

Interactive comment on “The origin of noise and magnetic hysteresis in crystalline permalloy ring-core fluxgate sensors” by B. B. Narod

Anonymous Referee #1

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The B.B. Narod's manuscript presents relevant scientific and technical data, regarding the origin of noise and hysteresis behavior in permalloy fluxgates. The manuscript is a good theoretical study endorsed by experimental results with 6.81 permalloy.

Technical Corrections (5):

1. Page 323 line 20. Figure 3 is mentioned in the text before Figure 2. In my opinion Figure 3 should become Figure 2 or be included in Figure 1 as an additional panel for easier comparison of data.

2. Page 327, line 11. Figure 14 is mentioned just after Figure 6 (page 327 line 2). A reordering of figures is needed.

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3. Page 333, line 26 A grain size of 20 micrometers for the new material is mentioned. I understand same material as 100 micrometer ring core described in section 6. Please include a reference or comment how this value was obtained (SEM, XRD,..?), as it is mentioned for Infinetics ring core (page 334, line 14).

4. Caption Figure 5. Please include a brief description for each showed domain structure in the caption to ease the interpretation.

5. Figure 9. Although the authorship and citation in the text is clear, I think it should be necessary to request permission to the publisher/author (Elsevier/Coïsson et al.) for its reproduction in this journal.

If these minor corrections are applied, I would strongly recommend the publication of this manuscript.

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