Data Management Plan—*Using Generalized Adversarial Networks to ensure trusted science results and maximize science reach within the dark matter community*

1 Information about the data and data format

The proposed work will result in several data products, specifically

- Software that prepares SuperCDMS data for processing by change-detection algorithms
- Software that implements change-detection algorithms
- Plots that evaluate the effectiveness of change-detection algorithms
- Products of data-quality monitoring at SNOLAB will include processed data and metadata with information on data quality
- User documentation for working with the SuperCDMS-SNOLAB data quality system

Documentation and software will be primarily ASCII text files.

2 Policies for access, sharing, and re-use

Data produced solely by the PIs on this proposal

The data produced solely by PIs on this proposal consists of software implementing data-generation algorithms, software that estimates the quality of this generated data, and software that re-creates existing analyses with this generated data.

The software created by this project will be publicly available for download from a cloud-based repository host such as github or gitlab. Additionally, all software and data will be registered, archived, and available for download on Zenodo. Code will be licensed with an MIT license, a permissive open-source license that allows re-use for commercial purposes.

The purpose of this release plan and licensing policy is to encourage the broadest possible dissemination and use of the software. Zenodo has an operations plan for at least the next 20 years and provides free archival space that meets the needs of this project well.

Data owned by the SuperCDMS collaboration

Data generated by the SuperCDMS-SNOLAB experiment, including data generated by the data quality monitoring, falls under the purview of the SuperCDMS collaboration.

SuperCDMS does not have manpower to release raw data, processed data, and metadata. However, all publications have an accompanying data release.

2.1 Rights and Obligations of PIs on this proposal

The PI on this proposal is a member of the SuperCDMS collaboration, which has data release and software release policies that must be respected. PI Roberts is obligated to negotiate the release of data and software according to their collaboration's governing laws and will to advocate for permissive, open-source licensing where possible.

The Co-PI on this proposal is responsible for software that provides general methods for building data-generation neural networks of interest in dark matter experiments. This code is not experiment-specific and will be released under an open-source license.

3 Long-term storage and data management

All software and documentation will be archived on Zenodo. Zenodo is a collaboration between CERN and OpenAIRE and has an operation plan for the next twenty years.

Zenodo saves all data to two physically distinct disk servers. For low-use data, they reserve the right to store the data to tape.