

The Sanford Underground Research Facility

Tuesday, May 14, 2024 8:50 AM (40 minutes)

The Sanford Underground Research Facility (SURF) has been operating for 17 years as an international facility dedicated to advancing compelling multidisciplinary underground scientific research, including physics, biology, geology, and engineering. Seven primary underground levels at SURF offer a unique environment that allows researchers the opportunity to explore an array of important questions regarding the origin of life and its diversity, mechanisms associated with geologic processes as well as engineering topics such as mining innovations and technology developments. SURF laboratory facilities include a Surface Campus as well as campuses at the 4850-foot level (1490 m, 4300 m.w.e.) that host a range of significant physics experiments, including the LUX-ZEPLIN (LZ) dark matter experiment and the MAJORANA DEMONSTRATOR rare-decay experiment. The CASPAR nuclear astrophysics accelerator completed the first phase of operation at the Ross Campus and is planning for the second phase beginning in 2024. SURF is also home to the Long-Baseline Neutrino Facility (LBNF) that will host the international Deep Underground Neutrino Experiment (DUNE). SURF offers world-class service, including an ultra-low background environment, low-background assay capabilities, and electroformed copper is produced at the facility. The initial phase of laboratory expansion is underway on the 4850L (1485 m, 4100 m.w.e.) for new large caverns (nominally 100m L x 20m W x 24m H) on the timeframe of next-generation dark matter and neutrino experiments (~2030). As some experiment activities are completing and as SURF is preparing to increase underground laboratory space, a call has been issued to the underground science community for letters of interest.

Primary author: HEISE, Jaret (SDSTA/SURF)

Presenter: HEISE, Jaret (SDSTA/SURF)

Session Classification: Plenary: Underground Science & Native American Heritage

Track Classification: Plenary