

Abstract Submitted
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Improved determination of fusion events measured with the Multi-Sampling Ionization Chamber MuSIC@Indiana¹ JAMES JOHNSTONE, ROHIT KUMAR, VARINDERJIT SINGH, SYLVIE HUDAN, ROMUALDO DESOUZA, Indiana Univ - Bloomington — A Multi-Sampling Ionization Chamber (MuSIC) provides as an efficient means to measure fusion excitation functions for low-intensity radioactive beams. Segmentation of the anode along the beam direction allows measurement of the energy loss of both beam and fusion products. However, due to the finite anode size this approach typically results in significant energy uncertainty in the measured fusion excitation function. To reduce this energy uncertainty, a new analysis methodology was developed. In the new approach, the energy loss of the entire event is utilized. Through comparison of the measured energy loss track to a library of simulated beam and fusion events, the position of the fusion event and the identity of the fusion product is determined. Details of the approach and its implementation will be presented.

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