

Environmental Systematics and the Impact on
21-cm Epoch of Reionization Measurements

by

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has been approved

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Table of Contents

List of Figures	2
List of Tables	2
1. Introduction	3
1.1. The Epoch of Reionization	3
1.2. The 21-cm Power Spectrum	3
1.3. The Hydrogen Epoch of Reionization Array	3
1.4. Radio Frequency Interference	4
2. Methods	4
2.1. RFI Excision Strategies	4
2.2. Calculating the Power Spectrum	4
2.3. Modelling HERA Data	4
3. Results	4
4. Conclusion	4
5. References	4

List of Figures

1. HERA as of late 2017 – early 2018	3
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List of Tables

Abstract

1. Introduction

1.1. The Epoch of Reionization

[Morales & Wyithe \(2010\)](#)

[Pritchard & Loeb \(2012\)](#)

1.2. The 21-cm Power Spectrum

1.3. The Hydrogen Epoch of Reionization Array



Figure 1. HERA as of late 2017 – early 2018. HERA will observe large-scale structure prior to and during the EoR via the redshifted 21-cm line from the intergalactic medium. Image courtesy of the South African Radio Astronomy Observatory.

[DeBoer et al. \(2017\)](#)

1.4. Radio Frequency Interference

2. Methods

2.1. RFI Excision Strategies

2.2. Calculating the Power Spectrum

2.3. Modelling HERA Data

3. Results

4. Conclusion

5. References

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