Editor:

Based on reviews I have received, your manuscript may be suitable for publication after some **minor-to-moderate level of revision**. Together with attached comments of the reviewers, I share below my minor comments:

- Consider highlighting the interest of this study (the significance of understanding past seismicity/seismic gap in the area).

Done. We hope that the reworded Introduction part now clearly highlights the interest of our study. We have also added one figure at the end (Figure 11) with the chrono-geographical interpretation of the results.

- Consider highlighting your findings in Abstract which should answer the main question of this study

Our main findings are now highlighted in the abstract (Lines 44-48).

- A map that shows the EAF, DSF, and the bend is missing. Throughout the text, consider adding map(s) that would help to follow the discussions on historic locations, which might not be the trend in historical studies but would add value to this work which targets the geophysics community.

We provide the first one as part of new Figure 1. A new localities map is provided in the Supplementary material as new Figure S1.

- Typo? Some words are struck through (for example L34).

Corrected

- Now that there are many recent publications, consider citing new papers (e.g., Karabulut et al., 2023 **https://doi.org/10.1144/jgs2023-021** and Altunel et al., 2024 https://doi.org/10.1038/s41598-024-65906-4), when relevant.

The first one was already included. The second one is added (Line 101).

- "Predecessor" earthquake is unclear to me. It should be clear to any reader from the very beginning, given the title. Do you mean "precursor," or a large past rupture in the area equivalent to the recent events by assuming a seismic cycle that repeats every x years, or are you using it to discuss whether there was a seismic gap or not?

Clarified in the text. Please see lines 86 to 91.

- Throughout the text, consider adding between parenthesis the current location referred to (for ex., where is Sham in L101?).

Generally done.

Reviewer 1

Stucchi et al. analyze the historical records that describe a series of earthquakes along the EAF near the junction with the DSF. They struggle successfully with the scarcity of reliable information and arrive at important conclusions regarding the seismic history before the destructive 2023 earthquakes in the region. Hence, the submission is timely, important, and comprises a significant contribution to our understanding of the seismicity in the region. I therefore recommend it is accepted for publication after the following issues are addressed, in addition to many comments made on the pdf.
The manuscript is well-illustrated and generally written clearly, but editing of the language is a must. I did some editing on the fly but it's not enough.
Determining which historical record is reliable is not trivial. Still, some selections are made by the authors without stating clear a-priori criteria.

Thank you for your comment. There is no "a priori" criteria in history, except that sources chronologically and geographically closer to the earthquakes are better. In this paper we used only those sources that are chronologically and geographically closest to the earthquakes. We call them "primary" (or "original") sources because they are the first to record earthquake effects in one or more localities, i.e. those from which a particular description of earthquake effects was "originated" and handed down in history .»

Some explanation is given in paragraph 3.1 and in the chapters related to the earthquakes

One example, line 104 says that the knowledge of the 1822, 1872, and 1893 earthquakes is "already good", without stating any criteria to support this claim.

We were not referring to historical sources here, but to the amount of available information and the consistency of the earthquake parameters from varied catalogues.

However, we have modified and transferred the statement. Please see lines 128-130 and 541-544 of the annotated manuscript.

The same goes for preferring the Gasperini et al. 1999 "boxer method" for resolving the location and size of historical earthquakes over other methods (e.g., *Bakun, W. H., & Wentworth, C. M. (1998). Estimating earthquake location and magnitude from seismic intensity data. Bull. Seism. Soc. Am., 87(6), 1502–1521* or *Sirovich L, Pettenati F, Cavallini F, Bobbio M (2002) Natural-neighbor isoseismals. Bull Seismol Soc Am 92:1933–1940*. I do not argue against this choice, but it is one of several options, so the authors should explain why it was selected.

Thank you for your comment. We went along with the methodologies used for the compilation of SHEEC (Stucchi et al.). Bakun and Wentworth is also a viable option, mostly for offshore earthquakes. However it would have required extra-work for calibration.

Sirovich et al. is not an option in our opinion, because it requires a priori hypothesis on the source and it does not work very well for earthquake with few data points.

Also – the authors should explain why the Gruenthal et al. (1998) is used for assigning local intensity and not the more inclusive INQUA scale (Michetti, A. M., Esposito, E., Gurpinar, A., Mohammadioun, B., Mohammadioun, J., Porfido, S., Rogozhin, E., Serva, L., Tatevossian, R., Vittori, E., Audemard, F., Comerci, V., Marco, S., McCalpin, J., & Morner, N. A. (2004). The Inqua Scale: An innovative approach for assessing earthquake intensities based on seismically-induced ground effects in natural environment (E. Vittori & V. Comerci, Eds.). Agenzia per la Protezione dell'Ambiente e per i Servizi Tecnici, Dipartimento Difesa Del Suolo.) Again – I'm arguing against the choice, but is has to be justified.

We take that EMS98 is currently the more used intensity scale in the European area. We added this explanatory sentence to the manuscript (Line 264). However, this is not the case of INQUA which, by the way, we do not consider more inclusive. These authors have a different view of the seismically-induced ground effects which are minimal for the investigated earthquakes here.

The conclusions section should be more concise.

We tried to provide a more concise Conclusions section.

Line 104 (of former manuscript)
the knowledge of these three earthquake is already good and we will not go into details, although our study provide earthquake parameters for them, too.
based on what? first define the criteria, then decide whether the knowledge is sufficient.

Here we were referring to the amount of available information and the consistency of the earthquake parameters from varied catalogues.

However, we have modified and transferred the statement. Please see lines 128-130 and 541-544 of the annotated manuscript.

Line 206
In this paper we are using the EMS-98 (Gruenthal ed., 1998), aware
why not the EEE Scale? much more up to date.

Please see our comment about the EMS scale above.

Line 207
particular that historical accounts:

There are several texts that summarize the limitations and problematics of historical accounts.

We agree. However we are not able to mention all.

Line 212
As for problem a) and b), in some cases we adopted range intensities
explain how the ranges are determined

We assign ranges according to EMS-98 definitions. If we have some evidence of 8, some of 9 and some of 10, we say 8-10.

Line 216
D (damage). Problem c) mainly concerns the 1114 sequence
If you know it from historical accounts - it's a circular reasoning.

Here we unfortunately disagree. It is only a warning. We say "may"

Line 228
When just one or only a few macroseismic data points
provide a number, or a range

It may change form case to case, this is why we preferred to use "a few", conforming with its meaning in English.

Line 259 Ambraseys (2009) affirms
not a primary source (so not affirms but concludes?)

Agreed. Changed to "concludes" in line 320.

Line 272
slightly -
quite vague

Again, this is only a warning.

Line 297
"concise" is somewhat contradictory to "vague".

Agreed and changed as "succinct and vague in lines 266 and 358.

Line 312
position of the trench near Duzici where Duman et al. (2020) claim they have identified
Yönlü & Karabacak (2023) report a surface rupture, which they associate with the 1114 earthquake. Please inform the readers how this event is identified in Duman et al 2020. I'm unable to find any mention of the 1114 earthquake. I suppose they refrain from assigning specific earthquakes to the earthquake ruptures because of the large temporal uncertainty.

At page 434, Duman et al. (2020) write: A surface rupture on the Düziçi fault segment was dated AD 1035–1215. This event may correspond to the historical AD 1115 event. […] We assume that the 1114 and 1115 events may be the same.

Line 349
Apart from Servandikar (today Savranda Kalesi) we propose
based on what?

Based on the studies mentioned in the same paragraph.

Line 402
the intensity value to
iI is customary to note intensities with Roman numerals to avoid confusion with magnitudes (Arabic numbers)

We unfortunately disagree. Roman numerals are out of use now. On the other hand, magnitudes have decimals, intensities not

Line 505
are not better constrained and, often, they too heavily rely on historical data of
as well as radiometric dating

Agreed and added in line 634.

Line 515
6. Conclusion
The conclusions should be concise and informative. No need to repeat the data or the discussion.

The conclusions part is now heavily modified. Please see Line 601 and on.

Line 521
All this part is an unnecessary repetition and not a conclusion.

Some of these sentences are now removed. Please see Line 604 and on.

Line 522
one of 2023, February 6, proves that Mw values obtained
not really a proof.

Agreed and removed (Line 609).

Line 523
not be so “overestimated” as many authors usually believe
examples? references?

This sentence is removed.

Line 530
November 29 being the largest, but that historical sources were not able to capture the different effects related to each of the two events;
the historical sources don’t have any abilities. it’s us who are unable to find clear evidence for a single earthquake or more.

Unfortunately, we disagree. It depends on when the historical source has been written.

Line 534
• the earthquakes of 1872 and 1893 did concern the extremities of the 2023 sequence,
doesn’t sound like the right word

corrected into “affect”

Reviewer 2

To the Authors,
I am not fully convinced with the manuscript although the review of the historical earthquakes could contribute to the literature. Although the conclusions and discussion are consistent with the analysis presented, I don't think the manuscript addresses a novel finding due to the "high uncertainty" of the results.

Thank you for your comment, however we are sorry about this sentence. Throughout the text, we have explained that we prefer to show the uncertainty rather than to hide it.

I highly recommend the authors to make the same analysis with trench data.

Unfortunately, this would be out of the scope of the paper

I find the language of the manuscript highly subjective. Some examples can be listed:
"we believe" "these three earthquakes is already good"
"The identification of place-names quoted by the sources is not a major problem for this sequence..."
and many other in the text.

We tried to match as much as possible.

I recommend the authors to resubmit the manuscript after improving the quality and decreasing the uncertainty in the results.

Please see our reply above.

Minor commends can be found on the attached manuscript.

Line 79
Introduction
What is wrong with this introduction? Background information is not sufficient.
Further information about other earthquakes should be given.

Unfortunately, we didn't have sufficient space to give all the background information. On the other hand, several references are provided for studies related to historical earthquakes in the region.

Why did they chose only these 4 earthquakes specifically?

Explained in line 125.

Make a brief introduction of the EAFZ!

We had it in a first version, which was required to be shortened by the editors.

Line 89
Figure 1
I would prefer an original figure instead of a figure from another study.

This is the state of the art before our study. We have added one figure with the results at the end (Figure 11).

Line 104
the knowledge of these three earthquake is already good and we will not go into details
Good? Relative to what? How? Why?

We have modified and transferred the statement. Please see lines 128-130 and 541-544 of the annotated manuscript.

Line 112
Figure 2
There are two 1114 events. There is no 1514 on the map. If the epicenters are the same for 1514 and 1513, the map should be changed accordingly. Same for the 1114/1115 event. Show the rupture extents of different events with different colors.

Some problems mentioned by the reviewer are corrected

As for the rupture extents, in the present paper we try to explain that based on the available information we cannot even give the epicentre and Mw for some earthquakes: therefore, rupture extents are not available for several of them. However, Figure 10 proposes some possibilities for two of them.

Line 149
Figure 3
Why don't you add the 1003 event? Kahramanmaraş text is not visible.

Explanation is added in line 533.

Line 164
MF = - 0.53 + 0.58(Ii) + 1.96x10-3(Ri) + 1.83log(Ri)
What does Ri refer to?

Explanation is added.

Line 255-257
missing reference!!!

This was a general statement. The explanations and references were given in the following paragraphs.

Line 286
4.2.4 Macroseismic data points assessment
??????????????

General information is provided in Section 3.2. This is also part of the current terminology in historical seismology

Line 306
November 11,
Do you mean November 29 or November 13?

November 13. Corrected.

Line 312
The position of the trench near Duzici where Duman et al. (2020) claim they have identified the 1114 event
Either the reference is wrong or the interpretation. Duman et al. 2020 claims that "The trenching results are also consistent with the possibility that a large earthquake on the Karataş and Yumurtalık fault segments, may have triggered ruptures on the Düzi.i and Osmaniye fault segments."

The sentence reported by reviewer #2 is not related to the point we are discussing. By reading the whole paper, we can read at page 430, where the results of trench 6 are commented, the following sentence:

"We infer the timing of the last event (E3) based on the AD 1035–1215 age of the wedge, or fissure fill. This age range coincides with the AD 1115 historical earthquake that occurred in this area. Based on the available dating results, we infer that three major earthquakes (E1 through E3) occurred during the period BC 10,085–9805 and AD 1035–1215. The most recent event (E3) appears to coincide with the historical AD 1115 earthquake that occurred in the region."

In the discussion section, at page 434, just few rows before the sentence reported by the reviewer, we read:

A surface rupture on the Düziçi fault segment was dated AD 1035–1215. This event may correspond to the historical AD 1115 event. […] We assume that the 1114 and 1115 events coincide.

Line 469
Table 1
I find "?" is confusing. Instead of using "?" the authors should classify the historical earthquakes based on reliability based on quality criteria and color the table accordingly. It would be more clear if the same coloring applied on the map.

Thank you for your comment. We would like, but as we have explained, uncertainty is there and we want to show it.