

Idaho National Engineering and Environmental Laboratory

Nuclear Structure and Decay Data Evaluations

Idaho Group

**Report to US NDP meeting
November 6, 2003 at Brookhaven
National Laboratory**



I. Mass-chain Evaluations

The Idaho Group has the responsibility for the twelve mass chains 87 and 153-163.

The participants in this work are R. G. Helmer and C. W. Reich.

Since the last network meeting in April 2002, complete evaluations for $A=156$, 158, and 159 have been finished, with those for $A=156$ and 159 having been published.

We have reviewed the mass-chain evaluations for $A=60$, 156, and 159

The current status of our mass chains are as follows:

<u>Mass</u>	<u>Date of most recent publication</u>
87	3/2002
153	2/1998
154	10/1998
155	4/1994 (in progress)
156	8/2003
157	6/1996 (in progress)
158	3/1996 (submitted)
159	7/2003
160	8/1996
161	7/2000
162	7/1999
163	1/2000

II. Decay Data Evaluation Project, DDEP

R. G. Helmer participates in the Decay Data Evaluation which includes non-ENSDF evaluators from France, Germany, Russia, Spain, and the United Kingdom, along with ENSDF evaluators E. Browne and R. G. Helmer.

During the last year, several evaluations have been submitted, edited, and finalized.

III. IAEA Coordinated Research Program

R. G. Helmer is a member of a current IAEA Coordinated Research Program which is preparing a set of decay data evaluations to be included in an update of their report entitled "X-ray and Gamma-ray Standards for Detector Calibration" (IAEA-TECDOC-619 (1991)).

Since the April 2002 meeting, he has provided evaluated data for the decay of 15 nuclides (^{22}Na , ^{24}Na , ^{40}K , ^{46}Sc , ^{51}Cr , ^{54}Mn , ^{60}Co , ^{64}Cu , ^{65}Zn , ^{95}Nb , $^{110\text{m}}\text{Ag}$, ^{113}Sn , ^{137}Cs , ^{153}Sm , and ^{226}Ra).