**Article choosen : Edouard Gauvrit \_ Listening fish to recover Ocean’s physical properties**

**Summarize the main results of the article in a few sentences:**

The main idea is to study the biological activity in a water column thanks to acoustic and CTD data. Here, the overall question is to determine if the acoustic layer can trace the bottom of the mixed layer and characterized turbulent processes in the same depth. The mixed layer depth seems to follow acoustic discontinuities, especially the 38 kHz. The maximum chlorophyll concentration has bee, detected in the 70/120 kHz layer.

**Answer the following questions about the structure of the paper:**

**Overall content:**

**1. Is the overall purpose of the study and /or central question clear?**

Yes, the author has explained well its line of reasoning.

**2. Does the interpretation of the findings answer the overall question of the**

**paper?**

Yes, everything is explained in the results and in the figures.

**3. Is every paragraph and sentence in the paper relevant to the overall**

**question?** Yes

**If no, point to some examples:**

**4. Are there portions of the text that could be omitted?**

Yes

**If yes, point to some examples:** in the 2nd paragraph of the 2nd page, when the definition of the mixed layer is given: this explication would have been more useful in the introduction.

**5. Is the overall organization of the paper clear and effective?**

Yes

**Suggestions for improvement:**

**Individual sections:**

**1. Does the title adequately represent the content of the paper?** Yes

**Suggestions for improvement:**

**2. Does the abstract clearly and concisely summarize the paper and state the**

**main results?** The abstract is clear, even if it wasn't necessary to put the title of each part (context, method etc…)

**Does is contain all needed information (context, need, task, object, findings and conclusion)?** Yes

**3. Does the introduction provide enough context to the readers?** Yes it is perfect !

**Does it state the need for the work? Does it state clearly what has been done to address it?** We understand well what they are looking for and what method is employed.

**4. Does this paper put the progress it reports in the context of existing**

**published work?** Yes

**Is there adequate referencing and introductory discussion?**

**5. Are the material and methods used in the study clearly explained?** I don't understand the last part of the methods, about the Thorpe length.

**Can you point out what is special, unexpected, or different in the approach compared**

**to existing published work?** I don't know exactly what has been done previously but I would said that succeed to correlate acoustic, ocean's physics properties, CTD and biological data

**Does it contain too many technical details?** It is well explained, we don't need more information.

**6. Is the results sections(s) clearly and concisely written? Are there logical and**

**smooth transitions between sections, subsections and between paragraphs?** The results paragraphs are well separated, but the results section is too short compared to methods section. The figure 1, that shows the results of chlorophyll, is too far from that part !

**7. Does the conclusion clearly state the most important outcome of the work?**

**Does it address the questions stated in the Introduction? Does the conclusion**

**just summarize the results or does it interpret the findings and explain what**

**they mean?** The conclusion summarizes the main obtained results. However, it would have been better to remind what the overall question was.

**8. Are the interpretations and conclusions adequately supported by the**

**evidence presented? That is, are the assumptions valid, is the methodology**

**sound, is the evidence adequate, and do the conclusions logically follow?** Yes, except for the chlorophyll: we have any graphic that explained its interpretation.

**9. Are all parts of the text, references, graphics and tables necessary for the new**

**results and main points to be understood?** There is a miss of a graphic about the response of the chlorophyll to the acoustic method.

**10. Are the graphics and tables clear and their captions self-explanatory?** Yes, except for the part of the chlorophyll interpretation.

**• Sentences and Wording**

**1. Can you find grammatical mistakes?**

Abstract : "providing" instead of provided

"ecologically/biologically" instead of "ecological/biological"

**2. Can you point to sentences that loose you (too long/complex) and do you**

**have suggestions for improvement?** "The main interest to implement this approach to the Mad Ridge data is to recover physical knowledge of the water column from acoustic observations, which are easier to record and ensure more fine scale resolution within horizontal and vertical plane."

I would say: "The main interest to implement this approach to the Mad Ridge data is to recover physical knowledge of the water column from acoustic observations. Indeed, they are more easier to record and ensure more fine scale resolution within (=in the) horizontal and vertical plane."

**3. Are generally the action in verbs, characters in subjects and subjects near**

**verbs? Can you find counter-examples? Can you point out misused**

**nominalizations?** In the perspective :" For the future, to get a better identification of micro-turbulence with the acoustic we need to go higher in frequency."

Correction : " For the future, we need to go higher in frequency. So that, we could get a better identification of micro-turbulence in the water column with the acoustic."

**4. Is the writing cohesive? Does it flow well? Is the part of the sentence that**

**links to the previous sentence at the beginning or the end?** The writing is cohesive, but I don't understand some part of the methods section.

**5. Are the paragraphs coherent? Do the first and last sentences of paragraphs**

**match? Can you find counter-examples?** Everything is coherent.

**6. Is there an abusive use of passive voice?**

There is a good balance between passive and active voice.

**7. Can you find a lot of useless words/phrases?**

No, there are not useless word or phrases.

**8. Can you find complex words that could be replaced by simpler ones?** The vocabulary used is easy to understand or well explained.

**9. Can you find too complex subjects?** The part of the Thorpe method is difficult to understand and, in my opinion, not necessary to answer to the overall question.

**10. Can you find inadequately used adverbs/ repetition/ excessive hedging?**

There is no abusive repetition of words and inadequately used adverbs.

**11. Is the use of tenses (past/present/future) adequate?**

The tenses used are suits with the text.

**• Other comments?**

Taking off the numbers in the conclusion. This one has to be a coherent paragraph that answers to the overall question. Simplify the methods ; omit some parts, that does not avoid to understand the main part of what was done during his internship.