

## REVIEWS ON THE MANUSCRIPT [34]

### Reviewer 1:

The most obvious feature of the presented manuscript is that the author has focused on the experimental part of the problem.

The manuscript is rather easy to understand. The experimental setup and the obtained results seem to be successful.

Using the autocorrelation method is reasonable in the case of different characteristic frequencies.

In my opinion, the theoretical analysis should be provided in more detail.

One of the most important parameters of the sound, its frequency, could have been investigated. However, the author has chosen his own way of solving the problem, which is a fully understandable situation.

I would strongly recommend to add a few sentences describing the frequency analysis of the device (i.e.: whether the frequency and the air speed are related or not).

The manuscript is considered deserving publication upon this important clarification.

### Reviewer 2:

**“4.1. Strobe measurements”**: The three regimes you described were somehow unclear, both in the way they affect the sound produced, and the reason they exist. In my opinion, at least a qualitative explanation on the reason of the existence of these regimes needs to be given. I also suggest you to give pictures (like the one in figure 3b) of the three behaviors.

**“3.1. Air tunnel”**: There is a discussion mentioning about the flow being laminar. Not only there is no experimental or theoretical estimation as an evidence for the flow to be laminar, but I believe it is impossible for the flow to actually be laminar in this range of velocities.

An estimation on the Reynolds number predicts a quite turbulent flow. I recommend estimation on the Reynolds Number to be reported. (In my opinion, flow turbulence is the main reason for the different behaviors of the strips of paper in different velocity ranges.)

Please provide reference for the *“public-accessible NASA air-tunnel design”* if exists. Explain how the velocity is being measured in the tunnel.

**“3.2. Paper holder”**: *“two polystyrene holders were made to be aerodynamic”* this is an unclear sentence. **Figure 2** lacks in contrast. Consider making it clear by changing the colors.

**“4. Measurement”**: *“We believe that the noise that the problem text refers to is the loud flapping noise made, when more strips are present, from the strips hitting each other.”* This sentence is unclear.

**“5. Results”:** *“It can also be seen that the more papers we have, the lower the velocity at which they begin to oscillate, but also the lower the velocity at which they go to the chaotic regime.”* It is not clear how this conclusion was extracted from the results. Especially about the boundary of the chaotic regime, the plots do not seem to be in agreement with this conclusion.

**Figure 7** needs to have some information about the velocity in which it was achieved.

*“Similar graphs at different air-flow velocities show that the destruction of the paper strips gets more intense the faster the air-flow.”* Better to show the plots.

*“For the four paper strips the fit is  $y=3.13x+6.19$ , and for the plastic strips  $y=2.33x+5.12$ , with  $y$  being the air-flow velocity and  $x$  the noise intensity.”*

Provide units for this sentence.

**“6. Conclusion”:** Consider correcting the typing error “dana” to “data”.

If the result of this paper suggests a method for wind velocity measurement, it may help if at the end you mention the accuracy of your method and the ranges in which it works.

#### **Editorial request:**

*Consistency of spelling:* Please use a blank spacing between a numerical value and its dimension (5 cm, not 5cm).

*Figure 5:* Improve the scale. Most importantly, the numbers are too small and will not be seen upon publication.

*References:* Clarify what parts of the text cite or rely on the references [1] and [2]. What particular information is used from these two references?