

EVALUATION OF n+1H CROSS SECTIONS FOR THE ENERGY
RANGE 1.0E-11 TO 150 MEV

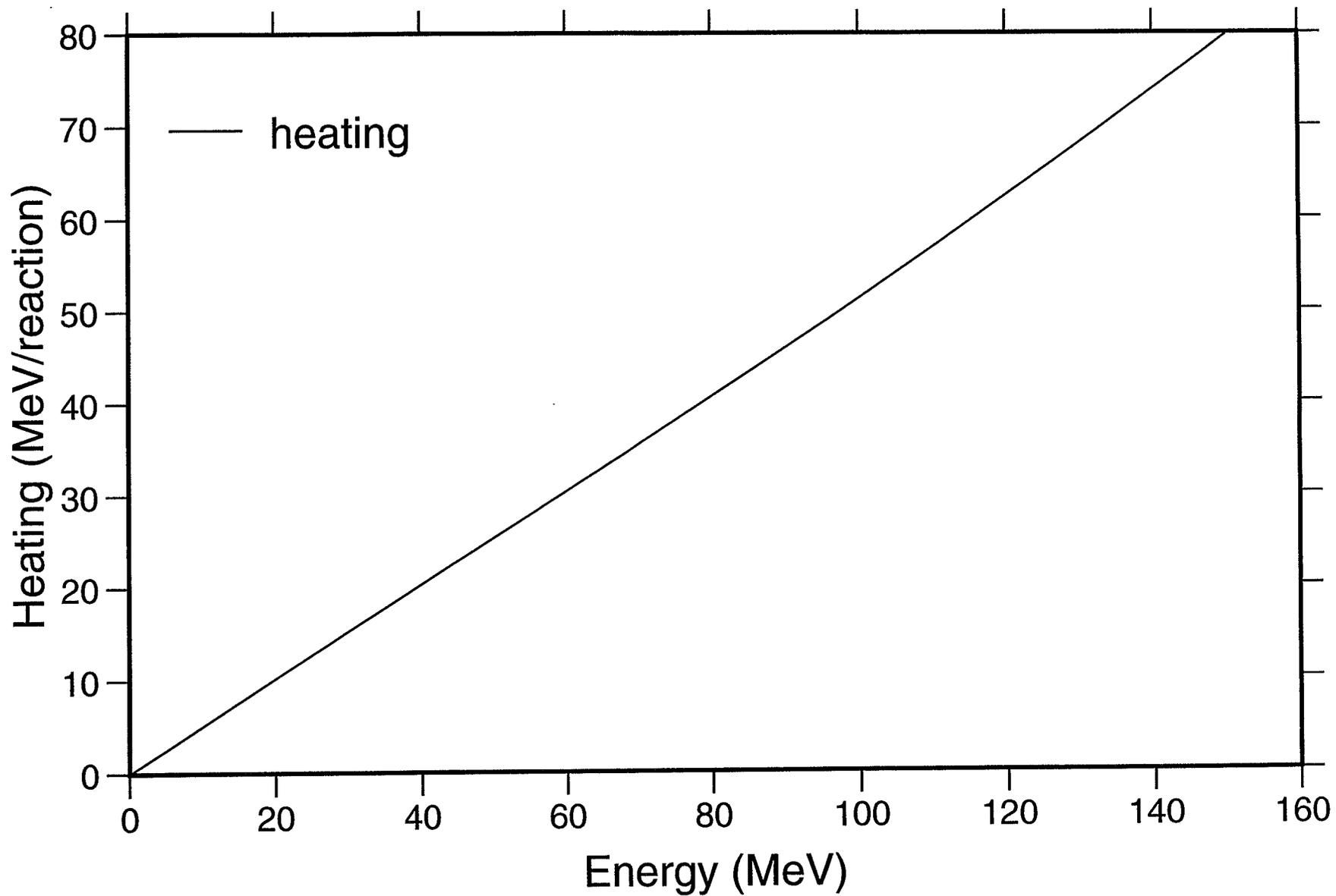
ENDF/B-VI Evaluation Revision, February, 1998
G. M. Hale and P. G. Young

This is an interim updating of the ENDF/B-VI Revision 2 (Release 5) evaluation to extend the incident neutron energy range from 100 to 150 MeV. The elastic scattering cross section from the R-matrix analysis used for ENDF/B-VI is matched in the energy region of 26 - 30 MeV to elastic cross sections from Arndt's phase-shift solution, VL40. Arndt's elastic cross section is used directly in the evaluation above the matching region to 150 MeV. A smooth extrapolation was made of MT=102 to 150 MeV.

This new evaluation has a smoother transition across the matching region than did the previous ENDF/B-VI file, and corresponds more closely to the recommendation of the EANDC standards subcommittee for n-p cross sections above 20 MeV. Proton kerma values calculated from this file deviate by no more than 2% from the previous ENDF/B-VI values at energies up to 100 MeV.

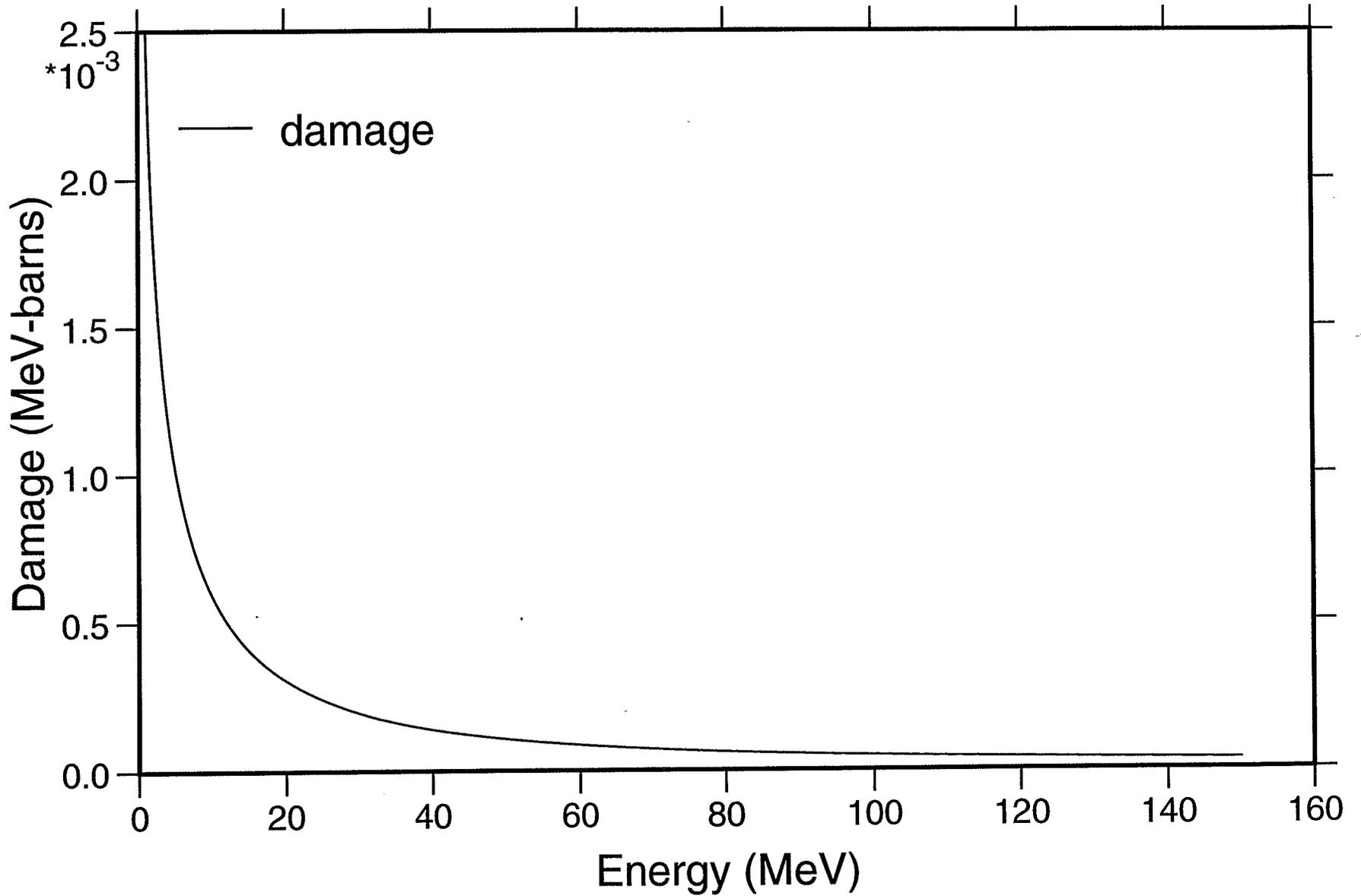
1-H-1 APT LA150 NJOY 97.18 MCNPX

Heating



1-H-1 APT LA150 NJOY 97.18 MCNPX

Damage



1-H-1 APT LA150 NJOY 97.18 MCNPX
angular distribution for elastic

