

Abstract Submitted
for the 4CF07 Meeting of
The American Physical Society

Laboratory Nuclear Astrophysics Research, the Universe Viewed from Underground SAMUEL OLSON, BYU Laboratory Nuclear Astrophysics Research Group, Brigham Young University — The field of Laboratory Nuclear Astrophysics, in the words of Rolfs, “. . . is often a frustrating science. The desired cross sections are among the smallest measured. . . often requiring long data collection times with painstaking attention to background. . . from a purely nuclear point of view, the reactions studied are often of comparatively little interest. . . [It] requires specialized equipment and environments.” In our efforts to study nuclear astrophysics, we have realized the truth of all of these statements. In the past, nuclear astrophysics was studied by accelerating high energy ions into gas targets, using beam energies ranging down to about 10 keV. Below this energy, reaction rates are so low that they are nearly impossible to detect. We report here our efforts to study fusion rates from low-energy reactants.

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Date submitted: 17 Sep 2007

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