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Q-Value Gating Techniques for Gamma-ray Background Reduction AARON COUTURE, Los Alamos National Laboratory, JOACHIM GOERRES, ELIZABETH STRANDBERG, MICHAEL WIESCHER, University of Notre Dame — For certain classes of experiments, the limiting background comes from beam induced reactions on the nucleus of interest rather than external sources. Techniques using a combination of high-efficiency and high-resolution detectors were developed for separating the $^{19}\text{F}(p,\gamma)$ and $^{19}\text{F}(p,\alpha\gamma)$ reactions—both of which are important for quiescent and explosive CNO burning. The measurement will be compared to previous attempts with particular emphasis on the advantages Q-value gating offers in an inherently high-background scenario.

Aaron Couture
Los Alamos National Laboratory

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