# En resa mot Svartåns djupa mörker

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***Abstract*—The abstract goes here.**

## I. Introduction

*Explain the subject. What was i studying? Why was this topic important to investigate? What did we know about the topic before I did this study? How will this study dvance new knowledge or new ways of understanding?*

## II. State of the Art

*The latest and most sophisticated or advanced stage of a technology or science. State of the art if the foundation for determining the methid and methodlogy.*

## III. Hypothesis

*In scienc, a hypothesis is an idea or explanation that you then tesr through study and experimentation. Outside science, a theory or quess can also be called a hypothesis*

## IV. Problem formulation

*The problm formulation is defined upon hypothesis to define the problem or problems for the thesis*

## V. Research questions

*A research question guides and centers your research. It should be clear and focusd, as well as synthesize multiple sources to present your unque argument. RQ should be furmulat*

## VI. Method

*How will you test the hypothesis? What methods will be used from the knowledge learned in state of the art?*
The PCB was tested using the National Instruments *myDAQ*, by imposing a square wave with following characteristics:

- Constant 5V amplitude.
- Constant 2.5V positive offset.
- Variable frequency $100Hz - 10kHz$
- Variable duty-cycle $10\% - 90\%$

and then measuring the output

## VII. Results

*What are the results your method have given?*

## VIII. Conclusion

*Have you provn or disproven the hypothesis? If not, why?*

## IX. Discussion

## X. Future work

*What is the best way to continue the work?*

## Acknowledgment

## References

[1] H. Kopka and P. W. Daly, *A Guide to LaTeX*, 3rd ed. Harlow, England: Addison-Wesley, 1999.