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Physics 511 Midterm Assignment

Julieta Gruszko

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Reading Committee:

Name of Chairperson, Chair

First committee member

Next committee member

etc

Program Authorized to Offer Degree:
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Abstract

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Chair of the Supervisory Committee:
Title of Chair Name of Chairperson
Department of Chair

My thesis will cover my work directly on the MAJORANA DEMONSTRATOR and the R&D project I am starting at UW. The first topic will include issues in the construction of the experiment, especially the development work I did on low-background signal cable connectors, and analysis methods I am developing and implementing, including optimum filtering and frequency-based tagging of detector noise. The main portion of my thesis, however, will focus on a project I am beginning now, an internal scanning system for P-type point contact germanium detectors. Using this setup, I will be able to characterize how different styles of detector respond to alpha particles and low-energy x-rays. This will help us understand the DEMONSTRATOR's alpha backgrounds and inform the choice of technology for a future ton-scale neutrinoless double beta decay experiment.

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