
Technical Evidence of a Misidentified YouTube Content ID Claim

The disputed soundtrack is Chiara Bertoglio's CC BY 3.0 recording - not the official Sa Chen/Pentatone recording examined here

Mussorgsky: *Pictures at an Exhibition* - XI. Promenade

Question at issue

Does the audio in the disputed video come from the Chiara Bertoglio recording that was deliberately selected and downloaded for the production, or from the official Sa Chen/Pentatone recording used here as the claim-relevant comparison?

Result in one sentence

The disputed soundtrack matches the Chiara Bertoglio performance extremely closely and does not match the official Sa Chen/Pentatone recording examined here; the independent controls show that this difference cannot be explained merely by both recordings containing the same composition.

Report date 16 September 2026

This report is a technical comparison of supplied audio files and documented source provenance. It is not a legal opinion and does not determine copyright ownership. The exact internal YouTube/PIAS Content ID reference audio was not disclosed.

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1. The claim and what this report tests

1.1 The question that matters

This report tests the factual basis of the disputed Content ID claim at the recording level. The central issue is not whether the video contains Mussorgsky's composition - all comparison sources do - but **which performance and recording was actually used**. The main evidentiary distinction is between:

- the Chiara Bertoglio performance documented as the source used during video production; and
- the Sa Chen/Pentatone performance obtained as an official Amazon MP3 purchase and carrying the title *Pictures at an Exhibition: XI. Promenade*.

The YouTube Content ID claim identifies the content title Pictures at an Exhibition: XI. Promenade, Sa Chen as the performer, and PIAS acting on behalf of Pentatone. The supplied claim information does not identify the specific Sa Chen/Pentatone release, ISRC, catalogue number, or the actual internal reference-audio file used by Content ID. Consequently, this report does not claim that the purchased Sa Chen file is necessarily the undisclosed Content ID reference. It is instead a highly relevant, well-provenanced Pentatone/Sa Chen comparison recording for the same titled movement.

Scope / limitation. The analysis cannot directly test an undisclosed Content ID reference file. It can, however, test whether the disputed soundtrack matches the known Chiara source and whether it differs from the official Sa Chen/Pentatone recording available to the video owner.

1.2 Why the claim matters: about 60 hours of project work, plus about 15 hours on the dispute

The audiovisual project itself represents approximately **60 hours of creative and technical work**. This is a good-faith estimate rather than a time-sheet calculation. It covers the selection and preparation of the visual material, identification and licensing of a suitable recording, programming and rendering the film, quality control, and publication.

That figure does *not* include the additional time required after the Content ID claim was made. Approximately another **15 hours** have so far been spent investigating the claim, locating and purchasing comparison recordings, developing and running the technical audio analysis, checking the results, preparing the evidence package and report, responding to the rejected dispute, and preparing the appeal. The total investment connected with this video and the present claim is therefore already on the order of **75 hours**.

The claim is therefore not a minor metadata issue for the video creator. A recording was deliberately selected from a documented source with an identified Creative Commons licence, incorporated into a substantial original audiovisual production, and then challenged as though it corresponded to another recording. Leaving a recording misidentification uncorrected would undermine work in which a considerable amount of time and care has already been invested.

For that reason, the video creator does not intend to abandon the work merely for convenience. The immediate objective is a careful manual review of the actual Content ID reference and correction of the claim if the reference does not correspond to the audio used in the video. The creator intends to pursue the formal review procedures available and, if the matter were ever to move beyond the platform process, to obtain appropriate professional legal advice. This report itself remains a technical evidence document rather than a legal submission.

1.3 How the evidence is tested - and why

Step	What is done	Why it is done
1	Extract the soundtrack from the disputed MP4.	Ensures the analysis uses the exact audio object that YouTube processed, not a substitute source file.
2	Locate the corresponding passage inside the full IMSLP Chiara recording.	Tests the stated production history and establishes a positive/source control.
3	Compare an independently obtained Chiara copy.	Checks that the match is not merely an artefact of one local file and corroborates the identity of the performance.
4	Compare the official Amazon-purchased Sa Chen/Pentatone track.	Directly addresses the central question: whether the disputed audio resembles the Sa Chen performance rather than Chiara.
5	Compare the earlier public Sa Chen YouTube copy with the Amazon purchase.	Validates that the earlier public comparison really represents the same Sa Chen/Pentatone performance.
6	Compare a Khatia Buniatishvili performance.	Provides a different-human-performance control: same composition, different pianist.
7	Compare MuseScore synthetic renders.	Provides a score-only baseline with the same notes but no shared human performance or recording provenance.
8	Use several complementary metrics.	Prevents a conclusion from depending on one feature that may merely reflect the common musical score.
9	Record hashes, metadata, parameters, code and figures.	Makes the analysis reproducible and auditable.

2. How the disputed soundtrack was created

2.1 Why Chiara Bertoglio's recording was chosen

The video creator states that the Chiara Bertoglio performance was chosen for two practical reasons: the recording was judged to be musically and technically suitable for the film, and IMSLP identified the recording as licensed under **Creative Commons Attribution 3.0 (CC BY 3.0)**. IMSLP currently lists Complete Performance #251520 as a 33:43 MP3, identifies **Chiara Bertoglio (piano)** as performer, gives publisher information as **Chiara Bertoglio**, and marks the recording **Creative Commons Attribution 3.0**.

The CC BY 3.0 deed states that the licensed material may be shared and adapted, including for commercial purposes, provided the license terms are followed, principally appropriate attribution and related notices. This report records the license status and production rationale; it does not make a legal determination about compliance with every license condition in a particular YouTube description.

2.2 Exact source and download location

The source chain begins on the IMSLP work page for Mussorgsky's *Pictures at an Exhibition*. The relevant recording appears there as Complete Performance #251520.

General IMSLP page	https://imslp.org/wiki/Pictures_at_an_Exhibition_(Mussorgsky,_Modest_Petrovich)
Direct MP3 used	https://s9.imslp.org/files/imglnks/usimg/7/70/IMSLP251520-PMLP03722-Quadri.mp3
Downloaded filename	IMSLP251520-PMLP03722-Quadri.mp3
IMSLP recording entry	Complete Performance #251520; Chiara Bertoglio (piano); 33:43; uploaded 21 September 2012; CC BY 3.0.

2.3 From the IMSLP source to the YouTube video

According to the production history supplied by the video creator, the production program cut the Promenade V passage directly from IMSLP251520-PMLP03722-Quadri.mp3 and used that excerpt as the soundtrack of 11_promenade_v.mp4. The v9 analysis then starts again from the *finished MP4*, extracts its audio, and compares that extracted soundtrack with the candidate sources.

IMSLP work page → Complete Performance #251520 →
 IMSLP251520-PMLP03722-Quadri.mp3 → production excerpt →
 11_promenade_v.mp4 → audio extracted again for this analysis

The analysis automatically located the best-matching Chiara passage at approximately **1112.607–1192.948 s** in the complete IMSLP recording, i.e. about **18:32.6–19:52.9**. This is independent technical corroboration of the stated production chain.

3. Comparison evidence: what each recording proves

3.1 The exact disputed audio

The soundtrack extracted from 11_promenade_v.mp4 is the primary reference for every comparison. The MP4 contains approximately 110 s of audio; after trimming leading/trailing silence, the active disputed soundtrack is approximately 80.5 s. This prevents circular reasoning: the analysis does not replace the claimed video audio with the original source file.

3.2 Chiara IMSLP source: the expected positive match

The complete IMSLP file is the source that the video creator states was used in production. If that account is correct, the soundtrack extracted from the finished MP4 should align very closely with the appropriate passage from this file despite transcoding and video production.

3.3 Independent Chiara copy: corroborating the performance identity

A separate copy identified as the same Chiara Bertoglio performance was obtained independently from the local IMSLP source. Its role is corroborative. It answers a useful question: *does the disputed soundtrack match only one particular local file, or does it also reproduce the characteristic timing of another copy of the same Chiara performance?*

A very close match to both the documented IMSLP source and the independent Chiara copy reduces the possibility that the result is caused by a local filename, an accidental edit, or a single damaged/mislabeled file. It therefore strengthens the identification of the performance itself.

3.4 Official Sa Chen/Pentatone recording: the claim-relevant test

For v9, the principal Sa Chen source is an MP3 purchased from Amazon. Its embedded metadata supplies unusually strong provenance for the comparison:

- title: *Pictures at an Exhibition: XI. Promenade*;
- artist and album artist: Sa Chen;
- copyright field: Pentatone Music B.V.;
- album: *Rachmaninoff: Etudes-tableaux - Mussorgsky: Pictures at an Exhibition*;
- track 18/23, date 2009; and
- Amazon.com Song ID 200000523627464.

The purchased file is therefore the cleanest available Sa Chen/Pentatone comparison. Its SHA-256 is d43737dac01deadb08eec04879b075a1ae8263c27d91c8cdb6022613a2a31c05.

3.5 Sa Chen YouTube copy: validating the Sa Chen comparison

An earlier analysis used a public YouTube-derived Sa Chen comparison. The v9 analysis retains it only as a secondary source and compares it directly with the purchased Amazon track. This is important because it tests whether the previous public file really represents the same underlying Sa Chen/Pentatone performance.

Finding. The Amazon-purchased Sa Chen track and the earlier Sa Chen YouTube comparison are effectively the same recording/performance for the purposes of this analysis: onset correlation 0.999717, local-tempo correlation 0.992036, dynamic-envelope correlation 0.999996, and DTW-aligned waveform correlation 0.999894. This validates the earlier Sa Chen comparison source.

3.6 Khatia Buniatishvili: different human performance control

The Khatia recording contains the same composition but a different pianist. Its role is not to identify the soundtrack; it shows how close a different human performance can become on score-related or broad musical features. This prevents overinterpreting high similarity that arises simply because all pianists are playing the same notes.

3.7 MuseScore renders: same score without the same performance

The two user-created MuseScore WAV files render the same score without sharing Chiara’s human timing or recording provenance. The standard render is the main synthetic control; the Dark Grand version changes only the piano timbre and is retained as a secondary control. Both are uncompressed 44.1 kHz stereo 32-bit floating-point WAV files, 83.854 s long.

Their role is especially useful because they establish a baseline for “same composition, different source”. If a metric also scores a synthetic realization highly, that metric cannot by itself be treated as a master-recording identifier.

4. How the recordings are compared

4.1 Preprocessing and passage localization

All candidate files are decoded consistently. The analysis resamples to a common working rate and trims silence using fixed parameters. For the complete Chiara recordings, a coarse search first locates the Promenade V region; a finer DTW comparison then aligns the candidate passage to the disputed soundtrack.

Parameter	Value
Working sample rate	22050 Hz
Hop length	512 samples
Coarse-search hop length	2048 samples
Silence trim threshold	45 dB

4.2 Why no single similarity score is enough

No single measurement can safely distinguish performances of the same composition. The analysis therefore uses complementary features:

Chroma DTW distance

Measures similarity of pitch-class progression after allowing local timing differences. Lower is closer. It is partly score-sensitive, so it is not a recording fingerprint by itself.

Onset timing correlation and onset MAE

Compare the sequence and timing of note attacks after alignment. These are more sensitive to phrasing and performance timing. Higher correlation and lower MAE indicate a closer match.

Local tempo/rubato correlation and MAE

Compare changes in tempo over the passage. Similar expressive timing is useful evidence, although the MuseScore controls demonstrate that feature extraction can be timbre-sensitive.

Dynamic-envelope correlation

Compares broad loudness/phrase shape. It is retained mainly as a diagnostic because a different pianist can score very highly.

DTW-aligned waveform correlation

A coarse acoustic measure that is sensitive to phase, acoustics, encoding and the DTW mapping. It is not treated as decisive except where two files are otherwise expected to represent the same source, as in the Amazon-vs-YouTube Sa Chen validation.

Chromaprint

The v9 script supports Chromaprint if `fpca1c` is installed, but it was unavailable for this evidence run and therefore contributes nothing to the conclusion.

4.3 Decision rule

The conclusion is based on the **combined pattern** of results and the hierarchy of controls: documented source, independent same-performance corroboration, official Sa Chen comparison, different human performance, and synthetic score-only render. A metric that also gives a high score to Khatia or MuseScore is treated as less specific.

5. Results: Chiara matches; Sa Chen does not

5.1 Core numerical evidence

Candidate	Chroma DTW	Onset corr.	Onset MAE	Tempo corr.	Tempo MAE	Dynamics corr.
Chiara IMSLP	0.0121	0.9911	0.0589	0.9468	0.41 BPM	0.9998
Chiara independent copy	0.0181	0.9960	0.0457	0.9516	0.35 BPM	0.9988
Sa Chen Amazon purchase	0.2783	0.6249	0.3760	0.2173	6.70 BPM	0.6165
Khatia control	0.0363	0.9306	0.1599	0.3650	2.14 BPM	0.9983
MuseScore standard	0.2840	0.5442	0.4152	-0.3219	6.55 BPM	0.5465

Table 2: Core v9 comparison. Lower chroma DTW, onset MAE and tempo MAE are closer; higher correlations are closer.

Finding. The two Chiara sources are the only candidates that combine extremely low chroma-DTW distance with onset correlations around 0.99 and local-tempo correlations around 0.95. The officially purchased Sa Chen track is separated sharply from Chiara on all three of these performance-sensitive dimensions.

Relative to the documented Chiara IMSLP source, the purchased Sa Chen track has a chroma-DTW distance approximately **23.0 times larger**, an onset-timing MAE approximately **6.4 times larger**, and a local-tempo MAE approximately **16.2 times larger**. These ratios are descriptive, not probabilities.

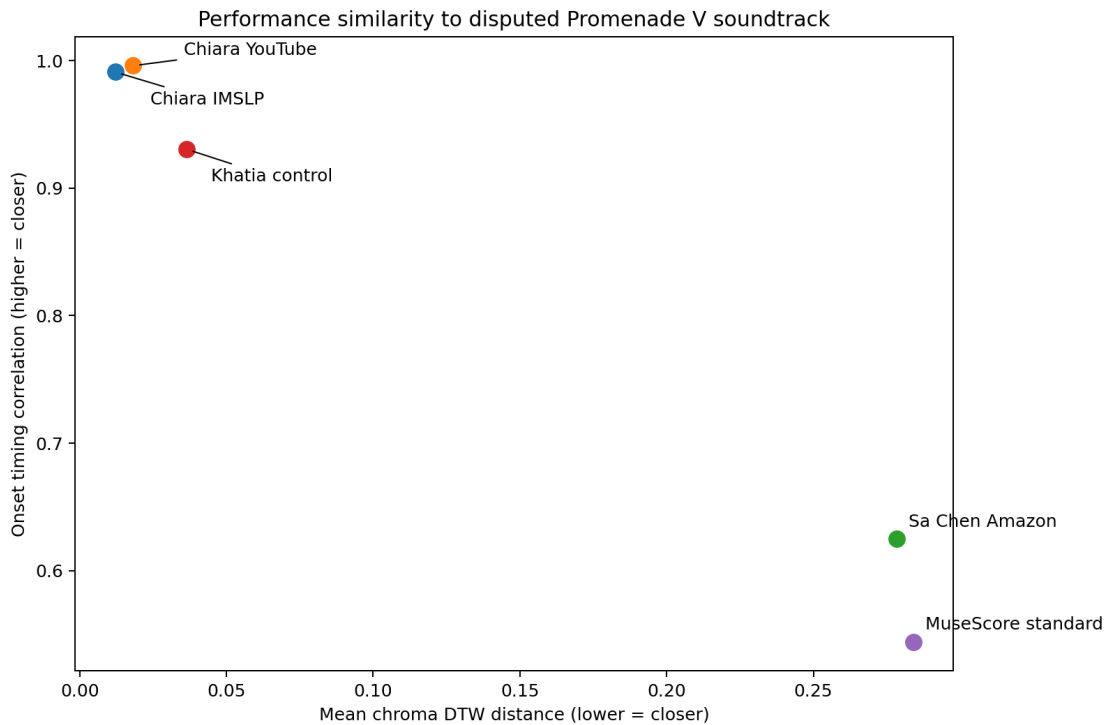


Figure 1: Chroma-DTW distance vs. onset-timing correlation. The two Chiara sources occupy the low-distance/high-correlation region. Sa Chen Amazon lies near the synthetic-control region rather than the Chiara cluster.

5.2 Direct comparison: disputed soundtrack vs. Chiara and Sa Chen

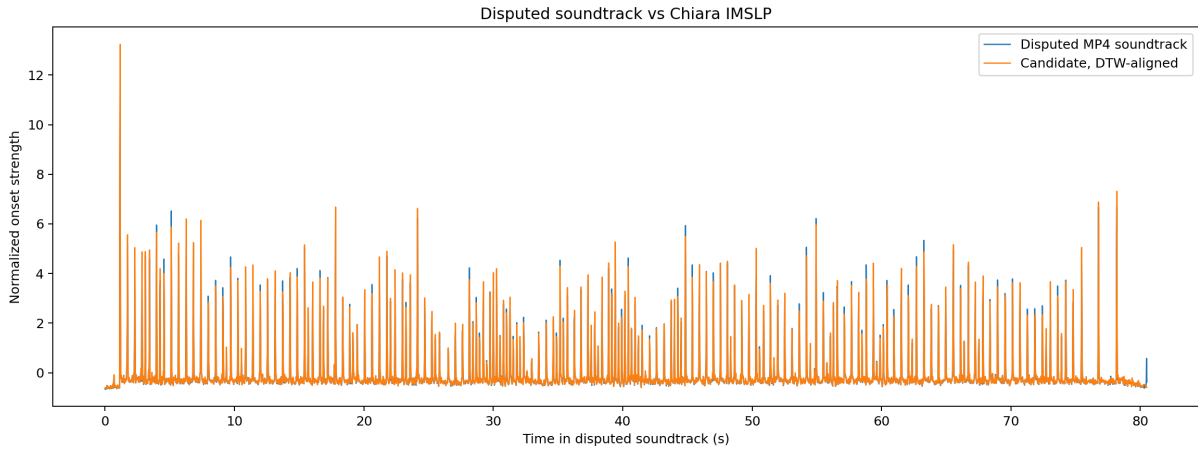


Figure 2: Disputed soundtrack vs. Chiara IMSLP source after alignment. Onset correlation 0.9911; onset MAE 0.0589.

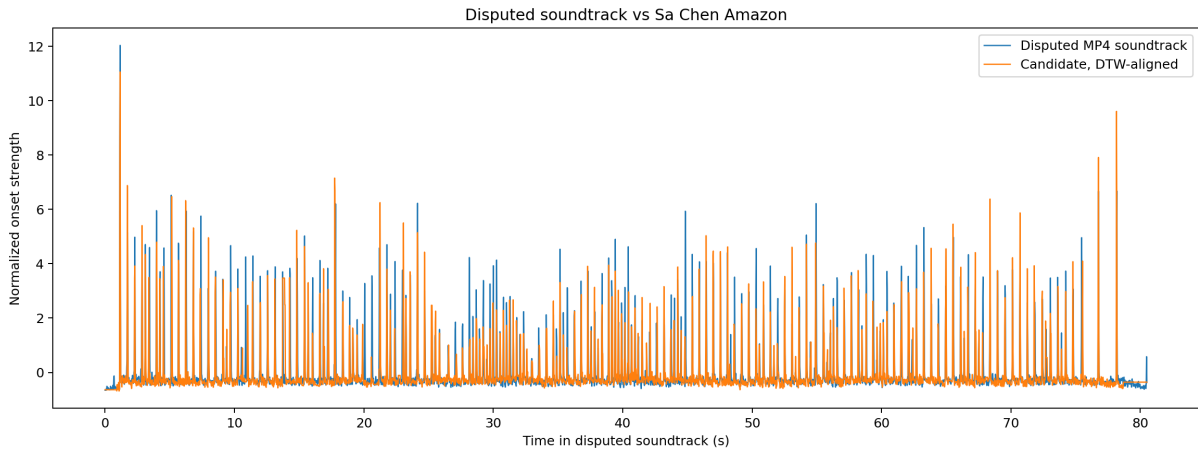


Figure 3: Disputed soundtrack vs. officially purchased Sa Chen/Pentatone track after alignment. Onset correlation 0.6249; onset MAE 0.3760.

The visual and numeric separation is consistent: the Chiara source closely tracks the disputed soundtrack’s note-attack pattern across the passage, whereas the Sa Chen performance shows substantially larger timing deviations.

5.3 Independent confirmation of the Chiara performance

The independent Chiara copy produces an onset correlation of **0.995992**, even slightly higher than the IMSLP source after the particular decoding/alignment path, and a local-tempo correlation of **0.951631**. The close result from a second copy of the same performance is important because it corroborates the performance identity independently of the single production-source file.

5.4 Independent validation of the Sa Chen comparison

The Amazon purchase and the earlier Sa Chen YouTube file are extremely close to one another:

Metric	Amazon vs. Sa Chen YouTube
Chroma DTW distance	0.004368
Onset timing correlation	0.999717
Onset MAE	0.018100
Local tempo/rubato correlation	0.992036
Local tempo MAE	0.170469 BPM
Dynamic-envelope correlation	0.999996
DTW-aligned waveform correlation, median	0.999894

Table 3: Secondary validation showing that the purchased Amazon track and the earlier Sa Chen YouTube comparison represent effectively the same performance/recording.

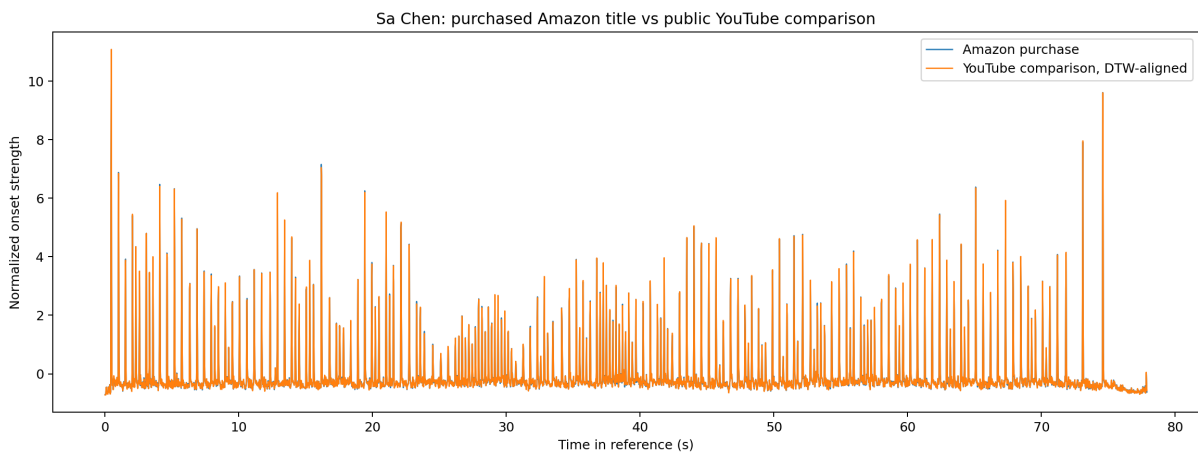


Figure 4: Onset pattern for the Amazon-purchased Sa Chen track and the earlier Sa Chen YouTube comparison. Their near-overlap independently validates the Sa Chen comparison source.

5.5 Why the control recordings matter

The Khatia control demonstrates why the report does not rely on a single musical-similarity score. Khatia’s chroma-DTW distance (0.0363) and onset correlation (0.9306) are relatively close because the same score imposes substantial shared structure. Yet Khatia’s local-tempo correlation is only 0.3650, much lower than the Chiara values near 0.95. Likewise, Khatia’s dynamic-envelope correlation is 0.9983, almost as high as Chiara, demonstrating that broad dynamics are not specific enough to identify a recording.

The MuseScore controls go one step further: they contain the same written music but no shared human performance. Their chroma-DTW and onset results are much closer to the Sa Chen region than to the Chiara region. This supports the interpretation that the large Chiara-level agreement is not explained by “same composition” alone.

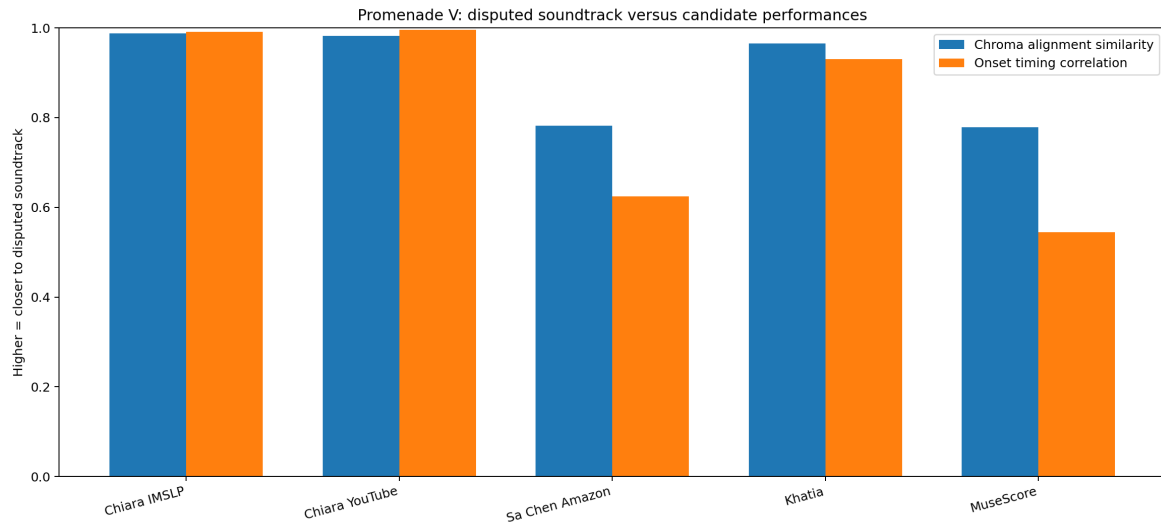


Figure 5: Core comparison summary. The two Chiara sources remain distinct from Sa Chen and the synthetic score-only control on the combined chroma/onset view.

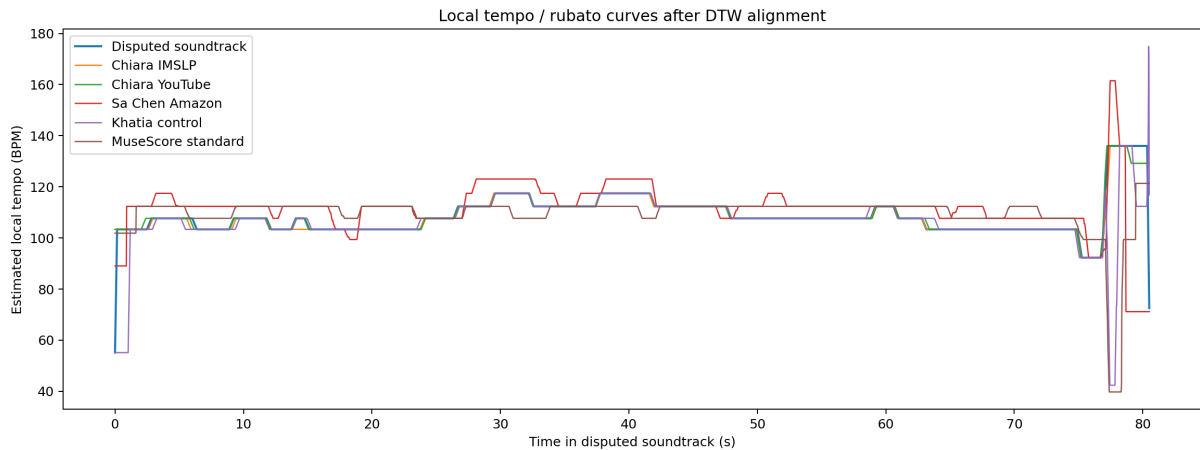


Figure 6: Local tempo/rubato curves. These are diagnostically useful but should not be read in isolation because timbre and onset extraction influence the estimator.

6. Conclusion: evidence of recording misidentification

6.1 What the evidence establishes

The evidence converges in three independent ways:

1. **Provenance:** the video creator documented a concrete source file from IMSLP, and IMSLP identifies that recording as Chiara Bertoglio under CC BY 3.0.
2. **Positive matching:** the soundtrack extracted from the finished MP4 aligns extremely closely with both the documented IMSLP Chiara source and an independent copy of the same Chiara performance.
3. **Negative discrimination against Sa Chen:** the officially purchased Sa Chen/Pentatone track is substantially farther from the disputed soundtrack on the principal performance-sensitive measures. The purchased Sa Chen track is itself validated by its near-identity to the earlier Sa Chen YouTube comparison.

Taken together, the v9 evidence identifies the disputed soundtrack as the Chiara Bertoglio performance used in production and excludes the officially purchased Sa Chen/Pentatone track as the recording used in the video. This is technical evidence of a recording misidentification in the disputed claim context.

6.2 Why this is not merely a “same music” result

All candidates contain Mussorgsky’s same movement, so any honest analysis must expect substantial common musical structure. The Khatia and MuseScore controls quantify that background similarity. They show, for example, that a different pianist can obtain a high dynamic correlation and a relatively low chroma distance. The decisive evidence is therefore not that Chiara is “similar”, but that the *combined pattern* of pitch alignment, attack timing and rubato is consistently much tighter for both Chiara copies than for Sa Chen.

The Sa Chen Amazon-vs-YouTube validation is also important methodologically: it shows what the analysis looks like when two files really are alternate distributions of the same underlying Sa Chen recording. Their waveform and performance-sensitive metrics approach unity. By contrast, disputed-video-vs-Sa-Chen does not show that pattern.

6.3 Limits of the conclusion

This report does not determine legal ownership, does not decide whether all CC BY 3.0 attribution conditions were satisfied in the publication of the video, and does not identify the undisclosed internal Content ID reference file. If PIAS/YouTube provides that actual reference audio, the same reproducible procedure can be applied directly to it.

7. Reproducibility and evidence integrity

7.1 File hashing and preserved provenance

The v9 evidence package records SHA-256 hashes and media metadata for each input. Selected values are shown below; the full manifest is part of the evidence package.

Input	File	SHA-256
Disputed video	11_promenade_v.mp4	885407b1259fa5d4f2f0c74b55f76ff636f0b34af81c27371ca6514e33322ade
Chiara IMSLP	IMSLP251520-PMLP03722-Quadri.mp3	7b0f6c5891489db392ef058e8f43a4d761a998917ae843ee89caf32ef5488b4f
Chiara independent copy	pictures_promenade_chiara_oter_youtube.mp3	4bf9bfc64431bff2450555fbcf9b8c37b312df81ed654170f895916b479329a2
Sa Chen Amazon	bought_at_amazon_ed277d4d-c01f-4b8d-940b-ab36a62176f8.mp3	d43737dac01deadb08eec04879b075a1ae8263c27d91c8cdb6022613a2a31c05
Sa Chen YouTube	pictures_promenade_XI.mp3	204bf3fab2fe8d1f8a843fc51725caaa5baefd1bca899deb2f7d65aa435b7e8
Khatia control	Khatia_Buniatishvili_official.mp3	f32fcbcea032f331e9c61752a5bc19253c161b7f3665a7938a070b15e37edd73
MuseScore standard	pictures-at-an-exhibition-modest-mussorgsky-promenade-v.wav	cc2983604c9f5005dfb375c9a1f41c86f3ef8a32bb48642b3b74f151aa80eed1

Input	File	SHA-256
MuseScore Grand	Dark pictures-at-an-exhibition-m odest-mussorgsky-promenade-v _chateau_dark_gran.wav	e076c368edc569ce5eabacd3f9dd5c0a796318 653e2b1ff6f63fc9aea5be2d1a

7.2 Software environment

Component	Recorded version / value
python	3.12.3 (main, Aug 31 2026, 10:18:26) [GCC 13.3.0]
platform	Linux-6.17.0-14-generic-x86_64-with-glibc2.39
numpy	2.1.1
librosa	1.0.0
scipy	1.18.0
matplotlib	3.9.2
ffmpeg	ffmpeg version 6.1.1-3ubuntu5 Copyright (c) 2000-2023 the FFmpeg developers
ffprobe	ffprobe version 6.1.1-3ubuntu5 Copyright (c) 2007-2023 the FFmpeg developers
fpcalc	not installed

7.3 Supporting technical material available on request

The PDF is intended to be complete and understandable on its own. For independent inspection or reproduction of the analysis, the complete Python analysis program and the full digital evidence package—including numerical results, metadata, file hashes, intermediate analysis data and generated plots—have been preserved and can be provided to PIAS, Pentatone or YouTube upon request.

A. Source references and CC BY 3.0 license context

1. IMSLP, *Pictures at an Exhibition (Mussorgsky, Modest)*: [https://imslp.org/wiki/Pictures_at_an_Exhibition_\(Mussorgsky,_Modest_Petrovich\)](https://imslp.org/wiki/Pictures_at_an_Exhibition_(Mussorgsky,_Modest_Petrovich)). Public page checked 16 September 2026. It lists Complete Performance #251520, Chiara Bertoglio (piano), publisher information “Chiara Bertoglio”, and Creative Commons Attribution 3.0.
2. Direct production-source MP3: <https://s9.imslp.org/files/imglnks/usimg/7/70/IMSLP251520-PMLP03722-Quadri.mp3>.
3. Creative Commons, Attribution 3.0 Unported deed: <https://creativecommons.org/licenses/by/3.0/>. The deed states that sharing and adaptation are permitted, including commercially, subject to attribution and the other license conditions.
4. Earlier public Sa Chen comparison supplied for validation: <https://www.youtube.com/watch?v=PW8bEj-qg18>. In v9 this source is secondary; the Amazon-purchased file is the principal Sa Chen comparison.

B. Official Sa Chen/Pentatone comparison: Amazon metadata

The following values were extracted from the purchased file and recorded in the v9 manifest. Binary/private metadata fields that contain no human-readable provenance information are intentionally omitted here.

Field	Value
Filename	bought_at_amazon_ed277d4d-c01f-4b8d-940b-ab36a62176f8.mp3
Title	Pictures at an Exhibition: XI. Promenade
Artist / album artist	Sa Chen
Composer	Modest Mussorgsky
Album	Rachmaninoff: Etudes-tableaux - Mussorgsky: Pictures at an Exhibition
Copyright metadata	Pentatone Music B.V.
Date	2009
Track	18/23
Amazon Song ID	200000523627464
Duration	78.236735 s
Audio	MP3, 44.1 kHz, stereo
SHA-256	d43737dac01deadb08eec04879b075a1ae8263c27d91c8cdb6022613a2a31c05

C. Complete numerical results

The complete numeric output is split into two portrait tables so that every value remains legible within the page width. Lower chroma DTW and onset MAE values indicate closer agreement; higher correlations indicate closer agreement. Tempo MAE is measured in BPM.

C.1 Pitch and onset timing

Candidate	Chroma DTW	Onset corr.	Onset MAE
Chiara IMSLP	0.012076	0.991075	0.058878
Chiara independent copy	0.018149	0.995992	0.045702
Sa Chen Amazon	0.278346	0.624921	0.376028
Sa Chen YouTube	0.278326	0.621507	0.378384
Khatia control	0.036318	0.930576	0.159897
MuseScore standard	0.283999	0.544162	0.415188
MuseScore Dark Grand	0.299617	0.552760	0.407965

C.2 Rubato / tempo and dynamics

Candidate	Tempo corr.	Tempo MAE (BPM)	Dynamics corr.
Chiara IMSLP	0.946751	0.414249	0.999812
Chiara independent copy	0.951631	0.351035	0.998831
Sa Chen Amazon	0.217277	6.700031	0.616549
Sa Chen YouTube	0.241886	6.604202	0.616367
Khatia control	0.365009	2.140437	0.998323
MuseScore standard	-0.321914	6.553429	0.546511
MuseScore Dark Grand	0.573894	4.851323	0.517245

C.3 Diagnostic waveform correlation

Additional DTW-aligned waveform correlations (median) were: Chiara IMSLP 0.255950, Chiara independent copy 0.298855, Sa Chen Amazon 0.227377, Sa Chen YouTube 0.227900, Khatia 0.325411, MuseScore standard 0.178575, and MuseScore Dark Grand 0.192426. These values are retained as diagnostics, not as a primary identity criterion, because their ordering is strongly affected by acoustics, phase and the alignment method.