CF1 Working Group C

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Charge 6: Identify infrastructure common to direct dark matter searches and explore strategies to deliver it.

**** Materials***

**** Common Technologies***

**** Underground Space***

**** Computing and Software***

**** General***

Wiki pages:

http://www.snowmass2013.org/tiki-index.php?page=GrpC

Mailing list: SNOWCF1C via LISTSERV@slac.stanford.edu

Phone meeting (1 to date)

Materials

- Compilation of screening facilities available worldwide, listed by type and sensitivity to major radioactive contaminants. (Liaison with Capabilities and with AARM)
- Evaluate future screening needs and match to availability of facilities
- Explore strategies for delivering it
- Explore materials sourcing, tracking and storage space needs
- Explore strategies for shared knowledge (e.g. Universal Materials Database)

Common Technologies

- Explore water shield common needs: Water processing, safety, tankage
- Radon assay & mitigation
- Low background PMTs: Alternate sources
- Calibration: Common sources, particularly neutrons (coordinate with other groups)
- Cryogenics: Common safety and information
- Underground safety: Techniques, organizational methods

Underground Space

- Compilation of Underground Real Estate presently available worldwide, and outlook for the space available and potentially available over the next decade. (Liaison with Capabilities)
- Compilation of future underground space needs for dark matter experiments, including depth requirements, size and shielding

Computing and Software

- Summarize state of Simulation tools (code, files, physics lists)
- Explore means of delivering common simulation tools and establishing links with developers from FLUKA, GEANT4, MCNPX, Sources, MUSUN, etc etc. (Liaison with AARM)
- Explore closer connection between simulation and material information

General

- Identify Common R&D needs (Liaison with Instrumentation Frontier)
- Explore collaborative structures between experiments
- Identify other common infrastructure

Address the big picture: Do we want common infrastructure or not?