**I. Introduction**

The Assay and Acquisition of Radiopure Materials (AARM) is a collaboration including representatives from all major dark matter and double beta decay experiments, as well as representatives from the geology and microbiology communities. We are united around the need for low-background siting and materials, in particular those concerned with dark matter, neutrinoless double beta decay, low-energy neutrino detection and production, and elements of biology and geology. This collaboration received a three-year S4 grant which combined three important functions: (1) Background characterization of the Homestake Mine, (2) Design of a low background counting facility (FAARM) to be located in a DUSEL lab module, and (3) Tools for underground physics, including a materials screening database, a dedicated Geant4 simulation, and the workshops necessary to build a community-wide effort around the quantification of backgrounds for underground science.

The effort in background characterization has been largely completed and further work specific to Homestake will continue under the guidance of the SURF management ?? *(DongMing please edit)* and the CUBED initiative. The site-specific FAARM engineering design was also completed; an overview of the facility was presented at the Low Radiation Techniques workshop at SNOLAB [1]. A new proposal for the redesign of the FAARM concept for a dedicated excavation at SURF will be submitted independently. The work being proposed here is for a continuation of the very successful integrative tools and workshops centered on simulation, material screening, and underground physics.

**II. Simulation**

1. (Intro)Explain the problem: uncertainties and definition *(Prisca)*
2. Physics
3. Status of the cross sections and mu-nuc *(DongMing, Anthony)*
4. AARM progress in the last couple years
5. Proposed plans for the future
6. Implementation issues in FLUKA and Geant4
7. Detailed issues *(Tony Empl)*
8. muon produced neutron comparison (Fluka v Geant) *(Anthony)*
9. Proposed plans for the future*(Anthony, Vitaly, Tony)*

C. Software tools and code repository *(DongMing, Chao)*

1. Comparing to Data
2. Overview of existing data/experiments
3. NMM and USD at Soudan and Veto Shield *(Melinda, Chao, Anthony)*
4. Proposed plans for the future *(Prisca et al.)*

**III. Database**

1. (Intro) Scarce resources (e.g. screeners) Pool information *(Prisca)*
2. Progress to date *(Jodi)*
3. Proposed work
4. Specific plans for the materials database *(Jodi, Prisca, Richard Ford)*
5. location of server and maintenance plan
6. legacy entry (ILIAS) and program to automate it
7. Database Reps from experiments identified
8. Collaborations with SNOLab, LRT (shared resources) *(Richard Ford)*
9. Extensions of the database to Sites *(Chao, DongMing, Richard Schnee)*
10. Rock and environmental backgrounds
11. Muons and overburden
12. Input framework to connect to simulation

4. Extension to integrative underground portal site.

**IV. Workshops** *(Prisca)*

1. Review rationale and success of previous (incl. DM task force)
2. Detailed realization (budget, travel, etc)

**V. Conclusion**