

Abstract Submitted
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Spectrometer optics studies and target development for the $^{208}\text{Pb}(e,e'p)$ experiment in Hall A at Jefferson Lab GUIDO M. URCIOLI, INFN, Roma, Italy, JUAN CARLOS CORNEJO, Cal. State Univ., Los Angeles, JOAQUIN LOPEZ HERRAIZ, Univ. Complutense de Madrid, JEFFERSON LAB HALL A COLLABORATION — The reactions $^{208}\text{Pb}(e, e'p)^{207}\text{Tl}$ and $^{209}\text{Bi}(e, e'p)^{208}\text{Pb}$ have recently been measured at Jefferson Lab using the high resolution spectrometers of Hall A. Monte Carlo simulations of these reactions showed that with a missing energy resolution of 1 MeV, spectrum fitting techniques could extract the cross sections for the states of ^{207}Tl up to 3.5 MeV excitation. Extensive spectrometer optics studies were required to attempt to achieve the requisite missing energy resolution. In addition, the low melting temperature of the heavy metal targets required rastering the electron beam spot on the target and a special target holder to be employed. The measurement was possible because of the unique electron beam characteristics of CEBAF, the high resolution spectrometers of Hall A and the use of a novel target design which allowed for up to 80 μA of beam on target. The experimental challenges and procedures will be discussed.

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