

Tuesday, January 7, 2026

Dear Editor,

Thank you for the opportunity to revise our manuscript. We appreciate the reviewers' constructive feedback and have implemented the following changes to improve clarity and scientific rigor:

1. Terminology and Table Updates

- Corrected the description of the fourth column in Table 2: now consistently referred to as "minimum magnitude" instead of "cutoff magnitude" to avoid misinterpretation.

2. Figure Revisions

- **Figure 7:** Clarified how migration velocities were derived, highlighting steeper segments used for calculations; updated caption accordingly.
- **Figure 4:** Caption now specifies projections along the gray trend line. N/S symbols are removed.
- **Figure 8:** Enlarged legend fonts and added time labels mentioned in the text.
- **Figure 10:** Corrected interpretation of clusters with low effective stress drop.

3. Structural and Textual Improvements

- Renamed chapter title from *Clustering analysis* to *Characteristics of seismicity clusters* for better accuracy.
- Revised Section 4.2 to clarify that radial distance is measured along the fitted plane.
- Polished language throughout, corrected citations and formatting issues, and ensured consistency in terminology.

4. Expanded Explanations and Motivation

- Added introductory sentences to the diffusivity and effective stress drop section, explaining their relevance to cluster dynamics and physical mechanisms.
- Included brief descriptions of Malagnini's approach in supplementary subsections (2.1 and 2.2) to provide context for technical formulas.

5. Scientific Clarifications

- Removed ambiguous wording such as "limited pore-pressure" and replaced by "decrease of seismic front migration velocity over time"
- Corrected statements regarding clusters with low stress drop and aseismic contributions.

6. Minor Edits

- Adjusted captions, improved figure readability, corrected typographical errors, and refined wording after native speaker review.

We believe these revisions address all concerns and significantly enhance the manuscript's clarity and scientific contribution. Thank you for your consideration.

Sincerely,

Alessandro Vuan & co-authors