

DICER: A new device for indirect capture experiments on radionuclides

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Direct neutron capture measurements on short-lived radionuclides can be extremely challenging, if not impossible using current techniques. Therefore, indirect methods have been developed. A new apparatus was installed at the Los Alamos Neutron Science Center (LANSCE) to measure neutron total cross sections on small radioactive samples as an indirect means to tightly constrain their neutron-capture cross sections. The first year of operation indicate that the instrument is ready to perform its first measurement on a radioactive sample (^{88}Zr , $t_{1/2}=83.4$ days). The experiment is planned for the summer of 2021 in collaboration with the Isotope Production Facility (IPF), also at LANSCE. A description of the apparatus and details of the experiment will be presented.