

METHOD OF NEUTRON ACTIVATION CROSS SECTION MEASUREMENT
FOR $E_n = 5.5 - 10$ MeV USING THE $D(d,n)He-3$
REACTION AS A NEUTRON SOURCE

by

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ABSTRACT

Neutron cross section measurements for $E_n = 5.5 - 10$ MeV can be effectively performed using the $D(d,n)He-3$ reaction as a source of predominantly monoenergetic neutrons. Relatively intense neutron production has been achieved using deuteron beams from the Argonne National Laboratory Fast Neutron Generator (FNG) in conjunction with a deuterium gas cell target. The objective of this report is to describe the experimental and data analysis procedures which are employed in a program of neutron activation cross section measurements in this energy region.