Abstract Submitted
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The CASPAR underground accelerator facility for the study of low energy nuclear astrophysics[1] DANIEL ROBERTSON, MANOEL COUDER, University of Notre Dame, UWE GREIFE, Colorado School of Mines, FRANK STRIEDER, South Dakota School of Mines and Technology, MICHAEL WIESCHER, University of Notre Dame — The drive of nuclear astrophysics is to push the limits of reaction measurements into the burning regime of astrophysical interest. As current laboratory experiments approach the stellar burning window, the rapid drop off of cross-sections is a significant barrier and drives the need for higher intensity accelerators, more robust and isotopically enriched target material and lower background interference. The natural background suppression of underground accelerator facilities enables the extension of current experimental data to the lower energies needed. The CASPAR facility is the first and only underground accelerator facility in the US, focused on the study of low energy reactions of nuclear astrophysical interest.

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