

Abstract Submitted  
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**Research and Development for Underground Science at Black Hills State University**<sup>1</sup> KARA KEETER, Black Hills State University — The development of the Deep Underground Science and Engineering Laboratory (DUSEL) in the former Homestake mine in Lead, South Dakota has greatly spurred interest in science research and development along with education and outreach. Early science activities at Black Hills State University associated with the Sanford Underground Laboratory and DUSEL include radon emanation studies of iron oxide sludge and in situ, and radioactive background and magnetic field measurements. Work is also underway for R&D development for depleted argon-based dark matter detectors, neutrinoless double beta decay experiments, and a liquid scintillator immersion tank for whole-body low-background assays. Students from BHSU and across the state of South Dakota have been working alongside scientists on these and other projects. Teachers from high schools throughout South Dakota have also participated in these projects through the newly formed QuarkNet Center at BHSU.

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