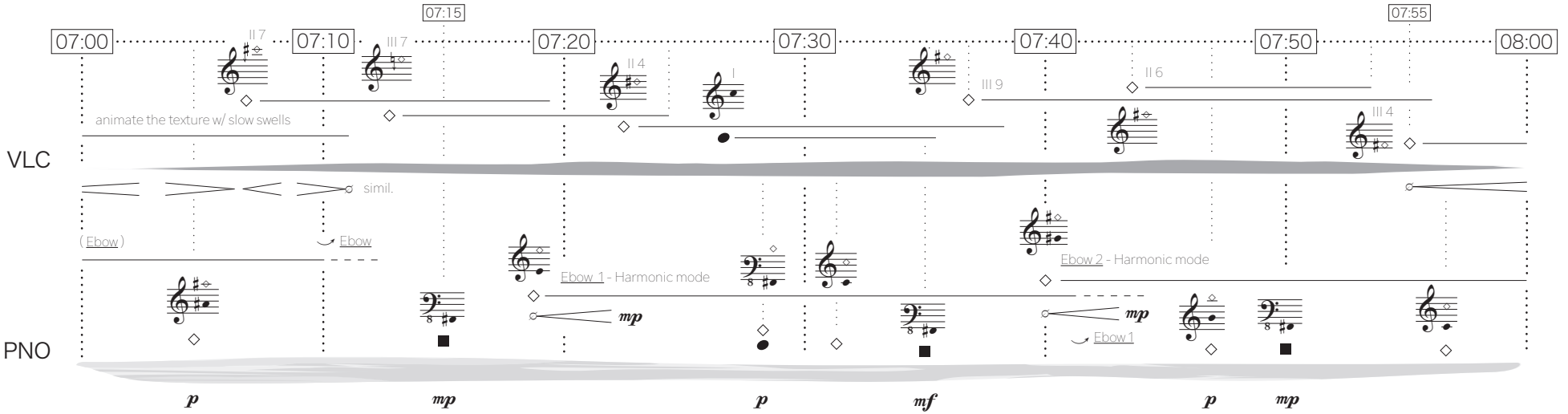

02:00
02:10
02:20
02:30
02:40
02:50
03:00
VLC
PNO
(as example)
pizz. on III
- pegbox
(w/ fingernail)
on III - one finger between
two harmonic positions
molto improvisando
vary pressure ad lib.
on III
[fff]
NE - DV
RGN
Use or ad lib.
mf
f
[p ↔ mf]
[mf]

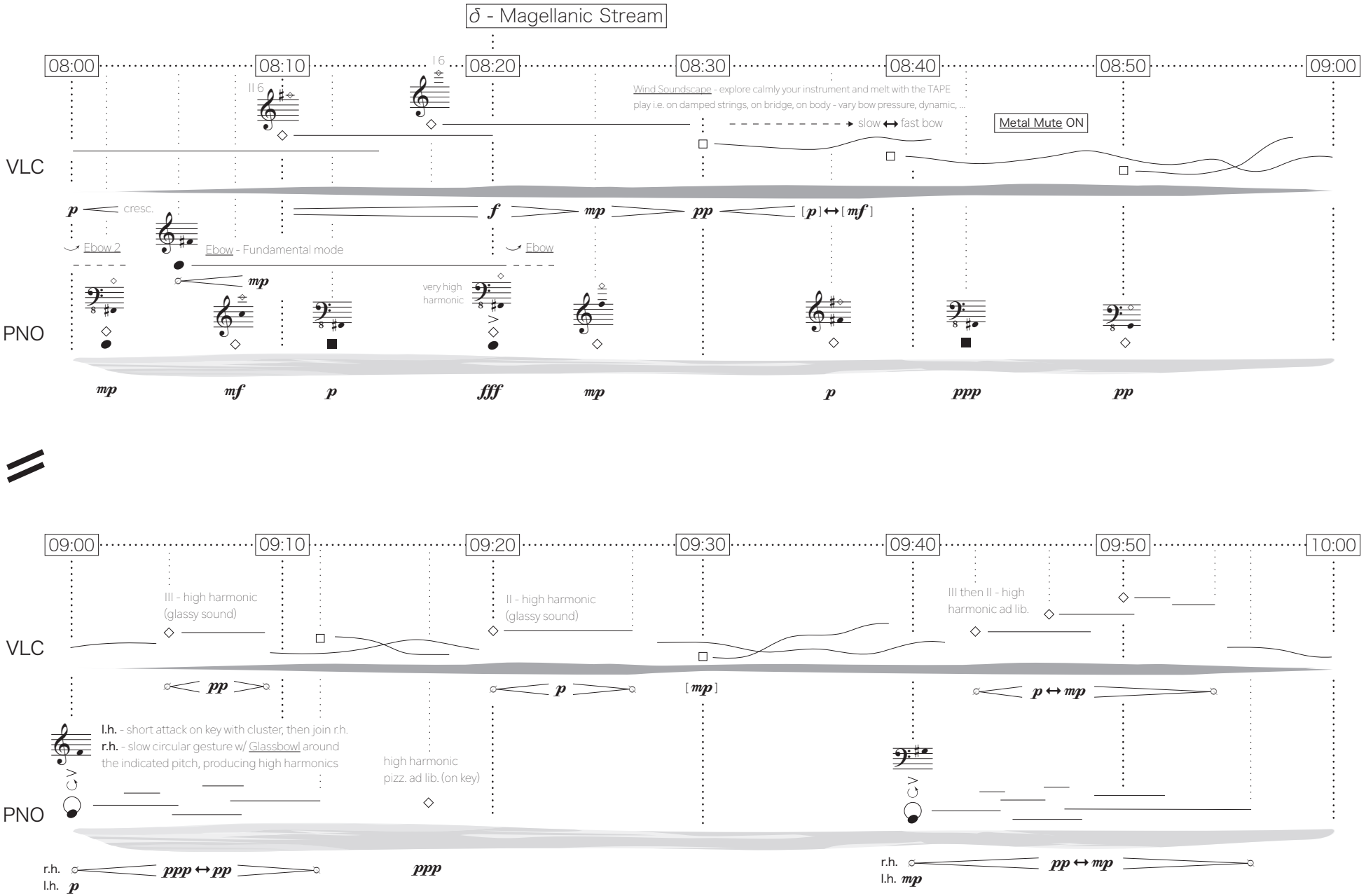

β - NGC 299
03:00
03:10
03:20
03:30
03:40
03:50
04:00
VLC
PNO
III - slow bow - s.t. ↔ n.
IV - WT Multiphonic
III - slow ↔ medium bow - s.t. ↔ s.p.
let emerge overtones gradually
pp
[p] ↔ [mp]
f
[pppp]
p
pp
[ppp]
pp
p

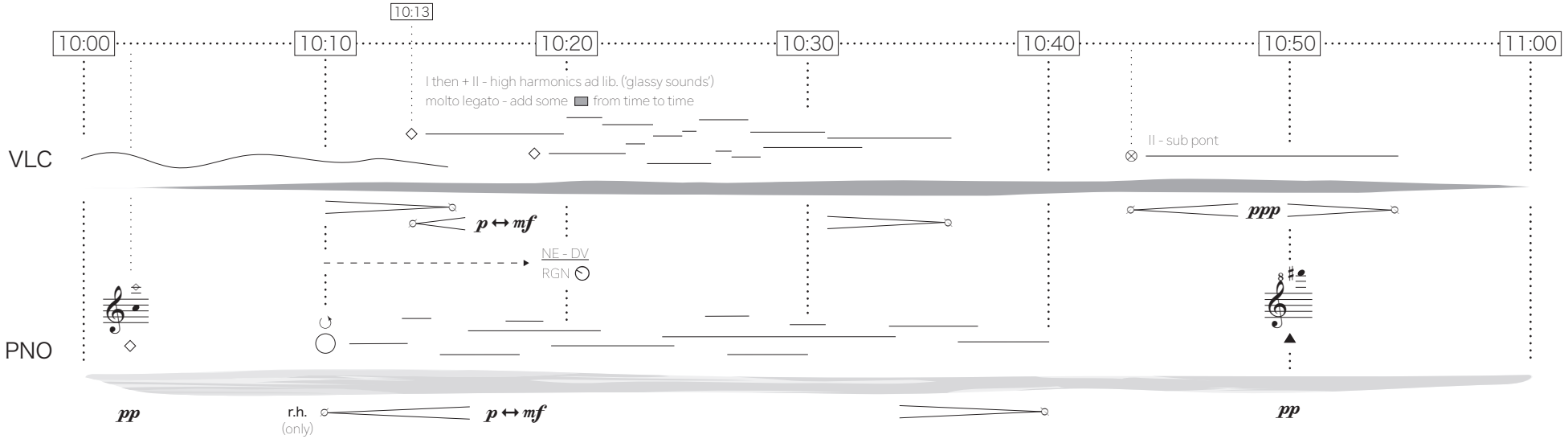

04:00
04:05
04:10
04:20
04:30
04:40
04:44
04:50
05:00
III 10 - slow bow
IV - WT
ord.
III - slow ↔ medium bow - n. ↔ s.p.
long
IV - WT Multiphonic
VLC
[p] ↔ [mp]
[p] ↔ [mf]
w/ finger
(on key)
Ebow - Harmonic mode
PNO
mp
mf
pp
mp
mf
mp
p
mf
pp
mp
p

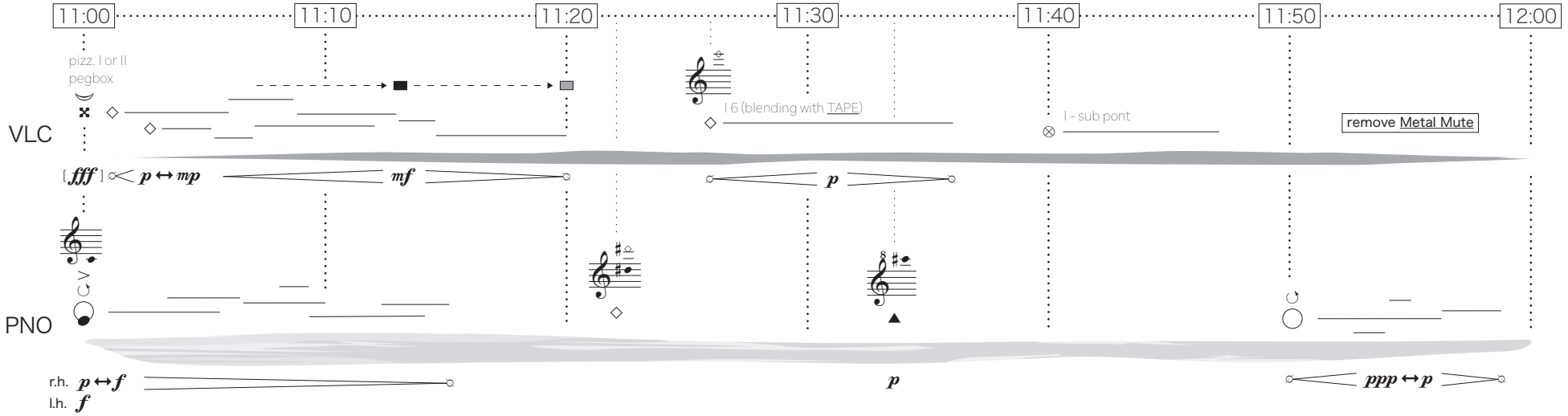

05:00
05:10
05:20
05:30
05:40
05:50
06:00
III 6
III 2
III - n. → s.p. ↔ m.s.p.
VLC
p
mf
ppp
f
p ↔ mf
( Ebow )
Ebow
Ebow - Fundamental mode
mp
PNO
mf
p
mp
pp ↔ mp
f
mp
mf
mp

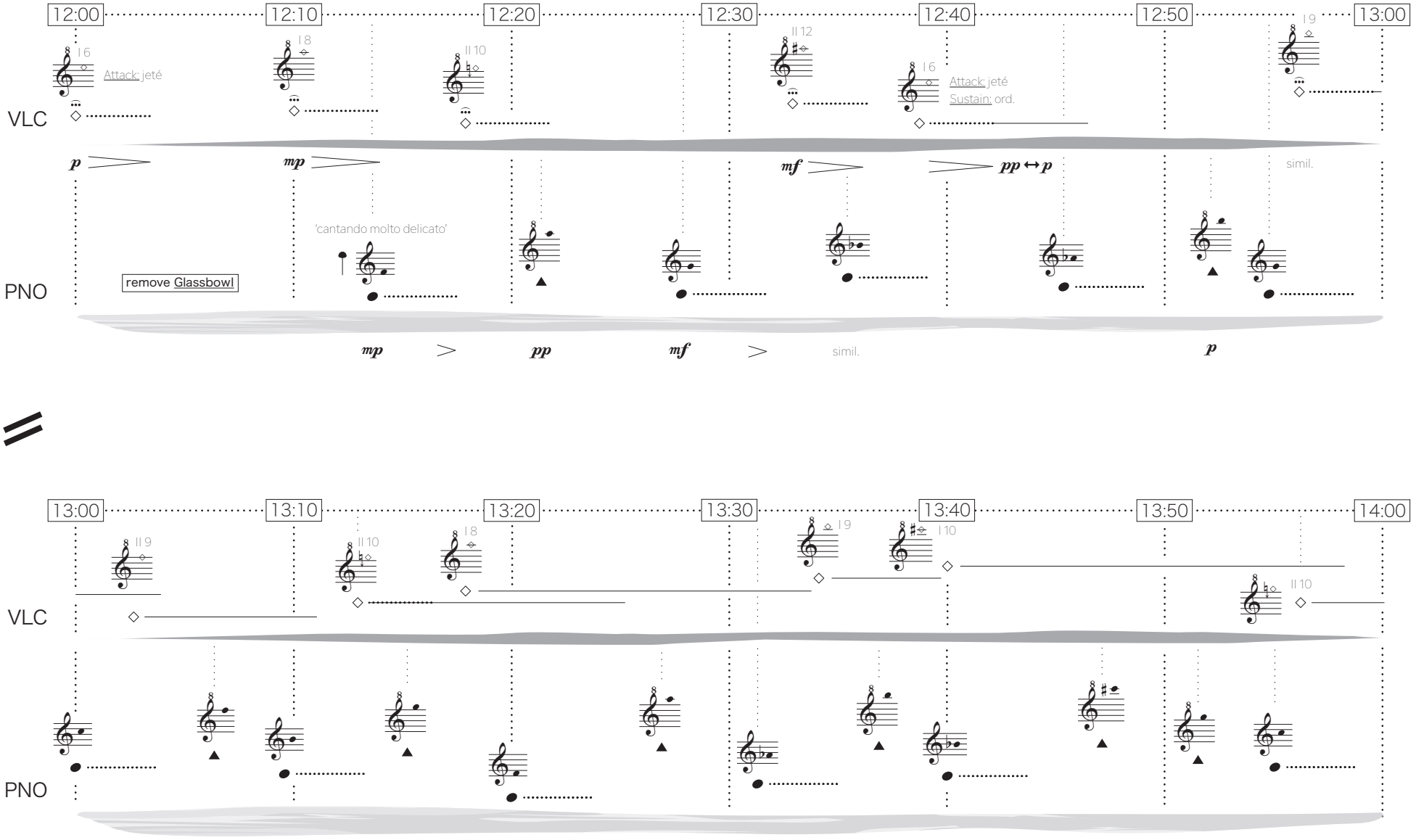

06:00
06:10
06:20
06:30
06:40
06:45
06:50
07:00
VLC
PNO
(III descresc.)
IV - WT ord.
Ebow
III - m.s.p.
II
III 10
p ↔ mf
Ebow - Harmonic mode
damped
mp
p
mp
pp
ppp
p
pp
mp

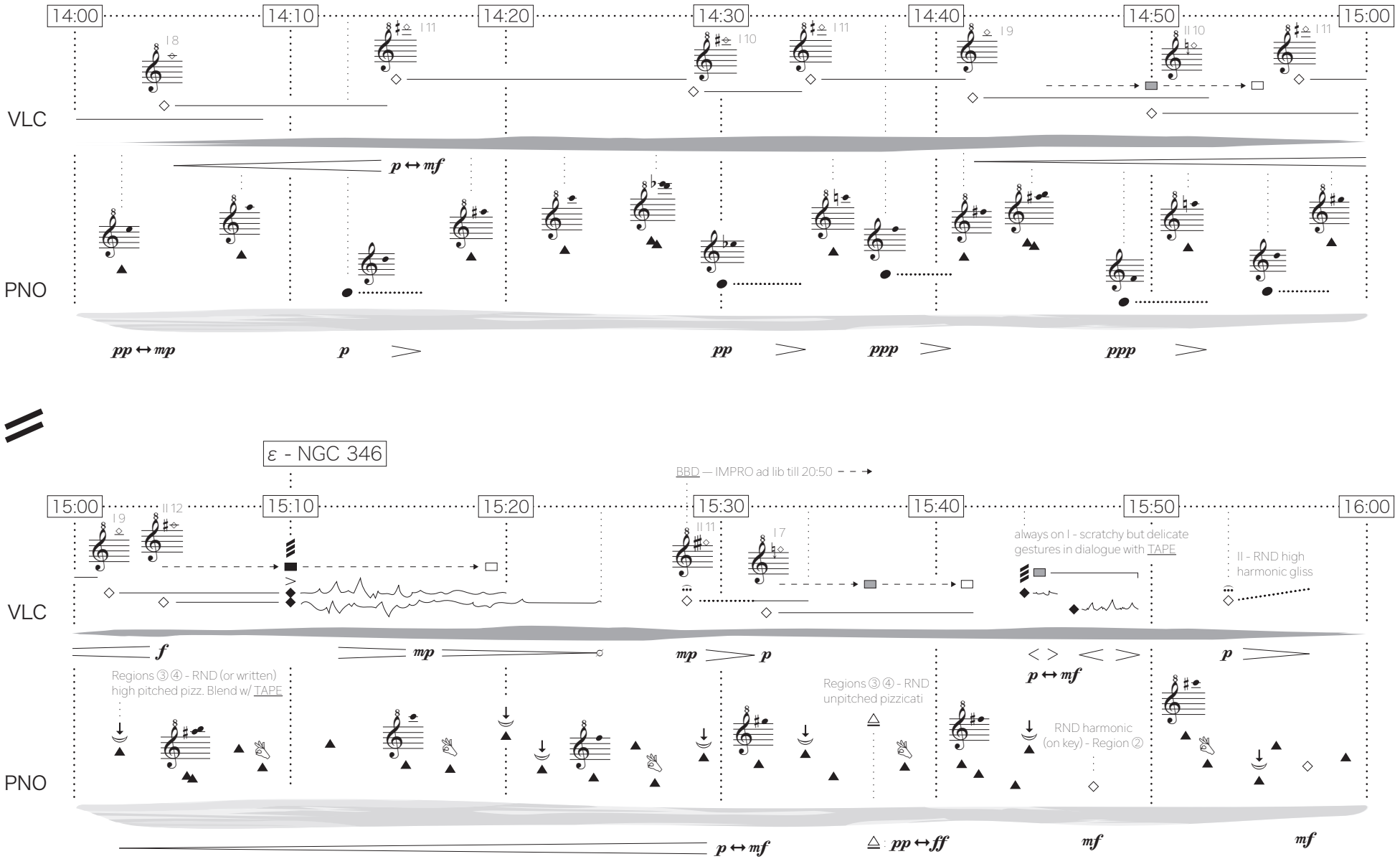

07:00
07:10
07:15
07:20
07:30
07:40
07:50
07:55
08:00
VLC
PNO
animate the texture w/ slow swells
II 7
III 7
II 4
I
III 9
II 6
III 4
simil.
( Ebow )
Ebow
Ebow 1 - Harmonic mode
mp
Ebow 2 - Harmonic mode
mp
Ebow 1
p
mp
p
mf
p
mp

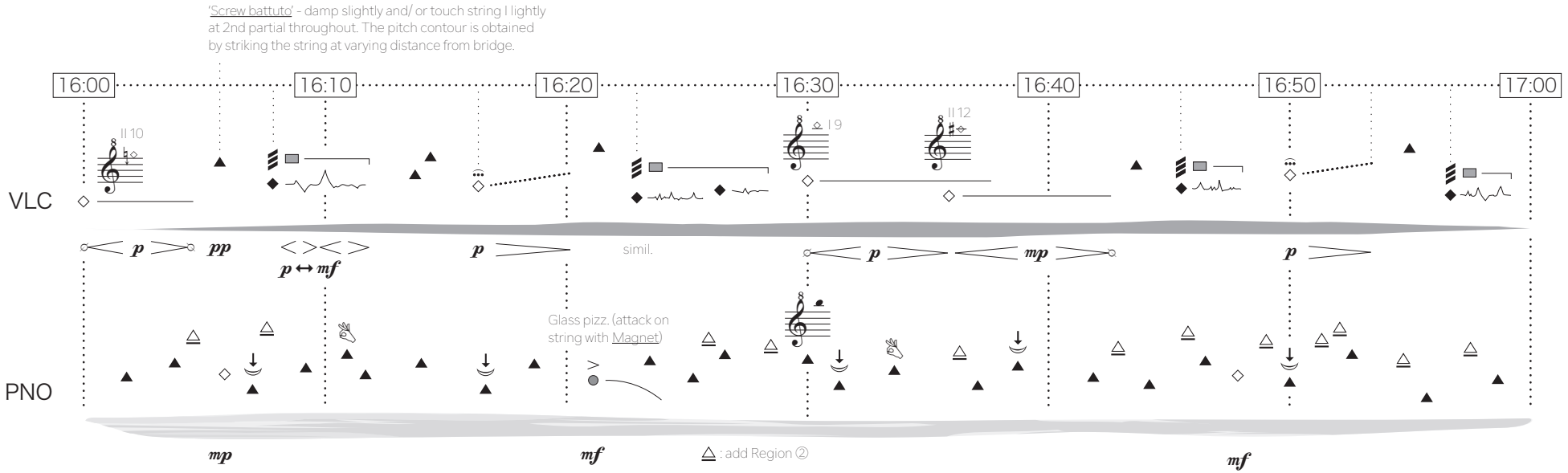

δ - Magellanic Stream
08:00
08:10
08:20
08:30
08:40
08:50
09:00
VLC
PNO
I 6
II 6
Wind Soundscape - explore calmly your instrument and melt with the TAPE
play i.e. on damped strings, on bridge, on body - vary bow pressure, dynamic, ...
slow ↔ fast bow
Metal Mute ON
p cresc.
f
mp
pp
[p] ↔ [mf]
Ebow 2
Ebow - Fundamental mode
Ebow
mp
very high harmonic
mp mf p fff mp p ppp pp
09:00
09:10
09:20
09:30
09:40
09:50
10:00
III - high harmonic (glassy sound)
II - high harmonic (glassy sound)
III then II - high harmonic ad lib.
pp
p
[mp]
p ↔ mp
l.h. - short attack on key with cluster, then join r.h.
r.h. - slow circular gesture w/ Glassbowl around the indicated pitch, producing high harmonics
high harmonic pizz. ad lib. (on key)
r.h. ppp ↔ pp
l.h. p
ppp
r.h. pp ↔ mp
l.h. mp

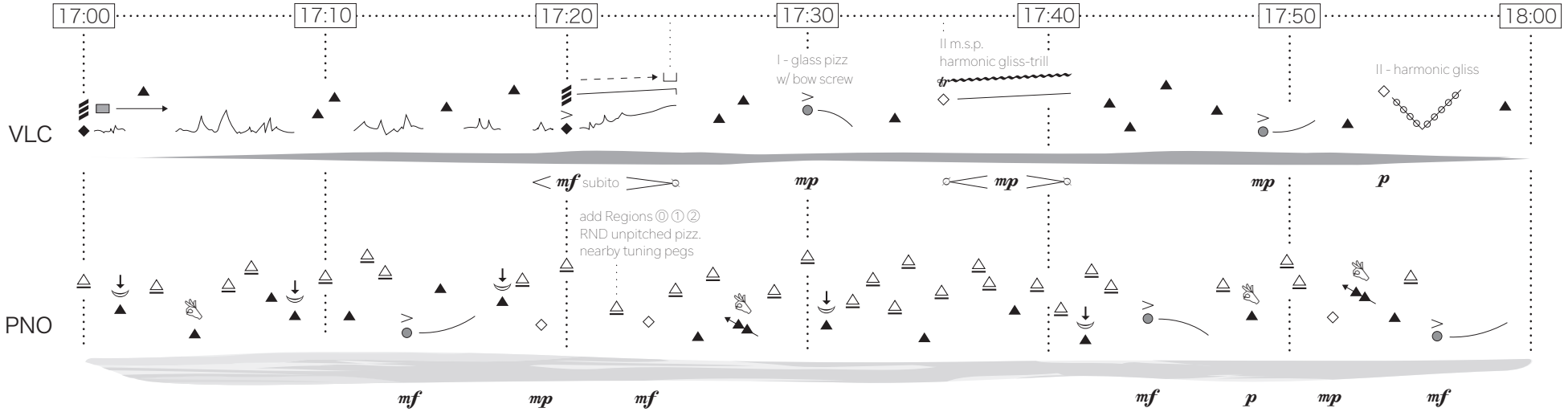

10:00
10:10
10:13
10:20
10:30
10:40
10:50
11:00
I then + II - high harmonics ad lib. ('glassy sounds')
molto legato - add some from time to time
VLC
II - sub pont
p ↔ mf
ppp
NE - DV
RGN
PNO
pp
r.h.
(only)
p ↔ mf
pp

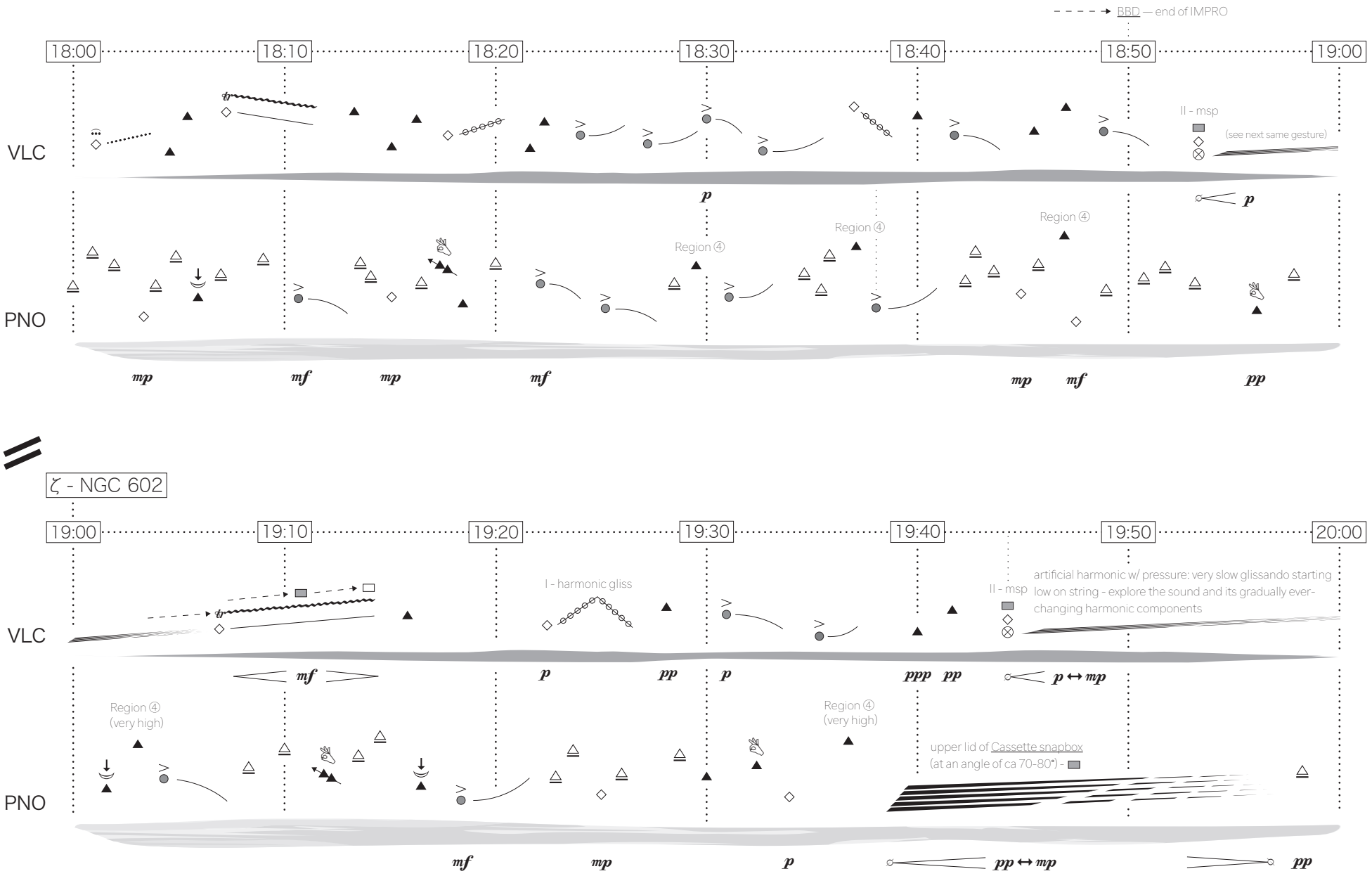

11:00
11:10
11:20
11:30
11:40
11:50
12:00
pizz. I or II
pegbox
VLC
I 6 (blending with TAPE)
I - sub pont
remove Metal Mute
[fff] p ↔ mp
mf
p
PNO
r.h. p ↔ f
l.h. f
p
ppp ↔ p

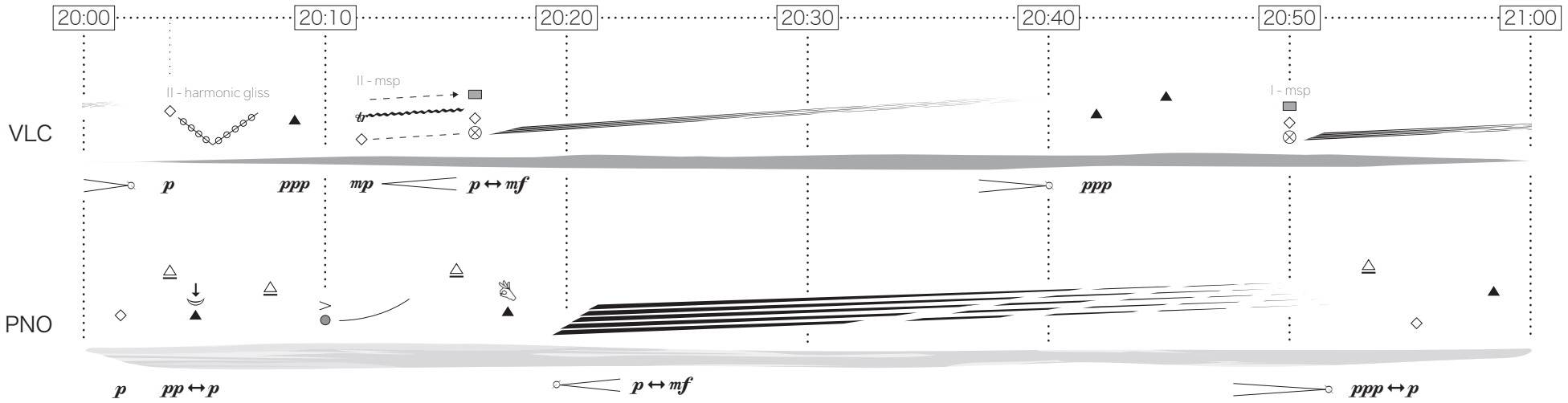

12:00
12:10
12:20
12:30
12:40
12:50
13:00
VLC
I 6
Attack: jeté
I 8
II 10
II 12
I 6
Attack: jeté
Sustain: ord.
I 9
p
mp
mf
pp ↔ p
simil.
PNO
'cantando molto delicato'
remove Glassbowl
mp
pp
mf
simil.
p
13:00
13:10
13:20
13:30
13:40
13:50
14:00
VLC
II 9
II 10
I 8
I 9
I 10
II 10
PNO

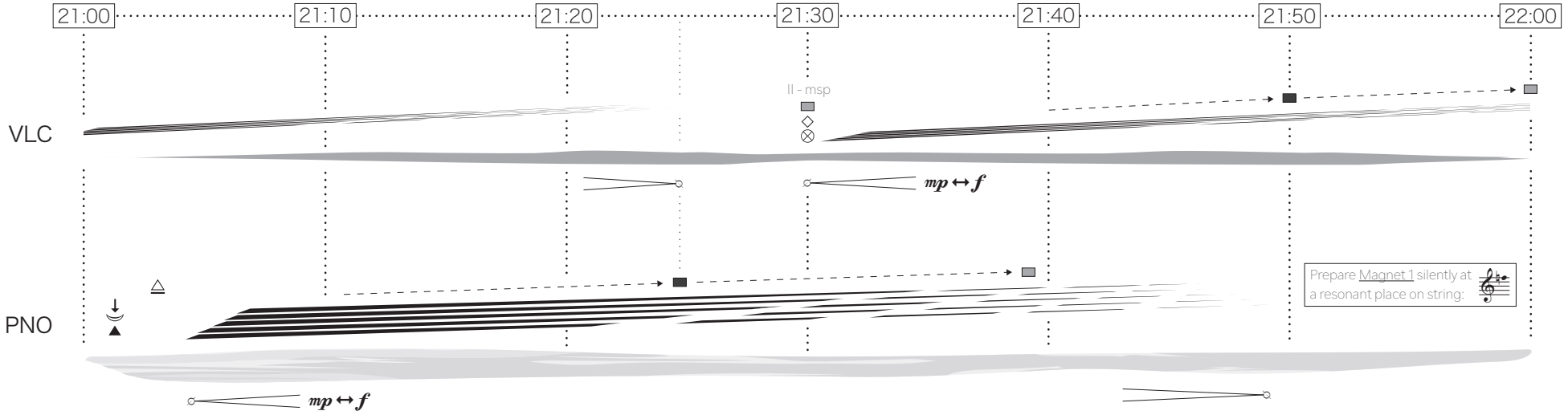

14:00
14:10
14:20
14:30
14:40
14:50
15:00
VLC
PNO
I 8
I 11
I 10
I 11
I 9
II 10
I 11
p ↔ mf
pp ↔ mp
p
pp
ppp
ppp
ε - NGC 346
BBD — IMPRO ad lib till 20:50
15:00
15:10
15:20
15:30
15:40
15:50
16:00
I 9
II 12
II 11
I 7
always on I - scratchy but delicate gestures in dialogue with TAPE
II - RND high harmonic gliss
f
mp
mp
p
p
p ↔ mf
Regions ③ ④ - RND (or written) high pitched pizz. Blend w/ TAPE
Regions ③ ④ - RND unpitched pizzicati
RND harmonic (on key) - Region ②
p ↔ mf
pp ↔ ff
mf
mf
Comment for PNO's 'cloud of pizzicati' - take your part as a point of departure to blend with the TAPE — and not as a frozen example of what you have to play on time and exactly.

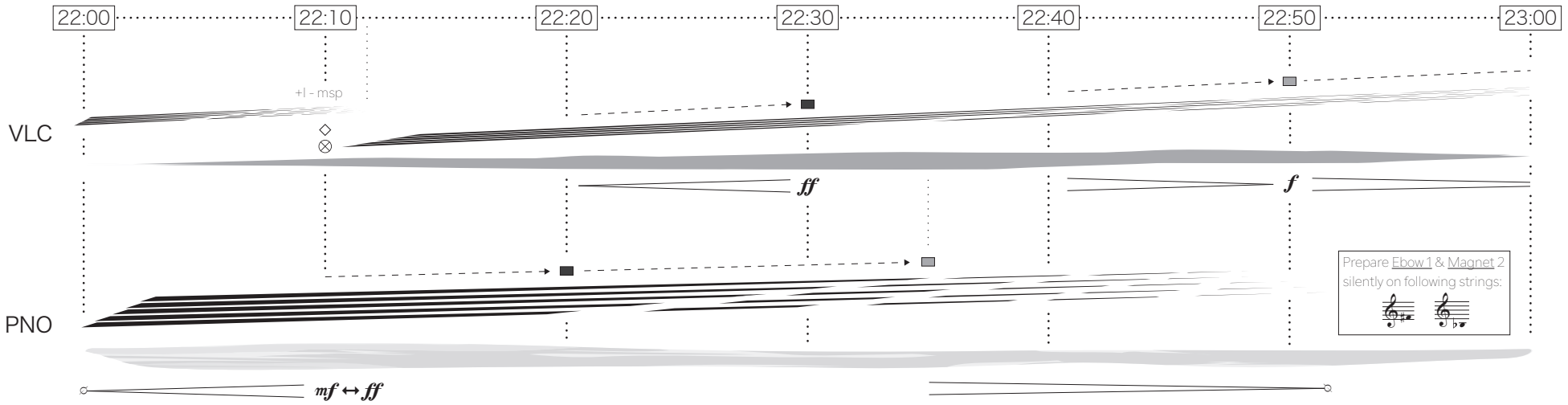

'Screw battuto' - damp slightly and/ or touch string I lightly at 2nd partial throughout. The pitch contour is obtained by striking the string at varying distance from bridge.
16:00
16:10
16:20
16:30
16:40
16:50
17:00
II 10
I 9
II 12
VLC
PNO
p
pp
p ↔ mf
simil.
mp
Glass pizz. (attack on string with Magnet)
mf
△ : add Region ②

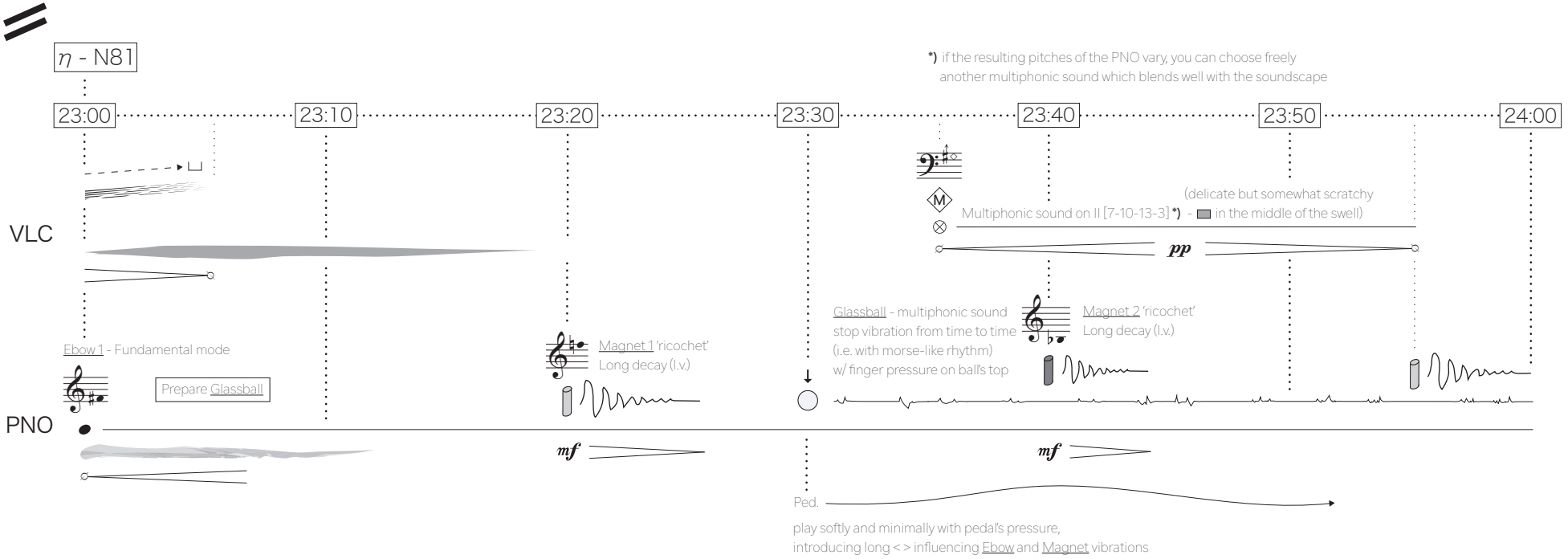

17:00
17:10
17:20
17:30
17:40
17:50
18:00
VLC
PNO
I - glass pizz w/ bow screw
II m.s.p. harmonic gliss-trill
II - harmonic gliss
mf subito
mp
p
add Regions ⓪ ① ②
RND unpitched pizz. nearby tuning pegs

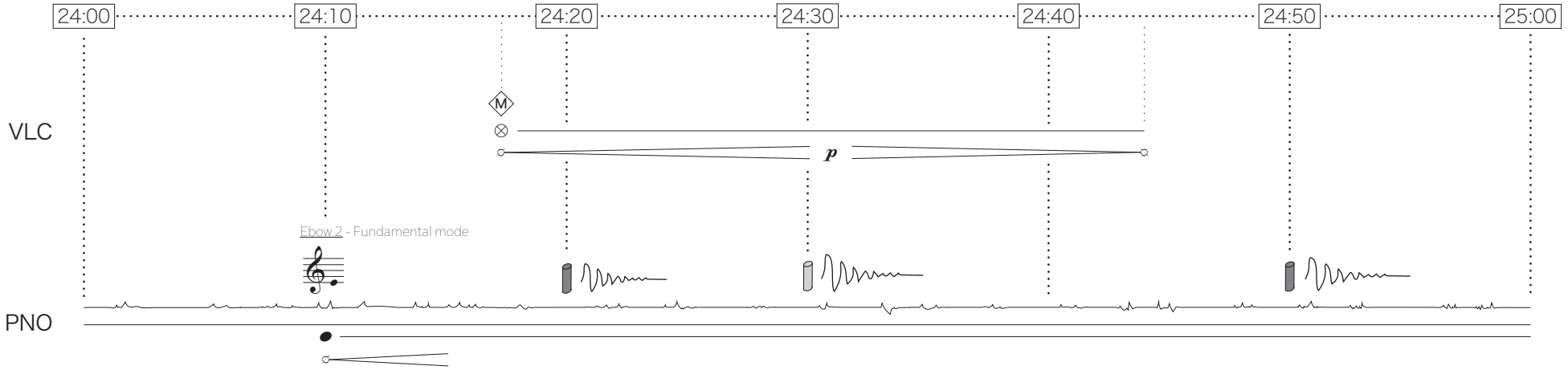

BBD — end of IMPRO
18:00
18:10
18:20
18:30
18:40
18:50
19:00
VLC
PNO
II - msp
(see next same gesture)
Region ④
mp
mf
mp
mf
p
mp
mf
pp
ζ - NGC 602
19:00
19:10
19:20
19:30
19:40
19:50
20:00
I - harmonic gliss
II - msp
artificial harmonic w/ pressure: very slow glissando starting low on string - explore the sound and its gradually ever-changing harmonic components
Region ④ (very high)
upper lid of Cassette snapbox (at an angle of ca 70-80°) -
mf
p
pp
p
ppp
pp
p ↔ mp
mf
mp
p
pp ↔ mp
pp

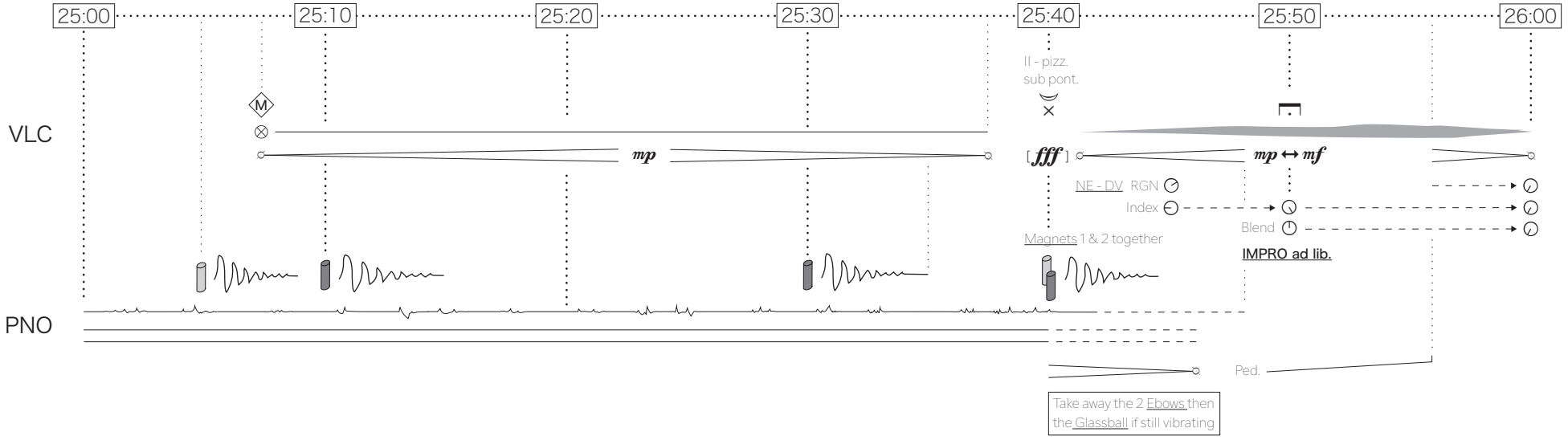

20:00
20:10
20:20
20:30
20:40
20:50
21:00
VLC
II - harmonic gliss
II - msp
I - msp
p
ppp
mp
p ↔ mf
ppp
PNO
p
pp ↔ p
p ↔ mf
ppp ↔ p


21:00
21:10
21:20
21:30
21:40
21:50
22:00
VLC
II - msp
mp ↔ f
PNO
Prepare Magnet 1 silently at a resonant place on string:
mp ↔ f


22:00
22:10
22:20
22:30
22:40
22:50
23:00
VLC
+l - msp
ff
f
PNO
Prepare Ebow 1 & Magnet 2
silently on following strings:
mf ↔ ff


η - N81
*) if the resulting pitches of the PNO vary, you can choose freely
another multiphonic sound which blends well with the soundscape
23:00
23:10
23:20
23:30
23:40
23:50
24:00
VLC
(delicate but somewhat scratchy
Multiphonic sound on II [7-10-13-3] *) - in the middle of the swell)
pp
Glassball - multiphonic sound
stop vibration from time to time
(i.e. with morse-like rhythm)
w/ finger pressure on ball's top
Magnet 2 'ricochet'
Long decay (l.v.)
Ebow 1 - Fundamental mode
Prepare Glassball
Magnet 1 'ricochet'
Long decay (l.v.)
PNO
mf
mf
Ped.
play softly and minimally with pedal's pressure,
introducing long < > influencing Ebow and Magnet vibrations


24:00
24:10
24:20
24:30
24:40
24:50
25:00
VLC
M
p
Ebow 2 - Fundamental mode
PNO


25:00
25:10
25:20
25:30
25:40
25:50
26:00
VLC
M
mp
II - pizz.
sub pont.
[fff]
mp ↔ mf
NE - DV RGN
Index
Blend
Magnets 1 & 2 together
IMPRO ad lib.
PNO
Ped.
Take away the 2 Ebows then
the Glassball if still vibrating