Abstract Submitted
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Design, Simulation and Construction of MuSIC@Indiana[1] ROMUALDO DESOUZA, Indiana University Bloomington, ROHIT KUMAR, IIT Bombay, Indiana University Bloomington — Fusion of neutron-rich nuclei is presently a topic of considerable interest. The most neutron-rich beams delivered by radioactive beam facilities however are typically available only at low intensities (<1000 ions/s). At energies above the fusion barrier, a **Mu**ltiple **S**ampling **I**onization **C**hamber (**MuSIC**) acting as an active target provides an effective means of measuring the fusion excitation function with such low-intensity beams. The advantages and limitations of this approach will be discussed. The design, construction and initial testing of MuSIC@Indiana will be detailed. Simulations of the detector performance will be described and initial preparations to measure fusion of ^{19,20,21}O + ^{12}C will be summarized.

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