Proposal for Adopted Decay Datasets

This is not my idea.

Discussed at USNDP/NSDD … apologies for not remembering who started concept

Our current decay datasets

Our current decay datasets are like a

From Adopted we take   From decay exp we take

     $J\pi$ Energies
     Mult   Intensities
     MR $T_{1/2}$?
     $T_{1/2}$?

Delicate Balance

Between preserving measured values in decay experiments

Providing "best" values for applications

I propose we forgo the balancing act and create two decay datasets

Two decay datasets

Experimental decay dataset

- Just like any other dataset
- Include only quantities measured in the decay experiments

Adopted decay dataset

- Pulls in "best" values from Adopted Levels and Gammas
- Jpi, energies, intensities, multipolarities, mixing ratios, conversion coefficients, …

Pros and cons

Pros:

- No loss of data
- Best data is provided to user
- No confusion in creating datasets
- Forms basis for a decay library

Cons:

- More evaluation work
- Confusion to user with 2 datasets
- Does require some code modifications

Proposal Details

The easy parts

From the Adopted Levels/Gammas take

- Gamma-ray Energies
- Multipolarities
- Mixing Ratios
- Jπ
- $T_{1/2}$

BrIcc will be run using all data from Adopted Gammas

Proposal Details

What would be the ID Record?

For DSID limited to 30 characters

152EU EC DECAY (13.517 Y):ADOPTED

152EU EC DECAY (9.3116 H):ADOPTED

Doesn't work, something needs to truncate

152EU EC DECAY (9.3116 H):AD

Translated as

^{152}Eu ε Decay (9.3116 h): Adopted

^{152}Eu ε Decay (9.3116 h): Recommended

Proposal Details

The difficult part: Intensities

- How to evaluate ?

  Not trivial but we can develop a policy
  Will be exceptions, but that's the
   nature of evaluations

- Where to put them?

  Also not trivial … but doable
  Proposal to follow

Brookhaven Science Associates

Proposal Details

Where to put them:

Relative intensities in gamma D record

GABS processes off of gamma D record and places absolute intensity in 2G record as AI=

Modify JAVA-NDS to place 2G AI= values in the Ig column