

Peer Review Form for Scientific Articles AE2223-I

"Aircraft Flyovers and Noise Annoyance: Which Corrections? Which metrics?"

Elements
<ul style="list-style-type: none"> • Abstract Readable as stand-alone text – Informative on research and results – Clear key words
<p>Comments:</p> <p>The abstract clearly describes what the problem statement is, that is: "However, as the ... or lost importance." p. 1. Subsequently, information is given on the assessment of the research. However, the results that were obtained from the research are lacking. Only an explanation what is done to the data is described but no conclusions or recommendations are given. A recommendation would be to include the results found from the data analysis and to include what the conclusions are based on these plus the recommendations for further research. Nevertheless, the text is readable as a stand-alone-text.</p> <p>Keywords are present, complete and clear to the intended readers. Abstract does not exceed 250 words.</p>
<ul style="list-style-type: none"> • Introduction Background information on problem – Clear motivation for research – Research question stated clearly – Structure article discussed if necessary
<p>Comments:</p> <p>The introduction starts off with background information on the problem ("Standing as a of Hoofddorp Noord."). Consequently, the problem in this field is stated "...there is currently ... plan or not." which is followed by an explanation. The presence of a knowledge gap in literature is clearly indicated and an explanation what gap this article will fill ("To fill this gap, ... and sharpness.") is present. The goal of the article is explicitly stated in "The purpose of ... and annoyance." which makes it clear to the reader what to expect from the text.</p> <p>Finally, the last part of the introduction contains the structure lay-out of the article.</p> <p>There is no explicit research question or hypothesis however it is clear to the reader what problem exists and how the article contributes to solving this problem ("The purpose of this work ... level of annoyance." P. 2).</p>
<ul style="list-style-type: none"> • Method Well-argued – Sufficient definition of concepts – Connection to research question
<p>Comments:</p> <p>Methodology is well described and supported by a graphical figure. The corrections (the concepts, models and theories) for analyzing the data are clearly indicated and defined by individually describing them in a subsection and relating them to practical issues (e.g. Geometrical Spreading Correction: "Applying this correction ... during recording." P. 3). The application of these corrections are all connected to the research question, namely these are the corrections used to analyze the raw data in order to apply the metrics and eventually link this to the annoyance level of the aircraft sounds.</p> <p>The assumptions and approximations are clearly indicated (e.g. "The only reliable part ... taken into account.").</p> <p>However in equation (3) the meaning of all variables used in this equation are not clear to the reader.</p> <p>Also, perhaps it is more clear to indicate which reference is used for each equation next to this</p>

equation. In this case it is more clear to the reader where each equation came from rather than going back to the introduction in which the references used for each part can be found.

- **Results and discussion**

Results presented clearly - Validity of results discussed and supported – Relation text/illustrations clear

Comments:

All results (however the psychoacoustic annoyance is lacking) from the metrics are described elaborately. Clear deviations in the dataset are high-lighted, compared with the assumed behavior followed by an explanation (e.g. "Dramatic changes ... on the corrected data." p. 7). Also some of the results are shown graphically and are mentioned in the text. The figures are located in the appendix, however this is not stated in the text (only referred to the figure but not mentioned it is located in the appendix). Table 1 looks very clear, however nowhere in the text is referred to it and no explanation of the values in the tables can be found. Also, it is not clear to the reader why it is chosen to only show dataset 7 and dataset 5, the presentation however is meaningfully related to the text.

- **Conclusions**

Link to research question – Follow from previous material – Recommendations further research

Comments:

In the conclusion it is very clearly indicated what the conclusions from the results found from the data are. However, the goal of the article was to develop a tool that shall be able to take recorded sound pressure levels of aircraft flyovers and return a level of annoyance. In the conclusion, the result of the tool and the link between the annoyance are not described explicitly and also the type of metrics that are used are mentioned however it might be useful to mention the weight that is assigned to each metric to determine the annoyance (a conclusion shall be readable as a stand-alone text). In the further research recommendation it is stated that an overall rank of annoyance level shall be quantified, but at first it seemed that this was the goal of the article (feels contradictory).

Reference use

- **Use of sources**

Correct references – Good use of literal quotes – Good use of paraphrasing

Comments:

References used are already clearly indicated in the introduction, however perhaps it is more clear to indicate which reference is used for the particular part of the text. In this case it is more clear to the reader where information came from rather than going back to the introduction in which the references used for each part can be found (this is applicable to chapter III. Methodology whole subsection A. Data corrections, after this chapter in-text references are (correctly) used and the paraphrases are not too close to the original). There is one inconsistency, in the section psychoacoustic annoyance sentence "In order to include... following equation:", it says Schneider [14], whereas throughout the text only the number for the reference is shown without mentioning the name.

- **Bibliography**

References meet requirements – Correspondence references in text and bibliography

Comments:

Most of the references meet the AIAA requirements and all references correspond in text and in the bibliography.

Some remarks:

- References 1, 7, 8, 9, 10, 11, 13, 14 and 15 are missing the page numbers that are used.
- References 6 and 15 are not specific enough (could not be found).
- Reference 2 is missing the date at which the reference is retrieved.
- In reference 13 after the quotation has ended it says: 06 2016, which is not clear.

Content

- **Data analysis / research sufficiency**

Your opinion on the data analysis and research sufficiency

Comments:

Data analysis is thoroughly investigated. Sufficient factors that have influenced the raw data are taken into account. Also the measure for the annoyance level is constructed out of a decent amount of factors and related to one another.

Perhaps some further things to consider: since the date of the recordings are available, it might be interesting to look at the weather during the recordings. Could it have an influence on the result (e.g. rain, temperature, wind, clouds, humidity..)?

- **Argumentation**

Your opinion on the academic value of the argumentation – Critical review of literature

Comments:

Overall, the article clearly describes its goal and how it is reached (in what order of steps and in this way the article is structured). The assessment is substantiated with theories and equations which are explained elaborately.

In chapter IV. Results and Discussion the results are clearly substantiated by argumentation (e.g. "For instance ... frequency are flatter." p. 7).

A critical review of the literature cannot be found, however the use of e.g. equations found from literature are first being analyzed such that the limitations and approximations are clear to the reader, such as "The only reliable part ... taken into account." p. 3.

Structure

- **Paragraphs**

Well-constructed – One topic – Clear topic sentences – Clear paragraph structure

Comments:

The overall structure meets the requirements of the scientific article (all chapters are present (except the nomenclature, but this is not mandatory) and the order of the chapters are correct) and it does not exceed 4000 words.

The start of each new section starts with a short introductory text describing what the reader can expect which gives an overview of the text.

All paragraphs are well-constructed, not too long and separated by an indent (indicating a shift to another topic or part of the topic). They all start with clear topic sentences. No remarks.

Style
<ul style="list-style-type: none"> • Style and language use Correctness – Objectiveness – Clarity – Attractiveness
<p>Comments:</p> <p>Correct English was used. Hardly any spelling mistakes could be found. Only on page 7, the sentence "In Fig. 6a, ... moment in time.", it should be "is not" instead of "isn't" (always write full-out). On page 9, the sentence: "The independent variable...a plausible model." starts with an open bracket (but it does not close anywhere. And the last sentence on this page does not read smoothly, "It can be observed ... 0 as well.". The style is objective, sentences are not too complicated or contain any ambiguity. The sentence length are somewhat varied, e.g. the first few sentences of the conclusion. No remarks.</p>
Illustrations and layout
<ul style="list-style-type: none"> • Tables and figures Functionality - Number and caption – Reference in text – Reference to source – Legend/explanation
<p>Comments:</p> <p>All tables and figures have a number and a caption. All are referred at least once in the text, except Table 1. is not mentioned in the text at all.</p>
<ul style="list-style-type: none"> • Format Font – Headings – Page lay-out – Adherence to template
<p>Comments:</p> <p>Font is correct according to the requirements by the American Institute of Aeronautics and Astronautics. Headings are easily recognizable and due to the subsections it is very clear to the reader what topic is discussed in what part of the text. Hence it is an attractive page lay-out. No remarks.</p>