

# Implentation of a Total Power Radiometer in Software Defined Radios

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# Overview I

- 1 Introduction
  - Software Defined Radio
  - GNURadio Software
  - Current ISU Radiometer
  - Related Works
- 2 General Theory of Operation
  - Software Defined Radios
  - GNURadio Software
  - RF Front End
- 3 GNURadio and N200 TPR
  - Hardware
    - Requirements
    - Noise Temperature Considerations
    - Existing ISU Radiometer RF Front End
  - Software
    - Requirements

# Overview II

- Obtaining Signal Information and GUI Controls
- Implantation of a TPR in Software
- Data Storage and Display

## 4 Testing and Verification

- Square-law Detector
- SDR Tests
- E E 518 Lab Tests
- LN2 Tests

## 5 Performance and Evaluation

- Sensitivity, Accuracy and Stability
- Required Performance
- Square-law Detector Performance
- SDR Performance

## 6 Conclusion and Future Work

## 7 Second Section

# Introduction

Introduction text here

Additional text for introduction

# Paragraphs of Text

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# Bullet Points

- Lorem ipsum dolor sit amet, consectetur adipiscing elit
- Aliquam blandit faucibus nisi, sit amet dapibus enim tempus eu
- Nulla commodo, erat quis gravida posuere, elit lacus lobortis est, quis porttitor odio mauris at libero
- Nam cursus est eget velit posuere pellentesque
- Vestibulum faucibus velit a augue condimentum quis convallis nulla gravida

# Blocks of Highlighted Text

## Block 1

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## Block 2

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## Block 3

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# Multiple Columns

## Heading

- 1 Statement
- 2 Explanation
- 3 Example

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# Table

Treatments	Response 1	Response 2
Treatment 1	0.0003262	0.562
Treatment 2	0.0015681	0.910
Treatment 3	0.0009271	0.296

Table : Table caption

# Theorem

Theorem (Mass–energy equivalence)

$$E = mc^2$$

# Verbatim

## Example (Theorem Slide Code)

```
\begin{frame}  
\frametitle{Theorem}  
\begin{theorem}[Mass--energy equivalence]  
$E = mc^2$  
\end{theorem}  
\end{frame}
```

# Figure

Uncomment the code on this slide to include your own image from the same directory as the template .TeX file.

# Citation

An example of the `\cite` command to cite within the presentation:

This statement requires citation [Smith, 2012].

# References



John Smith (2012)

Title of the publication

*Journal Name* 12(3), 45 – 678.

# The End